King County

1200 King County Courthouse
516 Third Avenue
Seattle, WA 98104

KING COUNTY

Signature Report

December 8, 2016

Ordinance 18427

Proposed No. 2016-0155.3 **Sponsors** Dembowski

AN ORDINANCE relating to comprehensive planning and permitting; amending Ordinance 8421, Section 3, as amended, and K.C.C. 14.56.020, Ordinance 8421, Section 4, as amended, and K.C.C. 14.56.030, Ordinance 11653, Section 6, as amended, and K.C.C. 20.12.017, Ordinance 13147, Section 19, amended, and K.C.C. 20.18.030, Ordinance 4461, Section 10, amended, and K.C.C. 20.22.150, Ordinance 10870, Section 330, as amended, and K.C.C. 21A.08.030, Ordinance 10870, Section 332, as amended, and K.C.C. 21A.08.050, Ordinance 13274, Section 4, as amended, and K.C.C. 21A.37.020, Ordinance 13274, Section 5, as amended, and K.C.C. 21A.37.030, Ordinance 13733, Section 10, as amended, and K.C.C. 21A.37.110 and Ordinance 13733, Section 4, as amended, and K.C.C. 21A.37.150, and repealing Ordinance 8421, Section 2, and K.C.C. 14.56.010 and Ordinance 7889, Section 4, as amended, and K.C.C. 26.08.010.

BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

SECTION 1. **Findings:** For the purposes of effective land use planning and regulation, the King County council makes the following legislative findings:

A. King County adopted the King County Comprehensive Plan 2012 to meet the requirements of the Washington State Growth Management Act ("the GMA");

B. The 2012 King County Comprehensive Plan, adopted by King County Ordinance 17485, satisfied the GMA requirement for the county to update its comprehensive plan by June 30, 2015;

C. In 2013 and 2014, King County adopted narrow amendments to the King County Comprehensive Plan 2012;

D. The King County Code authorizes a review of the Comprehensive Plan and allows substantive amendments to the Comprehensive Plan once every four years. The King County Comprehensive Plan 2016 amendments are the fifth major review of the Comprehensive Plan;

E. The GMA requires that King County adopt development regulations to be consistent with and implement the Comprehensive Plan;

F. The changes to zoning contained in this ordinance are needed to maintain conformity with the King County Comprehensive Plan, as required by the GMA. As such, they bear a substantial relationship to, and are necessary for, the public health, safety and general welfare of King County and its residents; and

G. King County engages in a comprehensive review of its Comprehensive Plan and development regulations every four years. This ordinance constitutes the conclusion of the county's review process. The 2016 King County Comprehensive Plan and King County's development are intended to satisfy the requirements of the GMA.

SECTION 2. A. King County completed its fifth comprehensive four-cycle review of the Comprehensive Plan in 2016. As a result of the review, King County amended the King Comprehensive Plan 2012 through passage of the King County Comprehensive Plan 2016.

B. The amendments to the King County Comprehensive Plan 2012 contained in Attachments A, B, C, D, E, F, G, H, I, J and K to this ordinance are hereby adopted as amendments to the King County Comprehensive Plan 2012.

C. Attachments A and B to this ordinance amend policies, text and maps of the Comprehensive Plan and amend the Comprehensive Plan Land Use Zoning. The land use and zoning amendments contained in Attachments A and B to this ordinance are hereby adopted as the official land use and zoning controls for those portions of unincorporated King County defined in Attachments A and B to this ordinance.

D. Attachment C to this ordinance contains Technical Appendix A (Capital Facilities).

E. Attachment D to this ordinance contains Technical Appendix B (Housing).

F. Attachment E to this ordinance contains Technical Appendix C (Transportation).

G. Attachment F to this ordinance contains Technical Appendix C.1 (Transportation Needs Report).

H. Attachment G to this ordinance contains Technical Appendix C.2 (Regional Trails Needs Report).

I. Attachment H to this ordinance contains Technical Appendix D (Growth Targets and Urban Growth Area).

J. Attachment I to this ordinance contains Technical Appendix R (Summary of Public Outreach for Development of the 2016 KCCP Update).

K. Attachment J to this ordinance contains the Skyway-West Hill Action Plan.

L. Attachment K to this ordinance amends the Vashon Town Plan and the King County zoning map for those portions of unincorporated King County defined in Attachment K to this ordinance.

SECTION 3. Ordinance 8421, Section 2, and K.C.C. 14.56.010 are each hereby repealed.

SECTION 4. Ordinance 8421, Section 3, as amended, and K.C.C. 14.56.020 are each hereby amended to read as follows:

There is established a ((~~non-motorized vehicle~~)) nonmotorized transportation program ((~~to meet the following goals and objectives:~~

~~A. To identify and document the needs of non-motorized transportation in King County, including bicyclists, equestrians, pedestrians, and special populations;~~

~~B. To determine ways that the existing county transportation network, including transit, can be made more responsive to the needs of non-motorized users~~)). The program shall consist of the nonmotorized policies in the King County Comprehensive Plan and the respective functional plans of the responsible county agencies, nonmotorized project needs contained in agency capital improvement programs and operational activities that:

A. Identify and document the nonmotorized transportation needs in the county for bicyclists, pedestrians, equestrians and special populations such as school children or people with limited mobility and wheelchair users;

B. Determine ways that nonmotorized transportation can be integrated into the current and future county transportation network and services, including transit;

C. ((~~To i~~))Inform and educate the public on issues relating to ((~~non-motorized~~)) nonmotorized transportation, including compliance with traffic laws; and

D. ((~~To institute the consideration of non-motorized transportation in all related county-funded~~)) Consider nonmotorized transportation safety and other needs in all related county programs, and ((~~to~~)) encourage the same consideration on an interlocal and regional basis((~~;~~

~~E. To improve non-motorized transport users and motorists compliance with traffic laws; and~~

~~F. To guide development of a county functional plan for non-motorized transportation, to implement the adopted policies established in the county comprehensive plan, the county transportation plan, and current programs within county government~~)).

SECTION 5. Ordinance 8421, Section 4, as amended, and K.C.C. 14.56.030 are each hereby amended to read as follows:

The department of transportation shall ((~~carry out the following duties and responsibilities~~)):

A. Implement the ((~~non-motorized vehicle~~)) nonmotorized transportation program in coordination with other county departments;

B. Provide support to any ad hoc ((~~non-motorized~~)) nonmotorized transportation advisory committee; and

C. Work with ((~~governmental agencies~~)) other jurisdictions and nongovernmental organizations to identify, develop and promote programs that encourage the use of ((~~non-motorized~~)) nonmotorized modes of transportation.

SECTION 6. Ordinance 11653, Section 6, as amended, and K.C.C. 20.12.017 are each hereby amended to read as follows:

The following provisions complete the zoning conversion from K.C.C. Title 21 to Title 21A pursuant to K.C.C. 21A.01.070:

A. Ordinance 11653 adopts area zoning to implement the 1994 King County Comprehensive Plan pursuant to the Washington State Growth Management Act RCW 36.760A. Ordinance 11653 also converts existing zoning in unincorporated King County to the new zoning classifications in the 1993 Zoning Code, codified in Title 21A, pursuant to the area zoning conversion guidelines in K.C.C. 21A.01.070. The following are adopted as attachments to Ordinance 11653:

Appendix A: 1994 Zoning Atlas, dated November 1994, as amended December 19, 1994.

Appendix B: Amendments to Bear Creek Community Plan P-Suffix Conditions.

Appendix C: Amendments to Federal Way Community Plan P-Suffix Conditions.

Appendix D: Amendments to Northshore Community Plan P-Suffix Conditions.

Appendix E: Amendments to Highline Community Plan P-Suffix Conditions.

Appendix F: Amendments to Soos Creek Community Plan P-Suffix Conditions.

Appendix G: Amendments to Vashon Community Plan P-Suffix Conditions.

Appendix H: Amendments to East Sammamish Community Plan P-Suffix Conditions.

Appendix I: Amendments to Snoqualmie Valley Community Plan P-Suffix Conditions.

Appendix J: Amendments to Newcastle Community Plan P-Suffix Conditions.

Appendix K: Amendments to Tahoma/Raven Heights Community Plan P-Suffix Conditions.

Appendix L: Amendments to Enumclaw Community Plan P-Suffix Conditions.

Appendix M: Amendments to West Hill Community Plan P-Suffix Conditions.

Appendix N: Amendments to Resource Lands Community Plan P-Suffix Conditions.

Appendix O: 1994 Parcel List, as amended December 19, 1994.

Appendix P: Amendments considered by the council January 9, 1995.

B. Area zoning adopted by Ordinance 11653, including potential zoning, is contained in Appendices A and O. Amendments to area-wide P-suffix conditions adopted as part of community plan area zoning are contained in Appendices B through N. Existing P-suffix conditions whether adopted through reclassifications or community plan area zoning are retained by Ordinance 11653 except as amended in Appendices B through N.

C. The department is hereby directed to correct the official zoning map in accordance with Appendices A through P of Ordinance 11653.

D. The 1995 area zoning amendments attached to Ordinance 12061 in Appendix A are adopted as the official zoning control for those portions of unincorporated King County defined therein.

E. Amendments to the 1994 King County Comprehensive Plan area zoning, Ordinance 11653 Appendices A through P, as contained in Attachment A to Ordinance 12170 are hereby adopted to comply with the Decision and Order of the Central Puget Sound Growth Management Hearings Board in Vashon-Maury Island, et. al. v. King County, Case No. 95-3-0008.

F. The Vashon Town Plan Area Zoning, ((~~attached to Ordinance 17842 as~~)) Attachment ((~~D~~)) K to this ordinance, is adopted as the official zoning control for that portion of unincorporated King County defined therein.

G. The 1996 area zoning amendments attached to Ordinance 12531 in Appendix A are adopted as the official zoning control for those portions of unincorporated King County defined therein. Existing p-suffix conditions whether adopted through reclassifications or area zoning are retained by Ordinance 12531.

H. The Black Diamond Urban Growth Area Zoning Map attached to Ordinance 12533 as Appendix B is adopted as the official zoning control for those portions of unincorporated King County defined therein. Existing p-suffix conditions whether adopted through reclassifications or area zoning are retained by Ordinance 12533.

I. The King County Zoning Atlas is amended to include the area shown in Appendix B as UR - Urban Reserve, one DU per 5 acres. Existing p-suffix conditions whether adopted through reclassifications or area zoning are retained by Ordinance 12535. The language from Ordinance 12535, Section 1.D., shall be placed on the King County Zoning Atlas page #32 with a reference marker on the area affected by Ordinance 12535.

J. The Northshore Community Plan Area Zoning is amended to add the Suffix "-DPA, Demonstration Project Area", to the properties identified on Map A attached to Ordinance 12627.

K. The special district overlays, as designated on the map attached to Ordinance 12809 in Appendix A, are hereby adopted pursuant to K.C.C. 21A.38.020 and 21A.38.040.

L. the White Center Community Plan Area Zoning, as revised in the Attachments to Ordinance 11568, is the official zoning for those portions of White Center in unincorporated King county defined herein.

M. Ordinance 12824 completes the zoning conversion process begun in Ordinance 11653, as set forth in K.C.C. 21A.01.070, by retaining, repealing, replacing or amending previously adopted p-suffix conditions or property-specific development standards pursuant to K.C.C. 21A.38.020 and K.C.C. 21A.38.030 as follows:

1. Resolutions 31072, 32219, 33877, 33999, 34493, 34639, 35137, and 37156 adopting individual zone reclassifications are hereby repealed and p-suffix conditions are replaced by the property specific development standards as set forth in Appendix A to Ordinance 12824.

2. All ordinances adopting individual zone reclassifications effective prior to February 2, 1995, including but not limited to Ordinances 43, 118, 148, 255, 633, 1483, 1543, 1582, 1584, 1728, 1788, 2487, 2508, 2548, 2608, 2677, 2701, 2703, 2765, 2781, 2840, 2884, 2940, 2958, 2965, 2997, 3239, 3262, 3313, 3360, 3424, 3494, 3496, 3501, 3557, 3561, 3641, 3643, 3744, 3779, 3901, 3905, 3953, 3988, 4008, 4043, 4051, 4053, 4082, 4094, 4137, 4289, 4290, 4418, 4560, 4589, 4703, 4706, 4764, 4767, 4867, 4812,

4885, 4888, 4890, 4915, 4933, 4956, 4970, 4978, 5087, 5114, 5144, 5148, 5171, 5184, 5242, 5346, 5353, 5378, 5453, 5663, 5664, 5689, 5744, 5752, 5755, 5765, 5854, 5984, 5985, 5986, 6059, 6074, 6113, 6151, 6275, 6468, 6497, 6618, 6671, 6698, 6832, 6885, 6916, 6966, 6993, 7008, 7087, 7115, 7207, 7328, 7375, 7382, 7396, 7583, 7653, 7677, 7694, 7705, 7757, 7758, 7821, 7831, 7868, 7944, 7972, 8158, 8307, 8361, 8375, 8427, 8452, 8465, 8571, 8573, 8603, 8718, 8733, 8786, 8796, 8825, 8858, 8863, 8865, 8866, 9030, 9095, 9189, 9276, 9295, 9476, 9622, 9656, 9823, 9991, 10033, 10194, 10287, 10419, 10598, 10668, 10781, 10813, 10970, 11024, 11025, 11271, and 11651, are hereby repealed and p-suffix conditions are replaced by the property specific development standards as set forth in Appendix A to Ordinance 12824.

3. All ordinances establishing individual reclassifications effective after February 2, 1995, are hereby amended, as set forth in Appendix C to Ordinance 12824, to retain, repeal or amend the property specific development standards (p-suffix conditions) contained therein.

4. All ordinances adopting area zoning pursuant to Resolution 25789 or converted by Ordinance 11653 are repealed as set forth in subsection((s)) M.4.a. through n. of this section. All p-suffix conditions contained therein are repealed or replaced by adopting the property specific development standards as set forth in Appendix A to Ordinance 12824, the special district overlays as designated in Appendix B to Ordinance 12824 or the special requirements as designated in Appendix A to Ordinance 12822.

a. The Highline Area Zoning attached to Ordinance 3530, as amended, is hereby repealed.

b. The Shoreline Community Plan Area Zoning, attached to Ordinance 5080 as Appendix B, as amended, is hereby repealed.

c. The Newcastle Community Plan Area Zoning, attached to Ordinance 6422 as Appendix B, as amended is hereby repealed.

d. The Tahoma/Raven Heights Community Plan Area Zoning, attached to Ordinance 6986 as Appendix B, as amended, is hereby repealed.

e. The Revised Federal Way area zoning, adopted by Ordinance 7746, as amended, is hereby repealed.

f. The Revised Vashon Community Plan Area Zoning, attached to Ordinance 7837 as Appendix B, as amended, is hereby repealed.

g. The Bear Creek Community Plan Area Zoning, attached to Ordinance 8846 as Appendix B, as amended, is hereby repealed.

h. The Resource Lands Area Zoning, adopted by Ordinance 8848, as amended, is hereby repealed.

i. The Snoqualmie Valley Community Plan Area Zoning, as adopted by Ordinance 9118, is hereby repealed.

j. The Enumclaw Community Plan Area Zoning attached to Ordinance 9499, as amended, is hereby repealed.

k. The Soos Creek Community Plan Update Area Zoning, adopted by Ordinance 10197, Appendix B, as amended, is hereby repealed.

l. The Northshore Area Zoning adopted by Ordinance 10703 as Appendices B and E, as amended, is hereby repealed.

m. The East Sammamish Community Plan Update Area Zoning, as revised in Appendix B attached to Ordinance 10847, as amended, is hereby repealed.

n. The West Hill Community Plan Area Zoning adopted in Ordinance 11116, as amended, is hereby repealed.

5. All ordinances adopting area zoning pursuant to Title 21A and not converted by Ordinance 11653, including community or comprehensive plan area zoning and all subsequent amendments thereto, are amended as set forth in subsection M.5.a. through f. All property specific development standards (p-suffix conditions) are retained, repealed, amended or replaced by the property specific development standards as set forth in Appendix A to Ordinance 12824, the special district overlays as designated in Appendix B to Ordinance 12824 or the special requirements as designated in Appendix A to Ordinance 12822.

a. The White Center Community Plan Area Zoning, contained in the Attachments to Ordinance 11568, as subsequently amended, is hereby further amended as set forth in Appendix D to Ordinance 12824.

b. All property specific development standards established in Ordinance 11653, as amended, are hereby amended as set forth in Appendix E to Ordinance 12824.

c. All property specific development standards established in Attachment A to Ordinance 11747, as amended, are hereby amended as set forth in Appendix F to Ordinance 12824.

d. All property specific development standards established in Ordinance 12061, as amended, are hereby amended as set forth in Appendix G to Ordinance 12824.

e. All property specific development standards established in Ordinance 12065, as amended, are hereby amended as set forth in K.C.C. 20.12.170.

f. All property specific development standards established in Attachment A to Ordinance 12170, as amended, are hereby amended as set forth in Appendix H to Ordinance 12824.

SECTION 7. Ordinance 13147, Section 19, amended, and K.C.C. 20.18.030 are hereby amended to read as follows:

A. The King County Comprehensive Plan shall be amended in accordance with this chapter, which, in compliance with RCW 36.70A.130(2), establishes a public participation program whereby amendments are considered by the council no more frequently than once a year as part of the amendment cycle established in this chapter, except that the council may consider amendments more frequently to address:

1. Emergencies;

2. An appeal of the plan filed with the Central Puget Sound Growth Management Hearings Board or with the court;

3. The initial adoption of a subarea plan, which may amend the urban growth area boundary only to redesignate land within a joint planning area;

4. An amendment of the capital facilities element of the Comprehensive Plan that occurs in conjunction with the adoption of the county budget under K.C.C. 4A.100.010; or

5. The adoption or amendment of a shoreline master program under chapter 90.58 RCW.

B. Every year the Comprehensive Plan may be amended to address technical updates and corrections, and to consider amendments that do not require substantive changes to policy language, changes to the priority areas map, or changes to the urban growth area boundary, except as permitted in subsection B.((~~5, 10.~~)) 9. and ((~~12.~~)) 11. of this section. This review may be referred to as the annual cycle. The Comprehensive Plan, including subarea plans, may be amended in the annual cycle only to consider the following:

1. Technical amendments to policy, text, maps or shoreline designations;

2. The annual capital improvement plan;

3. The transportation needs report;

4. School capital facility plans;

5. ((~~A mining site conversion demonstration project. The demonstration project shall evaluate and address:~~

~~a. potential options for the use of a reclaimed mine site, including the feasibility of residential use and/or long-term forestry on the demonstration project site;~~

~~b. the impacts to carbon sequestration as a result of reforestation, and for residential use, the impacts to carbon sequestration when implementing modified standards for lot clustering or transfer of development rights;~~

~~c. the need for a site design that compatibly integrates any proposed residential development on the demonstration project site with uses occurring on the adjacent rural or forest production district lands, especially if the proposed residential development utilizes modified standards for lot clustering and/or transfer of development rights;~~

~~d. the levels and standards for reclamation of mining sites that are appropriate to their use either for long-term forestry and/or for residential development; and~~

~~e. the need to ensure that the demonstration project provides an overall public benefit by providing permanent protection, as designated park or open space, of lands in the vicinity of the demonstration project site that form the headwaters of critical, high-valued habitat areas; or that remove the development potential from nonconforming legal parcels in the forest production district; or that provide linkages with other forest production district lands;~~

~~6.~~)) Changes required by existing Comprehensive Plan policies;

((~~7.~~)) 6. Changes to the technical appendices and any amendments required thereby;

((~~8.~~)) 7. Comprehensive updates of subarea plans initiated by motion;

((~~9.~~)) 8. Changes required by amendments to the countywide planning policies or state law;

((~~10.~~)) 9. Redesignation proposals under the four-to-one program as provided for in this chapter;

((~~11.~~)) 10. Amendments necessary for the conservation of threatened and endangered species; ((~~and~~))

((~~12.~~)) 11. Site-specific ((~~comprehensive~~)) land use map amendments that do not require substantive change to comprehensive plan policy language and that do not alter the urban growth area boundary, except to correct mapping errors;

12. Amendments resulting from subarea studies required by comprehensive plan policy that do not require substantive change to comprehensive plan policy language and that do not alter the urban growth area boundary, except to correct mapping errors; and

13. Changes required to implement a study regarding the provision of wastewater services to a Rural Town. The amendments shall be limited to policy amendments and adjustment to the boundaries of the Rural Town as needed to implement the preferred option identified in the study.

C. Every fourth year beginning in 2000, the county shall complete a comprehensive review of the Comprehensive Plan in order to update it as appropriate and to ensure continued compliance with the GMA. This review may provide for a cumulative analysis of the twenty-year plan based upon official population growth forecasts, benchmarks and other relevant data in order to consider substantive changes to policy language and changes to the urban growth area (((~~UGA~~))). This comprehensive review shall begin one year in advance of the transmittal and may be referred to as the four-year cycle. The urban growth area boundaries shall be reviewed in the context of the four-year cycle and in accordance with countywide planning policy ((~~FW~~))G-1 and RCW 36.70A.130. If the county determines that the purposes of the Comprehensive Plan are not being achieved as evidenced by official population growth forecasts, benchmarks, trends and other relevant data, substantive changes to the Comprehensive Plan may also be considered on even calendar years. This determination shall be authorized by motion. The motion shall specify the scope of the even-year amendment, and identify that the resources necessary to accomplish the work are available. An analysis of the motion's fiscal impact shall be provided to the council before to adoption. The executive shall

determine if additional funds are necessary to complete the even-year amendment, and may transmit an ordinance requesting the appropriation of supplemental funds.

D. The executive shall seek public comment on the comprehensive plan and any proposed comprehensive plan amendments in accordance with the procedures in K.C.C. 20.18.160 before making a recommendation, in addition to conducting the public review and comment procedures required by SEPA. The public shall be afforded at least one official opportunity to record public comment before ((~~to~~)) the transmittal of a recommendation by the executive to the council. County-sponsored councils and commissions may submit written position statements that shall be considered by the executive before transmittal and by the council before adoption, if they are received in a timely manner. The executive's recommendations for changes to policies, text and maps shall include the elements listed in Comprehensive Plan policy ((~~RP-307~~)) I-207 and analysis of their financial costs and public benefits, any of which may be included in environmental review documents. Proposed amendments to the Comprehensive Plan shall be accompanied by any development regulations or amendments to development regulations, including area zoning, necessary to implement the proposed amendments.

SECTION 8. Ordinance 4461, Section 10, amended, and K.C.C. 20.22.150 are hereby amended to read as follows:

When the examiner issues a recommendation regarding an application for a zone reclassification of property, the recommendation shall include findings on whether the application meets both of the following:

A. The proposed rezone is consistent with the King County Comprehensive Plan; and

B.1. The property is potentially zoned for the reclassification being requested;

2. An adopted subarea plan, subarea study or area zoning specifies that the property shall be subsequently considered through an individual reclassification application; or

3. The requested reclassification is based on changed conditions.

SECTION 9. Ordinance 10870, Section 330, as amended, and K.C.C. 21A.08.030, are each hereby amended to read as follows:

A. Residential land uses.

KEY		ZONE	RESOURCE			RURAL	RESIDENTIAL			COMMERCIAL/INDUSTRIAL				
P-Permitted Use C-Conditional Use S-Special Use			AGRICULTURE	FOREST	MINERAL	RURAL AREA	*RUEBARN	URBAN	RESIDENTIAL	NBEUGHBORSHOOD	CBOUMSMUNITY	RBEUGSIONALS	OFFICE	INDUSTRIAL
SIC #	SPECIFIC LAND USE		A	F	M	RA	UR	R1-8	R12-48	NB	CB	RB	O	I
	DWELLING UNITS, TYPES:													
*	Single Detached		P C12	P2		P C12	P C12	P C12	P C12	P15				

*	Townhouse				C4	C4	P11 C12	P	P3	P3	P3	P3	
*	Apartment				C4	C4	P5 C5	P	P3	P3	P3	P3	
*	Mobile Home Park				S13		C8	P					
*	Cottage Housing						P15						
	GROUP RESIDENCES:												
*	Community Residential Facility-I				C	C	P14.a C	P	P3	P3	P3	P3	
*	Community Residential Facility-II						P14.b	P	P3	P3	P3	P3	
*	Dormitory				C6	C6	C6	P					
*	Senior Citizen Assisted Housing					P4	P4	P	P3	P3	P3	P3	
	ACCESSORY USES:												
*	Residential Accessory Uses	P7 P17	P7		P7	P7	P7	P7	P7	P7	P7	P7	
*	Home Occupation	P18	P18		P18	P18	P18	P18	P18	P18	P18	P18	
*	Home Industry	C			C	C	C						
	TEMPORARY LODGING:												
7011	Hotel/Motel (1)									P	P	P	
*	Bed and Breakfast Guesthouse	P9			P9	P9	P9	P9	P9	P10	P10		
7041	Organization Hotel/Lodging Houses										P		
GENERAL CROSS REFERENCES:		Land Use Table Instructions, see K.C.C. 21A.08.020 and 21A.02.070; Development Standards, see K.C.C. chapters 21A.12 through 21A.30; General Provisions, see K.C.C. chapters 21A.32 through 21A.38; Application and Review Procedures, see K.C.C. chapters 21A.40 through 21A.44; (*)Definition of this specific land use, see K.C.C. chapter 21A.06.											

B. Development conditions.

1. Except bed and breakfast guesthouses.

2. In the forest production district, the following conditions apply:

a. Site disturbance associated with development of any new residence shall be limited to three acres. Site disturbance shall mean all land alterations including, but not limited to, grading, utility installation, landscaping, clearing for crops, on-site sewage disposal systems and driveways. Additional site disturbance for agriculture, including raising livestock, up to the smaller of thirty-five percent of the lot or seven aces, may be approved only if a farm management plan is prepared in accordance with K.C.C. chapter 21A.30. Animal densities shall be based on the area devoted to animal care and not the total area of the lot;

b. A forest management plan shall be required for any new residence in the forest production district, that shall be reviewed and approved by the King County department of natural resources and parks before building permit issuance; and

c. The forest management plan shall incorporate a fire protection element that includes fire safety best management practices developed by the department.

3. Only as part of a mixed use development subject to the conditions of K.C.C. chapter 21A.14, except that in the NB zone on properties with a land use designation of commercial outside of center (CO) in the urban areas, stand-alone townhouse developments are permitted subject to K.C.C. 21A.12.040, 21A.14.030, 21A.14.060 and 21A.14.180.

4. Only in a building listed on the National Register as an historic site or designated as a King County landmark subject to K.C.C. chapter 21A.32.

5.a. In the R-1 zone, apartment units are permitted, if:

(1) At least fifty percent of the site is constrained by unbuildable critical areas. For purposes of this subsection, unbuildable critical areas includes wetlands, aquatic areas and slopes forty percent or steeper and associated buffers; and

(2) The density does not exceed a density of eighteen units per acre of net buildable area.

b. In the R-4 through R-8 zones, apartment units are permitted if the density does not exceed a density of eighteen units per acre of net buildable area.

c. If the proposal will exceed base density for the zone in which it is proposed, a conditional use permit is required.

6. Only as accessory to a school, college, university or church.

7.a. Accessory dwelling units:

(1) Only one accessory dwelling per primary single detached dwelling unit;

(2) Only in the same building as the primary dwelling unit on:

(a) an urban lot that is less than five thousand square feet in area;

(b) except as otherwise provided in subsection B.7.a.(5) of this section, a rural lot that is less than the minimum lot size; or

c. a lot containing more than one primary dwelling;

(3) The primary dwelling unit or the accessory dwelling unit shall be owner occupied;

(4)(a) Except as otherwise provided in subsection B.7.a(5) of this section, one of the dwelling units shall not exceed one thousand square feet of heated floor area except when one of the dwelling units is wholly contained within a basement or attic; and

(b) When the primary and accessory dwelling units are located in the same building, or in multiple buildings connected by a breezeway or other structure, only one entrance may be located on each street;

(5) On a site zoned RA:

(a) If one transferable development right is purchased from the ((r))Rural ((a))Area or Natural Resource Lands under K.C.C. chapter 21A.37, the smaller of the dwelling units is permitted a maximum floor area up to one thousand five hundred square feet; and

(b) If one transferable development right is purchased from the ((r))Rural ((a))Area or Natural Resource Lands under K.C.C. chapter 21A.37, a detached accessory dwelling unit is allowed on an RA-5 zoned lot that is at least two and one-half acres and less than three and three-quarters acres;

(6) One additional off-street parking space shall be provided;

(7) The accessory dwelling unit shall be converted to another permitted use or shall be removed if one of the dwelling units ceases to be owner occupied; and

(8) An applicant seeking to build an accessory dwelling unit shall file a notice approved by the department of executive services, records and licensing services division, that identifies the dwelling unit as accessory. The notice shall run with the land. The applicant shall submit proof that the notice was filed before the department shall approve any permit for the construction of the accessory dwelling unit. The required contents and form of the notice shall be set forth in administrative rules. If an accessory dwelling unit in a detached building in the rural zone is subsequently converted to a primary unit on a separate lot, neither the original lot nor the new lot may have an

additional detached accessory dwelling unit constructed unless the lot is at least twice the minimum lot area required in the zone; and

(9) Accessory dwelling units and accessory living quarters are not allowed in the F zone.

b. One single or twin engine, noncommercial aircraft shall be permitted only on lots that abut, or have a legal access that is not a county right-of-way, to a waterbody or landing field, but only if there are:

(1) no aircraft sales, service, repair, charter or rental; and

(2) no storage of aviation fuel except that contained in the tank or tanks of the aircraft.

c. Buildings for residential accessory uses in the RA and A zone shall not exceed five thousand square feet of gross floor area, except for buildings related to agriculture or forestry.

8. Mobile home parks shall not be permitted in the R-1 zones.

9. Only as accessory to the permanent residence of the operator, and:

a. Serving meals shall be limited to paying guests; and

b. The number of persons accommodated per night shall not exceed five, except that a structure that satisfies the standards of the International Building Code as adopted by King County for R-1 occupancies may accommodate up to ten persons per night.

10. Only if part of a mixed use development, and subject to the conditions of subsection B.9. of this section.

11. Townhouses are permitted, but shall be subject to a conditional use permit if exceeding base density.

12. Required before approving more than one dwelling on individual lots, except on lots in subdivisions, short subdivisions or binding site plans approved for multiple unit lots, and except as provided for accessory dwelling units in subsection B.7. of this section.

13. No new mobile home parks are allowed in a rural zone.

14.a. Limited to domestic violence shelter facilities.

b. Limited to domestic violence shelter facilities with no more than eighteen residents or staff.

15. Only in the R4-R8 zones limited to:

a. developments no larger than one acre;

b. not adjacent to another cottage housing development such that the total combined land area of the cottage housing developments exceeds one acre;

c. All units must be cottage housing units with no less than three units and no more than sixteen units, provided that if the site contains an existing home that is not being demolished, the existing house is not required to comply with the height limitation in K.C.C. 21A.12.020.B.25. or the floor area and footprint limits in K.C.C. 21A.14.025.B; and

d. Before filing an application with the department, the applicant shall hold a community meeting in accordance with K.C.C. 20.20.035.

16. The development for a detached single-family residence shall be consistent with the following:

a. The lot must have legally existed before March 1, 2005;

b. The lot has a Comprehensive Plan land use designation of Rural Neighborhood Commercial Center or Rural Area; and

c. The standards of this title for the RA-5 zone shall apply.

17. Housing for agricultural employees who are employed by the owner or operator of the site year-round as follows:

a. Not more than:

(1) One agricultural employee dwelling unit on a site under twenty acres;

(2) Two agricultural employee dwelling units on a site between twenty acres and fifty acres;

(3) Three agricultural employee dwelling units on a site greater than fifty acres and less than one-hundred acres; and

(4) On sites one-hundred acres and larger one additional agricultural employee dwelling unit for each additional one hundred acres;

b. The primary use of the site shall be agricultural in SIC Industry Group No. 01-Growing and Harvesting Crops or SIC Industry Group No. 02-Raising Livestock and Small Animals. If the primary use of the site changes to a nonagricultural use, all agricultural employee dwelling units shall be removed;

c. The applicant shall file with the department of executive services, records and licensing services division, a notice approved by the department that identifies the agricultural employee dwelling units as accessory and that the dwelling units shall only be occupied by agricultural employees who are employed by the owner or operator year-round. The notice shall run with the land. The applicant shall submit to the department

proof that the notice was filed with the department of executive services, records and licensing services division, before the department approves any permit for the construction of agricultural employee dwelling units;

d. An agricultural employee dwelling unit shall not exceed a floor area of one thousand square feet and may be occupied by no more than eight unrelated agricultural employees;

e. One off-street parking space shall be provided for each agricultural employee dwelling unit; and

f. The agricultural employee dwelling units shall be constructed in compliance with K.C.C. Title 16.

18. Allowed if consistent with K.C.C. chapter 21A.30.

SECTION 10. Ordinance 10870, Section 332, as amended, and K.C.C. 21A.08.050, are each hereby amended to read as follows:

A. General services land uses.

KEY		RESOURCE			RURAL	RESIDENTIAL				COMMERCIAL/INDUSTRIAL					
P-Permitted Use C-Conditional Use S-Special Use	ZONE	AGRICULTURE	FOREST	MINERAL	RURAL AREA	URBAN RESERVE		URBAN RESERVE		NEIGHBORHOOD BUSINESS	COMMUNITY BUSINESS	REGIONAL BUSINESS	OFFICE	INDUSTRIAL	

		E					L		O D				
SIC#	**SPECIFIC LAND USE**	**A**	**F**	**M**	**RA**	**UR**	**R1-8**	**R12-48**	**NB**	**CB**	**RB**	**O**	**I**
	PERSONAL SERVICES:												
72	General Personal Service						C25 C37	C25 C37	P	P	P	P3	P3
7216	Drycleaning Plants												P
7218	Industrial Launderers												P
7261	Funeral Home/Crematory					C4	C4	C4		P	P		
*	Cemetery, Columbarium or Mausoleum				P24 C5 and 31	P24 C5	P24 C5	P24 C5	P24	P24	P24 C5	P24	
*	Day Care I	P6			P6	P6	P6	P	P	P	P	P7	P7
*	Day Care II				P8 C	P8 C	P8 C	P8 C	P	P	P	P7	P7
074	Veterinary Clinic	P9			P9 C10 and 31	P9 C10			P10	P10	P10		P
753	Automotive Repair (1)								P11	P	P		P
754	Automotive Service								P11	P	P		P
76	Miscellaneous Repair	P33			P32 P33	P32	P32	P32	P32	P	P		P
866	Church, Synagogue, Temple				P12 C27 and 31	P12 C	P12 C	P12 C	P	P	P	P	
83	Social Services (2)				P12	P12	P12	P12	P	P	P	P	

					P13 C31	P13 C	P13 C	P13 C					
0752	Animal specialty services				C P35 P36	C			P	P	P	P	P
*	Stable	P14 C			P14 C31	P14 C	P 14 C						
*	Commercial Kennel or Commercial Cattery	P42			C43	C43				C43	P43		
*	Theatrical Production Services									P30	P28		
*	Artist Studios				P28	P28	P28	P28	P	P	P	P29	P
*	Interim Recycling Facility				P21	P21	P21	P21	P22	P22	P	P21	P
*	Dog training facility	C34			C34	C34			P	P	P		P
	HEALTH SERVICES:												
801-04	Office/Outpatient Clinic				P12 C 13a	P12 C13a	P12 C13 a C37	P12 C13a C37	P	P	P	P	P
805	Nursing and Personal Care Facilities							C		P	P		
806	Hospital						C13 a	C13a		P	P	C	
807	Medical/Dental Lab									P	P	P	P
808-09	Miscellaneous Health									P	P	P	
	EDUCATION SERVICES:												
*	Elementary School				P39 P40	P	P	P		P16 P40	P16 P40	P16 P40	

*	Middle/Junior High School				P40 C39 and 31	P	P	P		P16 C40	P16 C40	P16 C40	
*	Secondary or High School				C39 and 31 C41 and 31	P26	P26	P26		P16 C15	P16 C15	P16	
*	Vocational School					P13a C	P13a C	P13a C			P15	P17	P
*	Specialized Instruction School		P18		P19 C20 and 31	P19 C20	P19 C20	P19 C20	P	P	P	P17	P 38
*	School District Support Facility					P23 C	P23 C	P23 C	C15	P15	P15	P15	P15
GENERAL CROSS REFERENCES:		Land Use Table Instructions, see K.C.C. 21A.08.020 and 21A.02.070; Development Standards, see K.C.C. chapters 21A.12 through 21A.30; General Provisions, see K.C.C. chapters 21A.32 through 21A.38; Application and Review Procedures, see K.C.C. chapters 21A.40 through 21A.44; (*)Definition of this specific Land Use, see K.C.C. chapter 21A.06.											

B. Development conditions.

1. Except SIC Industry No. 7534-Tire Retreading, see manufacturing permitted use table.

2. Except SIC Industry Group Nos.:

a. 835-Day Care Services, and

b. Community residential facilities.

3. Limited to SIC Industry Group and Industry Nos.:

a. 723-Beauty Shops;

b. 724-Barber Shops;

c. 725-Shoe Repair Shops and Shoeshine Parlors;

d. 7212-Garment Pressing and Agents for Laundries and Drycleaners; and

e. 217-Carpet and Upholstery Cleaning.

4. Only as accessory to a cemetery, and prohibited from the UR zone only if the property is located within a designated unincorporated Rural Town.

5. Structures shall maintain a minimum distance of one hundred feet from property lines adjoining rural area and residential zones.

6. Only as accessory to residential use, and:

a. Outdoor play areas shall be completely enclosed by a solid wall or fence, with no openings except for gates, and have a minimum height of six feet; and

b. Outdoor play equipment shall maintain a minimum distance of twenty feet from property lines adjoining rural area and residential zones.

7. Permitted as an accessory use. See commercial/industrial accessory, K.C.C. 21A.08.060.A.

8. Only as a reuse of a public school facility subject to K.C.C. chapter 21A.32, or an accessory use to a school, church, park, sport club or public housing administered by a public agency, and:

a. Outdoor play areas shall be completely enclosed by a solid wall or fence, with no openings except for gates and have a minimum height of six feet;

b. Outdoor play equipment shall maintain a minimum distance of twenty feet from property lines adjoining rural area and residential zones;

c. Direct access to a developed arterial street shall be required in any residential zone; and

d. Hours of operation may be restricted to assure compatibility with surrounding development.

9. As a home occupation only, but the square footage limitations in K.C.C. chapter 21A.30 for home occupations apply only to the office space for the veterinary clinic, and:

a. Boarding or overnight stay of animals is allowed only on sites of five acres or more;

b. No burning of refuse or dead animals is allowed;

c. The portion of the building or structure in which animals are kept or treated shall be soundproofed. All run areas, excluding confinement areas for livestock, shall be surrounded by an eight-foot-high solid wall and the floor area shall be surfaced with concrete or other impervious material; and

d. The provisions of K.C.C. chapter 21A.30 relative to animal keeping are met.

10.a. No burning of refuse or dead animals is allowed;

b. The portion of the building or structure in which animals are kept or treated shall be soundproofed. All run areas, excluding confinement areas for livestock, shall be surrounded by an eight-foot-high solid wall and the floor area shall be surfaced with concrete or other impervious material; and

c. The provisions of K.C.C. chapter 21A.30 relative to animal keeping are met.

11. The repair work or service shall only be performed in an enclosed building, and no outdoor storage of materials. SIC Industry No. 7532-Top, Body, and Upholstery Repair Shops and Paint Shops is not allowed.

12. Only as a reuse of a public school facility subject to K.C.C. chapter 21A.32. Before filing an application with the department, the applicant shall hold a community meeting in accordance with K.C.C. 20.20.035.

13.a. Except as otherwise provided in 13.b of this subsection, only as a reuse of a surplus nonresidential facility subject to K.C.C. chapter 21A.32.

b. Allowed for a social service agency on a site in the NB zone that serves transitional or low-income housing located within three hundred feet of the site on which the social service agency is located.

c. Before filing an application with the department, the applicant shall hold a community meeting in accordance with K.C.C. 20.20.035.

14. Covered riding arenas are subject to K.C.C. 21A.30.030 and shall not exceed twenty thousand square feet, but stabling areas, whether attached or detached, shall not be counted in this calculation.

15. If located outside of the urban growth area, limited to projects that are of a size and scale designed to primarily serve the ((r))Rural ((a))Area and Natural Resource Lands and shall be located within a rural town.

16. If located outside of the urban growth area, shall be designed to primarily serve the ((r))Rural ((a))Area and Natural Resource Lands and shall be located within a rural town. In CB, RB and O, for K-12 schools with no more than one hundred students.

17. All instruction must be within an enclosed structure.

18. Limited to resource management education programs.

19. Only as accessory to residential use, and:

a. Students shall be limited to twelve per one-hour session;

b. Except as provided in subsection c. of this subsection, all instruction must be within an enclosed structure;

c. Outdoor instruction may be allowed on properties at least two and one-half acres in size. Any outdoor activity must comply with the requirements for setbacks in K.C.C. chapter 21A.12; and

d. Structures used for the school shall maintain a distance of twenty-five feet from property lines adjoining rural area and residential zones.

20. Subject to the following:

a. Structures used for the school and accessory uses shall maintain a minimum distance of twenty-five feet from property lines adjoining residential zones;

b. On lots over two and one-half acres:

(1) Retail sale of items related to the instructional courses is permitted, if total floor area for retail sales is limited to two thousand square feet;

(2) Sale of food prepared in the instructional courses is permitted with Seattle-King County department of public health approval, if total floor area for food sales is limited to one thousand square feet and is located in the same structure as the school; and

(3) Other incidental student-supporting uses are allowed, if such uses are found to be both compatible with and incidental to the principal use; and

c. On sites over ten acres, located in a designated Rural Town and zoned any one or more of UR, R-1 and R-4:

(1) Retail sale of items related to the instructional courses is permitted, provided total floor area for retail sales is limited to two thousand square feet;

(2) Sale of food prepared in the instructional courses is permitted with Seattle-King County department of public health approval, if total floor area for food sales is limited to one thousand seven hundred fifty square feet and is located in the same structure as the school;

(3) Other incidental student-supporting uses are allowed, if the uses are found to be functionally related, subordinate, compatible with and incidental to the principal use;

(4) The use shall be integrated with allowable agricultural uses on the site;

(5) Advertised special events shall comply with the temporary use requirements of this chapter; and

(6) Existing structures that are damaged or destroyed by fire or natural event, if damaged by more than fifty percent of their prior value, may reconstruct and expand an additional sixty-five percent of the original floor area but need not be approved as a conditional use if their use otherwise complies with development condition B.20.c. of this section and this title.

21. Limited to:

a. drop box facilities accessory to a public or community use such as a school, fire station or community center; or

b. in the RA zone, a facility accessory to a retail nursery, garden center and

farm supply store that accepts earth materials, vegetation, organic waste, construction and demolition materials or source separated organic materials, if:

(1) the site is five acres or greater;

(2) all material is deposited into covered containers or onto covered impervious areas;

(3) the facility and any driveways or other access to the facility maintain a setback of at least twenty five feet from adjacent properties;

(4) the total area of the containers and covered impervious area is ten thousand square feet or less;

(5) ten feet of type II landscaping is provided between the facility and adjacent properties;

(6) no processing of the material is conducted on site; and

(7) access to the facility is not from a local access street.

22. With the exception of drop box facilities for the collection and temporary storage of recyclable materials, all processing and storage of material shall be within enclosed buildings. Yard waste processing is not permitted.

23. Only if adjacent to an existing or proposed school.

24. Limited to columbariums accessory to a church, but required landscaping and parking shall not be reduced.

25. Not permitted in R-1 and limited to a maximum of five thousand square feet per establishment and subject to the additional requirements in K.C.C. 21A.12.230.

26.a. New high schools permitted in the rural and the urban residential and urban reserve zones shall be subject to the review process in K.C.C. 21A.42.140.

b. Renovation, expansion, modernization, or reconstruction of a school, or the addition of relocatable facilities, is permitted.

27. Limited to projects that do not require or result in an expansion of sewer service outside the urban growth area. In addition, such use shall not be permitted in the RA-20 zone.

28. Only as a reuse of a surplus nonresidential facility subject to K.C.C. chapter 21A.32 or as a joint use of an existing public school facility.

29. All studio use must be within an enclosed structure.

30. Adult use facilities shall be prohibited within six hundred sixty feet of any rural area and residential zones, any other adult use facility, school, licensed daycare centers, parks, community centers, public libraries or churches that conduct religious or educational classes for minors.

31. Subject to review and approval of conditions to comply with trail corridor provisions of K.C.C. chapter 21A.14 when located in an RA zone.

32. Limited to repair of sports and recreation equipment:

a. as accessory to a recreation or multiuse park in the urban growth area; or

b. as accessory to a park and limited to a total floor area of seven hundred fifty square feet.

33. Accessory to agricultural or forestry uses provided:

a. the repair of tools and machinery is limited to those necessary for the operation of a farm or forest.

b. the lot is at least five acres.

c. the size of the total repair use is limited to one percent of the lot size up to a maximum of five thousand square feet unless located in a farm structure, including but not limited to barns, existing as of December 31, 2003.

34. Subject to the following:

a. the lot is at least five acres;

b. in the A zones, area used for dog training shall be located on portions of agricultural lands that are unsuitable for other agricultural purposes, such as areas within the already developed portion of such agricultural lands that are not available for direct agricultural production or areas without prime agricultural soils;

c. structures and areas used for dog training shall maintain a minimum distance of seventy-five feet from property lines; and

d. all training activities shall be conducted within fenced areas or in indoor facilities. Fences must be sufficient to contain the dogs.

35. Limited to animal rescue shelters and provided that:

a. the property shall be at least four acres;

b. buildings used to house rescued animals shall be no less than fifty feet from property lines;

c. outdoor animal enclosure areas shall be located no less than thirty feet from property lines and shall be fenced in a manner sufficient to contain the animals;

d. the facility shall be operated by a nonprofit organization registered under the Internal Revenue Code as a 501(c)(3) organization; and

e. the facility shall maintain normal hours of operation no earlier than 7 a.m. and no later than 7 p.m.

36. Limited to kennel-free dog boarding and daycare facilities, and:

a. the property shall be at least four and one-half acres;

b. buildings housing dogs shall be no less than seventy-five feet from property lines;

c. outdoor exercise areas shall be located no less than thirty feet from property lines and shall be fenced in a manner sufficient to contain the dogs;

d. the number of dogs allowed on the property at any one time shall be limited to the number allowed for hobby kennels, as provided in K.C.C. 11.04.060.B; and

e. training and grooming are ancillary services that may be provided only to dogs staying at the facility; and

f. the facility shall maintain normal hours of operation no earlier than 7 a.m. and no later than 7 p.m.

37. Not permitted in R-1 and subject to the additional requirements in K.C.C. 21A.12.250.

38. Driver training is limited to driver training schools licensed under chapter 46.82 RCW.

39. A school may be located outside of the urban growth area only if allowed under King County Comprehensive Plan policies.

40. Only as a reuse of an existing public school.

41. A high school may be allowed as a reuse of an existing public school if allowed under King County Comprehensive Plan policies.

42. Commercial kennels and commercial catteries in the A zone are subject to the following:

a. Only as a home occupation, but the square footage limitations in K.C.C. chapter 21A.30.085 for home occupations apply only to the office space for the commercial kennel or commercial cattery; and

b. Subject to K.C.C. 21A.30.020, except:

(1) A building or structure used for housing dogs or cats and any outdoor runs shall be set back one hundred and fifty feet from property lines;

(2) The portion of the building or structure in which the dogs or cats are kept shall be soundproofed;

(3) Impervious surface for the kennel or cattery shall not exceed twelve thousand square feet; and

(4) Obedience training classes are not allowed except as provided in subsection B.34. of this section.

43. Commercial kennels and commercial catteries are subject to K.C.C. 21A.30.020."

SECTION 11. Ordinance 13274, Section 4, as amended, and K.C.C. 21A.37.020 are hereby amended to read as follows:

A. For the purpose of this chapter, "sending site" means the entire tax lot or lots qualified under subsection B. of this section. Sending sites may only be located within rural or resource lands or urban separator areas with R-1 zoning, as designated by the King County Comprehensive Plan, and shall meet the minimum lot area for construction requirements in K.C.C. 21A.12.100 for the zone in which the sending site is located. Except as provided in K.C.C. 21A.37.110.C., or for lands zoned RA that are managed by the Washington state Department of Natural Resources as state grant or state forest lands,

land in public ownership may not be sending sites. If the sending site consists of more than one tax lot, the lots must be contiguous and the area of the combined lots must meet the minimum lot area for construction requirements in K.C.C. 21A.12.100 for the zone in which the sending site is located. For purposes of this section, lots divided by a street are considered contiguous if the lots would share a common lot line if the street was removed; this provision may be waived by the interagency committee if the total acreage of a rural or resource sending site application exceeds one hundred acres. A sending site shall be maintained in a condition that is consistent with the criteria in this section under which the sending was qualified.

B. Qualification of a sending site shall demonstrate that the site contains a public benefit such that preservation of that benefit by transferring residential development rights to another site is in the public interest. A sending site must meet at least one of the following criteria:

1. Designation in the King County Comprehensive Plan or a functional plan as an agricultural production district or zoned A;

2. Designation in the King County Comprehensive Plan or a functional plan as forest production district or zoned F;

3. Designation in the King County Comprehensive Plan as rural residential, zoned RA-2.5, RA-5 or RA-10, and meeting the definition in RCW 84.34.020 of open space, farm and agricultural land, or timber land;

4. Designation in the King County Comprehensive Plan, or a functional plan as a proposed rural or resource area regional trail or rural or resource area open space site, through either:

a. designation of a specific site; or

b. identification of proposed rural or resource area regional trails or rural or resource area open space sites which meet adopted standards and criteria, and for rural or resource area open space sites, meet the definition of open space land, as defined in RCW 84.34.020;

5. Identification as habitat for federal listed endangered or threatened species in a written determination by the King County department of natural resources and parks, Washington state Department of Fish and Wildlife, United States Fish and Wildlife Services or a federally recognized tribe that the sending site is appropriate for preservation or acquisition; or

6. Designation in the King County Comprehensive Plan as urban separator and zoned R-1.

C. For the purposes of the TDR program, acquisition means obtaining fee simple rights in real property, or a less than a fee simple right in a form that preserves in perpetuity the public benefit supporting the designation or qualification of the property as a sending site.

D. If a sending site has any outstanding code violations, the person responsible for code compliance should resolve these violations, including any required abatement, restoration, or payment of civil penalties, before a TDR sending site may be qualified by the interagency review committee created under K.C.C. 21A.37.070. However, the interagency may qualify and certify a TDR sending site with outstanding code violations if the person responsible for code compliance has made a good faith effort to resolve the violations and the proposal is in the public interest.

E. For lots on which the entire lot or a portion of the lot has been cleared or graded in accordance with a Class II, III or IV special forest practice as defined in chapter 76.09 RCW within the six years prior to application as a TDR sending site, the applicant must provide an affidavit of compliance with the reforestation requirements of the Forest Practices Act, and any additional reforestation conditions of their forest practice permit. Lots on which the entire lot or a portion of the lot has been cleared or graded without any required forest practices or county authorization, shall be not qualified or certified as a TDR sending site for six years unless the six-year moratorium on development applications has been lifted or waived or the landowner has a reforestation plan approved by the state Department of Natural Resources and King County.

SECTION 12. Ordinance 13274, Section 5, as amended, and K.C.C. 21A.37.030, are each hereby amended to read as follows:

A. Receiving sites shall be:

1. King County unincorporated urban sites, except as limited in subsections C and D. of this section, zoned R-4 through R-48, NB, CB, RB or O, or any combination thereof. The sites may also be within potential annexation areas established under the countywide planning policies; or

2. Cities where new growth is or will be encouraged under the Growth Management Act and the countywide planning policies and where facilities and services exist or where public investments in facilities and services will be made, or

3. RA-2.5 zoned parcels, except as limited in subsection E. of this section, that meet the criteria listed in this subsection A.3. may receive development rights transferred from rural forest focus areas, and accordingly may be subdivided and developed at a

maximum density of one dwelling per two and one-half acres. Increased density allowed through the designation of rural receiving areas:

a. must be eligible to be served by domestic Group A public water service;

b. must be located within one-quarter mile of an existing predominant pattern of rural lots smaller than five acres in size;

c. must not adversely impact regionally or locally significant resource areas or critical areas;

d. must not require public services and facilities to be extended to create or encourage a new pattern of smaller lots;

e. must not be located within rural forest focus areas; and

f. must not be located on Vashon Island or Maury Island.

B. Except as provided in this chapter, development of an unincorporated King County receiving site shall remain subject to all zoning code provisions for the base zone, except TDR receiving site developments shall comply with dimensional standards of the zone with a base density most closely comparable to the total approved density of the TDR receiving site development.

C. An unincorporated King County receiving site may accept development rights from one or more sending sites, as follows:

1. For short subdivisions, up to the maximum density permitted under K.C.C. 21A.12.030 and 21A.12.040; and

2. For formal subdivisions, only as authorized in a subarea study that includes a comprehensive analysis of the impacts of receiving development rights.

D. Property located within the outer boundaries of the Noise Remedy Areas as identified by the Seattle-Tacoma International Airport may not accept development rights.

E. Property located within the shoreline jurisdiction or located on Vashon Island or Maury Island may not accept development rights.

SECTION 13. Ordinance 13733, Section 10, as amended, and K.C.C. 21A.37.110 are hereby amended to read as follows:

A. The TDR bank may purchase development rights from qualified sending sites at prices not to exceed fair market value and to sell development rights at prices not less than fair market value. The TDR bank may accept donations of development rights from qualified TDR sending sites.

B. The TDR bank may purchase a conservation easement only if the property subject to the conservation easement is qualified as a sending site as evidenced by a TDR qualification report, the conservation easement restricts development of the sending site in the manner required by K.C.C. 21A.37.060 and the development rights generated by encumbering the sending site with the conservation easement are issued to the TDR bank at no additional cost.

C. ((~~If a conservation easement is acquired through a county park, open space, trail, agricultural, forestry or other natural resource acquisition program for a property that is qualified as a TDR sending site as evidenced by a TDR qualification report, any development rights generated by encumbering the sending site with the conservation easement may be issued to the TDR bank so long as there is no additional cost for the~~

~~development rights.~~)) Any development rights, generated by encumbering property with a conservation easement, may be issued to the TDR bank if:

1.a. The conservation easement is acquired through a county park, open space, trail, agricultural, forestry or other natural resource acquisition program for a property that is qualified as a TDR sending site as evidenced by a TDR qualification report; or

b. the property is acquired by the county with the intent of conveying the property encumbered by a reserved conservation easement. The number of development rights generated by this reserved conservation easement shall be determined by the TDR qualification report; and

2. Under either subsection C.1.a. or b. of this section, there will be no additional cost to the county for acquiring the development rights.

D. The TDR bank may use funds to facilitate development rights transfers. These expenditures may include, but are not limited to, establishing and maintaining internet web pages, marketing TDR receiving sites, procuring title reports and appraisals and reimbursing the costs incurred by the department of natural resources and parks, water and land resources division, or its successor, for administering the TDR bank fund and executing development rights purchases and sales.

E. The TDR bank fund may be used to cover the cost of providing staff support for identifying and qualifying sending and receiving sites, and the costs of providing staff support for the TDR interagency review committee.

F. Upon approval of the TDR executive board, proceeds from the sale of TDR bank development rights shall be available for acquisition of additional development rights and as amenity funds to facilitate interlocal TDR agreements with cities in King

County and for projects in receiving areas located in urban unincorporated King County. Amenity funds provided to a city from the sale of TDR bank development rights to that city are limited to one-third of the proceeds from the sale.

SECTION 14. Ordinance 13733, Section 14, as amended, and K.C.C. 21A.37.150 are each hereby amended to read as follows:

A. Expenditures by the county for amenities to facilitate development rights sales in cities shall be authorized by the TDR executive board during review of proposed interlocal agreements, and should be roughly proportionate to the value and number of development rights anticipated to be accepted in an incorporated receiving site pursuant to the controlling interlocal agreement, ((~~or in the unincorporated urban area,~~)) in accordance with K.C.C. 21A.37.040. Expenditures by the county to fund projects in receiving areas located in urban unincorporated King County shall be authorized by the TDR executive board and should be roughly proportionate to the value and number of development rights accepted in the unincorporated urban area.

B. The county shall not expend funds on TDR amenities in a city before execution of an interlocal agreement, except that:

1. The executive board may authorize up to twelve thousand dollars be spent by the county on TDR amenities before a development rights transfer for use at a receiving site or for the execution of an interlocal agreement if the TDR executive board recommends that the funds be spent based on a finding that the expenditure will expedite a proposed transfer of development rights or facilitate acceptance of a proposed transfer of development rights by the community around a proposed or established receiving site area;

2. King County may distribute the funds directly to a city if a scope of work, schedule and budget governing the use of the funds is mutually agreed to in writing by King County and the affected city. Such an agreement need not be in the form of an interlocal agreement; and

3. The funds may be used for project design renderings, engineering or other professional services performed by persons or entities selected from the King County approved architecture and engineering roster maintained by the department of finance or an affected city's approved architecture and engineering roster, or selected by an affected city through its procurements processes consistent with state law and city ordinances.

C. TDR amenities may include the acquisition, design or construction of public art, cultural and community facilities, parks, open space, trails, roads, parking, landscaping, sidewalks, other streetscape improvements, transit-related improvements or other improvements or programs that facilitate increased densities on or near receiving sites.

D. When King County funds amenities in whole or in part, the funding shall not commit the county to funding any additional amenities or improvements to existing or uncompleted amenities.

E. King County funding of amenities shall not exceed appropriations adopted by the council or funding authorized in interlocal agreements, whichever is less.

F. Public transportation amenities shall enhance the transportation system. These amenities may include capital improvements such as passenger and layover facilities, if the improvements are within a designated receiving area or within one thousand five hundred feet of a receiving site. These amenities may also include programs such as the

provision of security at passenger and layover facilities and programs that reduce the use of single occupant vehicles, including car sharing and bus pass programs.

G. Road fund amenities shall enhance the transportation system. These amenities may include capital improvements, such as streets, traffic signals, sidewalks, street landscaping, bicycle lanes and pedestrian overpasses, if the improvements are within a designated receiving site area or within one thousand five hundred feet of a receiving site. These amenities may also include programs that enhance the transportation system.

H. All amenity funding provided by King County to cities or to urban unincorporated receiving areas to facilitate the transfer of development rights shall be consistent with federal, state and local laws.

I. The timing and amounts of funds for amenities paid by King County to each participating city shall be determined in an adopted interlocal agreement. The interlocal agreement shall set forth the amount of funding to be provided by the county, an anticipated scope of work, work schedule and budget governing the use of the amenity funds. Except for the amount of funding to be provided by the county, these terms may be modified by written agreement between King County and the city. Such an agreement need not be in the form of an interlocal agreement. Such an agreement must be authorized by the TDR executive board. If amenity funds are paid to a city to operate a program, the interlocal agreement shall set the period during which the program is to be funded by King County.

J. A city that receives amenity funds from the county is responsible for using the funds for the purposes and according to the terms of the governing interlocal agreement.

K. To facilitate timely implementation of capital improvements or programs at the lowest possible cost, King County may make amenity payments as authorized in an interlocal agreement to a city before completion of the required improvements or implementation programs, as applicable. If all or part of the required improvements or implementation programs in an interlocal agreement to be paid for from King County funds are not completed by a city within five years from the date of the transfer of amenity funds, then, unless the funds have been used for substitute amenities by agreement of the city and King County, those funds, plus interest, shall be returned to King County and deposited into the originating amenity fund for reallocation to other TDR projects.

L. King County is not responsible for maintenance, operating and replacement costs associated with amenity capital improvements inside cities, unless expressly agreed to in an interlocal agreement.

SECTION 15. Ordinance 7889, Section 4, as amended, and K.C.C. 26.08.010 are each hereby repealed.

SECTION 16. **Severability.** If any provision of this ordinance its application to

any person or circumstance is held invalid, the remainder of the ordinance or the application of the provision other persons or circumstances is not affected.

Ordinance 18427 was introduced on 3/7/2016 and passed as amended by the Metropolitan King County Council on 12/5/2016, by the following vote:

Yes: 8 - Mr. von Reichbauer, Ms. Lambert, Mr. Dunn, Mr. McDermott, Mr. Dembowski, Mr. Upthegrove, Ms. Kohl-Welles and Ms. Balducci
No: 0
Excused: 1 - Mr. Gossett

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON

J. Joseph McDermott, Chair

ATTEST:

Melani Pedroza, Acting Clerk of the Council

RECEIVED
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CLERK
KING COUNTY COUNCIL

APPROVED this 13 day of DECEMBER, 2016.

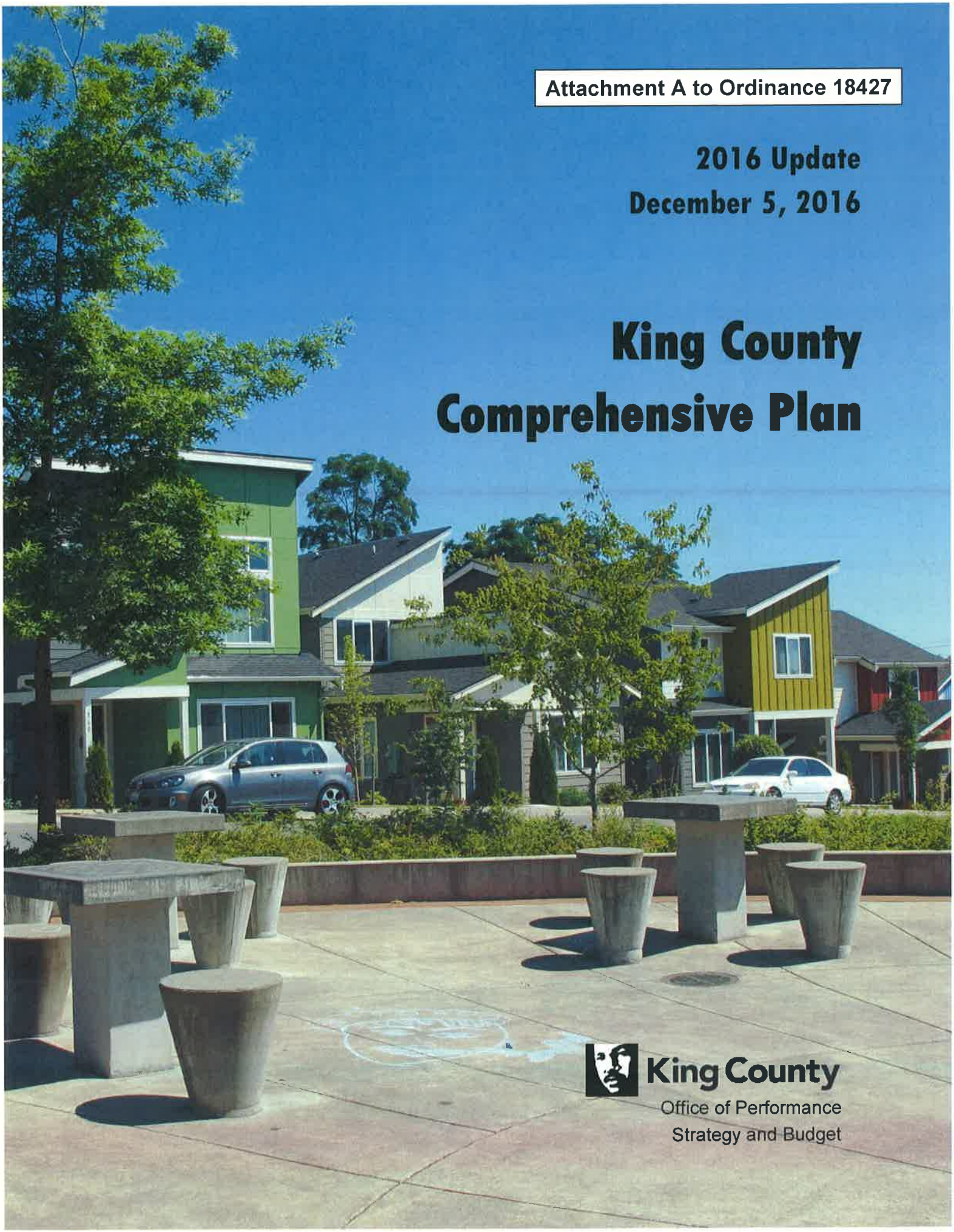
Dow Constantine, County Executive

Attachments: A. King County Comprehensive Plan-2016 Update, 12/5/16, B. Land Use and Zoning Amendments, 12/5/16, C. Tech App A Capital Facilities 11/22/16, D. Tech App B Housing, 11/22/16, E. Tech App C Transportation, 11/22/16, F. Tech App C1 2016 Transportation Needs Report, 11/22/16, G. Tech App C2 Regional Trails Needs Report, 11/22/16, H. Tech App D Growth Targets and the Urban Growth Area, 11/22/16, I. Tech App R Public Outreach, 11/22/16, K. Addendum to Vashon Town Plan

Attachment A to Ordinance 18427

2016 Update
December 5, 2016

King County Comprehensive Plan



King County
Office of Performance
Strategy and Budget

King County

December 2016

Dear King County Resident:

After more than two years of outreach, research and engagement with community members and stakeholders, the King County Council and King County Executive are pleased to present the adopted 2016 King County Comprehensive Plan.

The 2016 update is a major (every four year) review of the Comprehensive Plan. It builds on King County's 25 years of success in implementing the Growth Management Act. Since adoption of the first Comprehensive Plan in 1994, the vast majority of housing growth countywide – 96 percent – has occurred in urban areas. Building on this success, the 2016 plan now also responds to new critical challenges:

Equity and Social Justice. The 2016 Comprehensive Plan includes strong, specific language about how consideration of Equity and Social Justice will shape County actions, how we will move forward with affordable housing and human services goals, how we will work to ensure that undesirable land uses do not overburden historically underserved communities, and how all residents of King County will benefit from careful application of Equity and Social Justice principles when the County sites facilities, operates programs, or launches new initiatives.

Climate Change and Environmental Protection. The 2016 Comprehensive Plan incorporates key goals and policies from the County's 2015 Strategic Climate Action Plan. It demonstrates the County's commitment to climate action, with new policies on environmental and climate justice; more specific references to our efforts to reduce County greenhouse gas emissions through new technologies, such as all-electric battery buses; commitments to ongoing preservation of valuable open spaces; and development of a Green Building handbook and building codes.

Local Government Responsibilities. At its core, the Comprehensive Plan is a description of King County's role in the unincorporated areas. The 2016 Comprehensive Plan highlights this role and provides additional clarity about the County's responsibility as a local service provider to unincorporated residents through enhancements to policies and text throughout all chapters. At the same time, the adopted Comprehensive Plan describes the County's role as a regional service provider and a leader and convener on regional issues of concern.

Housing and Human Services. The 2016 Comprehensive Plan reflects the importance of serving those most in need by organizing policies related to affordable housing and human services into a new chapter. Language in the adopted Plan strengthens and clarifies these policies to reflect the County's commitment to help people who are experiencing homelessness, those at risk of displacement, and those in need of mental health and behavioral health services. The Plan also adds a new policy that calls for a regional approach to increasing the availability of affordable housing.

Local and Regional Planning. The adopted 2016 Comprehensive Plan complies with the State Growth Management Act and illustrates the County's continued commitment to protect rural lands from expansion of the urban growth area. The Comprehensive Plan also launches a new subarea planning program that will create more detailed, stakeholder-informed local plans across the entire unincorporated area.

Natural Resource Lands. The adopted 2016 Comprehensive Plan reaffirms King County's commitment to protecting our valuable forest and agricultural lands in accordance with the State Growth Management Act. The Comprehensive Plan links the production of local food and the proliferation of farmers markets to continued protection for our Agriculture Production Districts, which have remained in place for more than forty years. New policies in this update also encourage the use of Best Management Practices and sustainable farming activities to help protect the environment.

2015 marked the 25th anniversary of the passage of the Growth Management Act. This landmark legislation created a new planning approach in Washington State that sought to address the harmful impacts of uncoordinated and unplanned growth. The Growth Management Act requires jurisdictions to designate an urban growth area within which growth would be encouraged and outside of which growth could occur only if it was not urban in nature. It also requires the adoption of regulations to assure the conservation of agricultural, forest, and mineral resource lands of long-term significance as well as regulations to protect environmentally critical areas including wetlands, aquifer recharge areas, fish and wildlife habitat corridors, frequently flooded areas, and geologically hazardous areas. By almost any measure, King County has been successful in realizing these broad goals. Since adoption of the first Comprehensive Plan in 1994, the vast majority of housing growth countywide – 96 percent – has occurred in urban areas. And, through incorporations and annexations, more than 60 percent of the unincorporated urban area that existed in 1994 is now within cities, which continues to fulfill the goal of transitioning counties to serve as providers of rural and regional services. In Rural Areas and Natural Resource Lands, the County has preserved working farms and forests through a balanced strategy that includes regulations, incentives, and technical assistance, and this has led to a sustainable rate of development.

Looking forward, the State, local jurisdictions, and regional partners will soon be reviewing the required timelines for comprehensive plan updates and how that relates to timing of growth forecasts, Buildable Lands Reports, updates to the multicounty planning policies and growth allocations, and updates to countywide planning policies and growth targets. The County will be involved in this work and will determine how it affects our own Comprehensive Plan update cycle to ensure alignment with the broader growth management framework timelines. Review of the King County Comprehensive Plan update cycle will also evaluate scheduling major updates in odd calendar years, in consideration of the County's biennial budget cycle.

The adoption of the 2016 Comprehensive Plan marks yet another step of King County's ongoing success at balancing economic vitality and healthy neighborhoods with careful stewardship of our farms, forests, and open spaces. Together, we can ensure that that our region continues to manage growth effectively while protecting thriving rural and resource lands, and remain in compliance with the Growth Management Act.

Sincerely,

Rod Dembowski
Chair, Transportation, Economy and Environment Committee
King County Council

Dow Constantine
King County Executive

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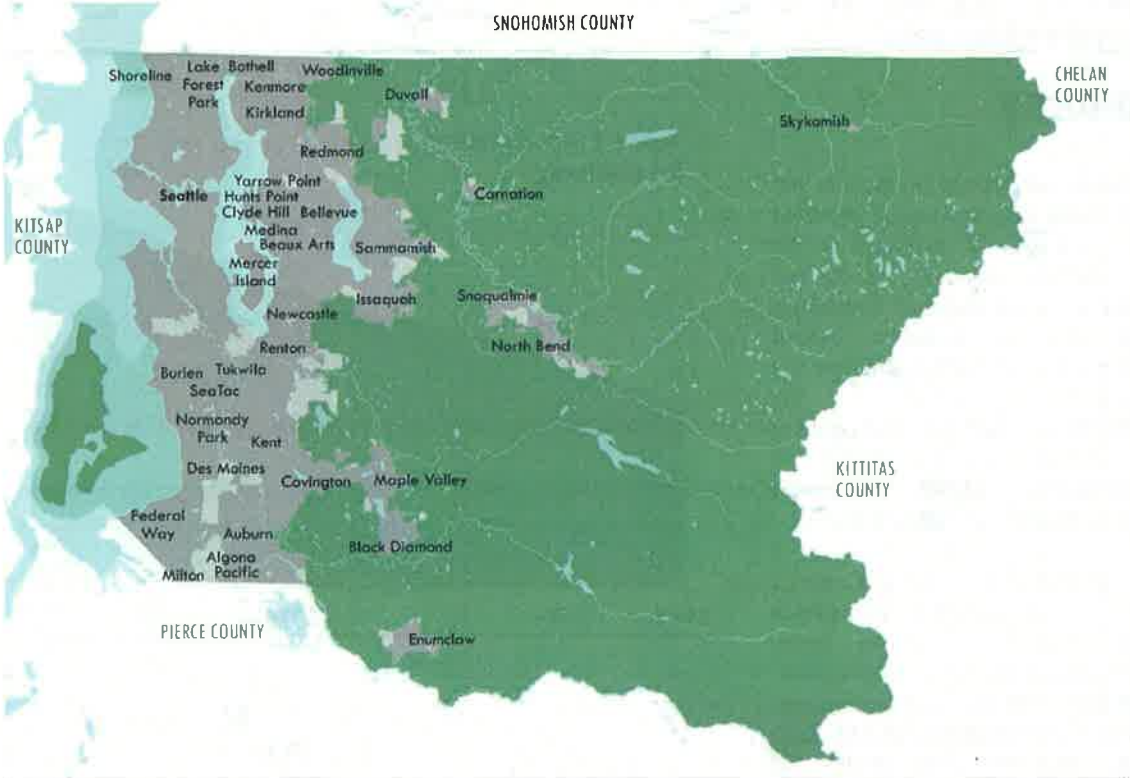
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EXECUTIVE SUMMARY

In 2015, King County was the **most populous county in Washington State** and the **13th most populous county in the nation**. Between 2015 and 2031, King County is targeted to **grow by 252,000 residents**.



The King County Comprehensive Plan is fundamental for directing and managing this anticipated growth. It contains policies guiding development and land use in unincorporated areas of the County, as well as service provision throughout the County and the region. Since the 1994 update, the Comprehensive Plan has worked in accordance with the Washington State Growth Management Act to protect resources and enhance quality of life. The Plan does this by emphasizing the protection of Critical Areas and Natural Resource Lands, protecting Rural Areas and rural character, and designating an Urban Growth Area where density and services should be concentrated. In addition, the Plan guides the County's work with its cities through the Countywide and Multicounty Planning Policies in central Puget Sound.

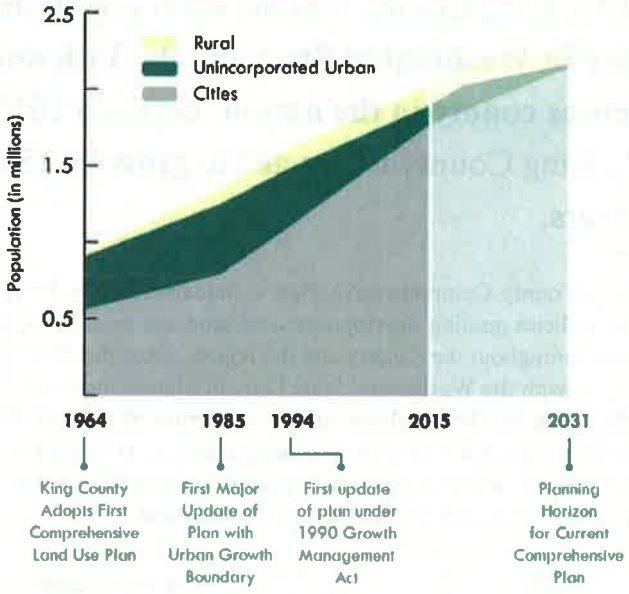


About King County

Demographics

According to most recent available data (2015), King County has an estimated population of **2.05 million people**. Approximately **94%** of King County's residents live in urban areas and **6%** in unincorporated Rural Areas and Natural Resource Lands.

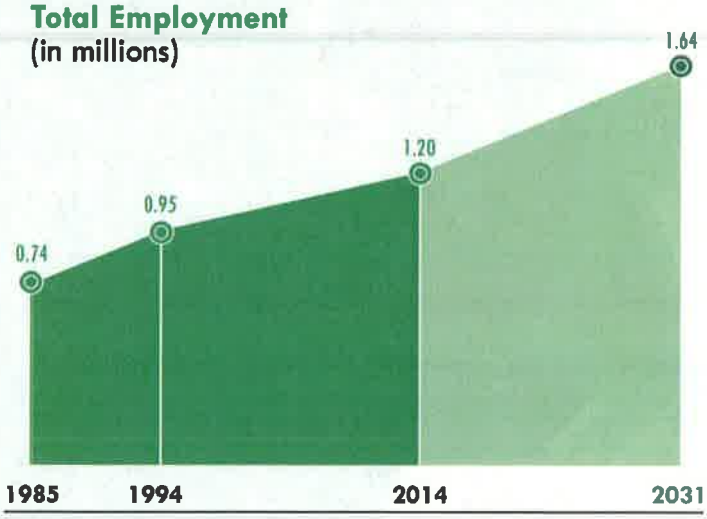
Over the past 20 years, King County has experienced a substantial 25% growth in its population. By 2031, King County is **expected to grow to a population of 2.3 million, adding just over 250,000 residents** to its overall population. Based on the Guiding Principles of the Comprehensive Plan, **95%** of this growth is targeted to be absorbed by cities and **5%** in unincorporated King County.



Economy

The substantial population growth that King County has experienced in recent years can largely be attributed to the area's thriving economy, which has fostered a massive influx of individuals adding to the County's overall workforce. King County comprises the majority of the Seattle-Bellevue-Tacoma metropolitan statistical area and consists of **approximately 70,000 businesses providing nearly 1.2 million jobs**.

The vast majority of King County's workforce is employed in the service sector, such as in the trade-transportation-utilities, professional-businesses services, and education-health services industries. Overall, King County **accounts for 50.3% of Washington's total payroll**.

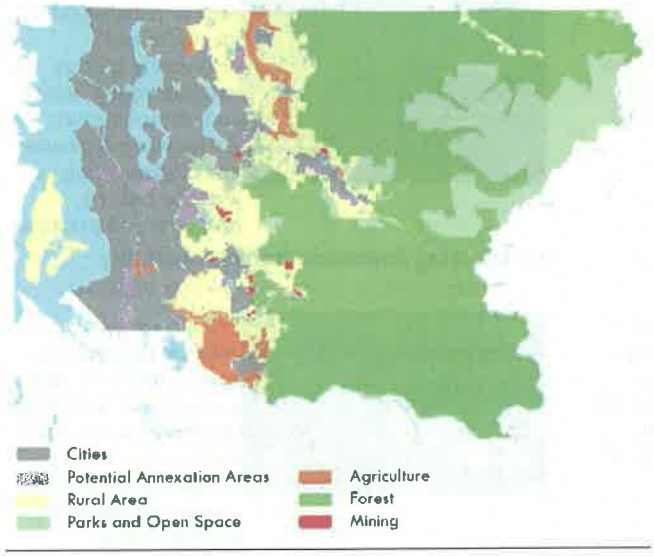


Geography



King County is characterized by beautiful scenery and geographic diversity, stretching from the Puget Sound in the west to the Cascade Crest in the east. There are **39 cities** in the county, ranging in size from the **205**-person town of Skykomish to the bustling metropolis of Seattle, with a population greater than **660,000**. In addition, King County has a variety of working farm- and forestlands, as well as a vast open space network. Numerous water bodies, including rivers, lakes, and streams, provide a key resources and create valuable land assets and unique ecosystems along coastlines and river corridors.

Land Use



King County's total land area is **2,130** square miles, accounting for 3% of all land in Washington State. Through careful zoning and development regulations, King County manages its land use in a manner that ensures a high quality of life for its residents. Growth management in King County is largely implemented by directing development toward the Urban Growth Area, while protecting existing Rural Areas, open spaces, and Natural Resource Land. This map offers a general snapshot of land use across the county, which shows a higher concentration of urban land uses located towards the western Puget Sound area and more rural and resource uses located in the central and eastern parts of the county.

Guiding Principles

Moving Towards a Sustainable King County

King County's Comprehensive Plan has long been based on a vision of the county as a livable area with healthy, thriving and dense urban communities; ample open space, forest and farm lands preserved for long-term use; a vibrant economy inclusive of numerous sectors; and a transportation system providing a variety of options. In addition, the Plan reflects the 14 goals of the Growth Management Act and the goals of the King County Strategic Plan. In 2015, King County adopted an update to its Strategic Plan, which aims to promote: **mobility; health and human services; economic vitality; safety and justice; accessible, affordable housing; a healthy environment; and efficient, accountable regional and local government**. The following principles, first adopted in the 2012 Comprehensive Plan, are updated to reflect these long-term goals and priorities.

1. Creating Sustainable Neighborhoods



Strive to promote sustainable neighborhoods and communities. Seek to ensure that the benefits and impacts of the county's activities are equitably distributed among all segments of the population.

2. Preserving & Maintaining Open Space and Natural Resource Lands



Pursue opportunities to preserve and maintain remaining high propriety forest, agriculture and other open space lands.

3. Directing Development Towards Existing Communities



Continue to support the reduction of sprawl by focusing growth and future development in the Urban Growth Area, consistent with adopted growth targets.

4. Providing a Variety of Transportation Choices



Continue to promote an efficient multimodal transportation system that provides residents with a range of transportation choices that respond to community needs and reduce impacts on the natural environment.

5. Addressing Health, Equity and Social and Environmental Justice



Seek to reduce health inequities and proactively address issues of equity, social and environmental justice when evaluating and implementing its land use policies, programs and practices.

6. Achieving Environmental Sustainability



Protect, restore and enhance the county's natural resources and environment, encourage sustainable agriculture and forestry, reduce climate pollution and prepare for the effects of climate change, including consideration of the inequities and disparities that may be caused by climate change.

New in the 2016 Plan

Major Four-Year Update

The 2016 update is a major four-year review of the Comprehensive Plan and, this year marks the 25th anniversary of the passage of the Growth Management Act. This landmark legislation requires jurisdictions to designate an urban growth area, within which growth would be encouraged, and adopt regulations to conserve resource land and environmentally sensitive areas. By almost any measure, King County has been successful in realizing the broad goals of the Growth Management Act. However, success has not been easy and, looking forward, the Comprehensive Plan needs to respond to new challenges, such as equitable access to opportunity, reducing carbon pollution and responding to climate impacts, addressing housing affordability and strengthening mobility. To address these, **the following updates are included in the 2016 Comprehensive Plan**.

Land Use Policy Amendments

- **Annexation policies revised to be more city-focused.** Creates incentives for annexation by promoting joint planning, encouraging use of city regulations and negotiating on transferable development rights in Potential Annexation Areas (PAAs) where there is an Interlocal Agreement, and revisiting PAA map and Countywide Planning Policies with cities. Amendments in *Chapter. 2.*
- **Rural Area policies strengthened to avoid incompatible uses.** Avoiding placement of primarily-urban serving facilities in the Rural Area and Natural Resource Lands (consistent with the Growth Management Act), and removal of the mining site conversion demonstration program. Amendments in *Chapters 2, 3, 9* and *12.*
- **Transfer of Development Rights policies enhanced for PAAs.** TDRs can be negotiated in PAAs with annexing cities, and directing amenity funding into unincorporated urban areas receiving TDRs. Amendments in *Chapters 2 and 3.*

Equity and Health Policy Amendments

- **Establishes a new chapter on Housing and Human Services.** The new *Chapter 4* consolidates and updates existing policies, and reflects new initiatives. It calls for new community development tools such as food innovation districts and residential local improvement districts, and commits to explore increasing housing density and affordable housing near businesses and transit.
- **Increases emphasis on Equity and Social Justice.** This includes further integration of Equity and Social Justice principles in policies *throughout the plan.*
- **Reflects current Public Health-related programs** – topics include smoke-free housing, healthy food retail, urban agriculture, the Local Food Initiative and farm-supportive programs. Amendments in *Chapters 2 and 3.*

Environmental Policy Amendments

- **Increased focus on Climate Change** in *multiple chapters.* Integration of relevant policies from the Strategic Climate Action Plan and the King County-Cities Climate Collaboration.
- **Stormwater Management Program policies updated.** Reflects the County's new municipal stormwater permit requirements, low impact development, sub-basin planning, infrastructure maintenance and retrofits and infrastructure mapping. Amendments in *Chapters 5* and *9.*
- **New policies on Crude Oil Transport by Rail**– these define the County's role and interests in this emerging policy issue. Amendments in *Chapter 9.*
- **Various environmental topics updated** – topics include noxious weeds, beaver exclusion and removal, enhanced landslide hazard policies, encouraging Green Building, and supporting a market-based price on carbon pollution. Amendments in *Chapters 3, 5, 7* and *9.*

Subarea Planning Program

- **Initiation of a new Community Service Area Planning Program.** Starting in 2016, this process will use the Community Service Areas as the planning geography. Amendments in *Chapter 11.*
- **Adopts the Skyway–West Hill Action Plan.** This is an addendum to existing 1994 West Hill Community Plan.

General Amendments

- Changes to make the plan more **user-friendly** such as this Executive Summary, a more navigable Table of Contents, and a new Workplan section in *Chapter 12* that identifies major work items that start after adoption in 2016.
- Other updates *throughout the plan* including revised data, refined definitions, minor formatting enhancements, and updated references to partnerships and implementation plans.

These amendments, along with others included in the following chapters, are intended to help the Comprehensive Plan remain responsive to the County's growth management challenges of today... and tomorrow.

Plan Elements

Chapters of the Comprehensive Plan

Chapter 1
Regional Growth Management Planning

King County's growth management policies and regulations are consistent and work in coordination with the Growth Management Act, Multicounty and Countywide Planning Policies, and other technical plans.

Chapter 2
Urban Communities

With the majority of King County residents living and working in the urban area, this chapter includes policies that guide urban development with the goal of creating healthy, sustainable communities.

Chapter 3
Rural Areas and Natural Resource Lands

King County's Rural Area and Natural Resource Lands are crucial for sustaining quality of life for county residents into the future. This chapter focuses on protecting these assets from urban development, promoting sustainable economic development and supporting rural communities.

Chapter 4
Housing and Human Services

The availability of adequate and affordable housing has become one of the most pressing issues facing King County today. This chapter contains policies regarding the provision of housing and services for all residents.

Chapter 5
Environment

King County's natural environment comprises various unique and valuable assets. This chapter contains King County's approach to environmental protection, conservation, restoration and sustainability.

Chapter 6
Shorelines

Shorelines require particular focus and management given both their immense value and fragility. This chapter contains King County's Shoreline Master Program, which aims to protect and conserve this unique natural resource.

Chapter 7
Parks, Open Space & Cultural Resources

This chapter addresses King County's approach to conserving and maintaining its expansive open space system, which includes numerous local and regional parks, and trails, and its cultural resources and historic properties.

Chapter 8
Transportation

Recognizing that availability of safe, accessible and efficient transportation options has significant implications for the quality of life of all county residents, this chapter addresses how King County will distribute investments equitably.

Chapter 9
Services, Facilities & Utilities

The provision of services, facilities and utilities should be concentrated in areas of density and at levels that can support existing and future demand. This chapter addresses how such crucial infrastructure should be developed.

Chapter 10
Economic Development

In its commitment to foster a prosperous, diverse and sustainable economy, the County recognizes that it must support actions and programs promote the success of both businesses and the workforce.

Chapter 11
Community Service Area Planning

This chapter includes policies that recognize the unique characteristics of particular unincorporated communities, provides significant historical context and describes the new subarea planning program.

Chapter 12
Implementation & Amendments

This chapter describes how the policies should be implemented and monitored, major actions that will occur to implement the plan, the procedure for amending the plan and the role of zoning in the planning process.

Appendices

Integral to the vision and goals of the Comprehensive Plan are the detailed inventories, forecasts, financial plans and Urban Growth Area analysis required by the Growth Management Act. A set of technical appendices are adopted as part of the plan to meet Growth Management Act requirements.

Regulations

The King County Comprehensive Plan is implemented through adopted regulations, including the King County zoning Code and other Code titles. All development must meet the requirements of the Code.



CHAPTER 1

REGIONAL GROWTH MANAGEMENT PLANNING

King County has some of the most beautiful scenery in the country, some of the most productive farmlands, and one of the most vibrant economies. The 2016 King County Comprehensive Plan establishes a vision that preserves this incredible diversity while continuing to acknowledge that residents want options as to where they live, work and play.

The Comprehensive Plan responds to requirements in state growth management planning laws that require jurisdictions to guide growth and development throughout the unincorporated areas of the county and establishes King County's position on major issues such as transportation, annexations, regional water supply and environmental protection.

I. About King County

King County Geography

King County, covering 2,130 square miles, is the size of the state of Delaware, but much more geographically diverse. It extends from Puget Sound in the west to 8,000-foot Mt. Daniel at the Cascade crest to the east. King County's various landforms include saltwater coastline, river floodplains, plateaus, slopes and mountains, punctuated with lakes and salmon streams. Lake Washington, covering 35 square miles, and Lake Sammamish with 8 square miles are the two largest bodies of fresh water. Vashon-Maury Island in Puget Sound and Mercer Island in Lake Washington provide different island environments.

King County Jurisdictions

In 1994, when King County's first Comprehensive Plan under the Growth Management Act was adopted, the county had 34 cities with 1,116,000 people. More than a third of annual new residential development was occurring in unincorporated areas. Since December 1994, five new cities have incorporated and numerous annexations have occurred, shifting more than 220,000 people into city limits. As of 2015, there are 39 cities ranging in size from Seattle with more than 660,000 people to Skykomish and Beaux Arts with fewer than 350 each. King County's 39 cities now cover 418 square miles, or 20% of the county's total land area. Unincorporated King County, the territory outside any city, now has about 253,000 people, or 13% of the county's population.

King County Demographics

In 2015, with more than 2,050,000 people, King County is the largest county in Washington State and the 13th largest in the nation. King County exhibits growing diversity: more than one-third of the population is now persons-of-color. As of 2010, 65% of the population is non-Hispanic white, 15% Asian or Pacific Islander, 7.7% African-American, 1% Native American and 8.9% Latino (2010 census data).

The number of housing units in King County is growing faster than its population. The 2010 Census counted more than 851,000 houses, apartment and condominium units, and mobile homes. The number of housing units has increased by 159,000 units (23%) since 1994. Household size has stabilized after declining in the 1970s and 1980s and is now estimated at 2.39 persons per household – the same as in 2000. A slight decline in household size is anticipated in coming years to about 2.26 in 2031.

King County Economy

King County is truly the economic engine of Washington State, with more than 1.2 million workers employed at nearly 80,000 business firms, excluding sole proprietorships. King County's $87 billion payroll is 52% of Washington State's $167 billion payroll and three-fourths of the four-county region's payroll.

King County has a cyclical economy, with booms and recessions. Since 2000, the region has had two major recessions, a boom, and recovery. The result is that as of 2010 the number of jobs was the same as it was in 2000: about 1.1 million. Since 2010, job growth has been substantial. Manufacturing employment remains important,

but, since 2006, growth has been in the trade, business services and information sectors. The economy has diversified from its traditional aerospace and resource bases to high tech, services and trade, both local and international. Given the county's complement of healthy, innovative businesses and its industrial diversification, its future unemployment rates should be lower than in the state and the nation.

II. King County Planning Framework

Prompted by residents concerned about sprawl, King County adopted its first comprehensive land use plan in 1964. Two decades later, the 1985 comprehensive land use plan was the first to identify an urban growth boundary line to limit urban growth to areas with the infrastructure needed for facilities and services. It also established policies to protect the Rural Area, conserve the natural environment and designate resource lands for long-term agriculture and forest production.

King County's first Comprehensive Plan under the State Growth Management Act was adopted in 1994. The Growth Management Act directs the state's most populous and fastest growing counties and their cities to prepare comprehensive land use plans that anticipate growth over a 20 year horizon and provide for it in a managed manner.

There is a hierarchy of growth management planning in the county with consistency between the levels. Some issues, such as the establishment of the Urban Growth Area, are best decided at the countywide level, while others, such as the amount of commercial space needed in a neighborhood, are best determined at the subarea plan level. At a broader scale, the Growth Management Act requires development of Multicounty Planning Policies by the counties of King, Kitsap, Pierce and Snohomish, as well as the development of Countywide Planning Policies by King County and its 39 cities. These documents are to be used solely for establishing a countywide framework from which county and city comprehensive plans are developed and adopted.

A. Public Participation in Planning

At the core of King County's planning is the goal of providing a high quality of life by actively soliciting public participation to help shape its plans, including strategic, comprehensive, functional, and subarea plans, and use these planning processes to strengthen communities.

RP-101 **King County shall strive to provide a high quality of life for all of its residents by working with cities, special purpose districts and residents to develop attractive, safe and accessible communities at appropriate urban and rural service levels; retain rural character and rural neighborhoods; support economic development; promote equity and social justice; preserve and maintain resource and open space lands; preserve the natural environment; and protect significant cultural and historic resources.**

RP-102 **King County shall actively solicit public participation from a wide variety of sources in its planning processes, including the development, amendment and implementation of its plans.**

RP-103 **King County shall seek comment from tribes during its planning processes.**

B. Multicounty Planning

The Puget Sound Regional Council is a regional planning agency with specific responsibilities under federal and state law for transportation planning, economic development and growth management. In April 2008, the general assembly of the Puget Sound Regional Council adopted VISION 2040—containing a numeric Regional Growth Strategy and the Multicounty Planning Policies—as an update to the earlier Vision 2020 regional plan. Multicounty Planning Policies address those issues that benefit from greater consistency across jurisdictions and those that are of a countywide or regional nature.

VISION 2040 is a regional strategy to accommodate the population and job growth expected by 2040 in the four-county Puget Sound region. As an integrated, long-range vision for maintaining a healthy region, promoting economic vitality, a healthy environment and well-being of people and communities, VISION 2040 provides clear direction to regional, county, and local governments on topics such as setting priorities for transportation investment, stimulating economic development, planning for open space, making city and town centers more suitable for transit and walking, and improving transportation safety and mobility. VISION 2040 promotes a triple-bottom line approach to decision-making that seeks to promote social, economic and environmental benefits in all projects, programs and plans.

As part of VISION 2040, the Regional Growth Strategy looks at how the region can distribute forecast growth, primarily within the designated urban growth area. The strategy is a description of a preferred pattern of urbanization that has been designed to minimize environmental impacts, support economic prosperity, promote adequate and affordable housing, improve mobility and make efficient use of existing infrastructure. The strategy provides regional guidance for counties, cities and towns to use as they develop new local population and employment growth targets and update local comprehensive plans.

RP-104 **King County's planning should include multicounty, countywide, and subarea levels of planning. Working with residents, special purpose districts and cities as planning partners, the county shall strive to balance the differing needs identified across or within plans at these geographic levels.**

C. Countywide Planning

State law requires that planning be coordinated on a countywide level, and that the county itself adopt a comprehensive plan to regulate those areas for which it has direct responsibility. The Countywide Planning Policies are required by the state Growth Management Act and provide a countywide framework to coordinate

local comprehensive plans and implement VISION 2040. King County and all cities and towns of King County are responsible for ensuring that their respective comprehensive plans are consistent with and implement the Countywide Planning Policies.

The Growth Management Planning Council is the formal body charged with developing the Countywide Planning Policies and then sending a recommendation to the King County Council for its review and approval. The Growth Management Planning Council is a representative body consisting of elected officials from King County, Seattle, the Sound Cities Association, and the City of Bellevue.[1]

The Countywide Planning Policies were first adopted by King County and ratified by the cities within the county in 1992. In response to VISION 2040, the county and the cities within the county approved a major overhaul and update to the Countywide Planning Policies in 2013. These revised Countywide Planning Policies implement the regional and countywide vision by providing a countywide framework to plan for job growth and new development, including housing, commercial, institutional and other non-residential uses. The Countywide Planning Policies provide broad direction to individual jurisdiction comprehensive plans, including the King County Comprehensive Plan. The goals of the policies include: promoting a compact and centers-focused growth pattern that uses land and infrastructure efficiently, protecting the Rural Area and Natural Resource Lands, providing affordable housing throughout the county and coordinating protection and restoration of the natural environment in King County.[2]

RP-105 **King County should work with the Growth Management Planning Council to adopt Countywide Planning Policies that support annual ratifications to allocated housing and employment growth targets for cities and the county.**

RP-106 **Except for Four-to-One proposals, King County shall not expand the Urban Growth Area prior to the Growth Management Planning Council taking action on the proposed expansion of the Urban Growth Area.**

RP-107 **King County shall not forward to the Growth Management Planning Council for its recommendation any proposed expansion of the Urban Growth Area unless the proposal was:**

- **a. Included in the scoping motion for a King County Comprehensive Plan update;**
- **b. An area zoning study of the proposal was included in the public review draft of a proposed King County Comprehensive Plan update; or**
- **c. Subjected to the hearing examiner process for site specific map amendments as contemplated by the King County Code.**

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[1] As amended by Ordinance 17687.

[2] As amended by Ordinance 17687.

RP-108 **King County shall implement the Countywide Planning Policies through its Comprehensive Plan and through Potential Annexation Area, preannexation and other interlocal agreements with its cities.**

D. Sub-Regional Planning and Partnerships

King County engages with partners in subareas of the county in sub-regional planning programs and partnerships that are related to the Comprehensive Plan. These activities are guided by the policies in the Comprehensive Plan as well as the other components of the overall King County Planning Framework noted in this chapter. Some key activities are noted below.

RP-109 **King County should establish and/or participate in regional and subregional partnerships to advance the objectives of the Comprehensive Plan, such as:**

- **a. The King County Cities Climate Collaboration (the "K4C") to confront climate change,**
- **b. The Puget Sound Regional Council's Regional Transit Oriented Development Program to advance transit-oriented development around transit stations and hubs,**
- **c. The Eastside Rail Corridor Regional Advisory Council, or successor groups, to support a vision that includes dual use (recreation trail and public transportation) and multiple objectives, consistent with its federal railbanked status, and**
- **d. The Regional Code Collaboration to collaborate on development of and updates to green building codes.**

These programs are described in greater detail, and where appropriate additional policies added, in the relevant subsequent chapters of the Comprehensive Plan.

E. Comprehensive Planning

The 2016 update is the fifth major review of the King County Comprehensive Plan. In accordance with Growth Management Act, it is designed to manage growth so that development is directed to designated urban areas and away from the Rural Area and Natural Resource Lands. The Growth Management Act also requires King County to designate and protect critical areas and commercially significant forestry, agriculture, and mining areas. The Growth Management Act requires a comprehensive plan to adhere to a set of fourteen goals and to include the following elements: land use, housing, capital facilities, utilities, rural, shorelines, and transportation. The King County Comprehensive Plan provides a legal framework for managing growth and making decisions about land use in unincorporated King County. Public and private agencies, property owners, developers, community groups and King County staff use the Comprehensive Plan in several ways.

The Comprehensive Plan provides guidance to county officials for decisions on proposals such as zoning changes and developments. It also gives the public direction on the county's position on proposed changes in land use or zoning, environmental regulations, or broader policy issues. The Plan also serves as a framework for other plans and regulations such as subarea plans and the King County Code that govern the location and density of land uses in unincorporated King County. The Plan provides a basis for decisions about public spending on facilities and services. Finally, the Plan presents other agencies, such as cities and special purpose districts, with King County's position on large-scale matters such as annexation, use of resource lands, environmental protection and others.

RP-110 **King County's planning should strengthen communities by addressing all the elements, resources and needs that make a community whole, including: economic growth and the built environment, environmental sustainability, regional and local mobility, health and human potential, and justice and safety.**

RP-111 **King County shall integrate mandated responses to the listings under the Endangered Species Act into future planning, economic development efforts and resource management programs to achieve, where consistent with the Endangered Species Act, a balance between environmental, social and economic goals and objectives. King County shall collaborate with others to conserve species and their habitats in order prevent future listings under the Endangered Species Act.**

RP-112 **King County shall incorporate approaches to reduce greenhouse gas emissions and prepare for the impacts of climate change into its land use and transportation planning, economic development efforts, and natural resource management.**

RP-113 **The Comprehensive Plan Land Use Map is adopted as part of this Plan. It depicts the Urban Growth Area, Urban Growth Area Boundary, Rural Area, Natural Resource Lands and other land uses. The Land Use Map at the end of this chapter generally represents the official Comprehensive Plan Land Use Map.**

Property Rights: The Growth Management Act requires cities and counties to balance a variety of goals in the implementation of growth management. One of the goals of Growth Management Act is to provide for the protection of private property rights in relation to the comprehensive planning process of the county. In support of this goal, King County undertakes a review process designed to assess its regulatory and administrative actions to avoid unconstitutional takings of private property.

RP-114 **King County shall continue its process of reviewing county regulatory and administrative actions so as to avoid unconstitutional takings of private property.**

F. Subarea Planning

Subarea plans, previously called community plans and basin plans, focus the policy direction of the Comprehensive Plan to a smaller geographic area. Smaller-scale subarea plans, known as area zoning and land use studies, per King County Code,[3] are focused on adoption or amendment of zoning maps on an area wide basis rather than the broad range of topics that are addressed in a full subarea plan. Examples of subarea plans and area zoning studies include the Duwamish Coalition Project, White Center Action Plan, Vashon Town Plan, Fall City Subarea Plan, the East Redmond Subarea Plan, and planning efforts within a watershed or basin. Development of subarea plans are guided by the following policy as well as other applicable policies of the Comprehensive Plan and provisions in the King County Code.[4]

RP-115 **Subarea plans, including area zoning studies, provide detailed land use plans for local geographic areas. Subarea plans implement and shall be elements of the King County Comprehensive Plan and shall be consistent with the Plan's policies, development regulations and Land Use Map. The subarea plans should be consistent with functional plans' facility and service standards. The subarea plans may include, but are not limited to:**

- **a. Identification of policies in the Comprehensive Plan that apply to the subarea;**
- **b. Review and update of applicable community plan policies;**
- **c. Specific land uses and implementing zoning, consistent with the Comprehensive Plan;**
- **d. Identification of the boundaries of Unincorporated Activity Centers and Rural Towns;**
- **e. Recommendations for the establishment of new Unincorporated Activity Centers, Community and Neighborhood Business Centers, if appropriate;**
- **f. Recommendations for additional Open Space designations and park sites;**
- **g. Recommendations for capital improvements, the means and schedule for providing them and amendments to functional plans to support planned land uses;**
- **h. Resolution of land use and service issues in Potential Annexation Areas;**
- **i. Identification of new issues that need resolution at a countywide level;**

[3] Per King County Code 20.08.030-Area Zoning

[4] Per King County Code 20.08.060-Subarea plan

j. **Identification of all necessary implementing measures needed to carry out the plan;**

k. **Specific land uses and zoning that encourage healthy, livable communities by promoting physical activity of walking and bicycling; and**

l. **Identification of locations and conditions for special overlay districts.**

The passage of Ordinance 17319 and 17415 in 2011 replaced the Unincorporated Area Councils with the Community Service Area geography. As described more fully in Chapter 11, Community Service Area Planning, this geography will be used as the guiding structure for subarea planning starting in 2015.

To the extent practicable, subarea plans in unincorporated King County should be developed in close coordination between the community and county staff that may have a lead or partial role in implementing the plans to ensure clearer expectations on how and whether community recommendations in a subarea plan are feasible for implementation and within what type of timeframe. This type of coordination, supported by the financial analysis noted in the following policy, is critical to all subarea and functional plans in order to evaluate the resources required and the time frame necessary for full implementation. Plan alternatives and costs should be clearly understood and plans should be financially achievable.

RP-116 **King County should identify the financial costs and public benefits of proposed subarea and functional plans prior to adoption to ensure that implementation can be appropriately prioritized.**

In addition to subarea plans and area zoning and land use studies, King County's land use planning also includes other planning processes. These include Comprehensive Plan policy directed subarea studies, such as the establishment of new community business centers, adjusting Rural Town boundaries, or assessing the feasibility of upzoning in urban unincorporated areas. Subarea studies are focused on specific areas of the County, but do not look at the range of issues that a subarea plan would include. In some cases, an area zoning and land use study may suffice to meet the requirements of the policies. In addition, there are Site Specific Land Use Amendments[5] and Zone Reclassifications,[6] which are site specific processes that involve County staff review and recommendations, a public hearing and recommendation by a Hearing Examiner and a decision by County Council. These must be consistent with the Comprehensive Plan or proposed with amendments during the Plan update process.

G. Functional Planning

Functional plans are detailed plans for facilities and services and also include action plans and programs for other governmental activities. Some functional plans are operational or programmatic and guide daily

[5] Per King County Code 20.08.170-Site Specific Land Use Amendments

[6] Per King County Code 20.08.160-Reclassification

management decisions. Others include specific details of facility design and location. Plans that guide specific siting of facilities must be consistent with the Comprehensive Plan. Functional plans are prepared by King County, independent special purpose districts or other public and private agencies. Examples of functional plans in King County include: the Strategic Climate Action Plan, Juvenile Justice Operational Master Plan, Open Space Plan, Regional Wastewater Services Plan, Strategic Plan for Road Services, and Strategic Plan for Public Transportation.

Capital improvements are important components of functional plans. Capital facilities and spending on improvements and new facilities are closely linked to availability of funds. Functional plans must identify costs and services of needed facilities and distinguish between improvements needed for new growth verses those needed to support existing public health and welfare needs.

RP-117 **Functional plans for facilities and services should:**

- **a. Be consistent with the Comprehensive Plan and subarea and neighborhood plans;**
- **b. Define required service levels that are appropriate for the Urban Growth Area, Rural Area and Natural Resource Lands;**
- **c. Provide standards for location, design and operation of public facilities and services;**
- **d. Specify adequate, stable and equitable methods of pay for public facilities and services;**
- **e. Be the basis for scheduling needed facilities and services through capital improvement programs; and**
- **f. Plan for maintenance of existing facilities.**

RP-118 **Existing functional plans that have not been adopted as part of this Comprehensive Plan shall remain in effect and continue as official county policy until reviewed and revised to be consistent with the Comprehensive Plan, or until repealed or replaced. In case of conflict or inconsistency between applicable policies in existing community and functional plans and the Comprehensive Plan, the Comprehensive Plan shall govern.**

RP-119 **King County shall prepare functional plans to identify countywide facility and service needs and define ways to fund these consistent with the King County Comprehensive Plan. Independent special purpose districts and other public agencies also prepare functional plans that should be considered by King County.**

H. Comprehensive Plan Review and Amendment

The Growth Management Act allows local comprehensive plan amendments to be considered once each year. In King County, those annual amendments allow technical changes only, except for once every four years. Then, during the "Four-Year Cycle review process," substantive changes to policies, land use designations and the Urban Growth Area boundary can be proposed and adopted. These provisions are detailed in King County Code Title 20.18. Additional information and policies are found in Chapter 12, Implementation, Amendments and Evaluation.

As part of its review of the Comprehensive Plan, King County, together with its cities, published the 2007 King County Buildable Lands Report and updated it in 2014. Ratified in 2015, the report fulfills the requirements of the Growth Management Act for the county and its cities to evaluate every eight years whether there is sufficient suitable land to accommodate the projected countywide population. The Buildable Lands Report represents a mid-course check on achievement of Growth Management Act goals. The focus of the evaluation is on the designated urban areas of King County and growth targets for those areas as established in the Countywide Planning Policies.

Based on data from 2006 through 2011, the 2014 Buildable Lands Report evaluated the actual housing constructed, densities of new residential development, and the amount of actual land developed for commercial and industrial uses within the Urban Growth Area. Based on that data, it projected that there is a sufficient amount of land within the Urban Growth Area to accommodate housing, commercial and industrial uses through 2031 and beyond. Additional discussion and policies can be found in Chapter 12, Implementation, Amendments and Evaluation.

Docket Request Process: Another key element of the Comprehensive Plan review and amendment process is the Docket Request Process. As required by the Growth Management Act, King County maintains a docket for recording comments on the King County Comprehensive Plan and associated development regulations. The process and requirements are detailed in the King County Code at 20.18.140. The County reviews all requests, communicates with docket submitters, and makes recommendations to the County Council by the first day of December. The docket report includes an executive recommendation for each item.

I. Managing Performance

As part of a growing national movement at all levels of government, King County is embracing performance measurement and management. Performance measurement is measuring and reporting performance data while performance management is using performance information to inform management decisions. Successful organizations rely on performance management to inform leadership about how well they are reaching their goals and where improvements can be made. With adoption of the King County Strategic Plan (*discussed below*), King County committed to the development of a unified and meaningful measurement framework to manage performance at all levels of government.

The policies in the King County Strategic Plan ensure that appropriate monitoring of the Countywide Planning Policies and Comprehensive Plan will contribute to this measurement framework. King County is carrying out performance management to:

- Ensure county goals are being met;
- Improve county services, where necessary;
- Serve as both a local and a regional government;
- Increase transparency with the public;
- Increase use of data for more informed public discussion and decision-making;
- Increase accountability at all levels of government; and
- Increase attention to effective performance measurement as called for in the King County Strategic Plan.

RP-120 **King County will measure and assess agency performance and the achievement of Countywide Planning Policies and Comprehensive Plan goals.**

RP-121 **Using best management practices, King County shall develop assessment and review tools to ensure that health, equity, social and environmental justice impacts are considered in the development, implementation and funding of county projects and programs.**

Additional information and provisions related to monitoring can be found in Chapter 12, Implementation, Amendments and Evaluation.

J. King County Strategic Plan

In 2010, the King County Council adopted the "King County Strategic Plan, 2010-2014: Working Together for One King County" through Ordinance 16897. The Strategic Plan was developed to serve as the framework for countywide priority setting, business planning, budget development, resource allocation, and leadership and managerial accountability. The Strategic Plan represented a significant countywide effort that obligated all departments and agencies to work together as a single county government.

In 2015, the King County Council passed Motion 14317, which adopted new goals and initiated an update of the Strategic Plan. Motion 14317 outlines goals and guiding principles that address topics in the Growth Management Act and other locally-defined priorities. These are as follows:

King County's Goals

- *Mobility:* Deliver a seamless network of transportation options to get people where they need to go, when they need to get there.

- *Health and Human Services:* Improve the health and well-being of all people in the community.
- *Economic Vitality:* Increase access to family wage job opportunities throughout the county.
- *Safety and Justice:* Provide for a safe and just community through proactive law enforcement and an accessible and fair justice system, while implementing alternatives to divert people from the criminal justice system.
- *Accessible, Affordable Housing:* Increase access to quality housing that is affordable to all.
- *Healthy Environment:* Preserve open space and rural character while addressing climate change.
- *Efficient, Accountable Regional and Local Government:* Ensure that County government operates efficiently and effectively and is accountable to the public.

Guiding Principles that Direct our Efforts

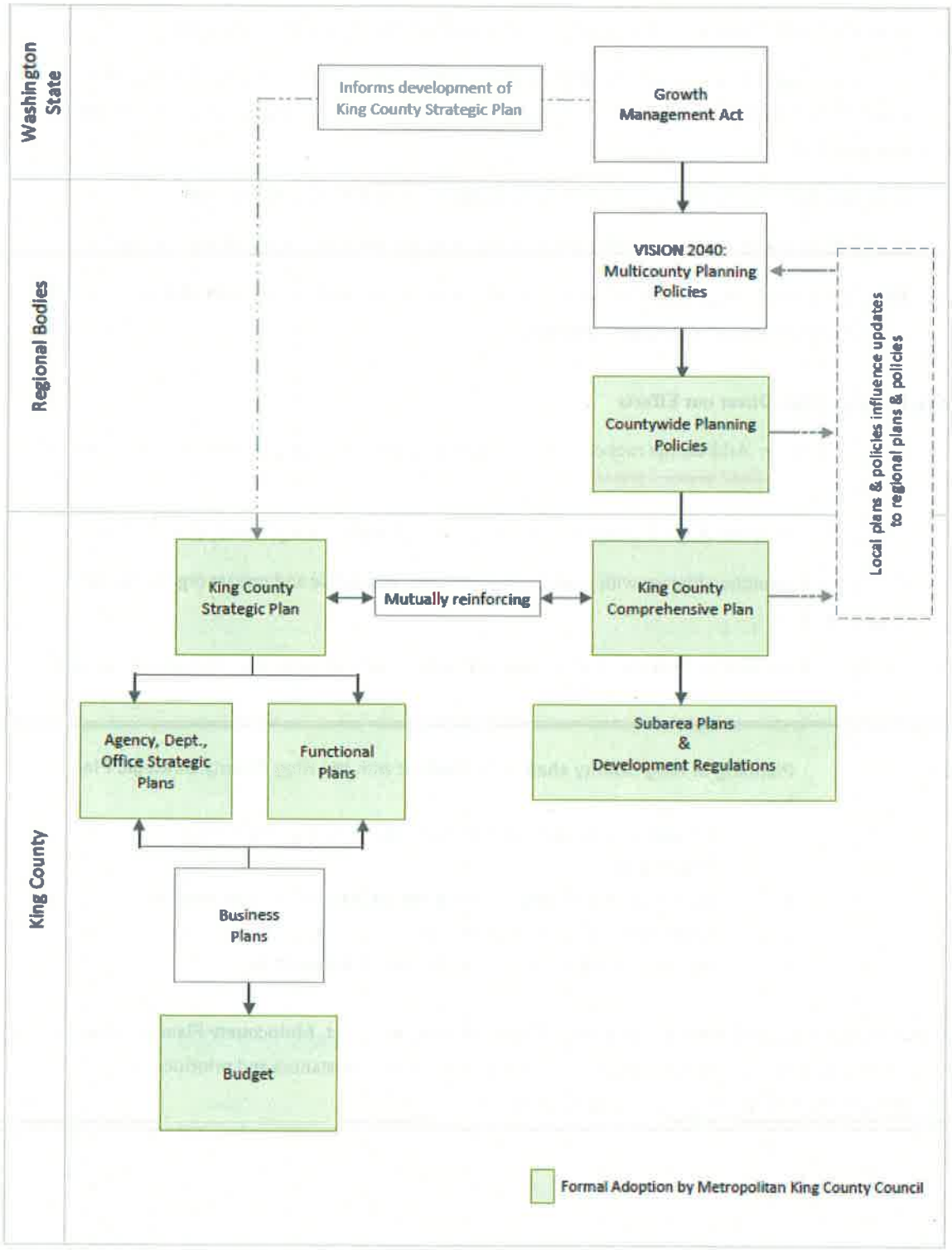
- *Equitable and Fair:* Address the root causes of inequities to provide for equal access to opportunities for all.
- *Financially Sustainable:* Align funding, policy and operational goals of King County government.
- *Regionally Collaborative:* Engage with partners, stakeholders, and public and private organizations to achieve goals.
- *Quality Local Government:* Provide effective, efficient local governance and services to unincorporated areas.

RP-122 **Planning in King County shall be consistent with the King County Strategic Plan by:**

a. Encouraging vibrant, economically thriving and sustainable communities;
b. Enhancing the county's natural resources and the environment;
c. Supporting safe communities; and
d. Providing equitable opportunities for all individuals.

These planning processes and structures respond to Growth Management Act, Multicounty Planning Policy, Countywide Planning Policy requirements and goals and reflect local circumstances and priorities. This complex framework is illustrated in the following graphic.

Figure: Planning Hierarchy Relationship to Growth Management Planning



III. King County Guiding Principles

The Comprehensive Plan is based on the principles of creating sustainable neighborhoods, preserving open space, farmland, and rural communities, directing development toward existing communities, and providing a variety of transportation choices. These **guiding principles** are consistent with the Washington State Growth Management Act and guide funding decisions, creation and operation of programs and projects, and how the County interacts with local, state and federal agencies. The impact of implementing these principles has been to:

- create higher urban densities by directing 96% of the growth into the urban cores of the region (Urban Growth Area),
- preserve irreplaceable resource lands, parks and critical areas,
- improve mobility by making transit service more accessible,
- sustain a vibrant economy,
- serve in the capacity of both a local and a regional government,
- improve water quality and manage stormwater runoff,
- improve air quality and particulate emissions, and
- reduce per-capita greenhouse gas emissions.

Guiding Principles

A. Creating Sustainable Neighborhoods

Neighborhoods are the backbone of any community. Creating sustainable neighborhoods may mean using incentives, programs or regulations to help create new neighborhoods, and support existing neighborhoods. Encouraging mixed land use and making access to jobs, shopping, and schools easier establishes the cohesiveness of a neighborhood. Having opportunities for physical activity and providing for people, if they choose, to age in place and remain in their neighborhood as their lifestyle changes or they face changing physical capabilities establishes the stability of a neighborhood. All of these factors contribute to creating a sustainable neighborhood.

Sustainability of a neighborhood also relates to the impact the neighborhood has on the environment. Incorporation of sustainable development practices into the design, construction and maintenance of the neighborhood can reduce greenhouse gas emissions, reduce pollution, reduce the use of natural resources, reduce energy and other maintenance costs, and enhance property values.

RP-201 **In its policies and regulations, King County shall strive to promote sustainable neighborhoods and communities. King County shall seek to ensure that the benefits and impacts of the county's activities are equitably distributed among all segments of the population.**

B. Preserving and Maintaining Open Space and Natural Resource Lands

The people of King County have long recognized that open space lands are essential to what makes this county unique. Since the inception of the Countywide Planning Policies, preserving open space, including enhancing working resource lands such as farmlands and forests, has been a priority of the County and its 39 cities. It is a cornerstone of the Growth Management Act.

The Growth Management Act requires the County and its cities to form linkages between and within population centers with lands useful for recreation, trails, wildlife habitat and connection of critical areas. To fulfill that mandate, King County operates a regional open space system consisting of parks, trails, natural areas, working resource lands, and flood hazard management lands. These open spaces provide multiple benefits and functions, including visual variety and relief from developed areas, protection of environmental and ecological processes, provision of wildlife habitat, and opportunities for outdoor recreation. However, preserving open space requires careful planning and management to ensure compatibility and long-term viability of these benefits and functions.

RP-202 **King County shall pursue opportunities to preserve and maintain remaining high-priority forest, agriculture and other open space lands.**

C. Directing Development Toward Existing Communities

Beginning in the 1940s, a sprawling pattern of low-density development emerged in King County. This sprawl resulted in the accelerated conversion of forests and farms to subdivisions and made it increasingly expensive to provide water, schools, sewer connections, streets, and other services. In addition, zoning codes tended to separate the differing types of land uses, with jobs and stores in one location, homes in another, and schools and parks in yet another.

The separate land uses were served by a roadway system of wide streets, with infrequent crosswalks, designed to accommodate cars, but not people. This pattern did not support using transit, bicycling, or walking to meet daily transportation needs, thus leading to an overburdening of the roadway system and a loss of regional and personal mobility. Low-density patterns that emerged relied on driving alone for many trips, contributing to persistent air pollution problems and increasing greenhouse gas emissions.

Reducing sprawl by focusing development into existing urban areas is one of the statutory goals of the state's Growth Management Act. To achieve that goal, steering growth to already developed communities (both within urban areas and, at much smaller scales in Rural Areas and Natural Resource Lands, in a system of central

places) with existing infrastructure and services can result in (1) protecting Rural Areas, (2) conserving natural resources, and (3) providing more economical and equitable services and facilities.

This broader approach does not mean that all new urban development will be high-density. In many cases, existing moderate-density locations, especially single-family neighborhoods, will not significantly change. Rather, King County will work to better integrate the locations where people work, shop, live, and play in a manner that uses public and private resources more efficiently.

RP-203 **King County shall continue to support the reduction of sprawl by focusing growth and future development in the Urban Growth Area, consistent with adopted growth targets.**

D. Providing a Variety of Transportation Choices

Transportation is critically important to King County and the surrounding region, facilitating access to jobs, education, services, recreation, and housing. King County plays a central role in the region's transportation sector, supporting a variety of motorized and nonmotorized travel modes, involving ground, air, and marine transportation. The county has direct responsibility for (1) the unincorporated area road network, (2) transit services and facilities throughout the county, (3) operation of the King County International Airport and (4) operation of passenger-only ferry service to Vashon Island and West Seattle. King County's services and facilities affect not only the local bus passenger but the jumbo airliner loaded with cargo and bound for destinations overseas.

The ability to access various transportation modes has a profound effect on quality of life for this county's residents and the vitality of its economy. The county's transportation system must be designed, operated and maintained in a manner that (1) provides access to mobility options for a wide range of users, including historically disadvantaged populations, (2) contributes to safe communities, (3) reduces impacts on the county's natural resources and environment, and (4) fosters a vibrant community.

RP-204 **King County shall continue to promote an efficient multimodal transportation system that provides residents with a range of transportation choices that respond to community needs and reduce impacts on the natural environment.**

E. Addressing Health, Equity, and Social and Environmental Justice

Despite broad economic and social gains in society and in this country in recent history, inequities exist and continue to persist for significant segments of the population—particularly for communities of color and people living in poverty—across the continuum of measures of social and economic health and well-being. In some cases, inequities are worsening over time. King County is not immune to national trends and statistics, despite its location in the relatively prosperous Puget Sound area. In the United States and in King County, children and adults who live at the bottom of the social and economic ladder face life threatening and debilitating conditions,

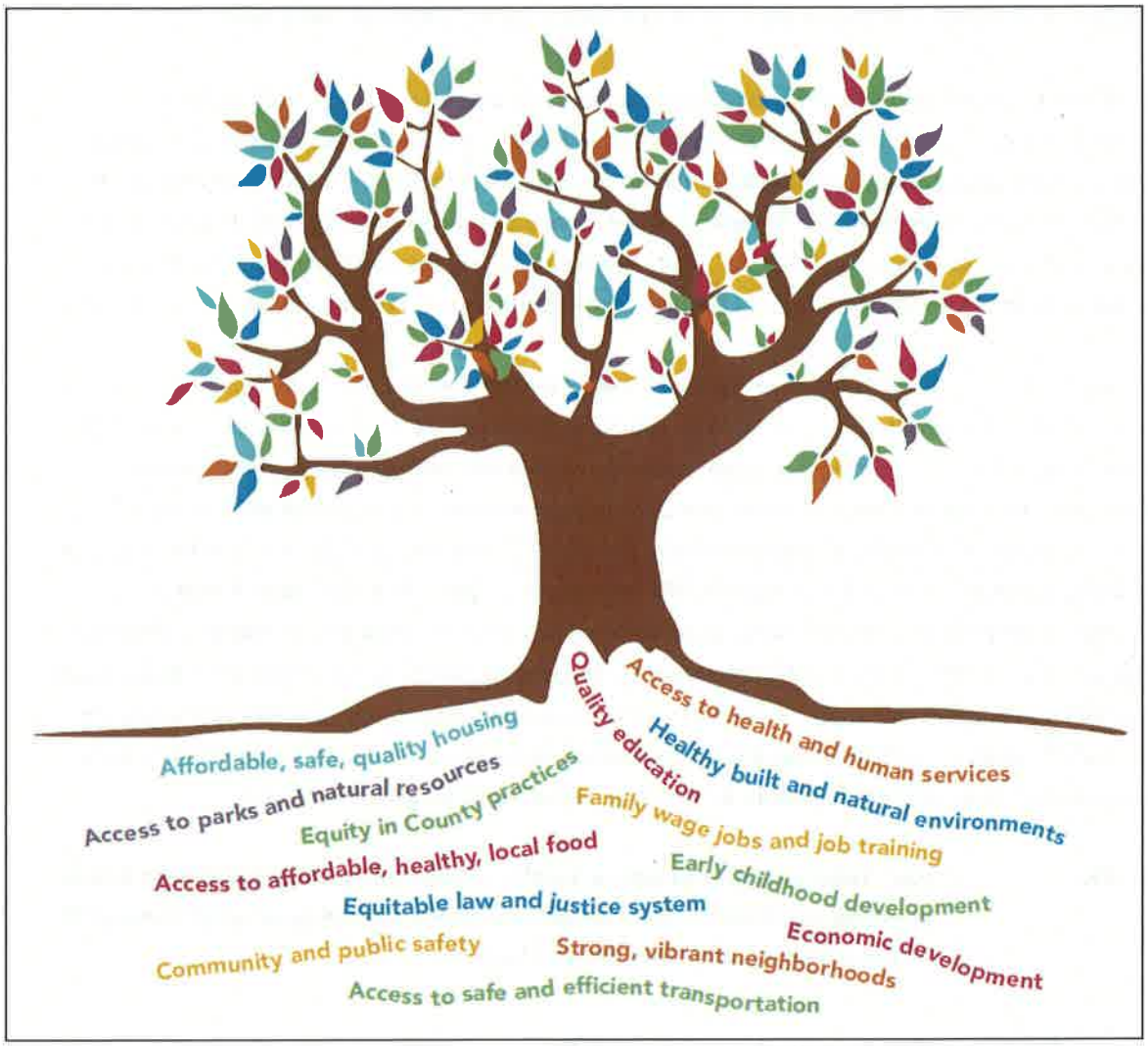
and lack access to opportunities, far more often than those in the middle, who in turn are more at risk than those at the top.

On average, people of color and people living in poverty have lower levels of access to quality education; are more likely to be unemployed or underemployed; are more likely to pay too much of their income for housing costs; and are more likely to experience adverse health outcomes, such as obesity, diabetes, or asthma, that can have the effect of reducing life expectancy. These challenges affect specific communities and, in turn, the entire region, resulting in a number of adverse socioeconomic consequences, including, for example, unfilled high-skilled jobs, higher levels of homelessness and higher health care costs.

Promoting economic opportunity for areas with fewer assets is a key goal of the Growth Management Act. In 2010, King County adopted Ordinance 16948, which defined and established the "Fair and Just" principle in the County's Strategic Plan. This transformed the work on equity and social justice from an initiative to an integrated effort that intentionally applies this principle to all work in order to achieve equitable opportunities for all people and communities.

A key component of this ordinance was defining the "Determinants of Equity," which are the social, economic, geographic, political and physical environment conditions in which people in the county are born, grow, live, work and age that lead to a just and thriving society. Access to the determinants of equity is necessary to have equity for all people regardless of race, class, gender or language spoken. Inequities are created when barriers exist that prevent individuals and communities from accessing these conditions and reaching their full potential.

Figure: Determinants of Equity



There is a clear relationship between the majority of the Determinants of Equity and the long-range planning role of the King County Comprehensive Plan. Land use patterns and transportation investments play key roles in making communities healthier and more equitable. Well-planned neighborhoods have features such as connected street networks, nearby shopping, walking paths, and transit service. Access to healthy food and the protection of agricultural lands affect the rate of obesity, food insecurity and malnutrition. These amenities reduce dependence on cars, increase opportunities to be physically active, decrease the likelihood to be overweight, improve air quality, and create opportunities for residents to access jobs, services and other key destinations that provide a path toward a higher quality of life.

As noted previously, the Comprehensive Plan plays multiple roles related to land use planning – a countywide collaborative role in how growth is accommodated in the county and region, and a local land use regulatory role

for how growth occurs in unincorporated areas. This dual role is important to recognize given the geographic distribution of communities that are the focus of the County's Equity and Social Justice work.

King County is committed to working to reduce inequities and address concerns of social justice by incorporating the values of the county's Equity and Social Justice work into the daily practice of developing policies and programs, making funding decisions and delivering services. Further, King County will identify and address the conditions at the root of disparities, engage communities to have a strong voice in shaping their future, and raise and sustain the visibility of Equity and Social Justice. The goal is to start by focusing on prevention and addressing the fundamental causes of the inequities in order to have a greater overall impact.

In order to achieve this, the County uses the Equity Impact Review Tool as a process to identify, evaluate and communicate the potential equity impact – both positive and negative – of a policy, program, or service. The Equity Impact Review Tool merges empirical (quantitative) data and community engagement findings (qualitative) to inform planning, decision-making and implementation of actions which affect equity in King County. Data are developed and compiled through a number of efforts, and published in a number of sources, including King County's January 2015 report, *The Determinants of Equity*; the King County Performance Dashboard; the public-private *Communities Count* initiative; and the Public Health Community Health Indicators Project. Data from these sources and others should be disaggregated when possible, combined with qualitative data from communities, and analyzed carefully to ensure that equity impacts are rigorously and holistically considered and advanced in the design and implementation of a proposed action (plan, policy and program development; service delivery; operations modification; capital programs and projects, etc.).

RP-205 **King County will seek to reduce health inequities and proactively address issues of equity, social and environmental justice when evaluating and implementing its land use policies, programs, and practices.**

F. Achieving Environmental Sustainability

King County can influence environmental sustainability through its land use and transportation policies and plans, investments in capital projects and facilities, economic development initiatives, and day-to-day operations. To be effective, sustainability actions need to be taken at many scales: in coordination with neighboring local governments, across county departments, and through the day-to-day actions of individual employees.

The county's approach to mitigation of and adaption to the effects of climate change have evolved over the last four years. Responding to climate change is an important element of the broader concept of environmental sustainability. This means meeting the needs of the current generation without compromising the capacity of the environment to support future generations.

RP-206 **King County will protect, restore and enhance its natural resources and environment, encourage sustainable agriculture and forestry, reduce climate pollution and prepare for the effects of climate change, including consideration of the inequities and disparities that may be caused by climate change.**

IV. Summary of the King County Comprehensive Plan

The Comprehensive Plan contains twelve chapters that address all of the requirements of the Growth Management Act, Countywide Planning Policies and Multicounty Planning Policies. They are as follows:

Chapter 1: Regional Growth Management Planning

The vision and goals of this Plan are based on the 14 planning goals specified in the Washington State Growth Management Act, the Countywide Planning Policies, the region's VISION 2040 and the values voiced by the residents of King County. The official King County Land Use Map is included in this chapter.

Chapter 2: Urban Communities

The Urban Communities chapter focuses on the importance of creating and sustaining livable communities. A major tenet of the Growth Management Act is to focus growth in the urban areas. The policies in this chapter facilitate urban development where infrastructure and facilities exist or can be readily provided.

Chapter 3: Rural Areas and Natural Resource Lands

Protecting Rural Areas, Natural Resource Lands and rural communities in King County is a major focus of the Comprehensive Plan in compliance with both the Growth Management Act and the King County Strategic Plan. This chapter delineates the county's approach to conserving Rural Areas and Natural Resource Lands, supporting rural communities and their heritage, and supporting the agriculture, forestry, and mining economies. Integral to these efforts are incentive tools such as the Transfer of Development Rights program that ensure the protection of environmental quality and wildlife habitat, while respecting economic values and property rights.

Chapter 4: Housing and Human Services

The availability of adequate and affordable housing has become one of the most pressing issues facing King County today. Similarly, partnering with other organizations and jurisdictions to deliver human services is a critical component for creating sustainable communities and supporting environmental justice. In the 2016 update, policies on these topics are consolidated into a new chapter.

Chapter 5: Environment

King County includes a rich and valuable array of land and water resources ranging from lowland lakes, rivers, and wetlands in highly urbanized areas, to saltwater shorelines, to nearly pristine landscapes in the foothills of the Cascades. This chapter establishes policies to ensure future protection of the environment and its contribution to the quality of life in King County. King County's programs for protecting its environment include some of the most progressive in the country. The policies in this chapter will help to ensure that the environment is protected and sustained, and that the healthy environment goal of the Strategic Plan is achieved.

King County seeks to combat climate change through actions to reduce greenhouse gas emissions and make the natural and built environment more resilient in the face of a changing climate. King County policies and programs support habitats for native plant and animal species, including those listed as threatened under the Endangered Species Act. The Environment Chapter includes policies guiding King County's actions to protect critical areas, improve water quality, and manage invasive species. The county uses a combination of habitat restoration, incentives, education, technical assistance, and regulations to protect the natural environment. This chapter also reflects the role of the Puget Sound Partnership in coordinating environmental management, including providing leadership for a coordinated and comprehensive environmental monitoring program across Puget Sound.

Chapter 6: Shorelines

King County adopted its first Shoreline Master Program in 1977. In November, 2010, King County approved an update to the Shoreline Master Program. This update incorporated the shoreline policies in the Comprehensive Plan for the first time and was approved by the Department of Ecology in 2014.

Chapter 7: Parks, Open Space and Cultural Resources

Protecting and enhancing King County's environment and quality of life through the stewardship and enhancement of its open space system of parks, trails, natural areas and working resource lands along with its valued cultural resources continues to be the central focus of this chapter. Furthering the regional trail system will be guided by the Regional Trails Needs Report (Technical Appendix C2).

Chapter 8: Transportation

This chapter sets the policy framework that guides efficient provision of vital transportation infrastructure and services that support a vibrant economy, thriving communities, and the county's participation in critical regional transportation issues. The chapter reflects the goals of the King County Strategic Plan and the priorities established in the strategic plans for public transportation, airport and road services. It also reflects the county's continuing transition to becoming a road service provider for a primarily rural road system, and speaks to the challenges of providing transportation services and infrastructure in a time of growing need and severely constrained financial resources.

The chapter promotes an integrated, multimodal transportation system that provides mobility options for a wide range of users, including historically disadvantaged populations. It also emphasizes safety, options for healthful transportation choices, and support for greenhouse gas emissions reduction goals. Additional policy focus is provided on maintaining and preserving existing services and infrastructure, implementing clear service priorities and guidelines, using transportation resources wisely and efficiently, and developing sustainable funding sources to support the level of services needed by communities.

Chapter 9: Services, Facilities and Utilities

This chapter guides service provision in King County, while recognizing the different service levels within the Urban Growth Area and the Rural Area and Natural Resource Lands. The Growth Management Act requires coordinated planning so that the services required by new residents and their homes and businesses are available as growth occurs. This chapter addresses a wide range of facilities and services provided by the county consistent with specific operational plans, such as the Flood Hazard Management Plan and the Strategic Climate Action Plan, and recognizes that the county is both a regional and a local service provider. The chapter also clarifies the County's intent regarding water supply planning.

Chapter 10: Economic Development

This chapter supports the county's long-term commitment to a prosperous, diverse, and sustainable economy by promoting public programs and actions that create the foundation for a successful economy whether within the Urban Growth Area, the Rural Area or on Natural Resource Lands. A successful economy is one in which the private, nonprofit, and public sectors can thrive and create jobs compatible with the environment and community and land use expectations. King County understands that a successful and diverse economy contributes to a strong and stable tax base and a high quality of life for all residents. This chapter recognizes businesses and the workforce as customers of an economic development system and supports actions and programs that promote the strength and health of both groups.

Chapter 11: Community Service Area Planning

This chapter uses King County's seven Community Service Areas as the framework for its renewed subarea planning program that offers long-range planning services to unincorporated communities. King County's community plans (except for the Vashon Town, West Hill, and White Center Plans) are no longer in effect as separately adopted plans. In many cases, however, the plans contain valuable historical information about King County's communities and often provide background for the land uses in effect today. Policies from the community plans were retained as part of the Comprehensive Plan to recognize the unique characteristics of each community and to provide historical context.

Chapter 12: Implementation, Amendments and Evaluation

The Comprehensive Plan policies, development regulations and Countywide Planning Policy framework have been adopted to achieve the growth management objectives of King County and the region. This chapter describes the county's process for amending the Comprehensive Plan and outlines and distinguishes the annual

cycle and the four-year-cycle amendments. The chapter identifies a series of major Workplan actions that will be undertaken between the major update cycles to implement or refine provisions within the Plan. This chapter further explains the relationship between planning and zoning.

V. Technical Appendices

Integral to the vision and goals of the Comprehensive Plan are the detailed inventories, forecasts, finance plans and Urban Growth Area analysis required by the Growth Management Act. Four technical appendices (Volume 1) are adopted as part of the plan to implement these Growth Management Act requirements (RCW 36.70A.070, 36.70A.110, 36.70A130). Technical Appendices A, B, C, and D were updated in 2008, 2012 and 2016.

Volume 1

Technical Appendix A. Capital Facilities and Services

Technical Appendix B. Housing

Technical Appendix C. Transportation

C1. Transportation Needs Report

C2. Regional Trail Needs Report

Technical Appendix D. Growth Targets and the Urban Growth Area

Technical Appendix R. Public Participation Summary 2016

Additional important information also supports the vision and goals of the Comprehensive Plan. Nine technical appendices (Volume 2) were prepared to provide supporting documentation to the 1994 plan:

Volume 2 (1994)

Technical Appendix D. Growth Targets and the Urban Growth Area

Technical Appendix E. Washington State Laws

Technical Appendix F. History of Planning in King County

Technical Appendix G. Economic Development

Technical Appendix H. Natural Resource Lands

Technical Appendix I. Natural Environment

Technical Appendix J. Potential Annexation Areas

Technical Appendix K. King County Functional and Community Plans

Technical Appendix L. Public Involvement Summary

Information that supported amendments subsequent to 1994 is included as follows:

Volume 3

Technical Appendix M. Public Participation Summary 2000

Volume 4

Technical Appendix N. Public Participation Summary 2004

Volume 5

Technical Appendix O. Public Participation Summary 2008

Volume 6

Technical Appendix P. Public Participation-Summary 2012

Technical Appendix Q. School Siting Task Force Report

Volume 7

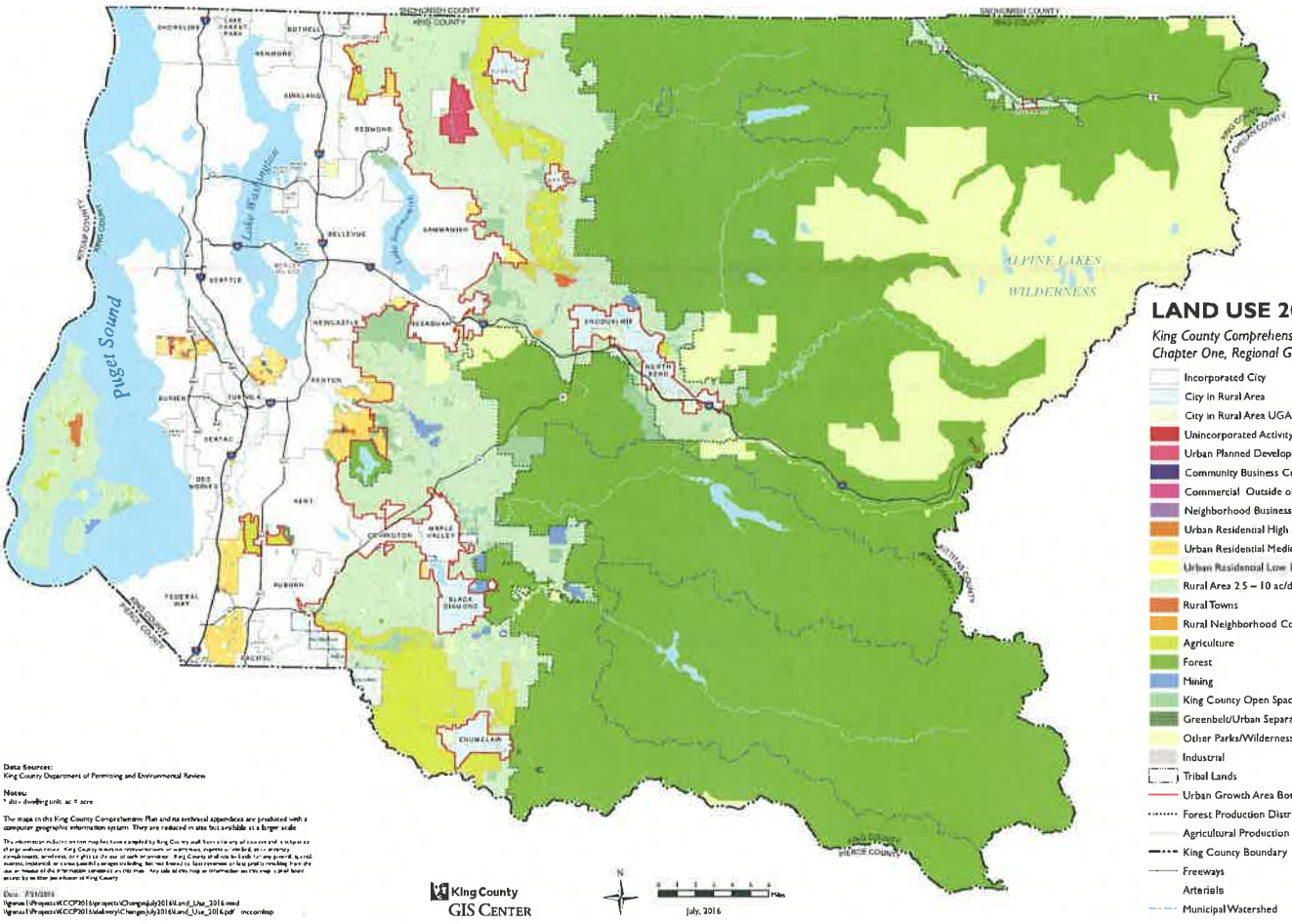
Technical Appendix R. Public Participation Summary 2016

VI. The Regulations

The King County Comprehensive Plan is implemented through regulations adopted as part of the King County Code. All development proposals in King County must meet the requirements of the Code. Additional information and policies are found in Chapter 12, Implementation, Amendments and Evaluation.

VII. For More Information

Please visit the web site of the King County Department of Performance, Strategy and Budget at *http://www.kingcounty.gov/compplan* for current information on planning in King County and to view electronic versions of the plan and related documents.



LAND USE 2016

King County Comprehensive Plan, 2016
Chapter One, Regional Growth Management Planning

- Incorporated City
- City in Rural Area
- City in Rural Area UGA
- Unincorporated Activity Center
- Urban Planned Development
- Community Business Center
- Commercial Outside of Centers
- Neighborhood Business Center
- Urban Residential High >12du/ac*
- Urban Residential Medium 4-12 du/ac*
- Urban Residential Low 1 du/ac*
- Rural Area 2.5 – 10 ac/du*
- Rural Towns
- Rural Neighborhood Commercial Centers
- Agriculture
- Forest
- Mining
- King County Open Space System
- Greenbelt/Urban Separator
- Other Parks/Wilderness
- Industrial
- Tribal Lands
- Urban Growth Area Boundary
- Forest Production District Boundary
- Agricultural Production District Boundary
- King County Boundary
- Freeways
- Arterials
- Municipal Watershed

Data Sources:
King County Department of Permitting and Environmental Review

Notes:
* du = dwelling unit, ac = acre

The maps in the King County Comprehensive Plan and its technical appendices are produced with a computer geographic information system. They are reduced in size but available at a larger scale.

The information included on these maps have been compiled by King County staff from a variety of sources and is subject to change without notice. King County makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. King County shall not be liable for any general, special, indirect, incidental, or consequential damages including, but not limited to, lost revenues or lost profits resulting from the use or misuse of the information contained on this map. Any sale of this map or information on this map is prohibited except by written permission of King County.

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July, 2016



CHAPTER 2
URBAN COMMUNITIES

The Urban Communities chapter brings together many of the major elements that combine to make a healthy and vibrant urban community whole: culture, recreation, business centers, jobs, and sustainability. By merging these elements of urban life into one chapter, King County emphasizes the importance each plays as part of a livable, sustainable and equitable community.

The chapter first defines the Urban Growth Area, where most growth has, will, and should continue to occur, and major land uses within it. The chapter then provides the framework to guide the development of new urban communities and redevelopment of existing communities within the unincorporated portion of the Urban Growth Area.

Related components in the plan include Chapter 4, Housing and Human Services, Chapter 7, Parks, Open Space and Cultural Resources, Chapter 8, Transportation and others.

It is the goal of King County to work toward a model sustainable community to balance growth with natural resource protection while addressing climate change. Sustainable development creates a balance between people, economy, and environment, balancing using resources to meet current needs while ensuring future generations can benefit from equivalent resources. Sustainable development seeks to achieve this goal by addressing the impacts of the built environment in which the residents of King County live and work. To highlight the importance of sustainable development and to consolidate policies applicable to both Rural Areas and Natural Resource Lands as well as urban communities, text and policies regarding sustainable development for public projects can be found in Chapter 9, Services, Facilities and Utilities, Section II (Facilities and Services), subpart D (Capital Facility Planning). Text and policies regarding sustainable development in the private sector can be found in Chapter 10, Economic Development, Section V (Sustainable Development in the Private Sector).

I. Urban Communities

A critical challenge for King County and its residents is to create urban communities that provide the sense of place and the range of choices people want for a quality urban life and experience, as well as to respond to the cultural and economic needs of diverse urban communities. Urban areas need more than physical infrastructure. They also need a broad range of amenities and human services that make them attractive and safe places to work and live, while protecting the physical environment and maintaining the region's quality of life. In short, they need to become and be sustained as healthy and equitable communities. The design goals of healthy communities include making it easier for people to live healthy lives by encouraging mixed land use and greater land density to shorten distances between housing, workplaces, transit, schools and recreation so people can choose to walk or bicycle more easily to these destinations.

People are more likely to walk to their destination if the distance is less than one-half mile ("walking distance") or to bicycle if the distance is less than three miles ("bicycling distance"). Incorporating high comfort pedestrian and bicycle infrastructure for all ages and abilities, especially sidewalks and bicycle paths that are separated from automobile traffic, can increase the safety and frequency of bicycle, pedestrian and transit trips. Healthy communities provide opportunities for people to be physically active and socially engaged as part of their daily routine and include access to open space and parks. People can, if they choose, age in place and remain in their community as their lifestyle changes or as they face changing physical capabilities. This contributes to a healthy community, as does ensuring access to affordable, healthy food, especially fruits and vegetables, and limiting access to unhealthy substances. An integral part of a healthy community is "healthy housing," which protects residents from exposure to harmful substances and environments, and reduces the risk of injury. These goals can be achieved, in part, through implementing building practices that promote health.

U-101 **Development within the Urban Growth Area should create and maintain safe, healthy and diverse communities. These communities should contain a range of affordable, healthy housing and employment opportunities, as well as school and recreational facilities, and should be designed to protect the natural environment and significant cultural resources.**

A. The Urban Growth Area

The Growth Management Act requires the county to designate an Urban Growth Area where most growth and development forecasted for King County will be accommodated. By designating an Urban Growth Area and focusing growth within it, King County and other counties in the state will:

- Limit sprawling development;
- Reduce costs by encouraging concentrated development;
- Improve the efficiency of transportation and utilities;
- Improve equitable access to human services;
- Protect the Rural Area and Natural Resource Lands;
- Enhance the preservation of open space; and
- Mitigate the impacts of climate change and adapt to its effects.

The Urban Growth Area for King County is designated on the official Land Use Map adopted with this Comprehensive Plan. The original Countywide Planning Policies provided the framework that the Metropolitan King County Council used when adopting the Urban Growth Area as part of the 1994 Comprehensive Plan.[1]

The Urban Growth Area includes all cities within the county, including the Urban Growth Areas for Cities in the Rural Area, the cities' annexation areas, and land within the unincorporated part of the county characterized by urban-type growth. The Urban Growth Area also includes the Bear Creek Urban Planned Developments east of Redmond. See Chapter 3, Rural Areas and Natural Resource Lands, for additional policy guidance on growth within the annexation areas of Cities in the Rural Area.

King County's total Urban Growth Area covers 461 square miles, less than one-quarter of the county's total land area of 2,130 square miles. Cities comprise most of the land mass of the Urban Growth Area, at 418 square miles; the unincorporated portion of the Urban Growth Area is now about 43 square miles. A general representation of the official Land Use Map is located at the end of Chapter 1, Regional Growth Management Planning.

[1] As amended by Ordinance 17687.

U-101a **The Urban Growth Area is considered long-term and can only be amended consistent with the Countywide Planning Policies, and the King County Comprehensive Plan policies.**

U-102 **The Urban Growth Area designations shown on the official Land Use Map include enough land to provide the countywide capacity, as required by the Growth Management Act, to accommodate residential, commercial and institutional growth expected over the period 2006-2031. These lands should include only those lands that meet the following criteria:**

- **a. Are characterized by urban development that can be efficiently and cost effectively served by roads, water, sanitary sewer and storm drainage, schools and other urban governmental services within the next 20 years;**
- **b. Do not extend beyond natural boundaries, such as watersheds, which impede provision of urban services;**
- **c. Respect topographical features that form a natural edge, such as rivers and ridge lines;**
- **d. Are sufficiently free of environmental constraints to be able to support urban growth without major environmental impacts, unless such areas are designated as an urban separator by interlocal agreement between jurisdictions;**
- **e. Are included within the Bear Creek Urban Planned Development sites; and**
- **f. Are not Rural Area or Natural Resource Lands.**

U-103 **Parcels that are split by the Urban Growth Area boundary line should be reviewed for possible redesignation to either all urban area or all Rural Area or Natural Resource Lands taking into consideration:**

- **a. Whether the parcel is split to recognize environmentally sensitive features;**
- **b. The parcel's geographic features;**
- **c. Whether the parcel will be added to an adjoining city's Potential Annexation Area; and**
- **d. The requirements of interlocal agreements, or the requirements of King County plans.**

Some cities that border the Urban Growth Area operate parks in the Rural Area. These parks may have been acquired by the city through a direct purchase or through a transfer agreement with King County. Cities can continue to operate parks in the Rural Area consistent with rural development standards. In specific circumstances, cities can request that these parks be redesignated to urban to allow future annexation by the city.

U-104 **Rural zoned properties that are immediately adjacent to a city and are planned or designated for park purposes by that city may be redesignated to urban when the city has committed to designate the property in perpetuity in a form satisfactory to the King County Council for park purposes and:**

- **a. The property is no more than 30 acres in size and was acquired by the city prior to 1994;**
- **b. The property is no more than 30 acres in size and receives county support through a park or recreation facility transfer agreement between King County and a city; or**
- **c. The property is or was formerly a King County park and is being or has been transferred to a city.**

U-105 **Existing or proposed churches in the Rural Area may be included within the Urban Growth Area when all of the following criteria are met:**

- **a. The church property must have an interior lot line as defined by King County Code 21A.06.730 that is adjacent to the original Urban Growth Area boundary as established by the 1994 King County Comprehensive Plan, excluding the Urban Growth Areas of Cities in the Rural Area and excluding Urban Growth Area boundaries established through the Four-to-One Program;**
- **b. The church property shall not be adjacent to an Agricultural Production District or the Forest Production District;**
- **c. Sewer service is required once the property is included in the Urban Growth Area;**
- **d. Direct vehicular access to a principal arterial road is required; and**
- **e. The church property shall be included in the Potential Annexation Area of the appropriate city at the same time it is included in the Urban Growth Area.**

1. Growth in Urban Centers and the Promotion of Public Health for All

The Multicounty and Countywide Planning Policies guide the development of urban centers, which are principally located in cities, and should accommodate concentrations of housing and employment. Focusing growth into centers helps achieve the goals of a sustainable and equitable community. However, in its unincorporated urban area, King County has a small number of smaller-scale urban centers, which includes an unincorporated activity center, community business centers and neighborhood business centers. These are represented on the Urban Centers map at the end of this chapter.

Focusing development in urban areas can have a positive effect on public health while also addressing climate change. The percentage of King County residents who are overweight or obese has risen rapidly since the late 1980s. With obesity comes increased risk for diabetes, hypertension and heart disease. Evidence suggests one

major reason for rising obesity is the lack of physical activity. Growth patterns in suburban areas, which discourage active transportation modes such as walking and bicycling and promote a reliance on private auto use, have contributed to this public health problem.

Communities that feature a variety of land uses; access to healthy, affordable foods; higher housing density; sidewalks; bicycle infrastructure; and street connections to nearby services promote health and quality of life. Tobacco remains the leading cause of death for King County residents. Zoning regulations can be used to reduce concentrated exposure to alcohol, tobacco and marijuana by regulating the number of outlets that can sell these products and advertising that is in view of the general public. Tobacco use also creates environmental tobacco smoke, which contains more than 4,000 substances and has been classified by the Environmental Protection Agency as a Group A carcinogen. Tobacco-free area policies reduce this hazard.

While creating communities that have a positive effect on public health, the county is also creating communities that will have a positive effect on climate change. When people replace their auto trips with transit, walking or biking, they are improving their health and reducing their carbon footprint at the same time. Communities that have integrated street networks, a mix of uses, and residential densities supportive of public transportation can reduce vehicle miles traveled because auto trips are being replaced with more walking, biking and transit use.

U-106 **Most population and employment growth should locate in the contiguous Urban Growth Area in western King County, especially in cities and their Potential Annexation Areas. Cities in the Rural Area should accommodate growth in accordance with adopted growth targets.**

U-107 **King County should support land use and zoning actions that promote public health by increasing opportunities for every resident to be more physically active. Land use and zoning actions include: concentrating growth into the Urban Growth Area; promoting urban centers; allowing mixed-use developments; supporting access to healthy, affordable retail foods; and adding pedestrian and bicycle facilities and connections.**

U-108 **King County should support the development of Urban Centers to meet the region's needs for housing, jobs, services, culture and recreation and to promote healthy communities; improving access to these services helps address social and economic needs of all residents, including disadvantaged communities. Strategies may include exploring opportunities for joint development or transit-oriented development, siting civic uses in mixed-use areas, and leveraging or utilizing existing county assets in urban centers.**

U-109 **King County should concentrate facilities and services within the Urban Growth Area to make it a desirable place to live and work, to increase the opportunities for walking and biking within the community, to more efficiently use existing infrastructure capacity and to reduce the long-term costs of infrastructure maintenance.**

U-109a **King County should encourage development, facilities and policies that lead to compact communities that transit can serve efficiently and effectively. As funding permits, King County should partner with jurisdictions and the private sector to spur development of compact communities and infrastructure investments that enhance alternatives to single occupant vehicles such as transit, safe walking paths and trails, bicycle facilities, car and van pools, and other modes.**

U-110 **King County shall work with cities, especially those designated as Urban Centers, in collaborative efforts that result in transfers of development rights from the Rural Area and Natural Resource Lands.**

U-111 **Development standards for urban areas should emphasize ways to allow maximum permitted densities and uses of urban land while not compromising the function of critical environmental areas. Mitigating measures should serve multiple purposes, such as drainage control, groundwater recharge, stream protection, air quality improvement, open space preservation, cultural and historic resource protection and landscaping preservation. When technically feasible, standards should be simple and measurable, so they can be implemented without lengthy review processes.**

While there are many benefits of focusing growth into centers, one impact of climate change is a greater likelihood that the frequency of hazardous heat islands in urban areas will increase. The term "heat island" refers to urban air and surface temperatures that are higher than the nearby Rural Areas and Natural Resource Lands. Heat islands form as cities replace natural land cover with pavement, buildings, and other infrastructure. The heat island effect can be reduced by requiring cool roofs, cool pavements, tree canopy and other vegetation. These tools are discussed in King County's Green Building Handbook.

U-112 **King County will work with cities, residents, and developers to design communities and development projects that employ techniques that reduce heat islands throughout the community and the region.**

King County is successfully promoting and supporting policies and programs that focus on the health of students at school. However, the school environment is only one aspect of the overall health of the student. The

environment surrounding a school and the routes a typical student travels to school or nearby school-related destinations also must be considered, including managing density of retail uses that primarily sell alcohol, tobacco and marijuana, and low-nutrition products; enhancing green space sites; creating safe areas to walk and bicycle to school; providing for transit and related facilities; and, reducing exposure to environmental toxins and other types of unsafe environments

U-113 **King County shall promote children's health by encouraging and supporting land uses in the environment surrounding a school and on travel routes to schools that complement and strengthen other formal programs, such as Safe Routes to School.**

2. Urban Growth Area Targets

The Growth Management Act requires the county and its cities to plan for future housing and employment growth target ranges for each jurisdiction. In 1994, the Growth Management Planning Council adopted household and job targets for each jurisdiction to distribute the expected growth in the Countywide Planning Policies.

Growth target ranges represent regional agreement on jurisdictions' policy choices regarding the amount of growth they intend to accommodate. King County and its cities have also developed targets for employment to foster a local balance between population and employment. The countywide and unincorporated King County's housing growth target and employment targets are contained in the Countywide Planning Policies. In 2008, *VISION 2040* was adopted and established a Regional Growth Strategy that provides guidance to countywide target setting. The Regional Growth Strategy built upon King County's target setting process and now requires the establishment of housing and employment targets.

In November 2009, consistent with the new guidance found in *VISION 2040*, a new set of housing and job growth targets were established to guide growth for the period 2006-2031. Each urban jurisdiction including unincorporated King County was assigned a growth target based on land capacity and other factors. The complete table of city growth targets approved in December 2010, and updated for annexations through 2016, is included in this chapter to provide the regional context for the unincorporated area targets.

U-114 **Land use policies and regulations shall accommodate a growth target of approximately 11,140 housing units and approximately 6,810 jobs by 2031, established in the Countywide Planning Policies for the unincorporated portion of the Urban Growth Area.**

U-115 **King County shall provide adequate land capacity for residential, commercial, industrial and other non-residential growth in the urban unincorporated area. As required under the Growth Management Act, this land capacity shall be calculated on a countywide basis and shall include both redevelopment opportunities as well as opportunities for development on vacant lands.[2]**

U-116 **King County shall use housing and employment targets to implement the Comprehensive Plan in urban communities. The targets allocated to subareas of unincorporated King County will be monitored and may be refined through future planning that includes communities, affected cities and service providers.**

The following *Figure: King County Growth Targets Update: Revised Table DP-1–adjusted 2015*, portrays housing and job growth targets for each jurisdiction. It has been updated to reflect annexations that occurred between 2010 and 2016 in the cities of Burien, Kent, Kirkland, Bellevue, Bothell, Sammamish and Tukwila. These cities annexed large areas of unincorporated King County, shifting those areas' Potential Annexation Area (PAA) targets into the respective cities. That adjustment of Potential Annexation Area targets into cities was acknowledged by the Growth Management Planning Council, adopted by the County Council, and ratified by the cities in 2012-2013 and adjusted again in 2015. The time horizon remains 2006-2031, and the targets for all other jurisdictions remain the same.

The table further provides guidance, in the Potential Annexation Area columns, for transfer of portions of growth targets into cities when annexation takes place in the future. Although they may be refined through future planning with affected communities and adjacent cities, these ranges are intended to be used as a guide for future planning of land uses and decisions on services and infrastructure.

Figure: King County Growth Targets Update: Revised Table DP-1–adjusted 2015

Regional Geography City / Subarea	**Housing Target**	**PAA Housing Target**	**Employment Target**	**PAA Emp. Target**
	Net New Units	Net New Units	Net New Jobs	Net New Jobs
	2006-2031	2006-2031	2006-2031	2006-2031
Metropolitan Cities				
Bellevue	17,290		53,000	
Seattle	86,000		146,700	
Total	**103,290**		**199,700**	
Core Cities				
Auburn	9,620		19,350	--
Bothell	3,810	810	5,000	
Burien	4,440		5,610	

[2]As amended by Ordinance 17687.

Regional Geography City / Subarea	**Housing Target**	**PAA Housing Target**	**Employment Target**	**PAA Emp. Target**
	Net New Units	Net New Units	Net New Jobs	Net New Jobs
	2006-2031	2006-2031	2006-2031	2006-2031
Federal Way	8,100	2,390	12,300	290
Kent	9,270	90	13,280	210
Kirkland	8,570	0	20,850	0
Redmond	10,200	640	23,000	--
Renton	14,835	3,895	29,000	470
SeaTac	5,800		25,300	
Tukwila	4,850	50	17,550	0
Total	**79,495**		**170,590**	
Larger Cities				
Des Moines	3,000		5,000	
Issaquah	5,750	~~290~~ 110	20,000	
Kenmore	3,500		3,000	
Maple Valley**	1,800	1,060	2,000	
Mercer Island	2,000		1,000	
Sammamish	4,180	350	1,800	
Shoreline	5,000		5,000	
Woodinville	3,000		5,000	
Total	**28,230**		**42,800**	
Small Cities				
Algona	190		210	
Beaux Arts	3		3	
Black Diamond	1,900		1,050	
Carnation	330		370	
Clyde Hill	10		--	
Covington	1,470		1,320	
Duvall	1,140		840	
Enumclaw	1,425		735	
Hunts Point	1		--	
Lake Forest Park	475		210	
Medina	19		--	
Milton	50	90	160	
Newcastle	1,200		735	
Normandy Park	120		65	
North Bend	665		1,050	
Pacific	285	135	370	
Skykomish	10		--	
Snoqualmie	1,615		1,050	

Regional Geography City / Subarea	Housing Target	PAA Housing Target	Employment Target	PAA Emp. Target
	Net New Units	Net New Units	Net New Jobs	Net New Jobs
	2006-2031	2006-2031	2006-2031	2006-2031
Yarrow Point	14		--	
Total	**10,922**		**8,168**	
Urban Unincorporated				
Potential Annexation Areas	8,760		970	
North Highline	820		2,170	
Bear Creek Urban Planned Dev	910		3,580	
Unclaimed Urban Unincorp.	650		90	
Total	**11,140**		**6,810**	
King County UGA Total	**233,077**		**428,068**	

* King County Growth Management Planning Council, adopted October 2009 and ratified by cities in 2010. These were re-adopted with the countywide planning policies in 2012 and ratified in 2013.

Targets base year is 2006. PAA / city targets have been adjusted to reflect annexations through 2016.

** Target for Maple Valley PAA is contingent on approval of city-county joint plan for Summit Place.

B. Residential Land Use

Housing is the major use of urban land in King County, occupying well over half of the county's developed land area. This plan supports the creation of a full range of housing choices for county residents.

U-118 **New residential development in the Urban Growth Area should occur where facilities and services can be provided at the lowest public cost and in a timely fashion. The Urban Growth Area should have a variety of housing types and prices, including mobile home parks, multifamily development, townhouses and small-lot, single-family development.**

1. Residential Densities

The density of eight homes per acre expressed below is a long-term goal and would be an average density of single-family and multifamily developments. Single-family homes will continue to account for most of the land area used for new development in the county. This plan proposes ways to develop single-family homes and densities so that urban land is used more efficiently, homes are more affordable, more housing choices are available and densities are adequate to support effective and efficient transit services. Housing at higher densities can promote public health by creating urban communities that support public transportation and nearby services and thereby increase opportunities for walking or biking.

U-119 King County shall seek to achieve through future planning efforts, over the next 20 years, including collaborative efforts with cities, an average zoning density of at least eight homes per acre in the Urban Growth Area through a mix of densities and housing types. A lower density zone may be used to recognize existing subdivisions with little or no opportunity for infill or redevelopment.

U-120 King County should apply the urban residential, low land use designation in limited circumstances in unincorporated urban areas in order to protect: floodplains, critical aquifer recharge areas, high function wetlands and unstable slopes from degradation, and the link these environmental features have to a network of open space, fish and wildlife habitat and urban separators. The residential density for land so designated should be maintained at one unit per acre, and lands that are sending sites under the Transfer of Development Rights Program may transfer density at a rate of at least four units per acre.

U-121 New multifamily housing should be built to the scale and design of the existing community or neighborhood, while contributing to an area-wide density and development pattern that supports transit and allows for a range of housing choices. Multifamily housing in unincorporated urban areas should be sited as follows:

a. In or next to unincorporated activity centers or next to community or neighborhood business centers;
b. In mixed-use developments in centers and activity areas; and
c. On small, scattered parcels integrated into existing urban residential areas. Over time, zoning should encourage a larger proportion of multifamily housing to be located on small scattered sites rather than on larger sites.

U-122 Land zoned for multifamily uses should be allowed to be converted to nonresidential zone categories only after new multifamily sites are identified and rezoned to replace the multifamily housing capacity lost due to the conversion.

U-122a King County should explore zoning policies and provisions and tools that increase housing density and affordable housing opportunities within unincorporated urban growth areas, with a focus on areas near frequent transit and commercial areas.

2. Minimum Density

In accordance with the Countywide Planning Policies, King County has included a minimum density requirement in its zoning regulations for all new urban residential development with a zoned density of four or more homes per acre.

U-123 **King County should apply minimum density requirements to all unincorporated urban residential zones of four or more homes per acre, except under limited circumstances such as the:**

a. **Presence of significant physical constraints such as those noted in policy U-120, or**

b. **Implementation of standards applied to a property through a property-specific development condition, special district overlay, or subarea study.**

3. Increases of Zoning Density

While King County supports higher densities in unincorporated urban areas, increased densities that would be incompatible with existing neighborhoods or cause significant impacts on roads, services and the environment are discouraged. The following policies will guide decisions on application of densities and proposed rezones.

U-124 **Requests for increases in density of unincorporated urban residential property zoned for one dwelling unit per acre shall be considered unless the property meets the criteria low land use designation in set forth in Policy U-120.**

U-125 **King County should support proposed zoning changes to increase density within the unincorporated urban area when consistent with the King County Comprehensive Plan Land Use Map and when the following conditions are present:**

a. **The development will be compatible with the character and scale of the surrounding neighborhood;**

b. **Urban public facilities and services are adequate, consistent with adopted levels of service and meet Growth Management Act concurrency requirements, including King County transportation concurrency standards;**

c. **The proposed density change will not increase unmitigated adverse impacts on environmentally critical areas, either on site or in the vicinity of the proposed development;**

d. **The proposed density increase will be consistent with or contribute to achieving the goals and policies of this comprehensive plan, and subarea plan or subarea study, if applicable; or**

e. **The development is within walking distance of transit corridors or transit activity centers, retail and commercial activities, and is accessible to parks and other recreation opportunities.**

U-126 **King County, when evaluating rezone requests, shall consult with the city whose PAA includes the property under review; if a pre-annexation agreement exists, King County shall work with the city to ensure compatibility with the city's pre-annexation zoning for the area. King County shall also notify special purpose districts and local providers of urban utility services and should work with these service providers on issues raised by the proposal.**

As part of its voluntary program with the Federal Aviation Administration to reduce aircraft noise inside residences surrounding the King County International Airport, the County completed a Federal Aviation Administration Part 150 Noise and Land Use Compatibility Study. As part of the study, noise contours were developed and plotted as part of a Noise Mitigation Boundary. Over the past seven years and with available Federal Aviation Administration funding, the County completed a residential sound mitigation program within the Noise Mitigation Boundary. The program provided a variety of noise mitigation components, including insulation, windows, and ventilation to 609 homes surrounding the airport. The program was completed in 2015.

U-127 **King County shall not support requests for residential density increases or conversion of non-residential property to residential uses on lands located within the outer boundaries of the Federal Aviation Administration approved Noise Mitigation Boundary as identified by Seattle-Tacoma International Airport and King County International Airport.**

Development in the Unincorporated Urban Growth Area at a greater density than permitted by the minimum zoning density, but equal to or less than the maximum zoning density allowed under the Residential Density Incentive Program, will be allowed in exchange for public amenities such as low-income housing, preservation of designated historic features or extra energy conservation measures, or through the transfer of development rights from other parts of the county.

U-128 **Density incentives should encourage private developers to: provide affordable housing, significant open space, trails and parks; use the Transfer of Development Rights Program, Low Impact Development and Green Building; locate development close to transit; participate in historic preservation; and include energy conservation measures.**

4. Mixed-Use Development

Mixed-use development combines higher density residential units with retail or office uses in the same building or within an integrated development on the same lot. Quality mixed-use developments can provide convenient shopping and services to both residents of the development and those who live nearby. They can help to build a sense of community, as neighboring merchants and residents get to know each other.

Mixed-use is traditional in older downtowns and commercial areas, where offices and retail typically occupy the first floor and residences are upstairs. Mixed-use developments can promote public health and help provide mitigation for climate change by providing opportunities for people to walk or bicycle to retail shopping, such as grocery stores with fresh fruits and vegetables and locally produced value-added food products, such as cheese, meats, and preserves. It provides an opportunity to support disadvantaged communities by clustering public services. If people can replace some of their driving trips with walking, biking or transit, then vehicle miles traveled will decrease. Further, by placing shopping and services close to where people live, even if some of the trips are made by auto they will be shorter than if the uses had been separated.

U-129 **King County supports mixed-use developments in community and neighborhood business centers, the White Center Unincorporated Activity Center, and in areas designated commercial outside of centers.**

U-130 **Design features of mixed-use developments should include the following:**

- **a. Integration of the retail and/or office uses and residential units within the same building or on the same parcel;**
- **b. Quality and appropriate ground level spaces built to accommodate retail and office uses;**
- **c. Off-street parking behind or to the side of the buildings, or enclosed within buildings; and**
- **d. Opportunities to have safe, accessible pedestrian connections and bicycle facilities within the development and to adjacent residential developments.**

U-131 **In a mixed-use development where residential and nonresidential uses are proposed in separate structures and the residential uses are proposed to be constructed prior to the nonresidential uses, permitting and development reviews should be through a process that ensures an integrated design.**

U-132 **In a mixed-use development, incentives such as increases in residential density or floor area ratio should be used to encourage the inclusion of well-designed and accessible public gathering spaces in the site design.**

U-132a **King County shall allow and support the development of innovative community gardens and urban agriculture throughout the public realm of residential and commercial areas.**

U-132b **King County shall allow and support mixed-use food innovation districts supportive of affordable, healthy local food.**

5. Urban Residential Neighborhood Design and Infill/Redevelopment

King County unincorporated urban areas should be designed so that residents enjoy them both for their unique character and for the amenities they provide. These areas, through local subarea planning processes and permitting and design standards, should support development that is of the same quality as adjacent cities.

The high level of amenities and development include outdoor spaces that are usable, attractive, comfortable, and enjoyable. The design of urban streets, including features such as parking strips, street trees, alleys and off-street parking all contribute to the character of urban neighborhoods. Careful site planning can incorporate neighborhood features, contribute to aesthetic value, minimize site disturbance, conserve energy and, in some cases, reduce development costs. Neighborhood shopping, grocery stores with fresh fruits and vegetables, libraries, larger parks, schools and public golf courses are examples of uses that provide amenities for nearby residents.

Small retail establishments integrated into residential development (e.g., a laundromat) can provide convenient services and help residents reduce automobile trips. Urban areas that are interesting and safe for pedestrians and bicyclists, and that provide many necessary services close to residential developments, can promote public health by increasing opportunities for physical activity during daily activities.

U-133 **King County encourages innovative, quality infill development and redevelopment in existing unincorporated urban areas. A variety of regulatory, incentive and program strategies could be considered, including:**

- **a. Special development standards for infill sites;**
- **b. Assembly and resale of sites to providers of affordable and healthy housing;**
- **c. Impact mitigation fee structures that favor infill developments;**
- **d. Greater regulatory flexibility in allowing standards to be met using innovative techniques;**
- **e. Coordination with incentive programs of cities affiliated to annex the area;**
- **f. Green Building techniques that create sustainable development; and**
- **g. Joint public/private loan guarantee pools.**

U-134 **Single-family detached homes, townhomes, duplexes and apartments shall be allowed in all urban residential zones, provided that:**

- **a. Apartments shall not be allowed in the R-1 zone unless 50% or more of the site is environmentally constrained; and**
- **b. Apartments in R-1, R-4, R-6 and R-8 shall not be developed at densities in excess of 18 units per acre in the net buildable area.**

U-135 **Urban residential neighborhood design should preserve historic structures, natural features and neighborhood identity, while providing privacy, community space, and safety and mobility for pedestrians and bicyclists of all ages and abilities.**

U-136 **Site planning tools, such as clustering, shall be permitted in order to allow preservation or utilization of unique natural features within a development.**

U-137 **New urban residential developments should provide recreational space, community facilities and neighborhood circulation for pedestrians and bicyclists to increase opportunities for physical activity and ensure access to transit facilities where they exist or are planned.**

U-138 **Residential developments should provide a variety of housing types and lot patterns through lot clustering, flexible setback requirements and mixed attached and detached housing.**

U-139 **Nonresidential uses, such as schools, religious facilities, libraries and small-scale retail and personal services, should be integrated into urban residential neighborhoods to create viable neighborhoods with reduced dependence on the automobile. These uses should be sited, designed and scaled to be compatible with existing residential character and should provide convenient and safe walking and bicycling connections to neighboring residences.**

U-139a **King County shall support policy and system changes that increase access to affordable, healthy foods in neighborhoods.**

U-139b **King County should allow the creation of local improvement districts, where required to carry out important public functions that are not otherwise able to be carried out by existing local governments.**

Multifamily residential development is important to King County's housing supply because it uses land and energy efficiently and provides opportunities for affordable rental and ownership housing. Multifamily development is defined as one building that contains two or more separate dwelling units. Multifamily developments can be apartments, duplexes, townhouses, or other innovative housing types.

U-140 **Multifamily residential development should provide common and private open space; variation in facades and other building design features that may include varying window treatments, building colors and materials; and light fixtures that will give a residential scale and identity to multifamily development.**

Generally, larger parcels of buildable vacant land in the Urban Growth Area have been preferred for development. Development of these large parcels, especially for attached units at higher densities, often provoked concerns about compatibility due to their scale and design.

As larger vacant lots become increasingly scarce, attention will turn more and more towards smaller vacant lots often located within built neighborhoods (i.e., infill) and to redevelopment. Residential development proposals on small lots and redevelopment often can be an unobtrusive and desirable means of increasing density and affordable housing within existing neighborhoods. Infill development and redevelopment are necessary to achieve growth management objectives such as maximizing the efficient use of land and increasing the variety of housing choices and prices.

U-141 **King County should support infill and redevelopment proposals in unincorporated urban areas that serve to improve the overall character of existing communities or neighborhoods. New development should consider the scale and character of existing buildings.**

6. Residential Site Improvement Standards and Public Services

The following policies govern King County land use regulations and functional plans that contain improvement standards for the review of proposed rezones, residential subdivisions, short subdivisions, multifamily buildings and construction permits.

U-142 **Residential developments within the unincorporated urban area, including mobile home parks, shall provide the following improvements:**

- **a. Paved streets (and alleys if appropriate), curbs and sidewalks, and internal walkways when appropriate;**
- **b. Adequate parking and consideration of access to transit activity centers and transit corridors;**
- **c. Street lighting and street trees;**
- **d. Stormwater treatment and control;**
- e. Public water supply;
- **f. Public sewers; and**
- **g. Landscaping around the perimeter and parking areas of multifamily developments.**

The design and construction quality of development in unincorporated urban areas should meet or exceed the quality in the area's designated annexation city.

U-143 **Common facilities such as recreation space, internal walkways that provide convenient and safe inter- and intra-connectivity, roads, parking (including secure bicycle parking), and solid waste and recycling areas with appropriate levels of landscaping should be included in multifamily developments. Common facilities should be smoke-free to avoid exposure to environmental tobacco smoke.**

Neighborhood recreation space and parks are important amenities for residents. The higher the density, the more essential such amenities become to a desirable living environment. If the site of a proposed development is large enough, a park site dedication or private park site can be required as a condition of a rezone, subdivision or site plan approval.

U-144 **Recreation space based on the size of the developments shall be provided on site, except that in limited cases, fee payments for local level park and outdoor recreation needs may be accepted by King County.**

U-145 **Recreation spaces located within a residential development, except those for elderly or other special needs populations, shall include a child's play area.**

U-146 **Recreation spaces located in residential developments in the Urban Area should include amenities such as play equipment, open grassy areas, barbecues, benches, bicycle racks, trails and picnic tables.**

C. Commercial Land Use

The Countywide Planning Policies call for a significant share of new jobs and housing to occur within cities and in urban centers, which are areas of concentrated employment and housing. The designated urban centers are to accommodate 15,000 jobs within a one-half-mile radius of a major transit stop, an average employment density of 50 jobs per gross acre and an average of 15 housing units per gross acre. All of the urban centers are designated by the Puget Sound Regional Council as Regional Growth Centers and all are located in cities.

In addition to the urban centers, cities and unincorporated urban King County have existing intensive industrial, commercial and residential areas that will continue to grow and provide employment, services, shopping and housing opportunities, but not at the same level as urban centers. Three categories of centers are established for urban unincorporated areas of King County. Higher density, more-concentrated developed industrial and commercial areas are classified as unincorporated activity centers and are intended to the primary location for this type of commercial development. Midrange centers are called community business centers and smaller, local centers are called neighborhood business centers. The locations of these centers are shown on the Urban Centers map at the end of this chapter. This Comprehensive Plan also recognizes existing commercial and industrial

development that is outside of unincorporated activity centers, community business centers and neighborhood business centers.

U-147 **Business/office park developments should be located in or adjacent to an unincorporated activity center. They may serve as a transition between office/retail areas and residential areas. They should be designed to take advantage of on-site or nearby structured parking and/or bus service and passenger facilities should be compatible with the objective of higher employment densities.**

U-148 **New commercial and office development shall locate in designated unincorporated activity centers, community and neighborhood business centers, and in areas designated commercial outside of centers.**

Warehouse-style retail businesses, large retail complexes, stadiums, large churches and colleges are examples of land uses that serve as destinations from throughout the region. Such uses require a full range of urban services including transit, substantial parking, and access to arterials and freeways, and therefore should locate in the urban area where these services are available. In addition, these land uses have traffic and impervious surface impacts that are inappropriate for the Rural Area and Natural Resource Lands.

U-149 **New facilities and businesses that draw from throughout the region, such as large retail uses, large public assembly facilities and institutions of higher education should locate in the Urban Growth Area.**

1. Unincorporated Activity Centers

Unincorporated activity centers are the primary locations for commercial and industrial development in urban unincorporated King County. Currently, White Center is the only designated unincorporated activity center, as other such centers are now parts of cities. The *White Center Community Action Plan* establishes the size and mix of uses allowed in the White Center Unincorporated Activity Center.

U-150 **Unincorporated activity centers in urban areas should provide employment, housing, shopping, services and leisure-time amenities to meet the needs of the local economy. The mix of uses may include:**

- **a. Health, human service and public safety facilities;**
- **b. Retail stores and services;**
- **c. Professional offices;**
- **d. Business/office parks;**
- **e. Multifamily housing and mixed-use developments;**
- **f. Heavy commercial and industrial uses, when there is direct freeway or rail access;**

g. Light manufacturing;
h. Parks and open space; and
i. Farmers Markets.

U-151 Within unincorporated activity centers, the following zoning is appropriate: Urban Residential, with a density of twelve to forty-eight dwelling units per acre; Community Business; Neighborhood Business; Office and Industrial.

U-152 King County may designate new unincorporated activity centers or expand existing unincorporated activity centers only through a subarea planning process that should address:

a. The relationship of the entire center to its surrounding uses including adjacent cities;
b. Availability of supporting public services;
c. The function of the center to other centers in the sub-region;
d. The need for additional commercial and industrial development;
e. The size and boundaries of the center; and
f. Zoning.

U-153 The size, uses and boundaries of unincorporated activity centers should be consistent with the following criteria:

a. More than forty acres in size, excluding land needed for surface water management or protection of environmentally critical areas;
b. Retail space based on the amount of residential development planned for the surrounding area to provide for community and local shopping needs; and
c. Retail space should not exceed 60 acres and 600,000 square feet unless it is served by direct freeway access by a principal or minor arterial and is well served by transit.

U-154 Design features of unincorporated activity centers should include the following:

a. Safe and attractive walkways and bicycle facilities for all ages and abilities with access to each major destination including schools, community centers and commercial areas;
b. Buildings close to sidewalks to promote walking and access to transit;
c. Compact design with close grouping of compatible uses;
d. Off-street parking in multistory structures located to the side or rear of buildings or underground;
e. Public art;
f. Public spaces, such as plazas and building atriums;

g. **Retention of attractive natural features, historic buildings and established character;**

h. **Aesthetic design and compatibility with adjacent uses through setbacks, building orientation, landscaping and traffic control;**

i. **Screening of unsightly views, such as heavy machinery, outdoor storage areas, loading docks and parking areas from the view of adjacent uses and from arterials; and**

j. **Signs should be regulated to reduce glare and other adverse visual impacts on nearby residences, without limiting their potential contribution to the color and character of the center.**

U-155 **Development within the designated White Center Unincorporated Activity Center, as shown on the Comprehensive Plan Land Use Map, shall be in accordance with the White Center Community Action Plan.**

U-156 **The White Center Community Action Plan establishes the following zoning as appropriate within the White Center Unincorporated Activity Center: Urban Residential, with a density of twelve to forty-eight dwelling units per acre, Neighborhood Business, Community Business, Office and Industrial.**

U-157 **In the White Center Unincorporated Activity Center, existing Industrial uses should be zoned and regulated to preserve their use into the future. Conversion of industrial properties to other uses shall be strictly limited.**

White Center was selected as one of three case study areas for study as part of the King County Land Use Transportation Air Quality and Health project, also known as HealthScape. Information from the study showed the types of changes in an area's urban form and transportation system that can lead to an increase in public health. These results have been used to guide development in the White Center area and to prioritize capital expenditures, such as the construction of the 98th Street Connector, which is a pedestrian walkway between Greenbridge and the commercial area of White Center.

U-158 **In the White Center Unincorporated Activity Center, new major residential developments should include low-impact design features and should promote public health by increasing opportunities for physical activity in daily life. The development should include: safe walkways and bicycle facilities for all ages and abilities with access to commercial areas, schools, and community facilities; trails; and pocket parks.**

2. Community Business Centers

Community business centers are primarily retail developments designed to serve a nearby market area of 15,000 to 40,000 people. Community business centers should be sited so they do not adversely affect other centers and are easily accessible by motor vehicles or public transportation, walking or bicycling. Community business centers should be designed to be compatible with adjacent residential uses, and should promote pedestrian and bicycle access. As shown on the Urban Centers map at the end of this chapter, these centers include Fairwood, Roxhill, Skyway and Top Hat.

U-159 **Community business centers in the urban areas should provide primarily shopping and personal services for nearby residents. Offices and multifamily housing are also encouraged. Industrial and heavy commercial uses should be excluded. Community business centers should include the following mix of uses:**

- **a. Retail stores and services;**
- **b. Professional offices;**
- **c. Community and human services;**
- **d. Multifamily housing as part of a mixed-use development, with residential densities of at least 12 units per acre when well served by transit; and**
- **e. Stands or small outlets that offer fresh, affordable fruit and produce and locally produced value-added food products.**

U-160 **Designated community business centers are shown on the Comprehensive Plan Land Use Map. Expansion of existing or designation of new community business centers shall be permitted only through a subarea study. Redevelopment and infill development of existing community business centers is encouraged.**

U-161 **Within community business centers, the following zoning is appropriate: Neighborhood Business, Community Business and Office.**

U-162 **The specific size and boundaries of community business centers should be consistent with the criteria listed below.**

- **a. More than 10 acres and up to 40 acres in size, excluding land needed for surface water management or protection of environmentally critical areas;**
- **b. Designed to provide shopping and services for a market population of 15,000 to 40,000 people;**
- **c. Located one to three miles from an unincorporated activity center or from another community business center. May be located less than two miles from a neighborhood business center when it is demonstrated the neighborhood business center will not be adversely affected; and**
- **d. Must be located at the intersection of two principal or minor arterials.**

U-163 **Design features of community business centers should include the following:**

- **a. Safe and attractive walkways and bicycle facilities for all ages and abilities;**
- **b. Close grouping of stores;**
- **c. Off-street parking behind or to the side of buildings, or enclosed within buildings;**
- **d. Public art;**
- **e. Retention of attractive natural features, historic buildings and established character;**
- **f. Landscaping, which may include planters and street trees;**
- **g. Appropriate signage;**
- **h. Public seating areas; and**
- **i. Architectural features that provide variation between buildings or contiguous storefronts.**

3. Neighborhood Business Centers

Neighborhood business centers are shopping areas offering convenience goods and services to local residents. Neighborhood business centers are intended to be small and compatible with adjacent residential areas and often are used on the way to another destination (for example, a fuel stop before or after commuting). Sometimes they consist of only one use or business. Neighborhood business centers should be designed to promote pedestrian and bicycle access.

As shown on the Urban Centers map at the end of this chapter, King County has eight of these centers, including Avondale Corner, Beverly Park, Jovita, Lake Geneva, Martin Luther King Jr. Way/60th Ave.-64th Ave. S, Rainier Ave. S./S. 114th St.-S. 117th St., Spider Lake, and Unincorporated South Park.

U-164 Neighborhood business centers in urban areas should include primarily retail stores and offices designed to provide convenient shopping and other services for nearby residents. Industrial and heavy commercial uses should be excluded. Neighborhood business centers should include the following mix of uses:

a. Retail stores and services;

b. Professional offices;

c. Multifamily housing as part of a mixed-use development with residential densities up to 12 units per acre when convenient to a minor arterial. Higher densities are appropriate when the center is a walkable community, convenient to a principal arterial or well-served by transit; and

d. Farmers Markets.

U-165 Designated neighborhood business centers are shown on the Comprehensive Plan Land Use Map. Expansion of existing or the designation of new neighborhood business centers shall only be permitted through a subarea study. Redevelopment and infill development of existing neighborhood business centers is encouraged.

U-166 Within neighborhood business centers, the following zoning is appropriate: Neighborhood Business and Office.

U-167 The specific size and boundaries of neighborhood business centers should be consistent with the criteria listed below.

a. Ten acres or less in size, excluding land needed for surface water management or protection of environmentally sensitive features;

b. Designed to provide convenience shopping for a market population of 8,000 to 15,000 people;

c. Located within walking distance of transit corridors or transit activity centers; and

d. Located one to three miles from another neighborhood business center.

U-168 **Design features of neighborhood business centers should include the following:**

a. **Safe and attractive walkways and bicycle facilities for all ages and abilities;**
b. **Close grouping of stores;**
c. **Off-street parking behind or to the side of buildings, or enclosed within buildings;**
d. **Public art;**
e. **Retention of attractive natural features, historic buildings or established character;**
f. **Landscaping, which may include planters and street trees;**
g. **Appropriate signage;**
h. **Public seating areas; and**
i. **Architectural features that provide variation between buildings or contiguous storefronts.**

4. Commercial Development Outside of Centers

The Commercial Outside of Center (CO) Land Use designation recognizes commercial uses predating the adoption of the county's first Growth Management Act -mandated Comprehensive Plan. These isolated unincorporated urban areas were and remain located outside a designated urban center (unincorporated activity center, community business center or neighborhood business center). The CO designation is also appropriate as a transitional designation within certain potential annexation areas. In these areas, the county will utilize the memorandum of understanding and applicable Comprehensive Plan policies to determine the appropriate zoning to implement this transitional designation.

U-169 **Stand-alone commercial developments legally established outside designated centers in the unincorporated urban area may be recognized with the CO designation and appropriate commercial zoning, including any identified potential zoning classification. An action to implement a potential zoning classification shall not require a detailed subarea study, if the current CO designation is to remain unchanged. When more detailed subarea plans are prepared, these developments may be designated as centers and allowed to grow if appropriate, or may be encouraged to redevelop consistent with the residential density and design policies of the Comprehensive Plan.**

U-170 **The CO designation may be applied as a transitional designation in Potential Annexation Areas identified in a signed memorandum of understanding between a city and the county for areas with a mix of urban uses and zoning in order to facilitate the joint planning effort directed by the memorandum of understanding. Zoning to implement this transitional designation should recognize the mix of existing and planned uses. No zone changes to these properties to allow other nonresidential uses, or zone changes to allow expansion of existing nonresidential uses onto other properties, should occur unless or until a subarea study with the city is completed.**

5. Commercial Site Improvement Standards and Public Services

The following policy governs King County land use regulations and functional plans that contain improvement standards for the review of proposed rezones and commercial construction permits.

U-171 **Commercial, retail and industrial developments in the unincorporated urban area should foster community, create enjoyable outdoor areas and balance needs of automobile movement with pedestrian and bicycle mobility and safety. Commercial and industrial developments shall provide the following improvements:**

- **a. Paved streets;**
- **b. Sidewalks for all ages and abilities and bicycle facilities in commercial and retail areas;**
- **c. Adequate parking for employees and business users;**
- **d. Landscaping along or within streets, sidewalks and parking areas to provide an attractive appearance;**
- **e. Adequate stormwater control, including curbs, gutters and stormwater retention facilities;**
- **f. Public water supply;**
- **g. Public sewers;**
- **h. Controlled traffic access to arterials and intersections; and**
- **i. Where appropriate, in commercial areas, common facilities, such as shared streets, walkways, and waste disposal and recycling with appropriate levels of landscaping.**

The design and construction quality of development in unincorporated urban areas should meet or exceed the quality in the area's designated annexation city.

6. Industrial Development

Maintaining a strong industrial land supply is an important factor in maintaining the county's economic base and providing family-wage jobs. The following policies assure that industrial development is supported and is also compatible with adjacent land uses while providing appropriate services for employees. In addition, King County is committed to helping return contaminated sites to productive use.

U-172 **Within the Urban Growth Area, but outside unincorporated activity centers, properties with existing industrial uses shall be protected. The county may use tools such as special district overlays to identify them for property owners and residents of surrounding neighborhoods.**

U-173 **Industrial development should have direct access from arterials or freeways. Access points should be combined and limited in number to allow smooth traffic flow on arterials. Access through residential areas should be avoided.**

U-174 **Small amounts of retail and service uses in industrial areas may be allowed for convenience to employees and users.**

U-175 **King County, in collaboration with cities and the development community, should create and fund a process to clean up and reclaim polluted industrial areas in order to expand the land available for industrial development.**

D. Urban Planned Developments and Fully Contained Communities

The Growth Management Act allows, within the designated Urban Growth Area, development of large land ownerships that may offer the public and the property owner opportunities to realize mutual benefits when such development is coordinated through the review process as an Urban Planned Development. Possible public benefits include greater preservation of public open space, proponent contributions to major capital improvement needs, diversity in housing types and affordability, and the establishment of the specific range and intensity of uses for the entire Urban Planned Development. A property owner and the public could benefit from the efficiency of combined hearings and land use decision making, as well as the establishment of comprehensive and consistently applied project-wide mitigations guiding the review of subsequent land use approvals.

U-176 **Sites for potential new Urban Planned Developments may be designated within the established Urban Growth Area to realize mutual benefits for the public and the property owner. Two Urban Planned Developments areas have been designated by the county: the Bear Creek Urban Planned Development area, comprised of the Redmond Ridge (formerly known as Northridge) Urban Planned Development, the Trilogy at Redmond Ridge (formerly known as Blakely Ridge) Urban Planned Development, and the Redmond Ridge East Urban Planned Development; and Cougar Mountain Village Urban Planned Development. Future Urban Planned Development sites in the Urban Growth Area shall be designated through a subarea planning process, or through a Comprehensive Plan amendment initiated by the property owner.**

U-177 **The creation of Urban Planned Developments is intended to serve as a model for achieving a mix of uses, appropriate development patterns, and high quality design, as well as providing for public benefits that shall include:**

a. Open space and critical areas protection;

b. Diversity in housing types and affordability;

c. Quality site design; and

d. Transit and nonmotorized transportation opportunities.

The Bear Creek Urban Planned Development area was first designated for urban development in 1989 in the Bear Creek Community Plan. The urban designation of this area under the Growth Management Act was established in the Countywide Planning Policies in 1992 and affirmed in 1994. The Bear Creek Urban Planned Development area was included in the Urban Growth Area designated in the 1994 King County Comprehensive Plan. Since the adoption of the 1994 Comprehensive Plan, both Redmond Ridge and Trilogy have been approved as Urban Planned Developments and King County has entered into development agreements governing the development of these sites. The legality of these development approvals was challenged and these legal challenges have been rejected. Therefore, these sites will be, and are being, developed at urban densities.

Through the adoption of the King County Comprehensive Plan 2000 Update, King County reaffirmed its urban designation of the Bear Creek Urban Planned Development area. In addition to the reasons that led the county (and the region) to originally include this area within the county's Urban Growth Area, when the county adopted the 2000 update, it noted that: two sites within this area had been approved for urban development after the adoption of the original Growth Management Act Comprehensive Plan; significant infrastructure improvements had been made at these sites; and the ultimate development of these sites was proceeding in accordance with issued permit approvals. The existence of these urban improvements further supported a conclusion that this area is characterized by urban growth within the meaning of the Growth Management Act and was therefore appropriately included within the county's Urban Growth Area.

Since the county considered and adopted the 2000 update, significant development within the Bear Creek Urban Planned Development area has taken place. The Urban Planned Development permits approved by the county required the construction of infrastructure needed to support urban development of the Bear Creek Urban Planned Development area. Those infrastructure improvements have now been completed or are under construction. This includes sanitary sewer trunk lines and pump stations; water trunk lines, pump stations, and storage facilities; stormwater collection, detention, treatment and discharge facilities; other utilities; a park and open space system linked by trails; and required road improvements. In addition, King County has granted final plat approval for lots for more than 2,100 of the dwelling units approved by the Redmond Ridge and Trilogy Urban Planned Development permits and more than 1,600 of those dwelling units have been built, are under construction, or have been permitted. Furthermore, major community facilities and services such as the 18-hole golf course and clubhouse, the Redmond Ridge Community Center, and the retail center and grocery store have been completed or are under construction. All of these developments support the conclusion that the Redmond Ridge and Trilogy Urban Planned Development sites are now fully characterized by and irrevocably committed to urban growth, and the county therefore reaffirms its urban designation of the Bear Creek Urban Planned Development area.

The urban designation of the Bear Creek, now referred to as Redmond Ridge East, has an approved Urban Planned Development permit and a Fully Contained Community permit that authorized the urban development of Redmond Ridge East. Redmond Ridge East is served by the urban infrastructure that has already been constructed to serve the Redmond Ridge and Trilogy Urban Planned Development sites.

The county reaffirms its urban designation of the Redmond Ridge East for the following reasons: this site has always been treated by King County as part of the Bear Creek Urban Planned Development urban area; this site is adjacent to the urban development that has already occurred and that will continue to occur at Trilogy and Redmond Ridge; this site is located in relationship to the rest of the Bear Creek Urban Planned Development area so as to be appropriate for urban growth; and this site is an area that will be served by existing urban public facilities and services that have been provided in accordance with Trilogy and Redmond Ridge Urban Planned Development permit requirements.

The Growth Management Act allows counties to establish a process, as part of the Urban Growth Area designation, for reviewing proposals to authorize new Fully Contained Communities. Criteria for approval of Fully Contained Communities are contained in Revised Code of Washington (RCW) 36.70A.350. If a county establishes in its comprehensive plan a process for authorizing Fully Contained Communities, it must adopt procedures for approving Fully Contained Communities in its development regulations. King County has established a Fully Contained Community consisting of the Bear Creek Urban Planned Development area.

U-178 King County has established a Fully Contained Community. This one area is designated through this Comprehensive Plan and is shown on the Land Use Map as the urban planned community of the Bear Creek Urban Planned Development area comprised of Trilogy at Redmond Ridge, Redmond Ridge, and Redmond Ridge East Urban Planned Development sites. Nothing in these policies shall affect the continued validity of the approved Urban Planned Development permits for these sites. This Fully Contained Community designation may be implemented by separate or coordinated Fully Contained Community permits.

U-179 The population, household, and employment growth targets and allocations for the county's Urban Growth Area in this plan include the Bear Creek Urban Planned Development area. Accordingly, the requirements in Revised Code of Washington 36.70A.350(2) that the county reserve a portion of the 20-year population projection for allocation to new Fully Contained Communities has been satisfied.

U-180 The review and approval process for a Fully Contained Community permit shall be the same as that for an Urban Planned Development permit, except the following additional criteria shall be met, pursuant to the provisions of RCW 36.70A.350:

a. New infrastructure (including transportation and utilities infrastructure) is provided for and impact fees are established and imposed on the Fully Contained Community consistent with the requirements of RCW 82.02.050;

b. Transit-oriented site planning and traffic demand management programs are implemented in the Fully Contained Community. Pedestrian, bicycle, and high occupancy vehicle facilities are given high priority in design and management of the Fully Contained Community;

c. Buffers are provided between the Fully Contained Community and adjacent non-Fully Contained Community areas. Perimeter buffers located within the perimeter boundaries of the Fully Contained Community delineated boundaries, consisting of either landscaped areas with native vegetation or natural areas, shall be provided and maintained to reduce impacts on adjacent lands;

d. A mix of uses is provided to offer jobs, housing, and services to the residents of the new Fully Contained Community. No particular percentage formula for the mix of uses should be required. Instead, the mix of uses for a Fully Contained Community should be evaluated on a case-by-case basis, in light of the geography, market demand area, demographics, transportation patterns, and other relevant factors affecting the proposed Fully Contained Community. Service uses in the

Fully Contained Community may also serve residents outside the Fully Contained Community, where appropriate;

e. Affordable housing is provided within the new Fully Contained Community for a broad range of income levels, including housing affordable by households with income levels below and near the median income for King County;

f. Environmental protection has been addressed and provided for in the new Fully Contained Community, at levels at least equivalent to those imposed by adopted King County environmental regulations;

g. Development regulations are established to ensure urban growth will not occur in adjacent nonurban areas. Such regulations shall include but are not limited to: rural zoning of adjacent Rural Areas; Fully Contained Community permit conditions requiring sizing of Fully Contained Community water and sewer systems so as to ensure urban growth will not occur in adjacent nonurban areas; and/or Fully Contained Community permit conditions prohibiting connection by property owners in the adjacent Rural Area (except public school sites) to the Fully Contained Community sewer and water mains or lines;

h. Provision is made to mitigate impacts of the Fully Contained Community on designated agricultural lands, forest lands, and mineral resource lands; and

i. The plan for the new Fully Contained Community is consistent with the development regulations established for the protection of critical areas by King County pursuant to RCW 36.70A.170.

For purposes of evaluating a Fully Contained Community permit the following direction is provided: The term "fully contained" is not intended to prohibit all interaction between a Fully Contained Community and adjacent lands but to limit impacts on adjacent lands and contain them within the development site as much as possible. "Fully contained" should be achieved through the imposition of development conditions that limit impacts on adjacent and nearby lands and do not increase pressures on adjacent lands for urban development. "Fully contained" is not intended to mandate that all utilities and public services needed by an urban population both start and end within the property (since sewer, water, power, and roads, are of such a nature that the origin and/or outfall cannot reasonably exist within the property boundaries), but that the costs and provisions for those utilities and public services that are generated primarily by the Fully Contained Community (schools, police, parks, employment, retail needs) be reasonably accommodated within its boundaries and not increase pressure for more urban development on adjacent properties.

U-181 **Except for existing Fully Contained Community designations, no new Fully Contained Communities shall be approved in King County.**

E. Urban Separators and the Four-to-One Program

The Countywide Planning Policies call for the county and cities to implement urban separators. Different from the Rural Area and Natural Resource Lands, these are low-density areas within the Urban Growth Area that create open space corridors, provide a visual contrast to continuous development and reinforce the unique identities of communities. Urban separators can play a significant role in preserving environmentally critical areas and in providing habitat for fish and wildlife. They also provide recreational benefits, such as parks and trails, and meet the Growth Management Act's requirement for greenbelts and open space in the Urban Growth Area. Urban Separators are mapped on the Land Use 2008 map in Chapter 1, Regional Growth Management Planning.

U-182 **Urban separators are corridors of land that define community or municipal identities and boundaries, provide visual breaks in the urban landscape, and link parks and open space within and outside the Urban Growth Area. These urban corridors should include and link parks and other lands that contain significant environmentally sensitive features, provide wildlife habitat or critical resource protection, contain defining physical features, or contain historic resources. The residential density for land so designated should be maintained at one unit per acre, and lands that are sending sites under the Transfer of Development Rights Program may transfer density at a rate of at least four units per acre.**

U-183 **King County should actively pursue designating urban separators in the unincorporated area and work with the cities to establish permanent urban separators within the unincorporated area that link with and enhance King County's urban separator corridors.**

U-184 **Designated urban separators should be preserved through park, trail and open space acquisitions; incentive programs such as the Transfer of Development Rights Program; the Public Benefit Rating System Program; and regulatory measures.**

While urban separators complement the regional open space system by helping to define urban communities, the King County Four-to-One Program provides an opportunity to add land to the regional open space system through the dedication of permanent open space. The Four-to-One Program has been recognized as an innovative land use technique under the Growth Management Act[3] and for King County, the purpose of the

[3] 36.70A.070 (5)(b) and .090 Revised Code of Washington

program is to create a contiguous band of open space, running north and south along the main Urban Growth Area Boundary. Since its inception in 1994, just over 1,300 acres have been added to the Urban Growth Area while nearly 4,500 acres of permanent open space have been conserved. Changes to the Urban Growth Area through this program are processed as Land Use Amendments to the King County Comprehensive Plan, subject to the provisions in King County Code chapter 20.18.

U-185 **Through the Four-to-One Program, King County shall actively pursue dedication of open space along the original Urban Growth Area line adopted in the 1994 King County Comprehensive Plan. Through this program, one acre of Rural Area zoned land may be added to the Urban Growth Area in exchange for a dedication to King County of four acres of permanent open space. Land added to the Urban Growth Area for drainage facilities that are designed as mitigation to have a natural looking visual appearance in support of its development, does not require dedication of permanent open space.**

U-186 **King County shall evaluate Four-to-One proposals for both quality of open space and feasibility of urban development. The highest-quality proposals shall be recommended for adoption as amendments to the Urban Growth Area. Lands preserved as open space shall retain their Rural Area designations and should generally be configured in such a way as to connect with open space on adjacent properties.**

U-187 **King County shall use the following criteria for evaluating open space in Four-to-One proposals:**

- **a. Quality of fish and wildlife habitat areas;**
- **b. Connections to regional open space systems;**
- **c. Protection of wetlands, stream corridors, ground water and water bodies;**
- **d. Unique natural, biological, cultural, historical, or archeological features;**
- **e. Size of proposed open space dedication and connection to other open space dedications along the Urban Growth Area line; and**
- **f. The land proposed as open space shall remain undeveloped, except for those uses allowed in U-188.**

U-188 King County shall preserve the open space acquired through the Four-to-One Program primarily as natural areas, passive recreation sites or resource lands for farming or forestry. King County may allow the following additional uses only if located on a small portion of the open space, provided that these uses are found to be compatible with the site's natural open space values and functions such as those listed in the preceding policy:

a. Trails;

b. Compensatory mitigation of wetland losses on the urban designated portion of the project, consistent with the King County Comprehensive Plan and the Critical Area Ordinance; and

c. Active recreation uses not to exceed five percent of the total open space area. Support services and facilities for the active recreation uses may locate within the active recreation area only, and shall not exceed five percent of the active recreation area. An active recreation area shall not be used to satisfy the active recreation requirements for the urban designated portion of the project as required by King County Code Title 21A.

U-189 Land added to the Urban Growth Area under the Four-to-One Program shall have a minimum density of four dwellings per acre and shall be physically contiguous to the original Urban Growth Area, unless there are limitations due to the presence of critical areas, and shall be able to be served by sewers and other efficient urban services and facilities; provided that such sewer and other urban services and facilities shall be provided directly from the urban area and shall not cross the open space or Rural Area or Natural Resource Lands. Drainage facilities to support the urban development shall be located within the urban portion of the development. In some cases, lands must meet affordable housing requirements under this program. The total area added to the Urban Growth Area as a result of this policy shall not exceed 4,000 acres.

U-190 King County shall amend the Urban Growth Area to add Rural Area lands to the Urban Growth Area consistent with Policy U-185 during the annual Comprehensive Plan amendment process. Open space dedication shall occur at final formal plat recording. If the applicant decides not to pursue urban development or fails to record the final plat prior to expiration of preliminary plat approval, the urban properties shall be restored to a Rural Area land use designation and associated zoning during the next annual review of the King County Comprehensive Plan.

F. Eastside Rail Corridor

The Eastside Rail Corridor is a former freight-rail facility railbanked under the National Trails System Act, 16 USC 1247(d), extending approximately 19 miles on its mainline from Renton to Woodinville with an approximately seven mile "spur" extending from Woodinville to Redmond. King County, the cities of Redmond and Kirkland, Sound Transit, and Puget Sound Energy have acquired Burlington Northern Santa Fe Railway's (BNSF) property interests in the Eastside Rail Corridor and have established a shared policy goal of dual use (recreational trail and public transportation), supporting mobility through transit, nonmotorized and active transportation, including access to transit outside the corridor, consistent with its federal railbanked status. The owners share other multiple objectives for the corridor, including accommodating utilities, parks, recreation and cultural amenities, and encouraging equitable access to these facilities, and to housing and jobs, in support of economic opportunity for all King County residents.

U-191 **King County shall collaborate with all Eastside Rail Corridor owners, adjacent and neighboring jurisdictions, and other interested and affected parties in support of achieving a vision for the corridor that includes dual use (recreational trail and public transportation) and supports multiple objectives, consistent with federal railbanking.**

U-192 **King County shall identify and implement actions that support development of the Eastside Rail Corridor to include dual use (recreational trail and public transportation), consistent with federal railbanking, and to achieve multiple objectives, such as actions to include property management and maintenance, service and capital planning and improvements, community and stakeholder engagement, securing funding to implement priority activities, and other actions.**

U-193 **King County shall work within all appropriate planning venues and processes to integrate the Eastside Rail Corridor into land use plans, transportation system plans, trail system plans, utility plans, and other plans, including significant capital projects or plans that affect and relate to dual use (recreational trail and public transportation), consistent with federal railbanking, and achieving multiple objectives for the corridor.**

II. Potential Annexation Areas

The annexation of urban unincorporated areas is good public policy. The State Growth Management Act and the regionally adopted Countywide Planning Policies stipulate that counties are the appropriate providers of regional services and of local services to the Rural Area and Natural Resource Lands. For their part, cities are the appropriate providers of local urban services to all areas within the designated Urban Growth Area Boundary. This logical split of government services is in part a reflection of the greater taxing authority afforded

to cities by the state Legislature. Annexation is a means to achieve the desired governmental service and land use vision set forth in regional policy and state law so that residents of urban areas receive urban level services.

King County's annexation efforts are particularly important given the impacts of historical patterns of annexation. Over time, higher tax revenue-generating areas – retail, industrial, and commercial centers and more affluent residential neighborhoods – have incorporated or annexed first, while lower income, ethnically diverse communities remained unincorporated. Given the County's limited taxing authority, promoting annexation is the best way to advance equity and socially just outcomes for residents in unincorporated urban areas.

Although it is the policy of the county to support and promote annexation, its formal ability to do so is extremely limited. State laws provide the cities, county residents and property owners with the authority to initiate the annexation process. A successful annexation initiative depends on establishing a collaborative and ongoing dialogue between the three affected interest groups: residents, the county, and the affected city. However, King County has a successful history of engaging in annexation discussions with urban unincorporated area residents. Most recently, from 2008 to 2015, there have been six major annexations:

- Lea Hill and Auburn West Hill into Auburn;
- Benson Hill into Renton;
- North Highline Area X into Burien;
- Panther Lake into Kent;
- Juanita-Finn Hill-Kingsgate into Kirkland; and
- Klahanie into Sammamish.

As a result of these and some smaller annexations, by 2016, King County's urban unincorporated population dropped by more than 110,000 persons from its 2007 level, to an estimated population of 119,900 (comparable to the population of Kent, the third largest city in the county).

Much of the remaining urban unincorporated area is made up of geographically isolated islands surrounded by cities or adjacent to the urban growth boundary. Because these areas are scattered across the county, the provision of local services is costly. Covering the cost of serving these areas reduces the amount of revenue available for regional services and for local services in the Rural Area and Natural Resource Lands. Therefore, King County has a strong fiscal interest in seeing the remaining urban unincorporated areas annexed to cities within the next several years.

The policies in this section are intended to guide the county's decision making on annexation-related issues to ensure the needs of residents in the urban unincorporated area are considered, the perspective of the future annexing city is considered and that a smooth transition from county to city government occurs.

U-201 In order to meet the Growth Management Act and the regionally adopted Countywide Planning Policies goal of becoming a regional service provider for all county residents and a local service provider in the Rural Area and Natural Resource Lands, King County shall encourage annexation of the remaining urban unincorporated area. The county may also act as a contract service provider where mutually beneficial.

U-201a In all urban unincorporated areas, King County shall consider equity and social justice in its planning, project development, and service delivery approach.

U-202 To help create an environment that is supportive of annexations, King County shall work with cities and with neighborhood groups, local business organizations, public service providers and other stakeholders on annexation-related activities to move the remaining urban islands towards annexation by the city most appropriate to serve it. King County will also seek changes at the state level that would facilitate annexation of urban unincorporated areas.

U-202a The County should seek state legislative authority to impose taxes in unincorporated urban areas consistent with the taxing authorities and rates of cities, and seek to impose rates consistent with the city to improve service delivery and infrastructure levels.

U-203 The Potential Annexation Areas Map adopted by the Growth Management Planning Council illustrates city-designated potential annexation areas (PAAs), contested areas (where more than one city claims a PAA), and those few areas that are unclaimed by any city. For contested areas, the county should attempt to help resolve the matter, or to enter into an interlocal agreement with each city for the purpose of bringing the question of annexation before voters. For unclaimed areas, King County should work with adjacent cities and service providers to develop a mutually agreeable strategy and time frame for annexation. For areas affiliated with a city for annexation, King County should proactively support annexations.

U-204 King County shall support annexation proposals that are consistent with the Countywide Planning Policies and the Washington State Growth Management Act, when the area proposed for annexation is wholly within the annexing city's officially adopted PAA, and when the area is not part of a contested area.

U-205 King County shall not support annexation proposals that would:

a. Result in illogical service areas;

b. Create unincorporated islands, unless the annexation is preceded by an interlocal agreement in which the city agrees to pursue annexation of the remaining island area in a timely manner;

c. Focus solely on areas that would provide a distinct economic gain for the annexing city at the exclusion of other proximate areas that should logically be included;

d. Move designated Agricultural and/or Forest Production District lands into the Urban Growth Area; or

e. Apply zoning to maintain or create permanent, low-density residential areas, unless such areas are part of an urban separator or are environmentally constrained, rendering higher densities inappropriate.

U-206 King County shall favor annexation over incorporation as the preferred method of governance transition. King County will not support incorporations when the proposed incorporation area is financially infeasible.

U-207 King County shall work with cities to develop pre-annexation or annexation interlocal agreements to address the transition of services from the county to the annexing cities. The development of such agreements should include a public outreach process to include but not be limited to residents and property owners in the Potential Annexation Areas, as well as residents and property owners in the surrounding areas. Such agreements may address a range of considerations, including but not limited to:

a. Establishing a financing partnership between the county, city and other service providers to address needed infrastructure;

b. Providing reciprocal notification of development proposals in Potential Annexation Areas, and opportunities to identify and/or provide mitigation associated with such development;

c. Supporting the city's desire, to the extent possible, to be the designated sewer or water service provider within the Potential Annexation Area, where this can be done without harm to the integrity of existing systems and without significantly increasing rates;

d. Assessing the feasibility and/or desirability of reverse contracting in order for the city to provide local services on the county's behalf prior to annexation, as well as the feasibility and/or desirability of the county continuing to provide some local services on a contract basis after annexation;

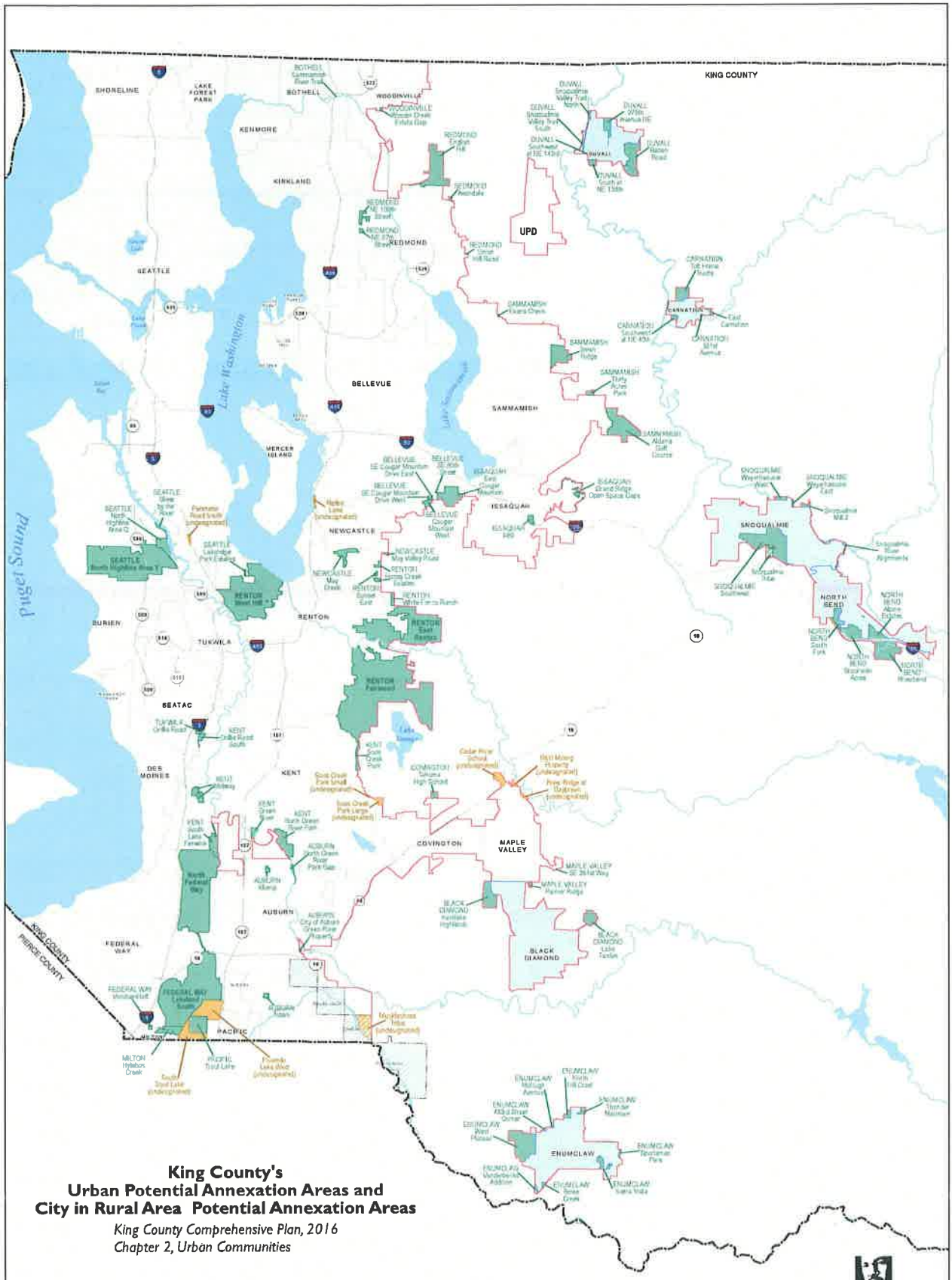
e. **Exploring the feasibility of modifying development, concurrency and infrastructure design standards prior to annexation, when a specific and aggressive annexation timeline is being pursued;**
f. **Assessing which county-owned properties and facilities should be transferred to city control, and the conditions under which such transfers should take place;**
g. **Transitioning county employees to city employment where appropriate;**
h. **Ensuring that land use plans for the annexation area are consistent with the Countywide Planning Policies with respect to planning for urban densities and efficient land use patterns; provision of urban services, affordable housing, and transportation; the protection of critical areas; and the long-term protection of urban separators;**
i. **Continuing equivalent protection of cultural resources, and county landmarks and historic resources listed on the King County Historic Resource Inventory;**
j. **Maintaining existing equestrian facilities and establishing equestrian linkages; and**
k. **Establishing a timeline for service transitions and for the annexation.**

King County will explore new options to affiliate unincorporated urban areas with cities, and to make the provision of services to such areas financially sustainable.

U-208 **King County should engage in joint planning processes for the urban unincorporated areas with the area's designated annexation city. Alternatively, upon a commitment from the city to annex through an interlocal agreement, King County will engage in joint planning processes for the urban unincorporated areas in tandem with the annexing city. Such planning may consider land use tools such as:**

a. **traditional subarea plans, subarea studies or area rezoning;**
b. **allowing additional commercial and high-density residential development through the application of new zoning;**
c. **Transfers of Development Rights that add units to new development projects; and**
d. **application of collaborative and innovative development approaches, such as design standards.**

King County will work through the Growth Management Planning Council to develop a plan to move the remaining unincorporated urban Potential Annexation Areas towards annexation.



King County's
Urban Potential Annexation Areas and
City in Rural Area Potential Annexation Areas

King County Comprehensive Plan, 2016
Chapter 2, Urban Communities

Designated City PAAs
Undesignated PAAs
Urban Growth Area
Incorporated City
City in Rural Area

N
W E
S

0 0.4 0.8 1.6 2.4 3.2 Miles

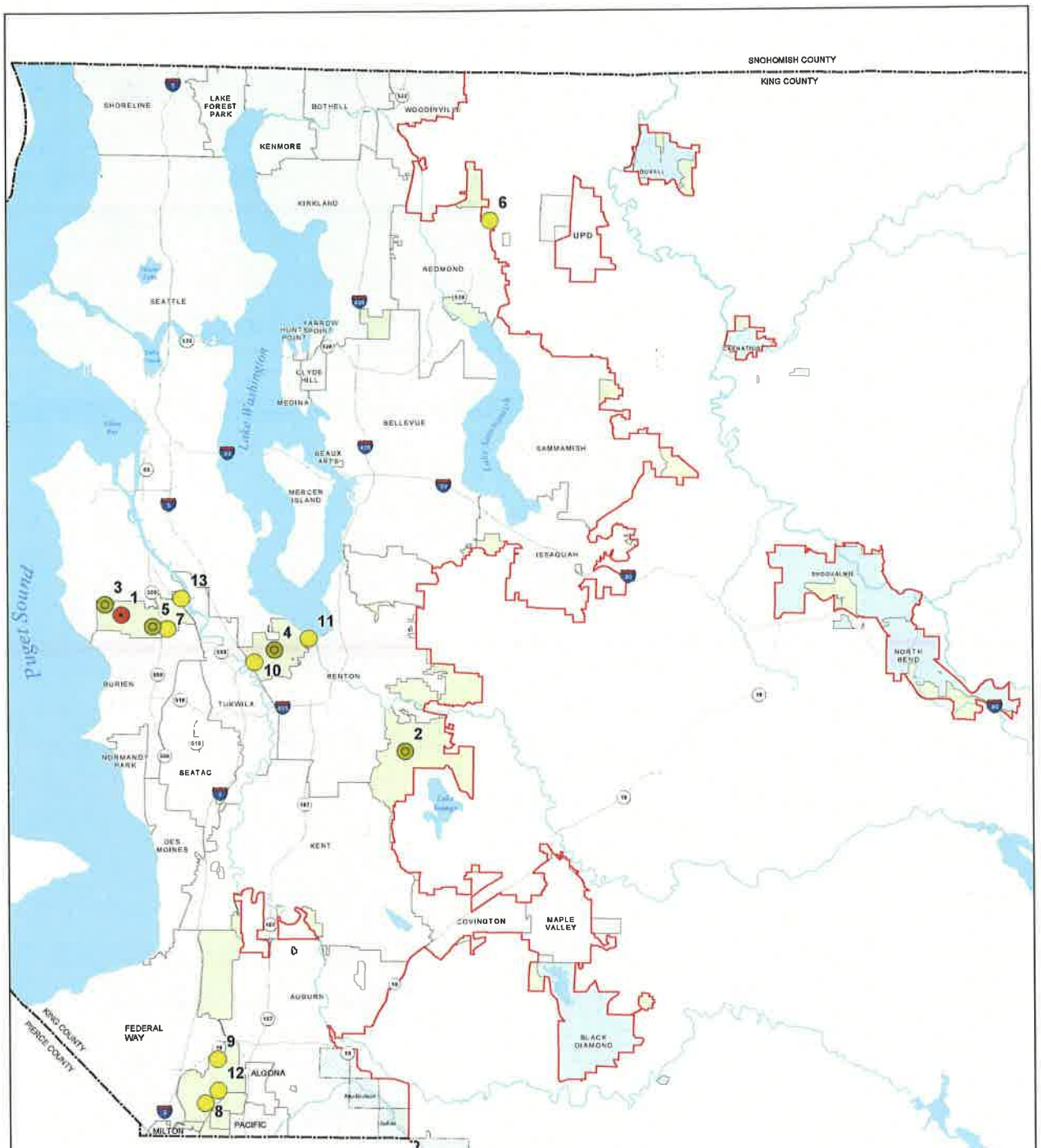
King County

Data Sources:
King County Office of Performance,Strategy and Budget
Regional Planning Section

Notes:
The maps in the King County Comprehensive Plan and its technical appendices are produced with a computer geographic information system. They are reduced in size but available at a larger scale.

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URBAN CENTERS 2016

King County Comprehensive Plan, 2016
Chapter Two, Urban Communities

- Unincorporated Activity Center
- 1 White Center
- Community Business Centers
- 2 Fairwood
- 3 Roxhill
- 4 Skyway
- 5 Top Hat
- Neighborhood Business Centers
- 6 Avondale Corner
- 7 Beverly Park
- 8 Jovita
- 9 Lake Geneva
- 10 Martin Luther King Jr. Way/60th Ave.-64th Ave. S
- 11 Rainier Ave. S/S. 114th St.-S. 117th St.
- 12 Spider Lake
- 13 Unincorporated South Park

- Incorporated City
- Potential Annexation Areas
- City in Rural Area
- Tribal Lands
- Urban Growth Area Boundary
- King County Boundary
- Freeways

King County GIS Center

Data Sources:
King County Department of Permitting and Environmental Review

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Date: 7/17/2016

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CHAPTER 3
RURAL AREAS AND NATURAL RESOURCE LANDS

Rural King County is an essential part of the county's rich diversity of communities and lifestyle choices, encompassing landscapes of scenic and great natural beauty. This chapter sets forth the county's intent and policies to ensure the conservation and enhancement of rural communities and natural resource lands.

In addressing these Rural Area needs, this chapter also comprises the rural land use classifications, such as Rural Area, Rural Neighborhood Commercial Centers, and Rural Towns. It also addresses the designated Natural Resource Lands, which include lands designated Agriculture, Forest, or Mining on the Land Use Map.

1. Growth Management Act Goals, Elements, and Requirements

Sections I through V of this chapter satisfy the Growth Management Act's mandatory rural element by designating Rural Area lands in order to limit development and prevent sprawl, by permitting land uses that are supportive of and compatible with the rural character established in the King County Countywide Planning Policies, and by providing for a variety of rural densities. These sections also satisfy the mandatory land use element by indicating the population densities that are appropriate for the Rural Area. The policies in these sections also encourage natural resource-based industries and uses in the Rural Area as required by the Growth Management Act.

Section VI of this chapter satisfies Growth Management Act Goal 8 to maintain and enhance natural resource-based industries; the Revised Code of Washington 36.70A.170 requirement to designate Natural Resource Lands; and the Revised Code of Washington 36.70A.080 optional conservation element by conserving Natural Resource Lands.

2. Equity and Social Justice Initiative

It is the county's goal to consider Equity and Social Justice in its planning, project development and local government service delivery throughout the Rural Area and Natural Resource Lands. Policies consistent with the county's Environmental and Social Justice Initiative in this chapter are related to local service delivery, natural resources, food systems and economic development determinants, respectively.

In its role as a local government in the unincorporated area, King County is committed to work to reduce inequities and provide opportunities by incorporating the values of the county's Equity and Social Justice work into the daily practice of developing policies and programs, making funding decisions and delivering services.

Policies in this chapter also support healthy built and natural environments by protecting Natural Resource Lands from development and ensuring a mix of land uses that support rural jobs, natural resource-based businesses and conserved open spaces that provide environmental services such as clean air, clean water and wildlife habitat. Agricultural policies support local food systems and provide access to affordable, healthy, and culturally appropriate foods for county residents. Agricultural policies in this chapter that implement the county's 2015 Local Food Initiative address the need to bring additional land into food production, to improve access to technical and financial resources for farmers that need them, and make local food more accessible in underserved communities.

Additional policies related to economic development in the agriculture and forestry sectors are located in Chapter 10, Economic Development.

The King County Rural Forest Commission and Agriculture Commission advise the county on the development and implementation of strategies, programs, policies and regulations that affect rural communities and resource

lands. The members of these advisory boards are chosen to represent the diverse interests of affected rural residents and business owners.

3. Rural Area and Communities

Understanding and conserving the unique characteristics of the Rural Area and each of the county's distinct rural communities will help King County retain its rural character and it's agricultural, forestry, and mining heritage.

King County's Rural Area, including communities such as the Hobart Plateau, Vashon Island, the Snoqualmie Valley, and the Enumclaw Plateau, are characterized by low-density residential development, farms, ranches, forests, watersheds crucial for both fisheries and flood hazard management, mining areas, small cities and towns, historic sites and buildings, archaeological sites, and regionally important recreation areas. These rural uses complement and support the more extensive resource uses in the designated Natural Resource Lands. The location of the Rural Area between the Urban Growth Area and the designated Natural Resource Lands helps to protect commercial agriculture and timber from incompatible uses.

Designation and conservation of the Rural Area supports and sustains rural communities and rural character as valued parts of King County's diversity. It also provides choices in living environments; maintains a link to King County's heritage; allows farming, livestock uses, and forestry to continue; and helps protect environmental quality and sensitive resources, such as groundwater recharge areas and watersheds crucial for both fisheries and flood hazard management. Rural King County also acts to enhance urban areas by providing a safe and reliable local food source, nearby open space and parks for a variety of recreation and tourism opportunities, and educational opportunities to explore current and historic agricultural and forestry practices.

The purpose of the zoning and land use designations in the Rural Area is to provide services and limited goods that satisfy rural residents' and local businesses' daily needs.

4. Resource Lands

The growing, harvest, extraction, processing, and use of products from the land play an important role in King County's economy by providing jobs and products for local use and export. Agricultural and forest lands also provide scenic views, links to King County's cultural heritage, and environmental benefits such as wildlife habitat, improvements in air and water quality, and carbon sequestration. In large measure, King County's quality of life is dependent upon the thoughtful planning and sound management of these lands to ensure their long-term conservation and productive use.

The population growth in the Puget Sound Region since 1945 has resulted in the conversion of agricultural and forest lands to other uses, and the reduction of mining opportunities. The natural resource land base has diminished for many reasons, among them the demand for more land for urban land uses, fragmentation of large acreages into rural residential properties, loss of infrastructure such as local processing facilities for

resource-based industries, and the high cost of land. Since 1994, when King County designated its Resource Lands of long term significance under Growth Management Act, it has been much more successful in retaining these areas.

Section VI contains King County's strategy for conservation of these valuable resource lands and for encouraging their productive and sustainable management. The strategy consists of policies to guide planning, incentives, education, and regulation. Although Section VI focuses on the designated Resource Lands of long term commercial significance, many of the policies are applicable to farm, forest and mineral lands in the Rural Area as well.

I. Rural Area

Preserving rural King County plays a key role in ensuring a continuing variety of landscapes, maintaining the diverse communities that often portray the rural legacy, and supporting the evolving rural economic opportunities for the county and its residents. The rural landscape is characterized by extensive forests and farm lands, free-flowing rivers and streams that provide high-quality habitat for fish and wildlife, and a mixture of housing types along with small commercial enterprises and business hubs. Rural Areas and rural-based economies contribute to the range of choices and enhance the quality of life of all county residents. The Growth Management Act and the King County Strategic Plan envision different landscapes, infrastructure, and level of services for urban and rural communities. King County is committed to sustaining rural economic clusters and rural character.

Traditional rural economic activities have evolved over the decades as residents have responded to changing markets and the expansion of urban areas. Large-scale, commercial forestry and mining have been and continue to be the traditional land uses in the eastern half of King County. Farming continues in the prime soils found in the river valleys and on the Enumclaw Plateau. Although certain historically prevalent types of agriculture such as hops farming have disappeared, and the number of dairy farms has declined, today's farmers are exploring new crops, value-added products, and creative direct marketing. County residents raise livestock such as poultry, cattle, sheep, llamas, alpacas, and buffalo. Equestrian activities, including breeding, training, boarding and recreation, have become a more significant part of the rural economy. The types of businesses now locating in the Rural Towns and Rural Neighborhood Commercial Centers and being developed as home-based businesses have also responded to these changes in the county, and in the commercial market place.

The glacial soils and terrain that give King County its natural beauty also create significant environmentally critical areas, such as steep, erodible slopes, wetlands and groundwater recharge areas. Maintenance of tree cover, natural vegetation and wetlands are critical to the continued functioning of the ecosystem and preservation of rural character. The interplay of forest cover, soils and water are essential to watershed health, ensuring adequate unpolluted groundwater recharge, stormwater runoff flow control and pollution reduction, carbon sequestration and habitat functions.

Conserving Rural Areas and Natural Resource Lands in King County is integral to providing diversity in lifestyle choices; sustaining farming, livestock, and forestry economies; protecting environmental quality and wildlife habitat; providing recreation opportunities and maintaining a link to the county's resource-based heritage.

A. Rural Legacy and Communities

King County's rural legacy is found in the rich history of its rural communities and continues today in the preservation of the county's historic, cultural, ecological, and archaeological sites, and to its rich and varied forestry, agricultural, and mining heritage. The railroad played a significant role in the historic growth and development of the county; its legacy is still seen in tourism opportunities in the Cities in the Rural Area such as Skykomish and Snoqualmie. Historic barns are found throughout the agricultural areas of the county. Lumber mills influenced the development of communities, such as the Rural Commercial Neighborhood Center of Preston, where the mill site is still in existence and historic photos adorn the walls of the community center. Chapter 7, Parks Open Space and Cultural Resources of this Comprehensive Plan provides the direction and policies for preserving the county's rural heritage. The policies that relate to conserving the farms and forests in King County are discussed in sections II and VI of this chapter.

R-101 **King County will continue to preserve and sustain its rural legacy and communities through programs and partnerships that support, preserve, and sustain its historic, cultural, ecological, agricultural, forestry, and mining heritage through collaboration with local and regional preservation and heritage programs, community groups, rural residents and business owners including forest and farm owners, rural communities, towns, and cities, and other interested stakeholders.**

B. Rural Character

The Growth Management Act requires the protection of traditional rural activities and rural character. King County is committed to protecting rural character and recognizes that each of its rural communities has distinct and unique characteristics. These communities vary depending on settlement and economic history, geography, and distance from the urbanizing areas of the region. For example, residents of Vashon Island, accessible only by ferry, sea or air, enjoy an island's leisurely and scenic lifestyle. Residents of the hilly gorge region around Black Diamond enjoy numerous recreational opportunities. There are small communities throughout rural King County, such as Hobart and Cumberland, each with its own unique history and lifestyle. Other communities with rich rural heritages, such as Old Maple Valley, are in transition as development of land in and adjacent to the areas is occurring. In the Snoqualmie Valley, farming is still the mainstay, while further east, the Town of Skykomish has a significant railroad and forestry history.

Population growth in Puget Sound communities affects rural character everywhere in the region. King County was once firmly rooted in agriculture, forestry and mining. However, with regional growth both the rural economy and the rural population are changing, as are the expectations of some rural residents for county services. Some residents are more accustomed to independent lifestyles focused around resource uses such as farming, dairying, keeping of livestock, or forestry. Other residents and visitors can be surprised by the sights, sounds, and smells associated with rural living; and can be accustomed to higher levels of service and facilities than are traditionally provided in the Rural Area.

One of the challenges facing the county is to provide for a diversity of lifestyle choices while providing public services at rural levels. As the county recognizes a profound difference between the nature and character of unincorporated rural King County as compared to the urban areas, it is the intent of the county to continue to provide services at established rural levels that support and help maintain rural character.

C. Public Engagement

In order to implement its goals, objectives, and strategies for broader public engagement, King County has created several Community Service Areas that encompass all of unincorporated King County, including areas without representation by any Unincorporated Area Council. The Community Service Areas provide a conduit for greater participation by all residents in unincorporated King County and increase opportunities for residents to inform county decisions relating to programs and capital projects within each Community Service Area.

R-102 **King County will continue to support the diversity and richness of its rural communities and their distinct character by working with its rural constituencies through its Community Service Areas program to sustain and enhance the rural character of Rural Area and Natural Resource Lands.**

II. Rural Designation

A. Rural Area Designation Criteria

The Rural Area designation in King County represents the multi-use nature of rural lands, including working farms and forests, livestock uses, home-based businesses and housing. The sustainability and enhancement of these areas and their underlying economic health is critical to the range of lifestyle choices available in King County.

The criteria set forth in this section were used to draw the boundaries of the Rural Area designated by this plan.

R-201 It is a fundamental objective of the King County Comprehensive Plan to maintain the character of its designated Rural Area. The Growth Management Act specifies the rural element of comprehensive plans include measures that apply to rural development and protect the rural character of the area (Revised Code of Washington 36.70A.070 (5)). The Growth Management Act defines rural character as it relates to land use and development patterns (Revised Code of Washington 36.70A.030 (15)). This definition can be found in the Glossary of this Plan. Rural development can consist of a variety of uses that are consistent with the preservation of rural character and the requirements of the rural element. In order to implement Growth Management Act, it is necessary to define the development patterns that are considered rural, historical or traditional and do not encourage urban growth or create pressure for urban facilities and service.

Therefore, King County's land use regulations and development standards shall protect and enhance the following attributes associated with rural character and the Rural Area:

a. The natural environment, particularly as evidenced by the health of wildlife and fisheries (especially salmon and trout), aquifers used for potable water, surface water bodies including Puget Sound and natural drainage systems and their riparian corridors;
b. Commercial and noncommercial farming, forestry, fisheries, mining, home-occupations and home industries;
c. Historic resources, historical character and continuity important to local communities, as well as archaeological and cultural sites important to tribes;
d. Community small-town atmosphere, safety, and locally owned small businesses;
e. Economically and fiscally healthy Rural Towns and Rural Neighborhood Commercial Centers with clearly defined identities compatible with adjacent rural, agricultural, forestry and mining uses;
f. Regionally significant parks, trails and open space;
g. A variety of low-density housing choices compatible with adjacent farming, forestry and mining and not needing urban facilities and services;
h. Traditional rural land uses of a size and scale that blend with historic rural development; and
i. Rural uses that do not include primarily urban-serving facilities.

R-202 **The Rural Area geography shown on the King County Comprehensive Plan Land Use Map include areas that are rural in character and meet one or more of the following criteria:**

- **a. Opportunities exist for significant commercial or noncommercial farming and forestry (large-scale farms and forest lands are designated as Resource Lands);**
- **b. The area will help buffer nearby Natural Resource Lands from conflicting urban uses;**
- **c. The area is contiguous to other lands in the Rural Area, Resource Lands or large, predominantly environmentally critical areas;**
- **d. There are major physical barriers to providing urban services at reasonable cost, or such areas will help foster more logical boundaries for urban public services and infrastructure;**
- **e. The area is not needed for the foreseeable future that is well beyond the 20-year forecast period to provide capacity for population or employment growth;**
- **f. The area has outstanding scenic, historic, environmental, resource or aesthetic values that can best be protected by a rural designation; or**
- **g. Significant environmental constraints make the area generally unsuitable for intensive urban development.**

The Rural Area geography is generally located east of the Urban Growth Area, with the exception of the entirety of Vashon-Maury Islands. Within the Rural Area, three land use categories are primarily applied: Rural Area (encompassing the Rural 2.5, Rural 5, Rural 10, and Rural 20 zones), allowing a range of low-density residential developments, forestry, farming, livestock uses, recreation and a range of traditional rural uses; Rural Town, recognizing historical settlement patterns and allowing commercial uses to serve rural residents; and Rural Neighborhood Commercial Centers, allowing small-scale convenience services for nearby rural residents.

While the Growth Management Act, the Countywide Planning Policies and King County's policies and regulations call for protecting the Rural Area by limiting housing densities, there are many other features in addition to density that characterize the Rural Area. Some of the most important features include integration of housing with traditional rural uses such as forestry, farming and keeping of livestock; protection of streams, wetlands and wildlife habitat; preservation of open vistas, wooded areas and scenic roadways; and availability of and reliance on minimal public services. King County is committed to maintaining these features as well, and the policies in this chapter call for continuing and expanding upon these efforts.

R-203 **King County's Rural Area is considered to be permanent and shall not be redesignated to an Urban Growth Area until reviewed pursuant to the Growth Management Act (Revised Code of Washington 36.70A.130(3)) and the Countywide Planning Policies.**

B. Forestry and Agriculture in Rural King County

The Rural Area includes working farms and forests. These contribute to rural character; the diversity and self-sufficiency of local economies; and open space, wildlife habitat, flood hazard management, and environmental quality. However, Rural Area land in farm and forest use has diminished since 1985, mostly through the conversion of these lands to residential uses. Pressures to convert from resource use include the high land value for alternative uses and the encroachment of residential and other development that conflicts with the resource use.

Although most of King County's agriculture and timber lands are within designated Agricultural and Forest Production Districts, there is a significant land base for agriculture and forestry in the Rural Area. King County has studied this land base, has mapped agricultural use, and has identified rural forest areas where forestry will be enhanced and protected. Efforts to conserve the forest, farm, and livestock uses are important and include technical assistance and incentive programs such as the Transfer of Development Rights Program (as presented in Section III).

R-204 **Farming and forestry are vital to the preservation of rural King County and should be encouraged throughout the Rural Area. King County should encourage the retention of existing and establishment of new rural resource-based uses, with appropriate site management that protects habitat resources. King County's regulation of farming, keeping of livestock, and forestry in the Rural Area should be consistent with these guiding principles:**

- **a. Homeowner covenants for new subdivisions and short subdivisions in the Rural Area should not restrict farming and forestry;**
- **b. Development regulations for resource-based activities should be tailored to support the resource use and its level of impact;**
- **c. Agricultural and silvicultural management practices should not be construed as public nuisances when carried on in compliance with applicable regulations, even though they may impact nearby residences; and**
- **d. County environmental standards for forestry and agriculture should protect environmental quality, especially in relation to water and fisheries resources, while encouraging forestry and farming.**

R-205 **Uses related to and appropriate for the Rural Area include those relating to agriculture, forestry, mineral extraction, and fisheries, such as the raising of livestock, growing of crops, creating value-added products, and sale of agricultural products; small-scale cottage industries; and recreational and small-scale tourism uses that rely on a rural location.**

Most of the policies related to agriculture and forestry are found in the Resource Lands section (Section VI) of this chapter. Many of these policies are relevant to agriculture and forestry in the Rural Area as well as in the designated Agricultural and Forest Production Districts.

The importance of farming and forestry to the Rural Area and Natural Resource Lands was first emphasized in the 1994 Comprehensive Plan. Subsequently, the county took steps to encourage the continuation of farm and forestry practices in the Rural Area and Natural Resource Lands, including developing a *Farm and Forest Report* in 1996. The report recommended a series of actions to protect the rural farm and forest land base as well as the practices of farming and forestry, including the provision of technical assistance to aid property owners in land management, outreach to owners of properties vulnerable to development, creating opportunities for property owners to sell their development rights, and seeking funding for public acquisition of rural properties that had an existing resource-based use. The report also recommended the continuation of the King County Agriculture Commission and the appointment of a Rural Forest Commission to review the impact of proposed regulations on rural forestry and recommend incentive programs.

1. Forestry

Since 1996, King County has been actively implementing the recommendations of the *Farm and Forest Report* through the Forestry Program. Throughout the Rural Area, King County encourages small-scale forestry and land stewardship through a variety of land owner incentive and community-based programs that:

a. Promote forest stewardship through education and technical assistance programs, such as the Washington State University Extension Forest Stewardship Programs;

b. Provide technical assistance and information to landowner groups and community associations seeking to implement land/water stewardship, management of stormwater runoff, habitat restoration and management plans;

c. Create opportunities and incentives for voluntary, cooperative management of woodlots and open space currently in separate ownership;

d. Offer technical assistance and information to landowners who are interested in managing their forest for non-timber specialty forest products;

e. Explore opportunities for providing relief from special levies and assessments;

f. Conduct projects on King County park lands to demonstrate sustainable forestry practices, and

g. Provide education and assistance in the control of noxious and invasive weeds, including information on integrated pest management and protection of pollinators in accordance with the best management practices established by the Environmental Protection Agency and Washington State Noxious Weed Control Board, and as implemented by the King County Noxious Weeds Program.

The county encourages forest stewardship planning and active forest management as a means of reducing conversion of forestland to other uses, improving forest health, increasing rural economic prosperity and reducing risks from wildfire. Hundreds of landowners have written forest stewardship plans and have enrolled in current use taxation programs, demonstrating a commitment to forest management.

The county has worked with the Rural Forest Commission to identify and propose changes to the King County Code to remove impediments to the implementation of forest stewardship plans. However, the small size of rural forest properties presents another obstacle to implementation of forest plans. Because the volume of timber harvested at any one time is usually small, it is difficult for landowners to find forestry services or log buyers. Many contractors do not consider small sites to be forestland with potential management opportunities, and they have not developed the tools and skills to work with small sites. There is untapped potential for work to be done by the private sector on small private forestlands. Outreach to forestry consultants and labor contractors concerning the potential small lot forest market is needed. Continuing forestry technical assistance and cost share to landowners, who otherwise are unlikely to pursue management activities, will encourage active forest stewardship and rural economic development.

King County continues to explore ways to facilitate the harvest, utilization and marketing of wood products grown in the Rural Area.

R-206 **The conservation of forest land and forestry throughout the Rural Area shall remain a priority for King County. Landowner property tax incentives, technical assistance, permit assistance, regulatory actions and community-based education shall be used throughout the Rural Area to sustain the forest land base and forestry activities. King County should ensure that its regulations, permitting processes and incentive programs facilitate and encourage active forest management and implementation of forest stewardship plans.**

The Forestry Program will continue to evaluate additional ways to conserve rural forest lands and encourage forestry. In addition, King County has identified properties for acquisition, and has worked in partnership with other jurisdictions and stakeholder groups to match high priority sites with funding sources for permanent conservation. King County owns and manages approximately 26,000 acres of forestland. Of this, 3,850 acres are designated as working forests: Taylor Mountain Forest, Ring Hill, Sugarloaf, Island Center, Dockton, Mitchell Hill, Tokul Creek and Preston Ridge forests. The county has extended its forest stewardship program to implement active management for forest health on other forested open space properties. The county has also conserved more than 142,000 acres of forested properties by purchasing the development rights. These properties remain in either private ownership or under Washington State Department of Natural Resources ownership.

Although economic incentive programs and technical assistance are available to all property owners in the Rural Area interested in pursuing small-scale forestry, special efforts to maintain forest cover and the practice of

sustainable forestry are warranted where there are opportunities to sustain large, contiguous blocks of rural forest. The Agricultural and Forest Lands map identifies such areas as Rural Forest Focus Areas and notes the locations and boundaries of each focus area.

R-207 **Rural Forest Focus Areas are identified geographic areas where special efforts are necessary and feasible to maintain forest cover and the practice of sustainable forestry. King County shall target funding, when available, new economic incentive programs, regulatory actions, fee and easement acquisition strategies and additional technical assistance to the Rural Forest Focus Areas. Strategies specific to each Rural Forest Focus Area shall be developed, employing the combination of incentive and technical assistance programs best suited to each focus area.**

R-208 **The Rural Forest Focus Areas should be maintained in parcels of 20 acres or more in order to retain large, contiguous blocks of rural forest. Regulations and/or incentives should seek to achieve a maximum density of one home per 20 acres.**

2. Farming

The 1996 *Farm and Forest Report* provided a series of strategies for conserving farmland and sustaining farming both within the designated Agricultural Production District where some of the County's best agricultural soils are found and outside the Agricultural Production District, where there continues to be a significant amount of farming. A 2013 aerial photo survey identified about 12,000 acres of Rural Area land in active agriculture, much of it in livestock production.

R-209 **King County should develop incentives to encourage agricultural activities in the remaining prime farmlands located outside the Agricultural Production District. These incentives could include tax credits, expedited permit review, reduced permit fees, permit exemptions for activities complying with best management practices, assistance with agricultural waste management or similar programs.**

The raising and management of livestock and the production of associated products are components of the county's agricultural economy. Livestock raised in the county includes, but is not limited to, cattle, buffalo, sheep, hogs, llamas, alpacas, goats, and poultry.

R-210 **King County supports the raising and management of livestock and the production of related value-added products. The management of livestock and the lands and structures supporting the raising of livestock, should be consistent with industry best management practices and must comply with county, state, and federal regulations related to the specific industry.**

Additional policies related to farming can be found in Section VI. Resource Lands.

C. Equestrian Activities

King County recognizes the contributions of equestrian livestock husbandry, training, competition, and recreation activities to the overall rural quality of life and economic base in King County. Equestrian activities provide a lifestyle value to numerous county residents and visitors and a source of revenue for rural residents and business owners. There are numerous organizations that support the equestrian industry by providing education and promoting equine husbandry, including the King County Agriculture Program, Washington State University Extension, Future Farmers of America, 4-H, the King County Executive Horse Council, Backcounty Horsemen, the Enumclaw Forested Foothills Recreation Association, and numerous other special interest equestrian-related groups.

In recent years the diversity of equestrian uses has expanded throughout the rural portions of the county, going well beyond the traditional uses of a child and his or her favorite horse, a 4-H horse show, or a trail ride through the woods. Today's equestrian uses include raising and training a variety of horse breeds, an increase in the number of riding arenas, and the construction of a state-of-the-art horse rehabilitation facility. This diversity of equestrian uses should be sustained and encouraged where compatible with the existing character of the area in which equestrian facilities are proposed to be built or expanded.

Several constraints may limit the development or expansion of equestrian activities. Even though the Growth Management Act limits growth in the Rural Area, some growth continues to occur throughout the Rural Areas of the county, reducing the availability of open land to sustain livestock, equestrian activities, and threatening existing or potential trail segments that may be lost to uncoordinated land developments.

R-211 **King County should continue to support and sustain equestrian activities and ensure that regulations support those activities compatible with the area in which they are located. The county should encourage subdivision layouts that preserve opportunities for livestock and equestrian activities.**

Trail riding throughout rural King County is a popular equestrian use enjoyed by both urban and rural residents. Although llama and alpaca treks are becoming increasingly popular, most of the trail riding in King County is on horses and mules. Several constraints, including uncoordinated land development, may limit the continuation, development, or expansion of equestrian trails or trail segments. Additionally, as ownership of private and/or

public land with existing trails is transferred, these trails may be lost when easements are not in place to protect the trails at the time of the transaction or if the new owner is not aware that a trail runs across the parcel.

The following policies address the need to continue to support trails for equestrian, multi-use, and existing trail linkage purposes.

R-212 **King County should support equestrian use trails throughout the Rural Area and in the Agricultural and Forest Production Districts, as appropriate, by:**

- **a. Working with local communities to identify and protect multiple-use trails and key linkages that support equestrian travel;**
- **b. Maintaining equestrian links, including multiple-use trails, where appropriate;**
- **c. Ensuring parking areas serving multiple-use trails are designed and constructed, whenever possible to handle parking for horse trailers; and**
- **d. Constructing and maintaining equestrian trails under County ownership or management consistent with King County Backcountry Trail or Regional Trail Standards whenever possible.**

R-213 **Soft-surface multiple-use trails in corridors separate from road rights-of-way are the preferred option for equestrian travel for safety reasons and to avoid conflicts with residential activities associated with the street. Existing off-road trails should be preserved during site development, with relocation as appropriate to accommodate development while maintaining trail connections. The King County Road Design and Construction Standards will accommodate safe equestrian travel within road rights-of-way. Where appropriate, capital improvement programs for transportation and park facilities shall also enable the use of new facilities by equestrians. Construction standards for multiple-use nonmotorized trails to be established in road rights-of-way within the Rural Area and Natural Resource Lands should assure a minimum eight-foot-wide gravel shoulder on arterial roads and 4.0 foot gravel shoulder on local access roads, or provide a trail separated from the driving lanes by a ditch or other barrier. Construction standards for soft-surface multiple-use nonmotorized trails in corridors separate from road rights-of-way shall be consistent with current trail construction and maintenance practices as promulgated by the U.S. Forest Service.**

R-214 **King County's land use regulations should protect rural equestrian community trails by supporting preservation of equestrian trail links in the Rural Area and within the Agricultural and Forest Production District. Representatives of the equestrian community should be given the opportunity to review and monitor regulatory and policy actions by King County, such as Rural Area development regulations, that have the potential to affect equestrian trails.**

R-215 **Property owners in the Agricultural and Forest Production Districts are encouraged to voluntarily allow continued equestrian access to existing trails or alternative access if the existing trail impedes future use of their property.**

R-216 **Equestrian trails should be a category in the county's Public Benefit Rating System, so that a landowner who provides trail access may qualify for a tax reduction under the program.**

R-217 **County departments negotiating trades or sales of county land shall determine whether any historically established trails exist on the property, and, when economically feasible, ensure that those trails are retained or replaced and are not lost as a condition of the trade or sale. Trails that provide key linkages, for either multi-use or equestrian trails, shall be considered to have strategic value to the county's trail network and shall be retained or replaced whenever possible.**

III. Rural Densities and Development

A. Rural Growth Forecast

The Growth Management Act requires new growth to be substantially accommodated in Urban Growth Areas, yet growth may be permitted outside the Urban Growth Area provided it is not urban in character.

The Rural Area and Natural Resource Lands are restricted from accommodating large amounts of growth, but low-density residential development and other traditional rural uses are allowed. The Growth Management Act requires that rural development be contained and controlled to ensure the protection of rural character, assure the visual compatibility of rural development with the surrounding Rural Area and Natural Resource Lands, protect environmentally critical areas and habitat, and protect against conflicts with natural resource uses, such as farming, forestry, and mining.

In 2009, the Growth Management Planning Council adopted urban area targets to accommodate the most recent countywide population projections supplied by the state. These urban targets assumed Rural Area and Natural Resource Lands forecast of fewer than 6,000 additional housing units during the period 2006 to 2031. No

attempt has been made to allocate this rural forecast to subareas of rural King County. As targets will not be updated until approximately 2019, these assumptions remain unchanged.

Since adoption of King County's initial Comprehensive Plan under the Growth Management Act in 1994, annual building permit activity in the Rural Area and on Natural Resource Lands has continued to drop to an average of less than 200 new building permits per year since 2007. Between 2000 and 2010, Rural Areas and Natural Resource Lands grew by about 4,000 housing units to a total of 49,000. However, the population of these areas actually declined slightly during the decade, and stood at 124,000 in 2010. Since then, the population has grown slightly. Application of new zoning measures and other regulatory tools have helped to reduce subdivision activity. The current rate of 200 new homes per year could continue for decades.

The application of lower-density zoning or more restrictive standards could reduce the creation of new lots, but there are limited opportunities to address development of existing legal lots. One measure that would slow the growth rate on existing lots would be the establishment of an annual limit on the number of building permits to be issued in the Rural Area and on Natural Resource Lands. This alternative would be more palatable if it were linked to a development rights transfer or purchase program.

R-301 **A low growth rate is desirable for the Rural Area, including Rural Towns and Rural Neighborhood Commercial Centers, to comply with the State Growth Management Act, continue preventing sprawl and the overburdening of rural services, reduce the need for capital expenditures for rural roads, maintain rural character, protect the environment and reduce transportation-related greenhouse gas emissions. All possible tools may be used to limit growth in the Rural Area. Appropriate tools include land use designations, development regulations, level of service standards and incentives.**

B. Residential Densities

The low-density residential living choices available in the Rural Area provide an important part of the variety of housing options for King County residents. The residential land use policies in this section, together with their implementing regulations, strike a balance between making rural housing available to those who desire a rural way of life and keeping densities and the number of housing units low enough so they can be supported by a rural level of public facilities and services, be compatible with nearby commercial and noncommercial farming and forestry, and prevent or significantly reduce adverse impacts of development on the natural environment.

These policies and implementing regulations could allow 14,000 to 24,000 more housing units at ultimate buildout in addition to the roughly 45,000 residences existing in the designated Rural Area in 2000. The Transfer of Development Rights Program will help reduce development capacity in the Rural Area, and King County should continue to seek other programs that provide economic incentives for property owners to voluntarily limit residential development of their land.

R-302 **Residential development in the Rural Area should occur as follows:**

a. In Rural Towns at a variety of densities and housing types, compatible with maintenance of historic resources and community character; and

b. Outside Rural Towns at low densities compatible with traditional rural character and uses, farming, forestry, mining and rural service levels.

The use of land and the density of development (measured as the number of homes or other structures per acre or per square mile of land) are key determinants and contributors to the character of the Rural Area, as described above in Section A. Although human settlement of King County's Rural Area has a wide variety of uses and densities, both the historical and desirable range of uses and densities defined here are necessarily narrower and less intense than that found in the Urban Area. Residential development at very low densities (including the land for accessory uses, on-site sewage disposal and local water supply) consumes or will consume most of the land in the Rural Area. Residential density may be the single, most important factor in protecting or destroying rural character that can be influenced by government policies and regulations.

Low overall densities in the Rural Area will be achieved through very large minimum lot sizes or limited clustering at the same average densities when facilities and services permit (for example, soil conditions allow on-site sewage disposal on smaller lots). The Rural Area cannot be a significant source of affordable housing for King County residents, but it will contain diverse housing opportunities through a mix of large lots, clustering, existing smaller lots and higher densities in Cities in the Rural Area and Rural Towns, as services permit.

R-303 **Rural Area zoned properties should have low residential densities that can be sustained by minimal infrastructure improvements such as septic systems and rural roads, should cause minimal environmental degradation and impacts to significant historic resources, and that will not cumulatively create the future necessity or expectation of urban levels of services.**

R-304 **Rural Area zoned residential densities shall be applied in accordance with R-305 – R-309. Individual zone reclassifications are discouraged and should not be allowed in the Rural Area. Property owners seeking individual zone reclassifications should demonstrate compliance with R-305 – R-309.**

Although King County designated Resource Lands and zoned extensive portions of its territory as Agricultural Production Districts or Forest Production Districts, very low residential densities adjacent to Natural Resource Lands are essential to minimize land use conflicts. In addition, a significant part of the Rural Area land base is still used for farming or forestry uses. Therefore, suitability of lands for continuing resource uses and proximity to designated natural Resource Lands will be important considerations in applying the lower rural densities.

R-305 **A residential density of one home per 20 acres or 10 acres shall be achieved through regulatory and incentive programs on lands in the Rural Area that are managed for forestry or farming respectively, and are found to qualify for a Rural Forest Focus Area designation in accordance with R-207.**

R-306 **A residential density of one home per 10 acres shall be applied in the Rural Area where:**

a. The lands are adjacent to or within one-quarter mile of designated Agricultural Production Districts, the Forest Production District or legally approved long-term mineral resource extraction sites; or

b. The lands contain significant environmentally constrained areas as defined by county ordinance, policy or federal or state law, or regionally significant resource areas or substantial critical habitat as determined by legislatively approved basin plans or Watershed Resource Inventory Area Plans; and

c. The predominant lot size is greater than or equal to 10 acres in size.

R-307 **For Vashon-Maury Island, a residential density of one home per 10 acres:**

a. Shall be maintained on areas zoned RA-10 as of 1994 to help protect community character and reduce adverse impacts on the island's infrastructure; and

b. Shall be applied to areas with a predominant lot size of 10 acres or greater and mapped as category I Critical Aquifer Recharge Areas.

R-308 **A residential density of one home per five acres shall be applied in the Rural Area where:**

a. The land is physically suitable for development with minimal environmentally sensitive features or critical habitat as determined by legislatively adopted watershed based plans;

b. Development can be supported by rural services;

c. The land does not meet the criteria in this plan for lower density designations; and

d. The predominant lot size is less than 10 acres.

Although King County intends to retain low residential densities in the Rural Area, residential development has occurred in the past on a wide variety of lot sizes. Both existing homes on small lots and rural infill on vacant, small lots contribute to the variety of housing choices in the Rural Area. In some cases, however, rural-level facilities and services (e.g. on-site sewage disposal, individual water supply systems) may not permit development of the smallest vacant lots. Policy R-309 recognizes that some of the Rural Area has already been subdivided at a density greater than one lot per five acres (for example, parts of the shoreline of Vashon Island) when the original 1994 Comprehensive Plan was adopted, and applied a zoning category to just those properties

in existence at that time. Zoning to implement policies R-306 through R-309 has been applied through subarea and local plans and area zoning maps.

R-309 **The RA-2.5 zone has generally been applied to Rural Areas with an existing pattern of lots below five acres in size that were created prior to the adoption of the 1994 Comprehensive Plan. These smaller lots may still be developed individually or combined, provided that applicable standards for sewage disposal, environmental protection, water supply, roads and rural fire protection can be met. A subdivision at a density of one home per 2.5 acres shall only be permitted through the Transfer of Development Rights from property in the designated Rural Forest Focus Areas. The site receiving the density must be approved as a Transfer of Development Rights receiving site in accordance with the King County Code. Properties on Vashon-Maury Islands shall not be eligible as receiving sites.**

Accessory dwelling units provide opportunities for affordable housing, on-site housing for workers and caretakers, housing for extended family members, and rental income for landowners. However, detached accessory dwelling units function similarly to separate homes on separate lots and should be treated as such. When a subdivision is proposed for a property that already has a house and a detached accessory dwelling unit, the house and accessory dwelling unit shall count as two units. For example, on an RA-5 zoned 20 acre parcel, which could be subdivided into four lots, the existing primary dwelling and the accessory unit in a separate building shall count as two of the four units allowed on the site.

R-310 **Accessory dwelling units in structures detached from the primary dwelling shall be counted as a separate dwelling unit for the purpose of lot calculations under the zoning in place at the time of a proposed subdivision.**

R-311 **The King County Residential Density Incentive Program shall not be available for development in the Rural Area zones.**

C. Transfer of Development Rights Program

The Growth Management Act encourages the use of innovative techniques for land use management. King County has a long tradition of using such techniques, including programs promoting transfers of development rights, to achieve its land management goals.

To that end, King County promotes the transfer of development rights from land valuable to the public as undeveloped ("sending sites"), to land better able to accommodate growth ("receiving sites"). The Transfer of Development Rights Program is a voluntary program that allows sending site landowners to achieve an economic return on their property while maintaining it in forestry, farming, habitat, parks, or open space in

perpetuity. It also increases housing opportunities in Urban Area receiving sites where urban services and infrastructure can accommodate additional growth.

Sending site landowners choose to sever the right to develop their land from the land itself and sell their development rights to receiving site landowners who are permitted to build additional development capacity above the base density, but at or below the allowed maximum density under current zoning, with the purchase of Transferable Development Rights. When Transferable Development Rights are allocated to sending site property owners, the land is protected from future development in perpetuity through a conservation easement.

In so doing, the Transfer of Development Rights Program: (1) benefits Rural Area and Natural Resource Land property owners by providing them financial compensation to not develop their land, (2) directs future Rural Area and Natural Resource Land development growth into urban areas, saving the County the cost of providing services to rural development and yielding climate change benefits through reduced household transportation-related greenhouse gas emissions, and (3) permanently preserves land through private market transactions.

R-312 **As an innovative means to permanently preserve private lands with countywide public benefit, to encourage higher densities in urban areas and reduce residential development capacity in Rural Area and Natural Resource Lands, King County shall continue to operate an effective Transfer of Development Rights Program.**

R-313 **The purpose of the Transfer of Development Rights Program is to reduce development potential in the Rural Area and designated Natural Resource Lands, and its priority is to encourage the transfer of development rights from private rural properties into the Urban Growth Area.**

R-314 King County supports and shall work actively to facilitate the transfer of Rural Area and Natural Resource Lands development rights to:

a. Preserve the rural environment, encourage retention of resource-based uses and reduce service demands;
b. Provide permanent protection to significant natural resources;
c. Increase the regional open space system;
d. Maintain low density development in the Rural Area and Natural Resource Lands;
e. Steer development growth inside the Urban Growth Area in ways that promote quality urban neighborhoods where residents want to work and live; and
f. Provide mitigation for the impacts of urban development on global climate change by simultaneously reducing transportation-related greenhouse gas emissions and sequestering carbon through retention of forest cover and conserving agricultural lands.

R-315 To promote transfers of development rights, King County shall:

a. Facilitate transfers from private property owners with sending sites to property owners with receiving sites;
b. Operate the King County Transfer of Development Rights Bank to facilitate the Transfer of Development Rights market and bridge the time gap between willing sellers and buyers of Transferrable Development Rights through buying, holding, and selling Transferable Development Rights;
c. Work with cities to develop interlocal agreements that encourage transfers of development rights from Rural Areas and Natural Resource Lands into cities;
d. Work with cities regarding annexation areas where Transferrable Development Rights are likely to be used;
e. Work with communities and seek funding and other means to provide public amenities to enhance the livability of incorporated and unincorporated area neighborhoods accepting increased densities through the Transfer of Development Rights Program; and
f. Work with the Washington State Department of Commerce, Puget Sound Regional Council, and King County cities to implement Washington State Regional Transfer of Development Rights legislation.

1. Sending and Receiving Sites

R-316 Eligible sending sites shall be lands designated on the King County Comprehensive Plan land use map as Rural Area (with RA-2.5, RA-5, and RA-10 zoning), Agriculture (A), Forestry (F), and Urban Separator (with R-1 zoning), and shall provide permanent land protection to create a significant public benefit. Priority sending sites are:

a. Lands in Rural Forest Focus Areas;
b. Lands adjacent to the Urban Growth Area boundary;
c. Lands contributing to the protection of endangered and threatened species;
d. Lands that are suitable for inclusion in and provide important links to the regional open space system;
e. Agricultural and Forest Production District lands;
f. Intact shorelines of Puget Sound; or
g. Lands identified as important according to the Washington State Department of Ecology's Watershed Characterization analyses.

R-317 For Transfer of Development Rights purposes only, qualified sending sites are allocated development rights as follows:

a. Sending sites in the Rural Area zoned RA-2.5 shall be allocated one Transferrable Development Right for every two and one-half acres of gross land area;
b. Sending sites in the Rural Area zoned RA-5 or RA-10 or Agricultural zoning shall be allocated one Transferrable Development Right for every five acres of gross land area;
c. Sending sites with Forest zoning shall be allocated one Transferrable Development Right for every eighty acres of gross land area;
d. Sending sites with Urban Separator land use designation shall be allocated four Transferrable Development Rights for every one acre of gross land area;
e. If a sending site has an existing dwelling or retains one or more development rights for future use, the gross acreage shall be reduced in accordance with the site's zoning base density for the purposes of Transferrable Development Right allocation; and
f. King County shall provide bonus Transferrable Development Rights to sending sites in the Rural Area as follows:
    1. The sending site is a vacant RA zoned property and is no larger than one-half the size requirement of the base density for the zone; and

2. The sending site is a RA zoned property and is located on a shoreline of the state and has a shoreline designation of conservancy or natural.

R-318 Prior to the county's allocation of Transferable Development Rights to a sending site landowner, the landowner shall record and place on title of sending site parcel a conservation easement documenting the development restrictions. If development rights are being retained for future development, the subsequent development must be clustered, and the tract preserved with a permanent conservation easement shall be larger than the developed portion. In the case of lands within the Rural Forest Focus Areas, no more than one dwelling unit per 20 acres shall be retained, and the tract preserved with a conservation easement shall be at least 15 acres in size.

R-319 Transferrable Development Rights may be used on receiving sites in the following order of preference as follows:

a. Incorporated Cities. Transfers into incorporated areas shall be detailed in an interlocal agreement between the city receiving the development rights and the county;
b. Unincorporated urban commercial centers;
c. Other unincorporated urban areas; and
d. Rural Areas zoned RA-2.5, unless they are on Vashon Island, may receive transfers of development rights, but only from the Rural Forest Focus Areas.

R-319a King County should designate urban unincorporated areas as Transferrable Development Right receiving sites for short subdivisions. Use of Transferrable Development Rights in formal subdivisions shall be allowed only through a subarea study.

R-320 King County should seek other public funding and private-public partnerships for incorporated and unincorporated urban area amenities to strengthen the Transfer of Development Rights Program and facilitate the transfer of development rights from Rural Areas and Natural Resource Lands into the King County Urban Growth Area to preserve the rural environment, encourage retention of rural and resource-based uses, and avoid urban service demands in the Rural Area and Natural Resource Lands.

R-320a **King County shall provide amenities to urban unincorporated Transferrable Development Right receiving areas to improve the livability of the receiving area. Amenities should be provided at levels commensurate with the number of Transferrable Development Rights used in the receiving area. The type, timing and location of amenities provided to urban unincorporated Transferrable Development Right receiving areas should be informed by a public engagement process including members of the affected receiving area and the city affiliated with annexation.**

R-321 **King County should pursue public funding and public-private partnerships, and bond or levy proposals, for additional Transfer of Development Rights Bank funding to target threatened private Rural Areas or Natural Resource Lands. Development rights purchased through such a program should be sold into any appropriate urban location.**

2. Rural and Resource Land Preservation Transfer of Development Rights Program

Rural Area and Natural Resource Lands face increasing development pressure, yet the county must simultaneously plan for, and allow, future development growth. This tension makes it incumbent on the county to strengthen its Transfer of Development Rights efforts. For this reason, King County seeks to increase the number of development right transfers and adopt an expanded *Rural and Resource Land Preservation Transfer of Development Rights Program* to reduce and redirect rural development potential into the urban areas.

R-322 **The goals of the *Rural and Resource Land Preservation Transfer of Development Rights Program* are to: (1) reduce the development potential in Rural Area and Natural Resource Lands by 25%; (2) increase activity in the Transfer of Development Rights market; (3) bolster demand for Transferrable Development Rights; (4) offer Rural Area and Natural Resource Lands property owners access to incentive programs; (5) protect low-density Rural Areas from encroaching urban development; and (6) reduce greenhouse gas emissions by decreasing vehicle miles traveled from the Rural Area and Natural Resource Lands and by sequestering carbon.**

R-323 The *Rural and Resource Land Preservation Transfer of Development Rights Program* shall include, but is not limited to, the following:

a. In addition to the density that is allowed on a receiving site in the urban growth area from the purchase of Transferrable Development Rights, the county shall evaluate the climate change benefits achieved by reducing transportation related greenhouse gas emissions that result from the transfer of development rights from the sending site, provided that such consideration is not precluded by administrative rules promulgated by the state;

b. In order to satisfy transportation concurrency requirements in the Rural Area in a transportation concurrency travel shed that is non-concurrent, a development proposal for a short subdivision creating up to four lots may purchase Transferrable Development Rights from other Rural Area or Natural Resource Land properties in the same travel shed; allowing this is intended to reduce overall traffic impacts in rural travel sheds by permanently removing development potential. The transfer shall not result in an increase in allowable density on the receiving site. A short subdivision creating two lots where the property has been owned by the applicant for five or more years and where the property has not been subdivided in the last ten years shall satisfy the transportation concurrency requirements without having to purchase Transferrable Development Rights;

c. King County shall provide an added density bonus of up to a 100% increase above the base density allowed in K.C. Code 21A.12.030, when Transferrable Development Rights are used for projects within any designated commercial center or activity center within the Urban Growth Area that provides enhanced walkability design and incorporates transit oriented development;

d. King County may allow accessory dwelling units in the Rural Area that are greater than one thousand square feet, but less than 1,500 square feet, if the property owner purchases one Transferrable Development Right from the Rural Area, Agriculture or Forestry designations; and

e. King County may allow a detached accessory dwelling unit on a RA-5 zoned lot that is two and one-half acres or greater and less than three and three-quarters acres if the property owner purchases one Transferrable Development Right from the Rural Area, Agriculture or Forestry designations.

D. Nonresidential Uses

Although low-density residential development, farming and forestry are the primary uses in the Rural Area, some compatible public and private uses are appropriate and contribute to rural character. Compatible uses might include small, neighborhood churches, feed and grain stores, produce stands, forest product sales and home occupations such as woodcrafters, small day care facilities or veterinary services. In addition, it may be necessary to locate some public facilities in the Rural Area, such as utility installations that serve rural homes. Any allowed nonresidential uses should be designed to blend with rural residential development and resource uses.

R-324 **Nonresidential uses in the Rural Area shall be limited to those that:**

- **a. Provide convenient local products and services for nearby residents;**
- **b. Require location in a Rural Area;**
- **c. Support natural resource-based industries;**
- **d. Provide adaptive reuse of significant historic resources; or**
- **e. Provide recreational and tourism opportunities that are compatible with the surrounding Rural Area.**

These uses shall be sited, sized and landscaped to complement rural character as defined in policy R-101 and R-201, prevent impacts to the environment and function with rural services including on-site wastewater disposal.

R-325 **Golf facilities shall be permitted when located outside of Rural Forest Focus Areas, Regionally Significant Resource Areas and Locally Significant Resource Areas, as a conditional use, in the RA-2.5 and RA-5 zones.**

In 2011, a School Siting Task Force was convened at the request of the Growth Management Planning Council to examine the issue of siting schools in Rural Areas, including whether they may be served by sewers. The Task Force examined undeveloped rural properties owned by school districts and made recommendations as to their use or disposition. In its final report, the Task Force recommended that all future school siting be consistent with the policies in *VISION 2040*. Placing schools in cities in the Rural Area, or in Rural Towns, reduces transportation and environmental impacts, protects rural character, and allows schools to be served with urban-level utilities and fire protection and used efficiently for other community activities.

R-326 Except as provided in R-327:

a. New schools and institutions primarily serving rural residents shall be located in neighboring cities and rural towns;

b. New schools, institutions, and other community facilities primarily serving urban residents shall be located within the Urban Growth Area; and

c. New community facilities and services that primarily serve rural residents shall be located in neighboring cities and rural towns, with limited exceptions when their use is dependent on a rural location and their size and scale supports rural character.

R-327 Consistent with the recommendations of the School Siting Task Force, included as Appendix Q, in the Rural Area:

a. Except as otherwise provided in subsections d. and e. of this policy, an existing elementary, middle, or junior high school may be modified or expanded but shall not be converted to a high school;

b. An existing high school may be modified or expanded or converted to an elementary, middle, or junior high school;

c. Snoqualmie Valley 1: parcel number 1823099046, as shown on the King County Department of Assessments map as of March 31, 2012, may develop as a new school;

d. Lake Washington 4: parcel numbers 0825069008 and 0825069056, as shown on the King County Department of Assessments map as of March 31, 2012, may develop as a new school and convert an existing school on the site to a high school use;

e. Tahoma 1: parcel number 2622069047, as shown on the King County Department of Assessments map as of March 31, 2012, may develop as a new school and convert an existing school on the site to a high school use only if no feasible alternative site can be located within the Urban Growth Area;

f. Lake Washington 2: parcel numbers 3326069010 and 3326069009, as shown on the King County Department of Assessments map as of March 31, 2012, may develop as a new school only if no feasible alternative site can be located within the Urban Growth Area, in which case it may be incorporated into the Urban Growth Area; and

g. Enumclaw A and D: the rural portions of parcel numbers 2321069064, 2321069063, and 2321069062, as shown on the King County Department of Assessments map as of March 31, 2012, may develop as ballfields or recreational playfields only, for a school located on the urban portions of the parcels.

R-328 **Small airfields beyond those already established in the Rural Area should not be permitted, due to their cumulative impacts on air traffic and nearby uses.**

R-329 **Library services for the Rural Area should be provided by bookmobiles, or by libraries in Rural Towns or Cities in the Rural Area.**

E. Character and Development Standards

The aesthetic qualities and character of the Rural Area depend on a combination of factors, including low densities; a high ratio of undeveloped or undisturbed soil and natural or crop vegetation to development (impervious surfaces), such as roads and structures; historic buildings and landscapes; and minimal development standards, public facilities and services beyond those needed for environmental protection and basic public health and safety.

R-330 **New subdivisions in the Rural Area should strive to maintain the size and scale of traditional development patterns and rural character.**

R-331 **New subdivisions in the Rural Area should be designed and developed to maximize conservation of existing forest cover and native vegetation, and to minimize impervious surfaces within individual lots and in the subdivision as a whole. King County shall develop additional site design standards for new subdivisions that further reduce the impacts of new homes in the Rural Area on the natural environment, resource uses and other adjacent land uses.**

R-332 **Site design standards for new subdivisions in the Rural Area should include: minimization of impervious surfaces; limitations on entrance signage; preservation of natural contours, existing meadows and opportunities for keeping of horses; and other standards to limit features typical of urban or suburban development.**

R-333 **Rural residential development adjacent to Agricultural and Forest Production Districts shall be sited to minimize interference with activities related to resource uses. Residences next to the Forest Production District shall be built with greater setbacks from the Forest Production District boundaries for safety and to reduce nuisance complaints.**

R-334 **To maintain traditional rural development patterns and assure continued opportunities for resource activities in the Rural Area, large lot development is preferred in the Rural Area. Clustering of lots is permitted when:**

- **a. The development provides equal or greater protection of the natural environment, natural resource lands, historic resources or archaeological sites;**
- **b. Clusters are limited in size to be compatible with surrounding large lots or nearby agricultural and forestry uses;**
- **c. The clustered development is offset with a permanent resource land tract preserved for forestry or agriculture, as designated by the owner at time of subdivision or short subdivision, or a permanent open space tract. Under no circumstances shall the tract be reserved for future development; and**
- **d. The development can be served by rural facilities and service levels (such as on-site sewage disposal and fire protection).**

Resource and open space tracts often require stewardship over time to control stormwater runoff and associated pollutants, prevent or control invasive species encroachment and to restore forest health, species diversity, and wildlife habitat structure.

R-335 **When a resource or open space tract is created as part of a plat, the county should require a stewardship plan to ensure appropriate management of the tract.**

Low-density development in the Rural Area will have different residential street needs from those in the Urban Growth Area. Travel demand is generally lower on rural roads and road maintenance is a proportionately greater per capita cost than in the Urban Growth Area.

Rural streets and roads outside Rural Towns generally will have no more than two travel lanes, no curbs or sidewalks and feature unpaved shoulders and open drainage ditches. Local access streets for residential subdivisions will constitute a significant proportion of the site disturbance and impervious surface associated with new development in the Rural Area and therefore must take the environment into consideration equally with traffic flow and vehicular access.

R-336 **King County shall continue to support the rural development standards that have been established to protect the natural environment by addressing seasonal and maximum clearing limits, impervious surface limits and resource-based practices. Stormwater management practices should be implemented that emphasize preservation of natural drainage systems, protect water quality and natural hydrology of surface waters and groundwater. Rural development standards should also, where feasible, incorporate and encourage Low Impact Design principles for managing stormwater onsite by minimizing impervious surfaces, preserving onsite hydrology, retaining native vegetation and forest cover, capturing and reusing rainwater, controlling pollution at the source, and protecting groundwater. King County shall take care that requirements for onsite stormwater management complement requirements for onsite wastewater management.**

R-336a **To help achieve the goal of reducing energy use and greenhouse gas emissions associated with new construction, King County should adopt and implement green building codes that are appropriate, ambitious and achievable. Adoption of such codes may result in an increased use of renewable energy technologies that may be sited in the Rural Areas and Natural Resource Lands, as appropriate. Development standards will seek to ensure that the siting, scale and design of these facilities respect and support rural character.**

IV. Rural Public Facilities and Services

The policies below set forth King County's general approach to providing services and setting facility standards for the Rural Area and provide guidance for siting those facilities that require Rural Area locations. See Chapter 8, Transportation, and Chapter 9, Services, Facilities and Utilities, for more detailed policies on specific facilities and services such as roads, on-site sewage treatment and disposal systems and water supply.

In order to focus growth within the Urban Growth Area, financial resources must be prioritized to develop and maintain sufficient urban infrastructure and services in the Urban Growth Area to accommodate that growth. Further, the presence of a high level of public infrastructure and services has been demonstrated to create pressure for new growth. To use financial resources efficiently and reduce growth pressure in the Rural Area and Natural Resource Lands, King County will not provide an urban level of infrastructure and services to the Rural Area and Natural Resource Lands. Chapter 8, Transportation, and Chapter 9, Services, Facilities and Utilities, clarify King County's priorities for transportation and other facility improvements in the Rural Area and Natural Resource Lands.

R-401 **King County shall work with cities and other agencies providing services to the Rural Area and Natural Resource Lands to adopt standards for facilities and services in the Rural Area and Natural Resource Lands that protect basic public health and safety and the environment, but are financially supportable at appropriate densities and do not encourage urban development.**

R-402 **Public spending priorities for facilities and services within the Rural Area and Natural Resource Lands should be as follows:**

a. First, to maintain existing facilities and services that protect public health and safety;

b. Second, to upgrade facilities and services when needed to correct level of service deficiencies without unnecessarily creating additional capacity for new growth; and

c. Third, to support sustainable economic development that is sized and scaled at levels appropriate for Rural Areas and Natural Resource Lands and does not foster urbanization.

In 2014, King County adopted an update to the Rural Economic Strategies Plan, through Ordinance 17956; this ordinance provides guidance to economic development activities in the Rural Area, as well as on Natural Resource Lands, and is described in more detail in Chapter 10, Economic Development.

R-403 **In the Rural Area and Natural Resource Lands, standards and plans for utility service should be consistent with long-term, low-density development and resource industries. Utility facilities that serve the Urban Growth Area but must be located in the Rural Area or on Natural Resource Lands (for example, a pipeline from a municipal watershed) should be designed and scaled to serve primarily the Urban Growth Area. Sewers needed to serve previously established urban "islands," Cities in the Rural Area, Rural Towns, or new or existing schools pursuant to R-327 and F-264 shall be tightlined and have access restrictions precluding service to other lands in the Rural Area and Natural Resource Lands.**

V. Rural Commercial Centers

This section addresses Rural Neighborhood Commercial Centers, Rural Towns, Cities in the Rural Area, industrial uses in the Rural Area, and promoting public health in the Rural Area.

The Rural Neighborhood Commercial Centers, Rural Towns, the Cities in the Rural Area, and non-resource industrial uses located in rural King County contribute to the vitality of the rural economy. Additionally, the Cities in the Rural Area and Rural Towns provide variety in development patterns and housing choices and provide employment opportunities, retail shopping, and other services to nearby residents. These cities and

towns also contain a significant portion of King County's historic architecture and are the primary locations for nonresidential uses in the Rural Area. The Rural Neighborhood Commercial Centers provide limited, local convenience shopping, restaurants, and services to meet the daily needs of rural residents.

A. Rural Neighborhood Commercial Centers

Rural Neighborhood Commercial Centers are small commercial developments, or in some cases, historic towns or buildings, that are too small to provide more than convenience shopping and services to surrounding residents. They generally do not have infrastructure or services such as water supply or sewage disposal systems any different from those serving the surrounding area. Examples of Rural Neighborhood Commercial Centers include the store at Stillwater on the Carnation-Duvall Road, the town of Cumberland on the Enumclaw Plateau, and Preston. The county is implementing projects and exploring new options to ensure the continuation of the character and businesses in these important rural centers.

R-501 **The Rural Neighborhood Commercial Centers designated on the Comprehensive Plan Land Use Map are small-scale business areas that should provide convenience shopping and services for the surrounding community. No new Rural Neighborhood Commercial Centers are needed to serve the Rural Area and Natural Resource Lands. Expansion of the boundaries of the existing Rural Neighborhood Commercial Centers shall not be permitted except through a subarea study.**

The designated Rural Neighborhood Commercial Centers shown on the Land Use map are:

Bear Creek:	Cottage Lake and Redmond-Fall City Road/236th NE
East King County:	Greenwater, Baring and Timberlane Village
Enumclaw:	Cumberland, Krain's Corner and Newaukum
Newcastle:	Coalfield and East Renton Plateau
Snoqualmie:	Preston and Stillwater
Tahoma/Raven Heights:	Maple Valley, Hobart, Ravensdale and North Cedar Grove Road
Vashon:	Burton, Dockton, Tahlequah, Portage, Heights Dock, Jack's Corner, Vashon Center, Vashon Service Center, Vashon Heights and Maury Island Service Center

The policies in this section are based on a recognition of the limited size of most Rural Neighborhood Commercial Centers, the limited utilities and other services available to them, and a desire to preserve their existing character and relationship to the surrounding rural community.

R-502 **Rural Neighborhood Commercial Centers should accommodate only small-scale retail, community and human services, and personal service uses that provide convenience shopping and services to nearby Rural Area and Natural Resource Lands residents.**

R-503 **King County commercial development standards for Rural Neighborhood Commercial Centers should facilitate economic reuse of existing structures, minimize increases in impervious surfaces, and encourage retention of historic character and scale. Urban-level parking, landscaping, and street improvement standards are not appropriate for Rural Neighborhood Commercial Centers except as demonstrated as being needed to address the safety of the public.**

R-503a **Where appropriate, King County should allow the use of existing structures/parcels to accommodate Farmers Markets within Rural Neighborhood Commercial Centers.**

B. Rural Towns

Rural Towns are unincorporated towns governed directly by King County, but may provide a focal point for community groups such as chambers of commerce or community councils to participate in public affairs.

The purposes of the Rural Town designation are to recognize existing concentrations of higher density and economic activity in the Rural Area, whether by virtue of historical rural settlements or redesignation of an urban commercial center; provide a physical focus for the historic identity of rural communities; and allow for modest growth of residential and economic uses within these designations if supported by the community and adequate utilities and other public services are available. At the present time, the Rural Towns are Fall City, Snoqualmie Pass, and the Town of Vashon and are recognized as such within the Comprehensive Plan. The county supports the economic vitality of these communities and is offering programs and working with the businesses and residents in and near these communities to help ensure their continued economic health.

Although higher-density development in Rural Towns may require public sewers, applying the full range of urban development standards (e.g. for street improvements or landscaping) may not be necessary, and may not be consistent with the historic character of these communities. Although Rural Towns also may in some circumstances develop at densities similar to those in the Urban Growth Area or in Cities in the Rural Area, they are considered part of the Rural Area for purposes of the Growth Management Act, do not provide significant growth capacity, and are not subject to the growth targets adopted for the Urban Growth Area.

R-504 **King County designates the Rural Towns of Fall City, Snoqualmie Pass, and the Town of Vashon as unincorporated Rural Towns. These historical settlements in unincorporated King County should provide services and a range of housing choices for Rural Area residents. The boundaries of the designated Rural Towns are shown on the Comprehensive Plan Land Use Map. Adjustments to these boundaries shall only occur through a subarea study, and shall not allow significant increases in development potential or environmental impacts. No new Rural Towns are needed to serve the Rural Area.**

R-505 **Commercial and industrial development that provides employment, shopping, and community and human services that strengthen the fiscal and economic health of rural communities should locate in Rural Towns if utilities and other services permit. Urban-level parking, landscaping, and street improvement standards are not appropriate for Rural Towns. Sidewalks and other pedestrian safety measures should be provided to serve the Rural Town.**

R-506 **Rural Towns may contain higher-density housing than permitted in the surrounding Rural Area, and should provide affordable and resource-worker housing if utilities and other services permit. Development density in Rural Towns may approach that achieved in Cities in the Rural Area.**

The policies in this section apply only to the unincorporated Rural Towns. King County encourages Cities in the Rural Area to adopt land use policies and development standards that protect and enhance their historical character.

R-507 **Rural Towns serve as activity centers for the Rural Area and Natural Resource Lands and may be served by a range of utilities and services, and may include several or all of the following land uses, if supported by necessary utilities and other services and if scaled and designed to protect rural character:**

- **a. Retail, commercial, and industrial uses to serve the surrounding Rural Area and Natural Resource Lands population;**
- **b. Residential development, including single-family housing on small lots as well as multifamily housing and mixed-use developments;**
- **c. Other retail, commercial, and industrial uses, such as resource industries, tourism, commercial recreation, and light industry; and**
- **d. Public facilities and services such as community services, churches, schools, and fire stations.**

R-508 **Sewers may be allowed in Rural Towns if necessary to solve existing water quality and public health problems which cannot be addressed by other methods, provided that any extension of sewer mains from urban areas to serve a Rural Town shall be tightlined systems designed to not serve any intervening lands. All alternatives shall be exhausted before sewers may be allowed. Rural Towns shall not be enlarged to facilitate provision of sewers.**

Rural and urban residents alike value the historic character of King County's Rural Towns. New development can enhance the character and valuable features of Rural Towns through careful design and location.

R-509 **Rural Towns should be compact, promoting pedestrian and nonmotorized travel while permitting automobile access to most commercial and industrial uses. New development should be designed to strengthen the desirable characteristics and the historic character of the town, be supported by necessary public facilities and services, and be compatible with historic resources and nearby Rural Area or Natural Resource Land uses. New industrial uses should locate where they do not disrupt pedestrian or bicycle traffic in established retail areas of town or conflict with residential uses.**

C. Cities in the Rural Area

The cities in King County's rural area are incorporated areas whose local governments are involved in the region's planning processes on an equal legal basis with the suburban cities, Bellevue and Seattle. The cities are Black Diamond, Carnation, Duvall, Enumclaw, North Bend, Skykomish and Snoqualmie.

The Growth Management Act stipulates that Cities in the Rural Area and their Potential Annexation Areas are to be treated as part of the Urban Growth Area. The Countywide Planning Policies also provide for urban land uses and densities and urban services in those locations. Excessive growth in Cities in the Rural Area and in Rural Towns, however, may create pressure for extending urban services (for example, sewers) across the Rural Area or Resource Lands, may increase conversion pressure on nearby Resource Lands and adversely affect rural character. Therefore, King County views Cities in the Rural Area as qualitatively different from the Urban Growth Area as a whole, even though they may provide significant opportunities for residential or employment growth within their boundaries.

King County has worked with the Cities in the Rural Area to establish Potential Annexation Areas to accommodate growth. These areas are shown as part of the Urban Growth Area on the Comprehensive Plan Land Use Map at the end of Chapter 1, Regional Growth Management Planning. Additionally, the county is working with these cities on individual economic development strategies and options, as well as regional economic and tourism opportunities.

R-510 **The Cities in the Rural Area and their Potential Annexation Areas are part of the overall Urban Growth Area for purposes of planning land uses and facility needs. King County should work with Cities in the Rural Area to encourage the provision of affordable housing, to minimize the impacts of new development on the surrounding Rural Areas and Natural Resource Lands and to plan for growth consistent with long-term protection of significant historic resources, the surrounding Rural Area and Natural Resource Lands.**

R-511 **Within Potential Annexation Areas of Cities in the Rural Area the following uses shall be permitted until the area annexes to the city:**

a. Residential development at a density of one home per five acres or less with mandatory clustering; and

b. Nonresidential development such as commercial and industrial as determined through previous subarea plans.

D. Non-Resource Industrial Uses and Development Standards in the Rural Area

There are three existing industrial areas in the Rural Area containing multiple industrial uses on several sites. One is located within the southwest portion of the Town of Vashon. The second is a designated industrial area adjacent to the Rural Neighborhood Commercial Center of Preston. The Preston Industrial Area recognizes an existing concentration of industrial uses that contributes to the economic diversity of the Rural Area, but expansion of this industrial area beyond the identified boundaries is not permitted (see Countywide Planning Policy CP-942). The third industrial area is located along State Route 169 on lands that have been and continue to be used as for industrial purposes and have a designation as a King County Historic Site.

R-512 **The creation of new Industrial-zoned lands in the Rural Area shall be limited to those that have long been used for industrial purposes, do not have potential for conversion to residential use due to a historic designation and that may be accessed directly from State Route 169.**

R-513 **Rural Public Infrastructure Maintenance Facilities, and agriculture and forestry product processing should be allowed in the Rural Area. Other new industrial uses in the Rural Area shall be permitted only in Rural Towns and in the designated industrial area adjacent to the Rural Neighborhood Commercial Center of Preston.**

In order to preserve rural character and protect sensitive natural features, new rural industrial development in the Rural Area needs to be of a scale and nature that is distinct from urban industrial development. The scale and intensity and many of the uses allowed in urban industrial development are not appropriate for rural industrial areas. The following policy applies to all new industrial development in the Rural Area.

R-514 **Development regulations for new industrial development in the Rural Area shall require the following:**

a. **Greater setbacks, and reduced building height, floor/lot ratios, and maximum impervious surface percentage standards in comparison to standards for urban industrial development;**

b. **Maximum protection of sensitive natural features, especially salmonid habitat and water quality;**

c. **Building and landscape design that respects the aesthetic qualities and character of the Rural Area, and provides substantial buffering from the adjoining uses and scenic vistas;**

d. **Building colors and materials that are muted, signs that are not internally illuminated, and site and building lighting that is held to the minimum necessary for safety;**

e. **Heavier industrial uses, new industrial uses producing substantial waste byproducts or wastewater discharge, or new paper, chemical and allied products manufacturing uses in the urban industrial zone shall be prohibited; and**

f. **Industrial uses requiring substantial investments in infrastructure such as water, sewers or transportation facilities, or facilities that generate substantial volumes of heavy-gross weight truck trips, shall be reduced in size to avoid the need for public funding of the infrastructure.**

The intent of this policy is to preclude expansion of the industrial area beyond the identified boundaries and to ensure that new development (not previously constructed or vested) in the industrial area meets rural character standards. Site design, landscaping, design and construction of internal and access roads and building scale should reinforce the set boundaries and rural nature of the industrial area to further discourage future industrial expansion beyond the industrial boundary.

There are also existing, isolated industrial sites in the Rural Area that are recognized, but are not appropriate for new industrial uses. Further expansion of these isolated industrial uses is not encouraged, and therefore they are not zoned Industrial.

R-515 **Existing industrial uses in the Rural Area outside of Rural Towns, the industrial area on the King County-designated historic site along State Route 169 or the** designated industrial area adjacent to the Rural Neighborhood Commercial **Center of Preston shall be zoned rural residential but may continue if they qualify as legal, nonconforming uses.**

E. Promoting Public Health in the Rural Area for All

Planning for and features of the built environment are important in providing healthy, safe places for people regardless of whether the setting is rural or urban. The built environment refers to various physical features, such as buildings, parks, and roadways, and their spatial arrangement in neighborhoods and communities. These features influence public health through the range of choices provided for engaging in various activities. For example, well designed roads can enhance the safety and walkability of neighborhoods, while having a park or other gathering place to come together with family, friends, or community members can strengthen social and mental health and increase community cohesiveness. People with access to places to play are twice as likely to reach recommended levels of physical activity than those who have little or no access. (See Chapter 2, Urban Communities, for additional information on the linkages between the built environment and various aspects of health.)

Many locations in King County's Cities in the Rural Area, Rural Towns, and Rural Neighborhood Commercial Centers function as important hubs for their respective communities because they provide shops and services. Parks, schools, or other public services within walking distance of these community hubs cannot always be safely or conveniently reached without a car. Opportunities for daily physical activity can be increased by establishing safe walking and bicycling connections to and within these rural hubs.

In addition to physical activity, another major determinant of health is what people eat. Everything from quality and location of food retail outlets and restaurants to food cost to school food choices influence the food choices of rural residents. According to data from national surveys, adults in the United States consume on average only 1.1 and 1.7 servings of fruits and vegetables daily. There are people in every community for whom hunger is a daily issue. Land use planning can play a role in providing and improving access to healthy foods. Garden plots located in neighborhoods, parks, vacant lots, surplus public rights-of-way, and public utility lands in various communities can be used as places to grow fruits and vegetables, build community, and address hunger. Similar locations in the Rural Area of King County should be explored for this purpose.

R-516 **Within Rural Towns and larger Rural Neighborhood Commercial Centers, non-motorized connectivity, where consistent with rural character, should be encouraged to promote walking and bicycling and to improve public health.**

R-517 **King County should explore ways of creating and supporting community gardens, Farmers Markets, produce stands and other similar community based food growing projects to provide and improve access to healthy, affordable food for all rural residents.**

R-517a **King County shall promote children's health by encouraging and supporting land uses in the environment surrounding a school and on travel routes to schools that complement and strengthen other formal programs, such as Safe Routes to School, at a size and scale appropriate to the Rural Area.**

VI. Resource Lands

A. Ensuring Conservation and Sustainable Use of Resource Lands

King County's Natural Resource Lands contribute to the economic prosperity of the region. They are the lands with long-term commercial significance for farming, forestry, and minerals. Businesses that rely on resource lands provide jobs and products, such as food, wood, and gravel. They also are an important part of the cultural heritage. Conservation and responsible stewardship of working farm and forest lands also produces multiple environmental benefits, such as:

- Stream and salmon protection;
- Clean air and water;
- Wildlife habitat;
- Flood risk reduction;
- Groundwater recharge and protection; and
- Carbon sequestration and reduced greenhouse gas emissions.

For mining, responsible stormwater management, erosion and sediment control, and site remediation can help to mitigate many of the impacts of mining while providing local sources of materials such as sand and gravel.

King County has taken major steps to conserve and manage agricultural soils and activities, forestry and mining opportunities. Resource Lands and the industries they support are conserved by encouraging development to occur primarily in the Urban Growth Area as directed by the Growth Management Act. Under this Comprehensive Plan, Resource Lands, including designated Agricultural Production Districts, the Forest Production District and sites of long-term commercial significance for resource uses, will have minimal new residential and commercial development. New development that does occur will be designed to be compatible with active resource-based uses.

This chapter contains King County's strategy for conservation of these valuable Resource Lands and for encouraging their productive and sustainable management. The strategy consists of policies to guide planning, incentives, education, regulation and purchase or transfer of development rights.

Forest, farm and mineral lands are not King County's only natural resources. Many other resource-based industries, such as the fisheries industry, are influenced by King County's land use and planning policies. Policies for the protection and enhancement of fisheries, as well as air, water, vegetation, wildlife and other natural resources, can be found in Chapter 5, Environment.

The Rural Forest Commission was established in 1997 to represent the diversity of forest interests in King County. The Commission reviews the development and implementation of strategies, programs, policies and regulations that benefit forestry and advises the county on ways to preserve rural forests and promote rural forestry.

R-601 **The Rural Forest Commission shall advise the King County Executive and Council on the development of innovative programs, policies and regulations that benefit forestry and that encourage the retention of the forest land base in King County. King County shall continue to support the Rural Forest Commission with staff and other resources.**

In 1994, the Agriculture Commission was established as a forum for farmers to take an active role in land use decisions, policies and regulations affecting commercial agriculture. The commission solicits input from agricultural agency technical advisors and others with land use and technical expertise, as well as other affected groups.

R-602 **The Agriculture Commission shall advise the King County Executive and Council on agricultural issues and programs, including, but not limited to:**

a. Existing and proposed legislation and regulations affecting commercial agriculture;

b. Land use issues that affect agriculture; and

c. Ways to maintain, enhance and promote agriculture and agricultural products in the region.

King County shall continue to support the Agriculture Commission with staff and other resources.

B. Resource Conservation Strategy

In 1985, the King County Comprehensive Plan designated the county's initial Forest Production District and five Agricultural Production Districts. Subsequent planning efforts established minimum lot sizes and uses for these districts and their surrounding areas. These land use regulations are consistent with the requirements of the Growth Management Act to designate productive lands and to plan for adjacent and nearby land uses compatible with long-term commercial farming and forestry. The Growth Management Act requires designation of agricultural and forest lands of long-term commercial significance. Agricultural lands of long-term

commercial significance are designated as Agricultural Production Districts and forest lands of long-term commercial significance are designated as the Forest Production District as shown on the Agricultural and Forest Lands Map.

The Growth Management Act also requires designation of mineral resource lands that have long-term significance for the extraction of minerals. Such lands are shown as Designated Mineral Resource Sites on the Mineral Resources Map in this chapter. The role of the Forest Production District in the conservation of mineral resources is also explained below.

R-604 **King County shall promote and support environmentally sustainable forestry, agriculture and other resource-based industries as a part of a diverse and regional economy.**

R-604a **King County shall support and designate mineral resource lands of long-term significance and promote policies, environmental reviews and management practices that minimize conflicts with neighboring land uses and mitigate environmental impacts.**

R-605 **Forestry and agriculture best management practices are encouraged because of their multiple benefits, including natural resource preservation and protection.**

R-606 **Farm lands, forest lands and mineral resources shall be conserved for productive use through the use of Designated Agricultural and Forest Production Districts and Designated Mineral Resource Sites where the principal and preferred land uses will be commercial resource management activities, and by the designation of appropriate compatible uses on adjacent Rural Area and urban lands.**

R-607 **Land uses, utilities and transportation facilities within and adjacent to Designated Agricultural and Forest Production Districts and Designated Mineral Resource Sites, shall be sited and designed to ensure compatibility with resource management.**

R-608 **King County should encourage infrastructure and services that support resource lands management and resource-based businesses. These should be sited in close proximity to designated Agricultural and Forest Production Districts and Designated Mineral Resource Sites when adverse impacts and incompatibilities can effectively be mitigated.**

King County recognizes that maintaining viable resource-based businesses is challenging. Owners of resource lands make substantial investments in managing their land. Market uncertainties, labor costs, vandalism, taxes and fees can affect the profitability of resource-based industries.

Conflicts with surrounding land uses and environmental problems can arise even with the best of precautions. Resource-based industries need reasonable certainty that policies are in place to help avoid such conflicts and operations can continue if activities are performed in an environmentally sound manner.

The Forest Lands Program (Revised Code of Washington 84.33), and the Open Space Taxation Program, which includes the Timberland and Public Benefit Rating System programs (Revised Code of Washington 84.34) are property tax incentives that encourage continued farm and forest management both within and outside the Forest Production District and Agricultural Production Districts.

R-609 **King County should expand access to property tax incentive programs to encourage landowners to continue practicing farming and forestry and to help ensure retention of the resource land base. These programs should be publicized and marketed.**

R-610 **King County shall employ a variety of innovative programs and incentives to help maintain and enhance resource-based industries.**

Examples of such programs include technical assistance and education for sustainable land management, education for urban and suburban residents, purchases of land or development rights, transfer of development rights, the purchase of scenic easements and other less-than-fee-ownership interests that conserve resource uses, establishment of buffers and setbacks for adjacent properties, and relief from special levies and local improvement district fees.

When urban development occurs near Resource Lands, conflicts can result. Examples of such conflicts are greater risk of forest fires; vandalism to logging, farm and mining equipment; destruction of young trees; and increased mixing of heavy truck and residential traffic, which presents safety problems. Increased development near resource lands also results in increased encroachment of noxious weeds into forests and farmland. It is important for neighboring property owners to understand the value of resource industries and what kinds of resource activities are likely to occur.

R-611 **King County should develop and employ effective means to inform affected property owners about nearby resource management activities. This may include, but not be limited to:**

- **a. Notice on title, and notification on recorded subdivisions, short subdivision maps and issued development permits for properties within five hundred feet of designated agriculture, forestry, and mineral resource lands;**
- **b. Signage; and**
- **c. Community meetings and other public notification tools.**

Successful Resource Land conservation requires a regional perspective and intergovernmental cooperation. Although the designated Resource Lands are located in unincorporated King County, they benefit nearby cities and can be affected by activities in those cities. Furthermore, some Resource Lands in King County are owned or managed by city, county, state and federal agencies and tribes. A regional perspective is also important because many resource activities are regulated or supported by state and federal programs.

R-612 **King County shall work cooperatively with cities, tribes, other public agencies, private utilities, resource managers, land owners and residents to conserve public and private Resource Lands for long-term productivity and environmental protection in a consistent and predictable manner.**

R-613 **Designated Forest and Agricultural Production District lands shall not be annexed by cities.**

R-614 **King County should establish written agreements with agencies, tribes and other affected parties whose close coordination and collaboration are essential to effective implementation of resource management programs. Such agreements should serve to establish consensus and commitment to achieving specific resource management goals and to define the specific roles and responsibilities of each agency.**

R-615 **King County should avoid duplication of federal and state regulations that apply to resource-based industries. However, King County reserves the authority to address issues of local concern with regard to resource-based activities and operations.**

As the population in the Puget Sound area continues to grow, the protection of resource lands and the continued success of commercial agriculture and forestry is a regional challenge. Many of the issues facing King County's resource industries are also faced by neighboring counties. Furthermore, some of the infrastructure and support businesses necessary to sustain agriculture and forestry may serve more than a single county. Therefore, King County's efforts to retain healthy resource economies will be more successful if the county collaborates with other agencies and agriculture and forestry interest groups in the region. These efforts may include policy development, training for service providers and outreach that is supportive of commercial agriculture and timber production and encourages the purchase of local food and local wood.

R-615a **King County should work with other jurisdictions, agencies and agriculture and forestry interest groups to help maintain and enhance commercial agriculture and forestry production by addressing challenges common across the region.**

Resource management strategies that protect the environment are necessary to maintain the long-term productivity of the resource. Chapter 5, Environment, describes the value of using an integrated, ecosystem-based approach to natural resource and environmental planning and management. This approach, along with sound operational practices by resource-based industries, may be able to prevent or minimize environmental impacts associated with common agricultural and forest practices and mining while maximizing co-benefits.

R-616 **Resource-based industries should use practices that:**

- **a. Protect the long-term integrity of the built environment, adjacent land uses, and cultural resources;**
- **b. Maintain the long-term productivity of the resource base; and**
- **c. Result in maintenance of ecosystem health and habitat.**

R-617 **Habitat protection requirements should not fall disproportionately on land maintained in agriculture or forestry, and the costs of such protection shall not be disproportionately placed on the owners of such land.**

R-618 **King County shall be a leader in resource management by demonstrating environmentally sound agriculture and forestry on county-owned land.**

R-619 **King County shall include resource education through its signs on trail systems that are linked with working farms, forests, and mines. Interpretation should:**

- **a. Provide historical perspective;**
- **b. Demonstrate current adaptive resource management practices (forestry, fisheries, wildlife, agriculture); and**
- **c. Explain economics of various resource uses.**

C. Forestry

King County forestlands provide local, regional and national benefits that are basic to quality of life. In addition to supplying a variety of wood and other products, forests emit oxygen, filter water, reduce risks from flooding and soil erosion, enhance groundwater recharge, provide habitat for innumerable plant and animal species, capture carbon, and offer scenic vistas and recreational opportunities. Conservation of the extensive forests in the county saves the region millions of dollars by reducing the need for costly infrastructure for stormwater and flood control, water treatment, and air quality remediation. King County's forests provide employment in forestry, wood, paper, recreation, and tourism industries. In sum, properly managed forests are fundamental to a healthy, diverse economy and environment.

The growth in human population has resulted in the loss of forestlands through conversion to non-forest uses. Increasing demands are being placed upon the remaining forest land base to provide goods, recreational opportunities and ecological functions. Climate change has the potential to put additional stress on forestlands

due to changes in seasonal temperature fluctuations, rainfall patterns, and distribution of insect populations. In the next 10 to 20 years, Pacific Northwest forests are expected to face increasing drought mortality, difficulty in getting seedlings established, and severity of forest fires.

To address these challenges, forest managers are embracing more broad-based management methods and strategies that encompass ecosystems, landscapes and watersheds, while continually incorporating new scientific information to improve these approaches. Their efforts, together with the collective foresight and dedication of landowners, interest groups, tribes, residents and agencies, are needed to ensure that King County's forests continue to contribute to a sustainable way of life for present and future generations.

The first step to maintain and enhance commercial forestry is to protect the forest land base. The second step is to encourage an ecosystem approach to forest management that provides for long-term ecosystem health and productivity and addresses cumulative impacts on non-timber resources. The third step is to minimize land use conflicts and offer incentives for the retention of commercial forestry and the forest land base.

1. Protecting Forest Lands

The purpose of the Forest Production District is to conserve large blocks of commercially valuable forestland for the long term. The designation and zoning is designed to prevent intrusion of incompatible uses, manage adjacent land uses to minimize land use conflicts, and prevent or discourage conversion from forestry to other uses. A comparison of the area of forestland converted since 1987 inside the Forest Production District with the area converted outside the District indicates that designation and zoning of commercial forest lands help to discourage subdivision and conversion.

Sixty percent of the land area in King County is within the designated Forest Production District. The Forest Production District comprises 1,300 square miles (825,000 acres) of forestland in east King County. Most of this land is held in large blocks of contiguous ownership. At this larger scale, it is easier to manage for multiple purposes such as habitat and long-term forest health.

Although it has declined from its height in the late 1980s, commercial timber harvest remains a significant economic activity in King County. At the same time, forest management strategies have become more diverse and may include objectives for forest health, biodiversity, and fish and wildlife habitat instead of timber production alone. Likewise, economic activity related to recreation, traditional cultural practices and aesthetics may be included in commercial forestry activities.

R-620 **The Forest Production District shall remain in large blocks of contiguous forest lands where the primary land use is commercial forestry. Other resource industry uses, such as mining and agriculture, should be permitted within the Forest Production District when managed to be compatible with forestry.**

R-621 **The Forest Production District is a long-term designation. Lands may be removed from the Forest Production District only through a subarea study, and only to recognize areas with historical retail commercial uses.**

About 70% of the Forest Production District is in public ownership, including parts of the Mt. Baker-Snoqualmie National Forest, including wilderness areas, state and county parks, Washington State Department of Natural Resources lands, and watersheds for the cities of Seattle and Tacoma. Public land management affects the region's economy, recreation, fish and wildlife habitat, forest health, stream flows, water supply, flood control and climate change mitigation capabilities. The county should take advantage of opportunities to collaborate with public land managers such as the U.S. Forest Service at Mt. Baker-Snoqualmie National Forest, and other stakeholders, to manage forests for multiple public values.

For example, in the last two decades, there have been significant changes in how forest lands in the Mt. Baker-Snoqualmie National Forest are managed. In King County, more than 350,000 acres are within the National Forest. Management emphasis has shifted from commodity timber production (in the 1960s, 70s and 80s) to management with an emphasis on ecological values and public use. The U.S. Forest Service has struggled to keep pace with the increasing demand for recreation infrastructure and to maintain access roads.

While timber harvest levels have declined significantly from those in the 1980s, the supply of forest products from the national forest remains important to the regional viability of the forestry industry. Forest fire suppression since the early 1900s resulted in abnormally high fuel levels on the forest floor, which can increase the severity of wildfires. More recent federal policies have placed emphasis on projects to enhance forest ecosystems, restore and improve land health and water quality, address fuel levels, and improve the maintenance of existing facilities within national forests.

Much of the 116,790 acres of forestland managed by the Washington State Department of Natural Resources in King County are trust lands that generate income from the sale of timber and other resources for the beneficiaries, such as schools, universities and counties. These lands also provide wildlife habitat and are heavily used for recreation. In January 1997 the Washington State Department of Natural Resources made a far-reaching commitment to protect native animal and fish species through a federally approved Habitat Conservation Plan that covers about 1.6 million acres of Washington State Department of Natural Resources -managed trust land forests—mostly in Western Washington. In 2007, the Washington State Department of Natural Resources initiated Forest Stewardship Council certification on state forest land located in the South Puget Sound Region, including part of Tiger Mountain near Issaquah and state-owned forestland near Enumclaw in King County.

R-622 **King County recognizes the many values provided by the public forestland in the county, and encourages continued responsible forest management on these lands. King County should collaborate with other public land managers in**

planning for the conservation, use, and management of forest resources on public lands for multiple public values.

The Forest Production District includes approximately 220,000 acres in private ownership, most of which is commercial forestland. County policies are intended to maintain and facilitate commercial forestry in the Forest Production District. The policies in this section allow for very limited residential uses in the designated Forest Production District, consistent with the objective of continuing forestry as the primary land use. For example, residences may be appropriate to permit forest managers to live on their land. King County zoning and subdivision regulations establish a large parcel size to promote efficient forest operations and to reduce incompatible residential development. Although the zoning calls for an 80-acre minimum lot size, many smaller lots were created prior to application of the zoning. Proliferation of residences in the Forest Production District makes commercial forestry less viable.

R-623 **King County is committed to maintaining working forestland in the Forest Production District, and shall continue to work with landowners and other stakeholders to promote forestry, reduce uses and activities that conflict with resource uses and recognize forestland values.**

R-624 **To reduce conflicts with resource uses, a forest management plan shall be required as a condition of development for any residential uses in the Forest Production District. Accessory dwelling units shall not be allowed in the Forest Production District.**

R-625 **Structures within the Forest Production District should be sited to maintain the productivity of the district. Site plan requirements should limit impervious surface, provide for fire control, protect domestic water supply and prevent conflicts with forest management.**

In 2004, King County purchased the development rights on the 90,000 acre Snoqualmie Forest. This purchase conserves the forest land base for the long term while supporting the continuation of commercial forest production. It is important that the county consider its responsibility to protect the long-term commercial significance of the Forest Production District in its efforts to conserve land within the District.

R-626 **King County should conserve working forests and should encourage continued private forestry through the acquisition of development rights in the Forest Production District. Land acquisition proposals that would remove lands from forest management should be evaluated to ensure that the long-term commercial significance of the Forest Production District is not compromised.**

Although there is considerable acreage in commercial forestry in King County, there are no major lumber mills still in operation in the county. There are a few small mills in the county, but they have limited capacity. As a result, small landowners have few options for marketing their logs, and usually have a long haul to the closest mill. The county should work with forest landowners and forestry business to better understand and address the barriers to local wood processing.

R-627 **King County should promote and support production, harvest, utilization, and marketing of wood products grown in the county's Rural Area and forest areas. King County should ensure that regulations applying to Rural Area and forest areas do not discourage the establishment of sawmills and other wood product businesses and services.**

King County can further protect commercial forestlands and prevent conflicts by working with other public agencies and service providers to consolidate lands and to locate infrastructure facilities to prevent or minimize intrusions. Such actions can also improve the owner's capacity to protect fish and wildlife habitat and other natural resources.

R-628 **In consultation with tribes and other affected agencies and landowners, King County should support land trades that result in consolidated forest ownership and work with forest managers to identify and develop other incentives for continued forestry.**

R-629 **King County opposes the establishment or expansion of special purpose taxing districts and local improvement districts in the Forest Production District, and shall not grant new or expanded franchises for utilities in the Forest Production District, unless demonstrated that they directly benefit forestry or are necessary for transmission of power or water.**

Forest lands have tremendous recreational and aesthetic value. For example, Forest Production District lands are included within the Mountains-to-Sound Greenway along the I-90 corridor. Opportunities for hiking and other forms of outdoor recreation exist within the working forests that are part of the Greenway. Access to Resource Lands must be carefully managed, however, to prevent conflict with natural resource goals. For example, open gate policies allowing public access may be incompatible with fish and wildlife protection goals and sometimes may interfere with forestry operations by risking such activities as garbage dumping, vandalism and timber theft. In the Mt. Baker-Snoqualmie National Forest, a variety of federal partnerships and volunteer programs help to better connect urban dwellers with the forest while providing ecological benefits.

R-630 **Public and private forest owners are encouraged to provide for recreational, educational and cultural uses when compatible with forest protection.**

Recreational and institutional developments, such as conference centers, ski areas and associated hotels, allow more people to enjoy the aesthetic benefits of forest lands. Such facilities are acceptable if located in areas of existing development, such as Snoqualmie Pass, and if their operation and use are restricted adequately to minimize conflict with resource lands. Major recreational or institutional development sites can adversely affect the Forest Production District because they reduce the forest land base and conflict with other resource management goals.

R-631 **No master planned resorts shall be permitted in the Forest Production District. New or expansion of existing recreational or institutional uses in the Forest Production District may be permitted if compatible with long-term forestry, the interests of tribes and other resource management goals.**

2. Promoting Forest Management

The Washington State Department of Natural Resources regulates forestry through the Forest Practices Act. If the forest practice is associated with a conversion from forestry to another use on the property, such as development, the county has jurisdiction, and the county's development regulations must be followed. On rural properties, it is typical that a landowner will combine a long-term forest use on one part of the property with a residence on another part of the property. It is in the interest of the county to ensure that development regulations are followed for the permanent clearing for development, but also to regulate the long-term forest parts of the property with regulations appropriate for forest harvest.

R-632 **King County should continue to work with all affected parties and the Washington State Department of Natural Resources to improve the enforcement of forest practice regulations in the Rural Area, and to ensure that landowners comply with county regulations when they are converting portions of a site to a non-forest use. Harvesting of forest lands for the purpose of converting to non-forest uses shall meet all applicable county standards for clearing and critical areas management. Landowners opting to conduct forest management activities under state approved forest practices permits should be restricted from developing those areas for non-resource purposes for six years from the date of forest practice approval. Recognizing that some landowners combine the development of a residence or an agricultural activity on a portion of the property with long-term forestry on the rest, the county should provide flexibility in its regulations to address the residential development and agricultural activity differently from the forest management.**

R-633 **King County should ensure that regulations applying to forest practices do not discourage forest management on properties in long-term forestry. Forestry should be regulated consistent with best management practices in the Forest Practices Act. The county should work to simplify its regulatory processes related to forest management.**

R-634 **King County should promote public understanding of the benefits of commercial timber production and encourage the use of local wood.**

King County has worked with state, federal, and private landowners on multiparty resource plans, such as the Middle Fork Snoqualmie Plan, the plan for Rattlesnake Ridge, and numerous watershed planning efforts. There will continue to be opportunities for interagency cross-ownership cooperation, which will result in improved resource management and conservation.

R-635 **Working with public and private forest land managers, King County shall encourage long-term forest productivity and the protection of land and water resources by participating in collaborative, multi-ownership planning efforts.**

R-636 **King County promotes forest management that achieves long-term forest health; protection of watersheds, critical areas and habitat to support fish and wildlife populations; protection of threatened and endangered species; management of stormwater runoff and associated pollutants; conservation and economic viability of working forests; carbon sequestration and reduction in greenhouse gas emissions; and adaptation to climate change.**

In 2005, King County worked with the Tolt Triangle community near Carnation, assisting with the formation of Tolt Triangle Fire Council and the development of their comprehensive community wildfire protection plan. The 500 rural residences on 5,800 acres covered by the plan became the first area in King County to earn the status of "Firewise Community" from the national Firewise® Program. Since 2005, additional communities in forested areas have adopted wildfire protection plans. The county provides training and technical assistance regarding fire planning and best management practices for implementing wildfire protection throughout forested areas of King County with a focus in the foothill areas prone to east winds.

R-637 **King County should encourage community fire planning so that residents are** aware of the dangers of forest fires and take steps to make their properties less **vulnerable. King County should support neighborhood-based efforts to manage forests to improve forest health and reduce the risk of wildfire.**

R-638 **King County shall encourage the development of private/public partnerships that provide incentives for landowners to practice innovative, fish-friendly forestry and that can help ensure retention of the forest resource land base in perpetuity.**

An example of such a partnership is the Mountains-to-Sound Greenway Biosolids Forestry Program, which includes King County, Washington State Department of Natural Resources, the Greenway Trust, the University of Washington and Hancock Forest Management. One of the elements of this program involves the acquisition of forestlands that are vulnerable to residential and commercial development. Lands are acquired by a combination of county funds and federal Forest Legacy funds and then transferred to the Washington State Department of Natural Resources for management. By deed, these lands stay in forest resource use in perpetuity and are managed according to the state's Habitat Conservation Plan. Seventy-five percent of all revenues generated are returned to King County. The lands that have been acquired help to form the block of public ownership along I-90, providing wildlife corridors, opportunities for trails and recreation, and the water quality protection provided by forest cover.

In addition to landscape-level planning and analysis, resource managers should identify specific areas in their forest ownership that are degraded or negatively impacting aquatic resources. Examples of such areas are logging roads or gravel mines no longer needed and scheduled to be abandoned or riparian zones that are not sufficiently vegetated. Organic soil amendments, when properly used, can greatly enhance vegetative growth and restore productivity to these sites, thus protecting fish and other aquatic resources. The use of recycled organic wastes generated in King County closes the recycling "loop" and helps sustain the productivity of resource lands.

R-639 **King County encourages the use of recycled, organic-based soil amendments, such as biosolids, and fertilizers in forest ecosystems, which can help reduce erosion and sedimentation into streams, increase water-holding capacity of soils, stimulate the growth of trees and other vegetation, capture carbon and enhance fish and wildlife habitat. King County shall work with the general public and private and public forestland owners to encourage the selective and appropriate use of these materials for ecosystem enhancement and restoration.**

One of the most successful efforts is the use of the county's biosolids to fertilize public and private forests. Annually, about 1,400 acres of forestland in east King County are fertilized with Loop® biosolids.

Maintaining land in long-term forest use offsets greenhouse gas emissions through sequestration of carbon in growing trees and in forest soils. In addition to providing plant nutrients, organic soil amendments such as Loop can significantly increase carbon storage in forests and help soils retain moisture. Efforts to conserve forests and encourage forest management for health and resilience are a major means of implementing King County's climate change policies. Even with these and other efforts to reduce greenhouse gas emissions, forests in the Pacific Northwest face potential impacts from climate change. In the coming decades, mortality of trees and

plants is projected to increase due to insects and pathogens, increased temperature, and lack of groundwater in the summer. Climate change also is projected to affect the composition and density of plant and animal species and the severity and frequency of forest fires. All of these potential impacts underscore the need for monitoring of climate-induced changes and active management of forest health.

R-640 **King County should continue to collaborate with the University of Washington, Washington State University including Extension, state and federal agencies, and forest landowners to monitor and evaluate impacts of climate change on forests in King County.**

R-641 **King County should consider climate change impacts and take steps to improve forest health and resilience to climate change impacts through its technical assistance to forest land owners, management of county-owned forest lands, and support of neighborhood-based efforts to reduce risks from wildfires.**

King County's 2015 Strategic Climate Action Plan calls for the county to manage and restore its forested parks and natural lands in ways that maximize biological carbon storage and sequestration, and increase resilience to changing climate conditions. To help guide forest management activities, in 2012 the Parks Division completed an initial assessment of the forest types on all of Parks' forested acreage. Additional assessment will continue to be conducted on newly acquired forested properties as well. Parks will develop and implement stewardship plans on all forested properties of 200 acres or more in size, which will result in healthier and forests that are more resilient to climate change. The Parks and Water and Land Resources Divisions will also continue to develop opportunities for volunteers to plant native trees and shrubs and remove invasive species from County-owned lands and have established an ambitious goal for the planting of new trees in the county.

D. Agriculture

Land suitable for farming is an irreplaceable natural resource. Agricultural lands and farming provide many benefits to the residents of King County including a connection to its cultural heritage, fresh local foods, and a diverse economy. In 2012, farmers in King County produced over $120 million in agricultural sales. Farmlands are an intrinsic component of the varied open space landscape of the region. Farmland provides scenic vistas and low-density separation between rural communities. Many farms in the county include an educational experience through U-Pick operations, harvest tours, and demonstrations of agricultural practices. Agricultural lands also provide environmental benefits, including the temporary storage and conveyance of floodwaters, habitat for birds and other wildlife, large areas without impervious surfaces, and opportunities for providing riparian vegetation along rivers and streams.

The concern about the loss of farmland in King County in the 1970s resulted in adoption of an agricultural lands policy framework through Ordinance 3064 in 1977 that called for the County to designate certain areas within King County as agricultural lands and then to develop an agricultural land protection program based upon both

land use regulations and compensation to protect existing agricultural lands and private property. This led to the successful Farmland Preservation Program bond issue in 1979, which has funded the purchase of farmland development rights.

In 1985, the county first designated its Agricultural Production Districts, which have remained stable since then at more than 41,000 acres. However, despite the land conservation accomplished through the Farmland Preservation Program and the designation of the Agricultural Production Districts, not all of this land is farmed. Based on surveys, approximately 27,000 acres of the Agricultural Production Districts are farmable, the rest being forested, farm building, water bodies or other non-farmable areas. About 25,000 areas are being actively farmed. In addition, there are 13,000 acres in active agriculture outside the Agricultural Production Districts on Rural Area and in urban areas.

This section focuses on the county's efforts to maintain and enhance commercial agriculture for the value of local produce, dairy products, specialty horticultural and energy crops, keeping livestock, and for scenic and historic values. To meet the Growth Management Act requirement to maintain and enhance agriculture, a variety of methods and programs continue to be necessary.

The policies call for King County to:

- Protect productive farmland by designation and zoning;
- Limit development to appropriately-scaled uses that are necessary to support commercial agriculture;
- Prevent or minimize land use conflicts between farming operations and adjacent land uses;
- Encourage and allow necessary infrastructure and services (markets, water, affordable housing, supply stores, technical services, tax incentives) that support commercial agriculture and contribute to growing, storing, processing, and distributing a local food supply and other horticultural and livestock activities;
- Support the economic development of the local food economy and improve access to healthy, affordable food;
- Continue to preserve farmland and develop additional mechanisms to maintain the affordability of farmland; and
- Encourage farming practices that conserve soils and protect water quality, fisheries, and wildlife.

King County's Local Food Initiative includes targets and recommendations to expand the local food economy to ensure job growth and economic viability for King County food businesses and farms.

The Local Food Initiative's production targets are to add 400 net new acres in food production and 25 new food farmers per year over the next ten years. Success in meeting the targets will require protection of existing farmland, keeping it farmed, addressing problems that impair farming, and enhancing programs that provide

technical assistance to farmers and expand markets for local farm products. To meet this target, the County should also pursue feasible opportunities to return formerly farmed land into production, such as the recent purchase of Tall Chief Golf Course in the Snoqualmie Valley which will be returned to agricultural use. In advancing this initiative, King County will encourage Best Management Practices and sustainable farming activities and will prioritize farming operations that have minimal adverse impacts on the environment.

1. Protecting Agricultural Lands

In 1979, voters approved a $50 million ballot measure to protect farmland threatened by development. The Farmland Preservation Program became the first voter-approved measure in the nation to protect farmland in a metropolitan area. By purchasing the development rights, the Farmland Preservation Program keeps farmland open and available through covenants that restrict development and limit the uses of the property to agriculture and open space. The covenants remain with the land in perpetuity so the land is protected regardless of ownership. Under the Farmland Preservation Program, the county holds the development rights in trust while the land remains in private ownership. By law, the county cannot sell or remove its interest in Farmland Preservation Program lands, with the exception of conveying public road or utility easements.

In 1995, the county approved an additional $3 million for the purchase of additional development rights under the Farmland Preservation Program, and continues to add to the program with a variety of grant funding and use of the Transfer of Development Rights Program. To date, the Farmland Preservation Program and Transfer of Development Rights Program has succeeded in preserving more than 14,000 acres of farmland.

R-642 **King County shall continue to implement the objectives of the Farmland Preservation Program. Protection of property purchased under the Farmland Preservation Program shall be a high priority when balancing conflicting interests such as locating transportation, active recreation, utility facilities, or other uses that could have an adverse impact on farm operations. King County shall use the Transfer of Development Rights Program as another tool to preserve farmland.**

Even farmland in the Farmland Preservation Program is challenged by pressures from adjacent development, the need to maintain drainage and irrigation systems, non-farmer ownership, and high real estate costs. To protect the farmland for the long term, investments in improving the farmability and managing the easements to ensure compliance are necessary.

R-642a **King County should develop a long term strategy for financing protection of sufficient farmland to significantly expand and retain food production, including improving the farmability of protected farmland, and ensuring that the easements are well-managed for the long-term.**

R-642b **Farmers conducting work on property on which King County owns a Farmland Preservation Program easement or farmers leasing properties owned by King County should be limited to predominantly agricultural and agricultural-supportive activities.**

Agriculture is most productive in agricultural communities where neighbors support agriculture, where parcels are large enough for commercial agriculture and where labor, supplies and markets for farm products are available. King County's farm soils and most profitable farms are usually found in contiguous blocks with few nonagricultural uses. In 1985, King County established Agricultural Production Districts with large lot zoning and agriculture as the preferred use.

The Agricultural Production Districts, shown on the Agriculture and Forest Lands Map in this chapter, present the least number of land use conflicts for agriculture, contain agricultural support activities and provide the best environment for farming in King County. The five Agricultural Production Districts are Sammamish Valley, Snoqualmie Valley, Lower Green River Valley, Upper Green River Valley and Enumclaw Plateau. Most of the farmlands preserved under the Farmland Preservation Program are found in these Agricultural Production Districts.

R-643 **Agricultural Production Districts are blocks of contiguous farmlands where agriculture is supported through the protection of agricultural soils and related support services and activities. Roads and natural features are appropriate boundaries for Agricultural Production Districts to reduce the possibility of conflicts with adjacent land uses.**

R-644 **King County should continue to seek funding and purchase additional development rights to farmland in the Agricultural Production Districts.**

Livestock, dairy and large-scale commercial row-crop operations require large parcels of land to allow for production that is profitable and sustainable. Generally, at least 35 acres is needed for full-time wholesale commercial production of such products. Specialty agricultural products, products that are direct-marketed, and part-time farming enterprises generally do not need as much acreage to be profitable.

R-645 **All parcels within the boundaries of an Agricultural Production District should be zoned Agricultural, either A-10 or A-35.**

R-646 **Lands within Agricultural Production Districts should remain in parcels large enough for commercial agriculture. A residential density of one home per 35 acres shall be applied where the predominant lot size is 35 acres or larger, and a residential density of one home per 10 acres shall be applied where the predominant lot size is smaller than 35 acres.**

R-647 **Agriculture should be the principal land use in the Agricultural Production Districts. Permanent new construction within districts shall be sited to prevent conflicts with commercial farming or other agricultural uses, and nonagricultural uses shall be limited. New development shall not disrupt agriculture operations and shall have a scale compatible with an active farming district.**

R-648 **On-site housing for farm employees shall be allowed where this can be accomplished without unnecessarily removing land from agricultural use or conflicting with other public interests. King County should address the regulatory constraints that make it difficult for farmers to offer housing for farm employees.**

The river valleys in King County are critical locations for agriculture, salmon habitat and natural floodplain processes. In compliance with growth management, portions of several of these valleys were designated as Agricultural Production Districts to protect the diminishing farmland for long-term commercial agriculture, thereby preventing their conversion to other uses that are often incompatible with habitat protection or that would require expensive flood risk reduction projects.

Some of the highest quality of salmon habitat in King County is found within the Agricultural Production Districts. As a result of federal listing of Chinook salmon as a threatened species, King County is obligated to take actions for protection of Chinook habitat in the county's watersheds. Such actions include restoration of habitat in portions of each of the county's rivers and, because many sections of the county's river systems are in a highly altered state, those reaches within Agricultural Production Districts offer some of the most promising opportunities for habitat restoration critical to salmon recovery. Each of the Water Resources Inventory Area Salmon Recovery Plans has recommended additional protection or restoration of critical habitat within the Agricultural Production Districts. At the same time, King County is committed to the preservation of productive agricultural soils and local agricultural production and protection of public safety in flood prone areas through the restoration of floodplain processes.

The farmers in the county support fish protection and fish recovery through many regulated and voluntary actions. King County recognizes that fish, flood management, and farm interests must work together in a collaborative manner. It is essential that farmers and other property owners in each watershed be directly included in planning and in the review of integrated, watershed-wide strategies that support the needs of agriculture, fish recovery, and flood risk reduction and floodplain management. Specific habitat protection rules should not jeopardize the agricultural productivity within the Agricultural Production Districts.

The 2012 Comprehensive Plan Update added policy R-650 that directed the County to convene a collaborative watershed planning process within each of the Agricultural Production Districts. The County choose to start the process in the Snoqualmie Valley Agricultural Production District, where the County has undertaken a number of habitat restoration projects, to develop an approach to improving and balancing the interests of agricultural

production, ecological function and habitat quality for salmon, and flood risk reduction and floodplain restoration.

In response to this, the Fish, Farm, and Flood Advisory Committee was formed in 2013, and the group of stakeholders representing agriculture, salmon recovery and flood management interests have been meeting regularly for the past three years. In 2016 the Advisory Committee developed a final report and a set of recommendations that balances near term actions as well as program and policy recommendations for all three resource interests. The Advisory Committee also recommended the formation of three task forces to undertake more detailed analyses of specific policy areas. Together the final recommendations and the work of the three task forces will form the foundation of a watershed planning approach in the Snoqualmie Valley Agricultural Production District to sustain agriculture production, salmon recovery, and flood risk reduction.

The Fish, Farm and Flood Advisory Committee participants recognize the importance of salmon recovery efforts, a vibrant agricultural economy and protecting agricultural soils in the Snoqualmie Valley Agricultural Production District, and the importance of protecting the public in flood prone areas. To address inherent conflicts between these three overlapping interests, the Advisory Committee recommended a suite of near term actions to address critical needs for all three resource areas, and the creation of three task forces:

- Buffers Task Force, with the goal of developing a science-based riparian buffer planting implementation strategy for the Snoqualmie Valley Agricultural Production District that strikes a balance between increasing ecological function of waterways and maintaining the agricultural viability of the Snoqualmie Valley Agricultural Production District.
- Snoqualmie Valley Agricultural Production District Strategic Plan Task Force, with the goal of improving the long-term productivity of farmland, bring more acres into production, especially food production, and increasing opportunities for farmers to develop the necessary infrastructure to support or increase their farm businesses. This task force will conduct an assessment of specific farmland resource property needs and assets in the Snoqualmie Valley Agricultural Production District and create an implementation plan for project improvements to land (e.g., drainage) and water access. It will complement other related efforts, such as King County's Local Food Initiative which is an economic development and marketing plan for food and agriculture in the region.
- Regulatory Task Force, with the goal of evaluating regulations and recommending process improvements or possibly statutory changes, as appropriate, pertaining to key regulatory issues identified by the Fish, Farm and Flood agricultural stakeholders. The goal of the task force is to identify changes that will reduce compliance costs and increase predictability without diminishing the overall level of environmental protection or the level of flood protection that regulations are intended to assure. Initial areas of focus for the task force include:
    - Drainage regulations that make maintenance expensive or time-consuming or otherwise restrict the ability to improve drainage of farm fields.

- Flood regulations related to constructing farm pads, buildings and other farm improvements.
- Mitigation required when farmers maintain drainage ditches or build a farm pad or other structure in a wetland or a buffer of a wetland or stream.

Those recommendations are reflected in a new policy R-650a.

R-649 **Agriculture must remain the predominant use in any Agricultural Production District and aquatic habitat or floodplain restoration projects, as well as, King County mitigation reserves program projects shall not reduce the ability to farm in the Agricultural Production District. Therefore, until the county implements the watershed planning process described in R-650, such projects are allowed only when supported by owners of the land where the proposed project is to be sited. Criteria to be considered:**

a. **For a project proposed to be sited on lands that are unsuitable for direct agricultural production purposes, such as portions of property that have not historically been farmed due to soil conditions or frequent flooding, and which cannot be returned to productivity by drainage maintenance, or**

b. **For a project proposed to be sited on lands suitable for direct agricultural production:**

(1) **there are no unsuitable lands available that meet the technical or locational needs of the proposed project, and**

(2) **the project is included in, or consistent with, an approved Water Resources Inventory Area Salmon Recovery Plan, Farm Management Plan, Flood Hazard Management Plan or other similar watershed scale plan; or the project would not reduce the baseline agricultural productivity within the Agricultural Production District.**

R-650 **Aquatic habitat restoration projects, floodplain restoration projects and projects under King County's mitigation reserves program in an Agricultural Production District shall be evaluated through a collaborative watershed planning process with the goal of maintaining and improving agricultural viability, improving ecological function and habitat quality, and restoring floodplains through integrated, watershed-wide strategies. A watershed planning process shall be established for an agricultural production district because of the number of** potential restoration projects and shall:

a. **ensure that agricultural viability in the Agricultural Production District is not reduced as the result of actions taken and that agriculture remains the predominant use in the agricultural production district;**

b. **evaluate and recommend actions at all scales across the affected watershed to maintain and improve agricultural viability, restore**

ecological functions and aquatic habitat and restore floodplains, including voluntary actions taken by landowners;

c. be a collaborative effort among affected land owners, interested stakeholders, and King County and shall be updated on a periodic basis; and

d. identify and recommend actions that King County should take or ensure are taken to maintain and improve agricultural viability in the Agricultural Production District and address any impacts to agriculture from aquatic habitat restoration projects, floodplain restoration projects and projects under King County's mitigation reserves program constructed in the Agricultural Production District.

R-650a **The Snoqualmie Valley Agricultural Production District is the first Agricultural Production District to undergo a watershed planning effort called for in R-650. King County shall implement the recommendations of the Snoqualmie Fish, Farm and Flood Advisory Committee. The recommendations of the task forces and other actions identified in the final Advisory Committee Report and Recommendations will form the basis for a watershed planning approach to balance fish, farm and flood interests across the Snoqualmie Valley Agricultural Production District and an agreement on protecting a defined number of acres of agricultural land. The Advisory Committee, or a successor committee, will monitor progress of the task forces and will reconvene to evaluate the watershed planning approach to balancing interests prior to the next Comprehensive Plan Update. The policy issues and recommendations outlined in the Snoqualmie Fish, Farm, Flood Advisory Committee Report and Recommendations are largely specific to the Snoqualmie Valley and are not intended to be applied broadly in other Agricultural Production Districts. Future Fish, Farm, Flood efforts focused in other Agricultural Production Districts will need to go through their own processes to identify barriers to success for all stakeholders in these geographic areas. R-649 continues to apply to the Snoqualmie Valley Agricultural Production District until the watershed planning effort outlined in the Fish, Farm and Flood recommendations is complete. A policy reflecting the outcome of this effort shall be included in the next four-year cycle Comprehensive Plan Update.**

R-651 **Maintaining the viability of farmlands is a high priority for King County. Within the Agricultural Production Districts, measures to protect threatened or endangered species shall be tailored to ensure working farms can continue to operate.**

Two Agricultural Production Districts in or near urban areas, the Lower Green River Valley and Sammamish Valley, were designated in the 1985 Comprehensive Plan, and those designations have been retained. The

development rights from many, but not all, of the parcels in these two districts have been purchased through the Farmland Preservation Program. The Lower Green River Agricultural Production District is completely surrounded by urban designated land and as such, functions as both prime agriculture land and urban separator. Each of the other Agricultural Production Districts and some Farmland Preservation Program lands outside of Agricultural Production Districts also share boundaries with cities. The challenges to agriculture from urban development include alterations to hydrology that result in flooded fields, increased traffic that interferes with farm vehicles on roads, increased lighting at night, complaints from urban neighbors about farm operations, and high land prices. The benefits of being located near urban areas include access to urban markets and consumers and increased recognition and appreciation of locally produced goods.

R-652 **King County commits to preserve Agricultural Production District parcels in or near the Urban Growth Area because of their high production capabilities, their proximity to markets, and their value as open space. King County should work with cities adjacent to or near Agricultural Production Districts to minimize the operational and environmental impacts of urban development on farming, and to promote activities and infrastructure, such as Farmers Markets and agriculture processing businesses, that benefit both the cities and the farms by improving access to locally grown agricultural products.**

R-653 **The Lower Green River Agricultural Production District is a regionally designated resource that is to remain in unincorporated King County. The Lower Green River Agricultural Production District functions as an urban separator between the cities of Kent and Auburn. King County may contract with other jurisdictions to provide some local services to this area as appropriate.**

Pastoral vistas make agricultural land a popular destination for recreation. However, creating parks with active recreational facilities in the Agricultural Production Districts is not appropriate because the land should be prioritized for agriculture. In addition, heavy recreational use in or near the Agricultural Production Districts could result in trespass and damage to crops, animals and farm equipment.

R-654 **Active recreational facilities should not be located within Agricultural Production Districts. When new parks, natural areas or trails are planned for areas within or adjacent to Agricultural Production Districts, King County should work with farmers to minimize impacts to farmland and agricultural operations.**

Public road and utility projects within and through Agricultural Production Districts must be designed to prevent disruption to agriculture. Therefore, road and utility district capital facilities and plans, including water, wastewater, recycled water, and drainage, need to ensure that services are consistent with preservation of long-term agriculture. (Chapter 9, Services, Facilities and Utilities, contains policies requiring special district plans to be consistent with land use plans.)

R-655 **Public services and utilities within and adjacent to Agricultural Production Districts shall be designed to support agriculture and minimize significant adverse impacts on agriculture and to maintain total farmland acreage and the area's historic agricultural character:**

a. **Whenever feasible, water lines, sewer lines and other public facilities should avoid crossing Agricultural Production Districts. Installation should be timed to minimize negative impacts on seasonal agricultural practices;**

b. **Road projects planned for the Agricultural Production Districts, including additional roads or the widening of roads, should be limited to those that are needed for safety or infrastructure preservation and that benefit agricultural uses. Where possible, arterials should be routed around the Agricultural Production Districts. Roads that cross Agricultural Production Districts should be aligned, designed, signed and maintained to minimize negative impacts on agriculture, and to support farm traffic; and**

c. **In cases when public or privately owned facilities meeting regional needs must intrude into Agricultural Production Districts, they should be built and located to minimize disruption of agricultural activity.**

R-656 **Lands can be removed from the Agricultural Production Districts only when it can be demonstrated that:**

a. **Removal of the land will not diminish the productivity of prime agricultural soils or the effectiveness of farming within the local Agricultural Production District boundaries;**

b. **The land is determined to be no longer suitable for agricultural purposes; and**

c. **Removal of the land from the Agricultural Production District may occur only if it is mitigated through the addition of agricultural land abutting the same Agricultural Production District that is, at a minimum, comparable in size, soil quality and agricultural value.**

2. Sustaining Agriculture and Farming

King County has made a significant investment in preserving farmland for agriculture and, as a result, has also preserved the open space benefits of these lands. The county must ensure that this land continues to be farmed into the future by helping farmers maintain and operate their farms and by promoting local agricultural products through infrastructure and activities that improve access to locally grown agricultural products.

Farmers, especially new and beginning, have limited resources to access land and financing to begin production. Furthermore, all King County farmers, regardless of size and years of farming, have a great need for information on marketing and production strategies required to operate their farming businesses. The Local Food Initiative seeks to provide this information and assistance. Under the Local Food Initiative regulatory and technical assistance will increase and be streamlined through a coordinated economic development effort by different county agencies and partner organizations that serve farmers. The team will provide assistance with production, marketing, and business planning through a "one-stop shop" available on-line with a possibility of physical co-location of services if necessary.

R-657 **King County shall work with and provide support to Washington State University Extension for its research and education programs that assist small-scale commercial farmers.**

R-658 **King County shall work with other jurisdictions and non-profits to expand markets for farm products by supporting Puget Sound Fresh and other programs that promote local food and connect buyers with producers.**

R-659 **King County should work with other jurisdictions, farm advocacy groups and others to support Farmlink, farmer training and other programs that help new farmers get started, gain access to farmland and develop successful marketing methods.**

King County recognizes the value of Farmers Markets for their role in community-building, their contribution to farmer success by providing a direct-marketing opportunity, and for making the bounty of King County farms available to city residents.

R-660 **King County should work with other jurisdictions to continue to provide support to Farmers Markets.**

R-661 **King County should develop incentives to encourage food production on prime farmland. These incentives could include tax credits, expedited permit review, reduced permit fees, permit exemptions for activities complying with best management practices or similar programs. The county should continue to work with community-based organizations that can assist immigrant and minority farmers, and other communities that have traditionally experienced access issues, in gaining access to farmland.**

R-661a **To help make more farmland accessible to beginning and low-income farmers, King County should expand its leasing of agricultural land to farmers where appropriate and should encourage private farmland owners to lease unused land to farmers.**

R-661b **King County should expand representation of low income and socially disadvantaged farmers within King County agricultural processes such as the Agriculture Commission, advisory committees, task forces and hiring.**

King County recognizes the importance of adding value to and direct sales of agricultural products as a way to keep agriculture viable in an urban landscape. King County's agriculture program works with farmers to encourage them to add value to their products by processing, packaging, and selling them directly to the consumer.

R-662 **Agricultural processing, packing and direct sales are considered agricultural activities and should be allowed at a size and scale appropriate to the zone in which they are operating. King County shall work with local and state health departments to develop regulations supporting these activities and with local non-profits and academic institutions to educate farmers about safe food processing practices and compliance.**

R-663 **King County supports the processing and packaging of farm products from crops and livestock, and will continue to work with farmers, ranchers, cities, neighboring counties, and other interested parties to address infrastructure and regulatory needs that promote sales to consumers, institutions, restaurants, and retail enterprises.**

R-664 **King County supports innovative technologies to process dairy and other livestock waste to reduce nutrients and to create other products such as energy and compost in the Agriculture and rural classifications.**

King County's Agricultural Production Districts have some of the best soil and conditions for growing food in the country. There is an increasing awareness among farmers about the potential for expanding local food production compatible with a variety of sustainability goals. Concerned about multiple threats to future food production, King County farmers are working with others to promote voluntary incentives that will increase the community of those involved in the local production of food.

R-665 **King County should develop incentives that support local food production and processing to increase food security; provide a healthy, affordable local food supply; and reduce energy use.**

Agricultural practices modify the natural environment in order to produce food or fiber or maintain livestock for human use. Ideally, practices that maintain the productivity of the lands also protect environmental quality and respect natural processes such as flooding and channel migration. Farmers, technical advisors, floodplain managers, and environmental regulators must work together to understand the relationships between production practices, environmental protection, public safety, and profitability. These practices, referred to as best management practices, are designed to prevent erosion, maintain flood conveyance and flood storage, retain riparian vegetation, avoid stream bank collapse, properly dispose of animal wastes, safely use and dispose of pesticides and prevent excessive stormwater runoff. Best management practices planned and implemented through efforts such as farm management plans can control runoff volumes and prevent pollutants from being discharged into local waterways and groundwater. These practices, such as manure bins, paddock and grazing area designs, and stream exclusion fencing, can reduce or eliminate pollutants in stormwater runoff from agricultural activities.

Climate change has the potential to affect farming in King County, with increased severity of winter flooding, higher summer temperatures, reduced availability of surface and groundwater for irrigation, increased pest risk, and changes in the types of crops suited to this area. At the same time, soil best management practices, including use of cover crops and modified tilling methods, and amendment with compost, biosolids or other organic matter can help to mitigate the impacts of climate change by retaining soil moisture, sequestering carbon, and reducing other greenhouse gas emissions. Consideration and investigation of alternative water supplies, such as recycled water, can also help to mitigate the impacts of climate change and help support local and sustainable agriculture. Development of anaerobic digesters for dairy manure and other agricultural waste products can capture methane gas and convert it to usable energy. Having locally-available produce can help to reduce greenhouse gas emissions from transport.

King County's policies in this chapter to conserve farmland and encourage food production take on a greater significance when considering that climate change may result in food shortages in other parts of the country and world. The Puget Sound region may become even more valuable for food production than it already is if producing food in other parts of the world becomes more difficult.

R-666 **King County shall provide incentives, educational programs and other methods to encourage agricultural practices and technological improvements that maintain water quality, protect public health, protect fish and wildlife habitat, protect historic resources, maintain flood conveyance and storage, reduce greenhouse gas emissions, control noxious weeds, and prevent erosion of valuable agricultural soils, and increase soil water holding capacity while maintaining the functions needed for agricultural production.**

In order to maintain and operate their farms, farmers need assistance in maintaining farm viability in the face of increasing urbanization, soil degradation, increased flooding and water scarcity caused by climate change, and

the increased impacts of upslope development. The maintenance of drainage and irrigation systems is essential for commercial agriculture to succeed in the county.

R-667 **King County shall continue to support agriculture with an expedited review process and reduced fees for structures necessary for farm operations.**

R-668 **King County shall work with federal, state, local, and private agencies to improve the availability and efficiency of water for agriculture through use of tools such as expanding the availability of recycled water to farms, offering incentives for irrigation efficiency, support mechanisms for water rights banking and trading that will give farmers greater certainty for water rights while protecting instream flows. King County will encourage the maintenance and preservation of agriculture water rights for agriculture purposes. Assessments of future surface and groundwater availability for agriculture should consider projected impacts of climate change.**

R-668a **King County will continue to support drainage improvements through its Agricultural Drainage Assistance Program and actively seek new ways to make drainage projects less expensive and easier to implement and to improve drainage systems across property lines.**

R-669 **King County should continue to collaborate with the Washington State University Extension, the University of Washington, and King Conservation District to develop information on the likely impacts of climate change on agriculture in King County, and to develop mitigation and adaptation strategies that are appropriate for King County's soils and farm economy. Research should address soil management, use of commercial compost, water storage, irrigation, alternative crops, integrated pest management, and nutrient management. The information should be made available to farmers through technical assistance programs and farm planning.**

R-669a **Farmers conducting work on property on which King County owns a Farmland Preservation Program easement should use Agricultural Best Management Practices and other sustainable farming methods.**

R-670 **King County should provide incentives for soil management practices that reduce greenhouse emissions through its Agricultural Best Management Practices Cost-Sharing Program.**

An alluvial fan is a depositional landform along a watercourse where there is an abrupt decrease in gradient and a resulting area of active sediment deposition. Most alluvial fans in King County form where steep tributary

streams discharge onto nearly level river floodplains. Since much of the county's farmland is located in valley floors, some agricultural landowners have properties on or containing alluvial fans that are significantly affected by the episodic deposits of upslope sediment and debris that accumulate on their land. These events result in obstructed stream channels, filled wetlands, covered farmland, and disruptions in operations. Water is redirected into unexpected places. Permits, regulations, and the lack of approved management practices make it difficult to remedy the situation to regain operations and farm viability.

R-671 **King County should use pilot or demonstration projects and multi-agency collaboration to develop a new suite of practices that will provide options for landowners whose existing operations are affected by alluvial fan deposits. These should provide timely and cost-effective relief from debris and the associated changes to the watercourse along with protection of intact fish habitat and restoration of degraded fish habitat within these areas.**

Agricultural lands have historically been located in floodplains. Agriculture coexists with flood storage and seasonal inundation; however, there is a growing concern that farmers cannot protect their investments from flooding. The federal, state and local flood hazard management standards are designed to ensure there is no adverse impact to upstream or downstream property owners from activities that are allowed within the floodplain. King County recognizes that most of the agriculture in the county is located in the floodplains because that is where the prime agricultural soils are located. In recent years, King County has provided extensive technical and financial support to farmers to build farm pads and raise homes and agricultural buildings in the Snoqualmie floodplain. This industry requires special consideration because it is tied to these agricultural soils, and can occur almost nowhere else in the county.

R-672 **King County should work with federal, state and local jurisdictions to reduce flood impacts to agricultural operations. The county will continue to investigate the needs of agriculture before, during and after flood events, to determine if and how losses can be reduced, and will use this information in designing its floodplain policies and regulations.**

The high cost of agricultural land continues to be a barrier for many farmers wishing to locate their farm businesses within King County. The steady rise in agricultural land values continues to hamper the ability of many potential and current farmers to enter or expand their operations.

R-673 **In addition to enhancing the Farmland Preservation Program, the county should develop more innovative solutions and incentives to keep agricultural land affordable and profitable for active farming.**

3. Agriculture and the Food System

King County has a year-round growing season, a strong farming tradition and local farming expertise, and proximity to major markets for local foods and food products. Many of the policies in the previous section are aimed at helping to overcome obstacles to successful farming in King County. With that direction and a focus on production of food, farmlands in King County could be even more instrumental in strengthening the food system for the benefit of all King County residents.

Agricultural lands, farming practices and activities, and farmers are part of the local and regional food system. In addition to the growing of food, the food system includes processing, distribution, food availability, and disposal. As more people move to this region, King County recognizes the importance of planning for the regional food system to be more sustainable and resilient.

In order to do so, King County will focus on developing a local food system that can:

- Expand opportunities for local farms and enhance the rural economy;
- Promote healthy eating to improve public health;
- Improve access to healthy, safe, and affordable food, to all county residents; especially those with low incomes;
- Reduce energy use and greenhouse gas emissions; and
- Divert food waste from landfills.

Studies have shown that 35% of garbage is food. Efforts to prevent food waste divert edible food to hunger programs and recycle food waste into compost could reduce what goes to the landfill, reduce methane generated by landfills, provide food for hungry people and provide soil amendments.

Food and nutrition are major factors in public health. The USDA's *2010 Dietary Guidelines for Americans* call for significant increases in daily consumption of fruit, vegetables, milk products and whole grains. In 2013, 13.4% of King County residents lacked access to enough food for an active, healthy life and 18.7% of King County children lived in food-insecure households *(Feeding America, Map the Meal Gap 2015),* and 73% of King County middle and high school age youth do not consume recommended levels of fruits and vegetables *(Healthy Youth Survey 2012).* Thirty-two% of adults in King County consume less than one serving of fruits per day and 17 percent less than one serving of vegetables daily, and there are significant differences across education levels for both fruit and vegetable consumption and across race and income groups for vegetable consumption *(Communities Putting Prevention to Work, 2010 and 2012).*

Efforts to increase the availability of these foods to King County residents should include encouraging an increase in food production on King County farms. Although it is not realistic for King County farms and farmers to provide the full complement of recommended foods in public health guidelines, there is the potential to increase food production for local and regional consumption, particularly in the first three categories.

R-674 **King County should work with farmers and ranchers to better understand the constraints to increased food production in the county and develop programs that reduce barriers and create incentives to growing food crops and raising food-producing livestock.**

R-675 **King County should prioritize its programs to help build and support a sustainable, reliable, equitable, and resilient local food system. King County should strive to make the local food system accessible to all and strive to make access to the local food system culturally appropriate.**

R-676 **King County should consider adopting procurement policies that would encourage purchases of locally grown fresh foods.**

R-677 **King County should promote local food production and processing to reduce the distance that food must travel from farm to table.**

R-677a **King County should continue food waste programs for single family, multifamily, businesses and institutions, aimed at reducing generation, promoting donation and encouraging curbside collection for anaerobic digestion and composting.**

R-677b **King County should prioritize the economic development of the food and agriculture industries in order to build a more sustainable and resilient local food system.**

Government funded food programs are increasingly relying on electronic cards for clients to purchase food. For example, food stamps have been replaced with electronic benefits transfer cards. Grocery stores can easily adopt new electronic technology to accept such cards. It is more challenging for Farmers Markets to do so as the majority of them are open-air events in parking lots without access to electricity or telephone connections. To improve accessibility of Farmers Markets for low-income shoppers, a concerted effort needs to be made to develop the ability to easily accept electronic payment. This will help make fresh food more available to low-income shoppers as well as increase the customer base for farmers.

R-678 **King County should collaborate with other organizations to further the development of programs that increase the ability of shoppers to use food** assistance benefits and the ability of farmers to accept electronic and other **forms of payment at Farmers Markets and farm stands.**

E. Mineral Resources

King County contains many valuable mineral resources, including deposits of coal, sand, rock, gravel, silica, clay, metallic ores and potentially recoverable gas and oil. Mining and processing these deposits is an important part of King County's economy, currently providing hundreds of jobs and producing materials used locally, regionally, and nationally. Mining also has historic significance, in that it provided the impetus for past development in many parts of King County, including Black Diamond and the Newcastle area.

King County is required by the Growth Management Act to designate and conserve mineral lands and plan appropriately to protect them. In doing so the county must assure that land uses adjacent to mineral lands do not interfere with the continued use of mineral lands in their accustomed manner and in accordance with best management practices. The policies in this section explain the steps taken to designate and conserve mineral resource lands and provide direction on the comprehensive review needed before additional sites are designated for mineral resource extraction.

Four main steps are necessary to maintain and enhance commercial mineral resource industries. First, mineral resource sites should be conserved through designation and zoning. Second, land use conflicts between mining, processing and related operations and adjacent land uses should be prevented or minimized through policies and assessment and mitigation of environmental impacts. Third, operational practices should protect environmental quality, fisheries and wildlife, in balance with the needs of the industry. Finally, mining areas need to be reclaimed in a timely and appropriate manner.

The Mineral Resources Map identifies four different types of Mineral Resource Sites. The sites were identified in the 1994 King County Comprehensive Plan or in subsequent annual updates. Following the Mineral Resources Map is a spreadsheet that contains information on each Mineral Resource Site parcel.

The Designated Mineral Resources Sites on the Mineral Resources Map satisfy King County's responsibility to designate and conserve mineral resources consistent with requirements of the Growth Management Act. All Designated Mineral Resources Sites have Mineral zoning. The criteria used in the 1994 King County Comprehensive Plan called for designation of properties that at the time were either zoned outright for mining or those operating under an approved Unclassified Use Permit. In addition to the designated Mineral Resources Sites, the Forest Production District and Forest (F) zone preserves the opportunity for mineral extraction. Mining is a permitted or conditional use in the F zone. Because forestry does not preclude future mineral extraction, King County considers the Forest Production District as part of its strategy to conserve mineral resources.

The Mineral Resources Map also shows Potential Mineral Resource Sites. These are sites where King County expects some future surface mining to occur or where the owner or operator indicates an interest in future mining. Most of the Potential Mineral Resources Sites shown on the map contain sand and/or gravel; however,

a few contain other mineral resources such as quarry rock and coal. Because of the geology of King County, most valuable metallic mineral resources are located in the Forest Production District, and are therefore already protected from urban development. Identification of Potential Mineral Resources Sites satisfies the Growth Management Act requirements to not knowingly preclude opportunities for future mining and to inform nearby property owners of the potential for future mining use of these areas in order to prevent or minimize conflicts.

The Mineral Resources Map also shows Non-Conforming Mineral Resources Sites. These are sites on which some mining operations predated King County zoning regulations without appropriate zoning or other land use approval. Mining for these sites has not been authorized through a Land Use Map or zoning designation. These sites are shown for informational purposes only. Mining can occur on an identified site only if mining has been approved as a nonconforming use by the Department of Permitting and Environmental Review, and mining activities have received all other necessary permit approvals. Because the sites have not undergone formal review to be designated on the Land Use Map or zoned for mining, the sites do not have long-term commercial significance. However, they can continue to serve mineral supply needs.

The Mineral Resources Map also shows Owner Identified Potential Coal Mining Sites that contain subsurface coal resources. These sites could be mined by either underground or surface mining techniques. Because of continued uncertainties involving the economics of energy and related market conditions, it is not always possible to determine the timing or likelihood of coal resources extraction in potential coal mining areas. Underground and surface coal mining is subject to permitting and enforcement by the federal government. King County regulates land use decisions governing surface facilities. Because of the difficulty in precisely locating these facilities prior to an actual proposal, King County determined to not apply Potential M zoning to owner-identified coal resources sites.

R-679 **King County shall identify existing and potential mining sites on the Mineral Resources Map in order to conserve mineral resources, promote compatibility with nearby land uses, protect environmental quality, maintain and enhance mineral resource industries and serve to notify property owners of the potential for mining activities. The county shall identify:**

- **a. Sites with existing Mineral zoning as Designated Mineral Resource Sites;**
- **b. Sites where the landowner or operator has indicated an interest in mining, sites that as of the date of adoption of the 1994 Comprehensive Plan had potential Quarrying/Mining zoning, or sites that the county determines might support future mining as Potential Mineral Resource Sites;**
- **c. Sites where mining operations predate zoning regulations but without zoning or other land use approvals as Non-Conforming Mineral Resource Sites; and**
- **d. Owner-Identified Potential Sub-Surface Coal Sites.**

R-680 **King County shall designate as mining on the Comprehensive Plan Land Use Map those sites that had Potential Mineral (M) zoning prior to the date of adoption of the 1994 Comprehensive Plan and those sites that had Mineral zoning as of the date of the adoption of the King County Comprehensive Plan 2000 Update.**

A mining designation on the Land Use Map shall not create a presumption that Mineral zoning will be approved for sites with Potential Mineral zoning. Potential Mineral zoning shall not be applied to additional sites.

Mining is an intense operation that may continue for many years. Mining operations can significantly change the land being mined and have impacts on the environment and on nearby properties. Beyond direct impacts to the mine site and nearby properties, the mining, transport, and end use of coal in production of electricity releases carbon that contributes to greenhouse gas emissions. In 2014, the county and cities updated the Countywide Planning Policies to set a goal to reduce greenhouse gas emissions 80% by 2050 at the county scale.

The county's 2015 Strategic Climate Action Plan includes the same overarching goal. King County requires comprehensive review, including environmental analysis, prior to approving a Land Use Map and zoning change. Site specific environmental review will also be required for a grading permit or any other permit that is necessary for a mining operation. Therefore, a comprehensive site-specific study is required prior to any such approval.

R-681 **King County may designate additional sites on the Comprehensive Plan Land Use Map as Mining only following a site-specific rezone to Mineral zoning. Upon approval of a rezone to Mineral zoning, the Comprehensive Plan Land Use Map shall be amended to designate the site as mining during the next Comprehensive Plan amendment cycle. King County should approve applications for site-specific rezones to Mineral zoning and applications for permits that would authorize mineral extraction and processing only following site-specific environmental study, early and continuous public notice and comment opportunities, when:**

a. **The proposed site contains rock, sand, gravel, coal, oil, gas or other mineral resources;**
b. **The proposed site is large enough to confine or mitigate all operational impacts;**
c. **The proposal will allow operation with limited conflicts with adjacent land uses when mitigating measures are applied;**
d. **The proposal has been evaluated under the State Environmental Policy Act so that the county may approve, condition or deny applications consistent with the county's substantive State Environmental Policy Act**

authority, and in order to mitigate significant adverse environmental impacts.

e. Roads or rail facilities serving or proposed to serve the site can safely and adequately handle transport of products and are in close proximity to the site.

If King County denies an application for a site-specific mining rezone it should remove the Mining land use designation and the associated Potential Mineral zoning for the site from the county's Land Use maps. If the county denies a permit that would authorize mineral extraction and/or processing on a Designated Mineral Resources Site, the county should consider new information generated during the permit review process to determine whether the site is not properly designated as mineral resource land of long-term commercial significance, the designation for the site on the Mineral Resources Map should be changed from Designated Mineral Resources Site to Potential surface Mineral Resource Site. In addition, the Mining land use designation and the Mineral zoning classification for the site should be amended to be compatible with the surrounding properties.

R-682 **King County should remove the Mining land use designation on the Comprehensive Plan Land Use Map and associated Potential Mineral zone or Mineral zoning for any sites that have been denied a rezone to Mineral.**

If a grading or other permit necessary for the extraction of mineral resources is denied on a Designated Mineral Resource Site, the county shall evaluate whether such mineral resource designation is appropriate. The re-evaluation process may occur during the annual Comprehensive Plan amendment cycle and information produced during the permit review process shall be used to evaluate the appropriateness of changing the existing designation. If the county determines that the site should not be designated as mineral resource land of long-term commercial significance as defined in the Growth Management Act, the site shall be redesignated to a Potential Surface Mineral Resource Site on the Mineral Resources Map and to a land use designation and zoning classification compatible with the surrounding properties.

R-683 **King County may update the Mineral Resources Map to identify additional Potential Mineral Resource Sites only during the four-year Comprehensive Plan amendment cycle.**

R-684 The preferred adjacent land uses to sites designated as Mining on the Land Use Map are mining, industrial, open space or forestry uses. Sites for newly proposed Mineral zones shall not be adjacent to or within Agricultural Production Districts. Agricultural lands and operations should be protected from significant impacts associated with nearby mine operations.

R-685 Mining activities are permitted within the Forest Production District, consistent with R-620. However, a conditional use permit shall be required for mining activities in the Forest Production District located within one-quarter mile of established residences or for proposals seeking to use local access streets where abutting lots are developed for residential use.

R-686 In order to comprehensively assess the environmental impacts associated with a zoning change, conditional use or operating approval for a mining proposal, the range of environmental impacts, including short-term and long-term effects arising or existing over the lifetime of the proposal, shall be assessed at the earliest possible stage. This should include the potential for future proposals for structures and operations related to mining, such as asphalt and concrete batch plants.

R-687 King County should prevent or minimize conflicts with mining when planning land uses adjacent to Designated and Potential Mineral Resource Sites. Subarea studies may indicate areas where mining is an inappropriate land use. Designated and Potential Mineral Resource Sites and nonconforming sites should be shown on Mineral Resources Map and subarea study maps in order to notify nearby property owners and residents of existing and prospective mining activities.

R-688 The periodic review process for mineral extractive and processing operations shall include sufficient public notice and comment opportunities. The purpose of the periodic review process is to provide opportunities for public review and comment on the mineral resource facility's fulfillment of state and county regulations and implementation of industry-standard best management practices, and for King County to modify, add or remove conditions to address new circumstances and/or unanticipated project-generated impacts. The periodic review process is not intended to re-examine the appropriateness of the mineral resource use, or to consider expansion of operations beyond the scope of existing permitted operations since that review would be accomplished through the county's permitting process. The periodic review is intended to be a part of King County's ongoing enforcement and inspections of mineral resource sites, and not to be a part of the county's permitting process.

R-689 Conditions and mitigations for significant adverse environmental impacts associated with mining operations and their associated structures or facilities should be required, especially in the following areas:

a. Air quality;
b. Environmentally sensitive and critical areas, such as surface and groundwater quality and quantity, wetlands, fisheries and wildlife habitats, and aquatic habitats;
c. Noise levels;
d. Vibration;
e. Light and glare;
f. Vehicular access and safety;
g. Land and shoreline uses;
h. Traffic impacts;
i. Visual impacts;
j. Cultural and historic features and resources;
k. Site security;
l. Climate change impacts from coal mined for energy production; and
m. Others unique to specific sites and proposals.

R-690 King County should work with the state and federal governments to ensure that proposals for underground mining, oil and gas extraction, and surface coal mining are reviewed with consideration of local land use and environmental requirements, regional impacts from transport and assessment of climate change impacts from end-use of oil, gas and coal.

R-691 King County should work with the Washington State Department of Natural Resources to ensure that mining areas are reclaimed in a timely and appropriate manner. Reclamation of mining sites in the Forest Production District should return the land to forestry. Where mining is completed in phases, reclamation also should be completed in phases as the resource is depleted. When reclamation of mining sites located outside of the Forest Production District is completed, the site should be considered for redesignation to a land use designation and zoning classification compatible with the surrounding properties.

R-692 King County shall encourage the removal of existing stockpiles of previously mined material in order to promote and achieve reclamation of land to its highest and best use.

Mineral Resources Property Information for the Mineral Resources Map

DESIGNATED MINERAL RESOURCE SITES

Map # Section-	Section-Township-Range	Site Name and/or Owner/Operator	Product*	Total Site Acreage (approx.)
1	25-21-06	Cadman S & G/Flintston S&G	SG	75
2	11-20-07 21-20-07	Plum Creek Timber Company	SG	476
3	21-22-03	Ideal Cement Co/King County	SG	39
5	27-22-07	Kangley Pit/Meridian Aggregates Co. (398 acres) and Stoneway Concrete Gravel Pit/Gary Merlino Construction	SG	608
6	28-23-06	Cedar Grove Pit/Queen City Farms	SG	315
7	33-23-06	Lake Francis Pit/Plumb Creek Timber Co	SG	143
8	33-23-06	Cedar grove Pit /ANMARCO	SG	35
9	20-23-06	Cedar Mountain Pit/ Rivera & Green	SG	57
10	20-22-06	Black River Quarry	SG	374
12	08-28-07 17-26-07	Cherry Pit/Thompson	SG	13
13	19-24-08 20-24-08	Snoqualmie/Weyerhaeuser Co. and S. Parsons et. al.	SG	665
15	06-23-06	Squak Mountain Quarry/M. Palmer	RS	16
16	22-24-07	Raging River/Cadman	RS	46
17	33-20-07	Highway 410 Quarry/J. Laramie	RS	34
18	28-26-11 27-26-11	Meridian Aggregates	R	38
19	11-21-06 12-21-06	John Henry Coal Mine/Palmer Coking Coal	C	375
20	01-21-06 36-22-06	Reserve Silica Corporation Plum Creek Timber Co. and Silica Sand Mine	S	
23	32-24-06	State of Washington	CL	
25	32-24-06	Interpace Harris Mine/ R.Thompson and Eltra. Corp.	SG	
26	35-22-06	Meridian Minerals Co.	SG	
27	29-23-06	Pinnacle Exploration	SG	
28	29-23-06 32-23-06	ANMARCO and G. Newell	SG	
29	29-23-06	Plum Creek Timber Co	SG	
30	27-24-06	Issaquah/King Co.	SG	
31	05-23-06	King County	SG	

DESIGNATED MINERAL RESOURCE SITES

Map # Section-	Section-Township-Range	Site Name and/or Owner/Operator	Product*	Total Site Acreage (approx.)
32	33-23-06	Lake Francis Plum Creek Timber Co	SG	
96	30-21-07	Franklin Pit/Morris	SG	158

POTENTIAL MINERAL RESOURCE SITES

Map # Section-	Section-Township-Range	Site Name and/or Owner/Operator	Total Site Acreage (approx.)
35	35-22-05	T. Scarsella	11
36	07-25-06	Cadman/King Co.	24
37	33-23-06	Merlino Property/ANMARCO	32
39	20-23-06	Rivera and Green	21
40	22-26-06	T. Alberg	40
41	31-26-07	T. Alberg	160
42	08-26-07 17-26-07	R. and A. Thompson	11
43	32-23-09	R. and A. Thompson	145
44	11-21-05	B & M Investments	174
45	25-22-02	Doane Family Ltd.	60
46	08-25-06	W. Nelson	86
47	18-21-07	Palmer Coking Coal	79
48	30-21-07	Palmer Coking Coal	275
50	36-21-06	Palmer Coking Coal	116
51	06-23-06	Palmers	39
52	12-23-05	R. and R. Schroeder and Pacific Company Constructors	30
53	02-20-06	State of Washington	36
54	03-91-33	Weyerhaeuser Co.	36
74		Weyerhaeuser Co	3655
75		Weyerhaeuser Co., United States, U.S. Corps of Engineers	4214
76		Weyerhaeuser Real Estate Co.	1765
77		Weyerhaeuser Co. and State of Washington	705
78		Weyerhaeuser Co., Riley, Everett, Hamerly	1926

POTENTIAL MINERAL RESOURCE SITES

Map # Section-	Section-Township-Range	Site Name and/or Owner/Operator	Total Site Acreage (approx.)
79		E. Seliger, Weyerhaeuser Co,	1167
80		Weyerhaeuser Co.	113
81		Metro	599
82		Cadman Black Diamond/Weyerhaeuser Co.	434
83		Weyerhaeuser Co.	925
55	02-20-07 12-20-07	Weyerhaeuser Co., State of Washington, Metro	634
56	10-20-07	Weyerhaeuser Co.	80
57	15-26-07	State of Washington	320
58	16-21-05	State of Washington	38
59	17-23-07 18-23-07 19-23-07 20-23-07	State of Washington	640
60	26-21-06	M & K Company	18
61	27-24-06	State of Washington	40
62	30-20-08	Weyerhaeuser Co.	141
63	30-21-07	State of Washington and Palmer Coking Coal	60
64	30-21-08	State of Washington	168
65	34-24-06	State of Washington	32
66	35-24-06	State of Washington	20
67	36-20-06	State of Washington	79
68	36-20-06	State of Washington	40
69	36-21-06	State of Washington	152
70	36-21-07	State of Washington	640
71	36-23-06	State of Washington	115
72	04-21-07	Weyerhaeuser Co.	173
73	03-25-09 04-25-09 05-25-09 10-25-09 33-25-09 34-26-09	Weyerhaeuser Co.	3079
84	28-20-07 32-20-07 33-20-07	Weyerhaeuser Co.	669

POTENTIAL MINERAL RESOURCE SITES

Map # Section-	Section-Township-Range	Site Name and/or Owner/Operator	Total Site Acreage (approx.)
85	04-19-07 05-19-07 32-20-07	Weyerhaeuser Co.	1572
86	34-25-07	L.A. Welcome	24
87	36-21-05	Sparling/King Co.	41
88	21-24-07	Raging River/King Co.	40
89	32-22-07	Lake Retreat/King Co	82
90	35-22-02	Sprowls/King Co.	40
91			
92	23-26-07	Swan Quarry/King Co.	76
93	31-23-07	Route 18 Fill Project/Plumb Creek Timber Co.	40

LEGAL NON-CONFORMING MINERAL RESOURCE SITES AND EXISTING MINERAL RESOURCE SITES IN THE FPD

Map # Section-	Section-Township-Range	Site Name and/or Owner/Operator	Product*	Total Site Acreage (approx.)
21	01-19-07	Hardie/Weyerhaeuser	S	625
94	29-20-07	Jensen Sand & Gravel/Jensen	SG	13
95	29-20-07	Corliss/Weyerhaeuser	SG	60
103	34-22-06	Summit/King County	SG	176
104	13-20-06	Enumclaw Quarry/Pierotti	RS	14
110	31-21-07	Hyde Pit/Palmer Coking Coal Co	SG	20
113	19-23-09 20-23-09 29-23-09	Cadman North Bend/Weyerhaeuser	SG	300
114	33-20-07	White River/Weyerhaeuser	RS	175

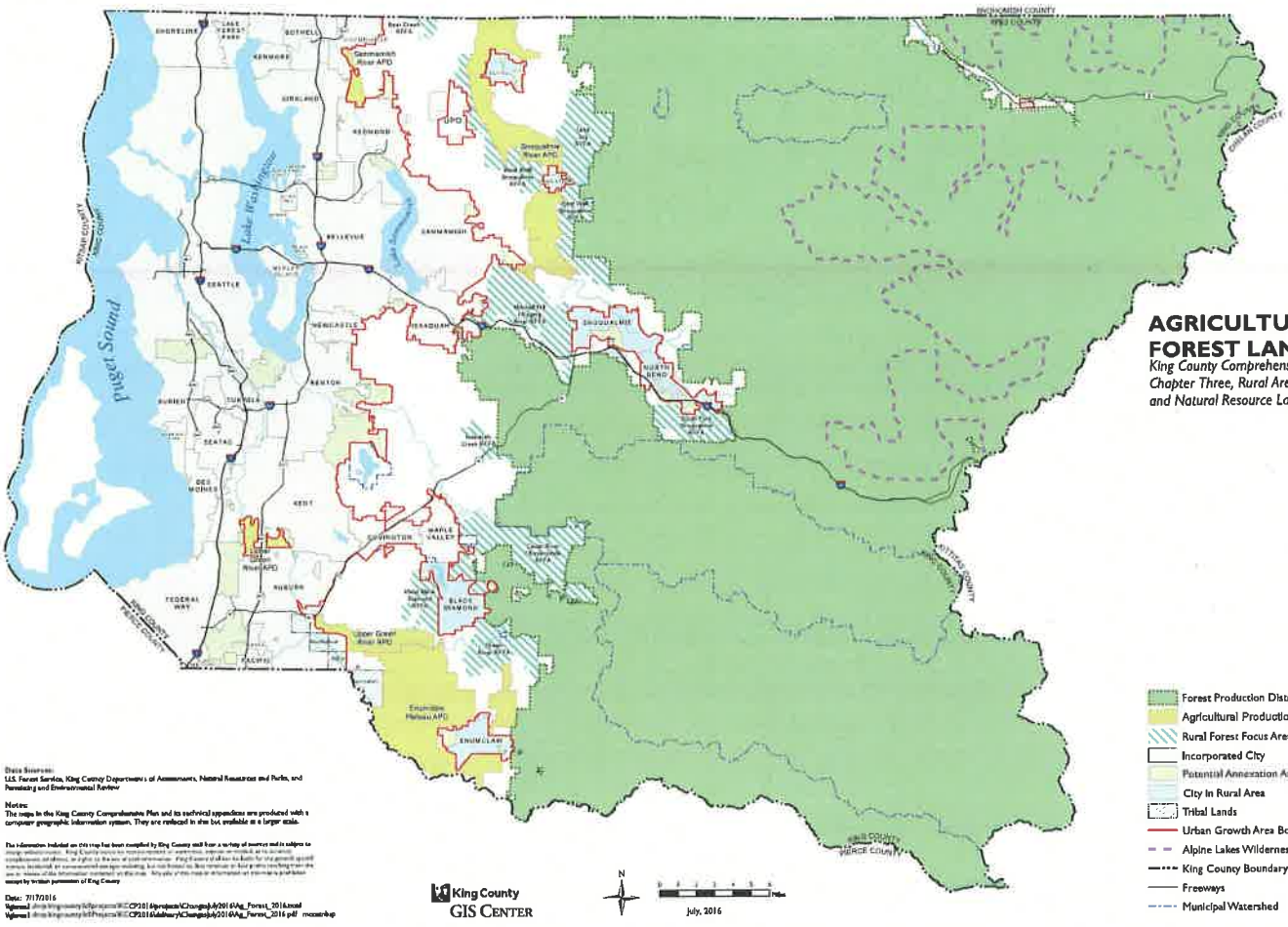
KEY FOR ALL SITES

SG	=	Sand & Gravel
RS	=	Rock & Stone
R	=	Rock
C	=	Coal
ShCl	=	Shale & Clay
Cl	=	Clay

S	=	Silica

NOTE:

Each map number corresponds to one or more parcel number(s), and in some cases different owners and operators. The acreage listed represents the sum acreage of all the parcels of the site. Please refer to the technical appendix for the parcel-specific version of this table.



AGRICULTURE AND FOREST LANDS 2016

King County Comprehensive Plan, 2016
Chapter Three, Rural Area
and Natural Resource Lands

- Forest Production District
- Agricultural Production District
- Rural Forest Focus Areas
- Incorporated City
- Potential Annexation Areas
- City in Rural Area
- Tribal Lands
- Urban Growth Area Boundary
- Alpine Lakes Wilderness
- King County Boundary
- Freeways
- Municipal Watershed

Data Sources:
U.S. Forest Service, King County Departments of Assessments, Natural Resources and Parks, and Permitting and Environmental Review

Notes:
The maps in the King County Comprehensive Plan and its technical appendices are produced with a computer geographic information system. They are reduced in size but available as a larger scale.

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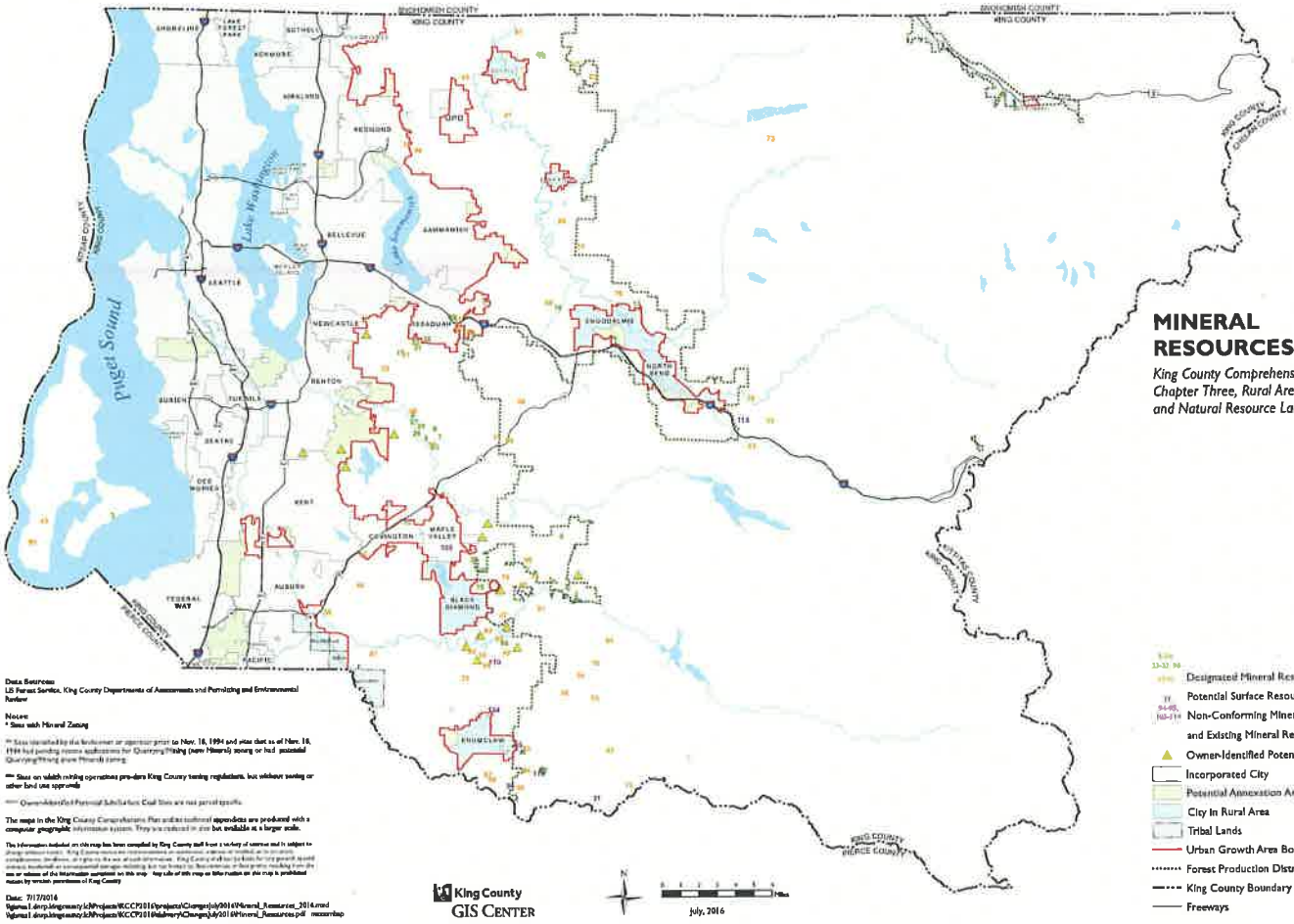
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King County
GIS Center

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July, 2016


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KING COUNTY
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Puget Sound
Lake Washington
Lake Sammamish
SHORELINE
LAKE FOREST PARK
BOTHELL
KENMORE
KIRKLAND
REDMOND
BELLEVUE
SAMMAMISH
SEATTLE
NEWCASTLE
ISSAQUAH
ENUMCLAW
NORTH BEND
RENTON
BURIEN
TUKWILA
SEATAC
DES MOINES
KENT
COVINGTON
MAPLE VALLEY
BLACK DIAMOND
AUBURN
FEDERAL WAY
PACIFIC
KING COUNTY
PIERCE COUNTY
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CHAPTER 4
HOUSING AND HUMAN SERVICES

Establishment of vibrant, thriving, healthy, and sustainable communities is a key goal of King County's Strategic Plan. Offering adequate choices and opportunities to fully address the spectrum of housing needs in all communities for all of King County's residents is an essential step toward meeting this goal. The County's Strategic Plan aligns with the Washington State Growth Management Act, *VISION 2040's* Multicounty Planning Policies, and the King County Countywide Planning Policies regarding establishing and implementing clear goals for affordable housing.

The Countywide Planning Policies provide a framework within which all jurisdictions are called upon to plan for a range of affordable housing choices within neighborhoods that promote health, well-being, diversity and access to opportunities for employment, recreation, social interaction and cohesion, active transportation (walking, biking and public transit) and education. The King County Comprehensive Plan strengthens this connection by promoting affordable housing for all county residents through support for adequate funding, zoning, and regional cooperation to create new and diverse housing choices in communities throughout the county.

I. Housing

A. King County's Regional Role in Promoting Housing Choice and Opportunity

Most housing is financed by and developed in the private sector. The ability of the private sector to develop affordable housing is affected by a wide range of market forces. However, local government actions such as land use policies, development regulations and infrastructure finance also have a significant impact on housing affordability. Public funding, incentive programs and mandatory programs are essential to addressing the housing needs of historically disadvantaged communities, including lower-income county residents, older adults, people of color, children and vulnerable adults (including victims and survivors of domestic violence, human trafficking, and commercial sexual exploitation), people with developmental disabilities, people with behavioral, physical, cognitive and/or functional disabilities, people who are experiencing homelessness, and growing segments of the population such as immigrant and refugee communities. Summary data regarding housing needs in King County can be found in Technical Appendix B of this Comprehensive Plan.

The policies in this chapter address affordable housing development, preservation and assistance programs administered by King County, King County's regulatory role in helping to ensure that there is adequate safe and healthy affordable housing in the unincorporated areas of the County, and King County's regional role convening partners to meet the housing needs of all county residents at a variety of income levels.

This chapter calls for more residential growth by preserving existing housing stock and developing new units on vacant parcels within established neighborhoods and in areas for new development near high capacity and frequent transit. These locations can offer affordable housing that is close to jobs, transportation and services. Housing development can also provide welcome improvements to communities suffering from a lack of investment. New development in established communities may result in the loss of existing low-cost housing; thus, this plan calls for King County and its partners to work together to help preserve and rehabilitate existing affordable housing. Low-cost housing is a community resource that should be preserved.

The Countywide Planning Policies have identified the substantial need that exists for low-income rental housing and for moderately priced homes that can be purchased by income-qualified homebuyers. In the past decade, a significant number of homeowners have lost their homes due to foreclosure and have become renters again. In the short term, those households may need affordable rents, while in the longer term they may again seek to own a moderately-priced home.

1. Regional Convener

King County has a role to play in promoting cooperation and public/private partnerships to address the full range of critical housing needs in King County and the Puget Sound region.

H-101 King County shall initiate and actively participate in regional solutions to address critical affordable housing needs in unincorporated King County and throughout the region. Jurisdictions, community members, private sector and housing representatives should be invited to identify and implement solutions.

H-101a King County should participate in regional efforts related to tenant protections throughout the region.

H-102 King County shall work with jurisdictions, the private sector, state and federal governments, other public funders of housing, other public agencies such as the Housing Authorities, regional agencies such as the Puget Sound Regional Council, intermediary housing organizations, and the non-profit sector, to encourage a wide range of housing and to reduce barriers to the development and preservation of a wide range of housing, at an appropriate size and scale, that:

a. Provides housing choices for people of all income levels, particularly in areas with existing or planned high-capacity and frequent public transportation access where it is safe and convenient to walk, bicycle, and take public transportation to work and other key destinations such as educational facilities, shopping and health care;

b. Meets the needs of a diverse population, especially families and individuals who have very-low to moderate incomes, older adults, people of color, children and vulnerable adults (including victims and survivors of domestic violence, human trafficking, and commercial sexual exploitation), people with developmental disabilities, people with behavioral, physical, cognitive and/or functional disabilities, and people who are experiencing homelessness;

c. Supports economic growth;

d. Supports King County's Equity and Social Justice Initiative and Health and Human Services Transformation Plan goals, for an equitable and rational distribution of low-income and high-quality affordable housing, including mixed-income housing, throughout the county; and

e. Allows for the opportunity to encourage permanent safe firearm storage locations in private and public residential buildings to make safe storage an easy choice, and, fosters safety from injury and violence, through exploring housing and community design standards that are shown to increase connectivity and reduce violence.

H-103 **Through subarea and regional planning with jurisdictions and partners in the Puget Sound region, mandatory and incentive programs and funding initiatives for affordable housing, King County shall serve as a regional convener and local administrator in the unincorporated areas to plan for housing to meet the needs of all economic segments of the population. With respect to affordable housing, King County shall address the countywide need for housing affordable to very-low, low and moderate-income households pursuant to the countywide targets established in the most recently adopted Countywide Planning Policies.**

As the Countywide Planning Policies note, residents in King County are facing an unmet need for housing that is affordable to households earning less than 80 percent of area median income. Recent data indicate that 295,000 households in King County spend more than 30 percent of their income on housing.[1] The lack of affordable housing is felt in every community in the county. A regional problem requires a regional approach. As such, King County and the jurisdictions within the county have a shared responsibility to increase the supply of housing affordable to these households.

Based on the identified need for affordable housing for households who are spending more than 30 percent of their income on housing, Countywide Planning Policy H-1 has established estimates of the countywide need for housing affordable to households with moderate, low and very-low incomes. The Countywide Planning Policies require King County and the jurisdictions located within King County to identify barriers to housing affordability and implement strategies to overcome them. The Countywide Planning Policies also require regional collaboration in meeting countywide housing growth targets and affordable housing needs, as well as in developing resources and programs to provide affordable housing.

H-103a **King County will work collaboratively with jurisdictions and partners to identify and meet affordable housing needs, including eliminating barriers to housing. This effort should take the form of a regional affordable housing plan that summarizes existing efforts and identifies the roles and strategies of the county, jurisdictions and partners to meet affordable housing needs.**

H-104 **King County shall work with the multiple partners outlined in this section to promote the preservation and expansion of affordable rental housing opportunities for households earning up to 80% of the King County median income. Preservation is a particularly acute need in areas that may experience redevelopment due to proximity to high capacity transit and/or an area experiencing changing market conditions.**

[1] Briefing 2015-B0143, based on data from 2015-2019 Consolidated Housing and Community Development Plan (Ordinance 18070)

H-105 King County shall work with the multiple partners outlined in this section to promote the preservation and expansion of affordable ownership housing opportunities for households earning up to 120% of the King County median income. Preservation is a particularly acute need in areas that may experience redevelopment due to proximity to high capacity transit and/or an area experiencing changing market conditions.

H-105a King County shall engage marginalized populations in the development, implementation, and evaluation of county-wide affordable housing goals, policies and programs.

2. Support Housing Models and Policies that Promote Healthy Communities, Housing Affordability and an End to Homelessness

H-106 King County, in partnership with other jurisdictions, shall evaluate achievement of countywide and local goals for housing for all economic sectors of the population by analyzing housing indicators, adopted land use regulations, actions that encourage development, and the effect of market factors on housing development. The results of this evaluation shall be used to develop new or revised policies, programs, regulations, and incentives to better meet the Countywide Planning Policies' housing goals. These may include adopting appropriate land use regulations and other actions that encourage development, rehabilitation and preservation of low- and moderate-income housing.

H-107 King County should encourage regional land use and investment strategies to stimulate mixed-use and mixed-income developments as a way to integrate neighborhoods and increase housing and transportation choices throughout King County.

H-108 King County shall work with other jurisdictions to encourage the use of universal design in the development of affordable housing, family-sized housing and market rate housing.

H-109 King County should develop new partnerships with public and private lending institutions to find solutions that reduce housing financing costs for both builders and consumers.

H-110 King County shall work with regional bodies, including the Puget Sound Regional Council and the Growth Management Planning Council, or their successors, and the private and non-profit sectors to support development of an adequate supply of housing commensurate with job growth within the county and its cities. To attain this goal, King County shall work with such regional partners to:

a. Support job and household growth targets and policies established in the Countywide Planning Policies;

b. Establish performance measures to gauge how jurisdictions are accommodating growth and housing needs;

c. Participate in buildable lands inventories, market analyses and other studies to evaluate if sufficient land capacity is available for residential development; and

d. Work with cities to ensure additional actions are taken throughout the county to accommodate and promote residential development when job growth causes great demand for housing and severe shortages in the availability of housing for new workers in the county.

H-111 King County should work with local employers to develop affordable employer-assisted housing opportunities located within commuting distance of the employment site.

H-112 King County should encourage affordable housing through redevelopment of nonresidential buildings, such as schools and commercial buildings, in locations suitable for housing and in ways that preserve significant historic features where appropriate.

H-113 King County should support the development, preservation and rehabilitation of affordable housing that protects residents from exposure to harmful substances and environments, including lead poisoning, reduces the risk of injury, is well-maintained, and is adaptable to all ages and abilities. King County should work on a regional level with jurisdictions to explore tools to ensure healthy housing is provided throughout the region.

H-114 King County should encourage development of residential communities that achieve lower prices and rents through clustered and higher density housing that shares common spaces, open spaces and community facilities.

H-115 King County should work with housing partners and jurisdictions to oppose policies, regulations and actions that result in the criminalization of homelessness and homeless encampments.

H-116 **King County shall support and encourage smoke free policies in multi-family housing and affordable housing, where appropriate.**

H-117 **King County shall support partnership efforts and the application of innovations in manufactured home production that may allow mobile home parks to adapt and improve the quality of housing stock and to increase the density of housing stock in order to preserve housing affordability while accommodating the region's growth needs.**

3. Fair Housing Access

An important element of this Comprehensive Plan is to address equal access to housing and freedom from discrimination in housing for all residents of King County. A number of the policies in this Plan address fair housing through support and encouragement of both the successful integration of housing for low to moderate-income households into all communities and, in particular, into healthy communities with access to jobs, transportation, good schools and economic opportunities; and the successful improvement of community conditions for those communities that are currently low on the opportunity scale.

Opportunity is a situation or condition that places individuals in a position to be more likely to excel or succeed. Opportunity mapping assesses the conditions present in neighborhoods across a region, by looking at indicators of opportunity in education, economy, transportation, housing, environment, and health, and ranks communities on a scale from low to high opportunity. High opportunity areas have the best conditions for the success of the residents living there. Opportunity mapping can also be useful in helping to identify transition areas where existing residents may be at risk for displacement. Analysis of opportunity mapping can provide valuable information about where more affordable housing needs to be located, and what needs to be remedied in areas that have very limited opportunities.

Local, state and federal fair housing laws, including the King County Fair Housing Ordinance, have set the stage for policies in this Plan that favor community-based, integrated housing and independent living, rather than institutional settings, for older adults and persons with behavioral, cognitive, physical and developmental disabilities. Service-enriched housing is also best integrated into community-based settings in apartments or single family homes rehabilitated to meet the needs of the residents.

H-118 **King County shall actively promote and affirmatively further fair housing in its housing programs, and shall work with all of its partners to further fair housing in its regional role promoting housing affordability, choice and access to opportunity for all communities, especially those communities that bear the burdens from lack of investment and access to opportunity; and shall work with residents and stakeholders to help them understand the rights protected by federal, state, and local fair housing laws and shall help to promote equitable housing practices for protected classes through fair housing education and enforcement.**

H-119 **King County shall flexibly apply its rules, policies, practices and services in its funding, incentive or mandatory affordable housing programs, when necessary to afford persons with disabilities equal opportunity to use or enjoy a dwelling or to create new affordable housing opportunities for persons with disabilities.**

H-120 **King County should work with housing industry representatives to identify and remove barriers (such as real estate marketing, finance or insurance practices) that restrict housing choices and opportunities for low- and moderate-income people older adults, people who are experiencing homelessness and people with behavioral, physical, cognitive and developmental disabilities.**

B. Strengthen Housing Linkages with Transportation

In accordance with the Countywide Planning Policies, *VISION 2040* and federal priorities, King County intends to strengthen the linkage of affordable housing to jobs and public transportation through transit-oriented development and the preservation and development of affordable housing near transit stations and along transit corridors, even though few of these exist in unincorporated areas. As the population of the Puget Sound region grows, King County is expected to remain the major employment center of the region. As job growth occurs, the workers for these jobs must be accommodated with adequate opportunities for housing.

The workforce of King County includes households earning a wide variety of incomes, from individuals earning minimum wage at a less than full-time job to dual- or triple-income households earning well above the County's median income. If a balance of job growth, improved public transportation, and affordable housing availability is not achieved, workers at the lower end of the income scale face particular pressures when forced to live longer distances away from their jobs. This increases pressures on transportation systems, contributes to higher energy use and greenhouse gas emissions, and reduces the time workers have for family, recreation, volunteer work, or continuing education.

H-121 **King County shall support affordable and mixed-income housing development in transit-oriented locations that is compatible with surrounding uses by:**

a. **Providing information and a process for accessing potential development sites in transit-oriented locations where King County has ownership or access to potential sites;**

b. **Promoting land use patterns that cohesively connect affordable and mixed-income housing with active transportation choices; and**

c. **Developing public financing techniques that will provide an advantage for projects that will create and/or preserve affordable and mixed-income housing within transit-oriented communities and neighborhoods that promote health, well-being and opportunity, or within a neighborhood plan for revitalization.**

H-122 **King County shall support transit-oriented development at transit supportive density and scale that preserves and expands affordable and mixed-income housing opportunities at locations near frequent and high-capacity transit service. King County shall engage in this work through a variety of strategies, including the engagement of funding partners, transit partners, jurisdictions, private for-profit and non-profit development entities, and other transit-oriented development partners.**

H-123 **King County will evaluate and seek opportunities for equitable transit-oriented development at major transit centers and hubs when investments are likely to produce increased ridership, community benefits and affordable housing opportunities.**

H-124 **King County shall work with partners to reduce and prevent displacement of very-low to moderate-income households from transit-oriented locations, to the extent possible; and shall strive to align affordable housing investments and transit investments in order to increase the quality of life of disinvested communities as measured by the Determinants of Equity.**

C. Housing and Land Use Regulation

In King County today, a substantial need exists for low-income rental housing and for moderately priced homes that can be purchased by first-time homebuyers. In the past decade, a significant number of homeowners have lost their homes due to foreclosure and have become renters again. In the short term, those households may need affordable rents, while in the longer term they may again seek to own a moderately-priced home.

While King County has seen a growth in the percentage of smaller (one- and two-person) households, there are also some large households that need affordable housing with three or more bedrooms. Existing units will

provide some of the affordable housing needed for low-income households in the future. However, with the projected growth in the number of low- to moderate-income households, prospect of increasing numbers of family and senior households with limited income, and the short supply of lower-cost housing available today, new construction must include affordable housing. Efforts to provide sufficient land and infrastructure and reduced development costs will help make new units affordable. In addition, a combination of incentive programs and funding will help keep rents affordable and expand opportunities for first-time homebuyers.

Meeting these objectives will entail providing sufficient land for a variety of affordable housing, such as higher-density single-family homes, multifamily properties, manufactured housing, accessory dwelling units and mixed-use developments.

H-125 **King County shall assure that there is sufficient land in the unincorporated urban areas zoned to accommodate King County's share of affordable housing and provide a range of affordable housing types, including higher-density single-family homes, multifamily properties, manufactured housing, cottage housing, accessory dwelling units and mixed-use developments. King County should work with cities to increase opportunities for affordable housing development by assuring there is sufficient land capable of being developed for this range of housing types that are more likely to be affordable to low-, moderate- and middle-income households.**

H-126 **King County shall provide opportunities for attached and detached accessory dwelling units in urban residential areas and shall encourage all jurisdictions within King County to adopt provisions to allow accessory dwelling units in their communities.**

H-127 **King County shall adopt appropriate land use regulations to require and encourage development, rehabilitation and preservation of very-low to moderate-income housing.**

H-128 **King County should pursue land use policies and regulations that result in lower development costs without loss of adequate public review, environmental quality or public safety and do not reduce design quality, inhibit infrastructure financing strategies, or increase maintenance costs for public facilities.**

H-129 **King County shall continue to improve development standards to allow higher densities and flexibility of housing types in all residential zones, in order to best accommodate the environmental conditions on the site and the surrounding neighborhood when planning housing developments.**

H-130 King County shall explore zoning policies and provisions that increase housing density and affordable housing opportunities within unincorporated urban growth areas near transit and near commercial areas.

H-131 King County shall seek to minimize the time necessary to process development permits for developments in unincorporated King County that will include affordable housing and address environmental goals and community and aesthetic concerns. King County should continue to expedite plan and permitting reviews for affordable housing projects in coordination with mandatory, incentive or subsidy programs, including tax abatements, exemptions and credits.

H-132 King County should encourage the formation of common development codes and standards, as well as common mandatory and incentive programs for affordable housing, with cities, sewer and water districts and other permitting agencies to increase predictability and reduce development costs.

H-133 King County shall encourage the development of new housing models that are healthy and affordable by providing opportunities for new models within unincorporated urban growth areas and near commercial areas. King County shall work to allow innovative housing projects to move forward, including affordable housing demonstration projects, affordable owner-built housing, land trusts and cooperative ownership structures for rental and ownership housing, co-housing and other innovative developments.

H-134 Density bonuses and other incentives for the development of affordable housing by for-profit and non-profit developers shall be available within unincorporated urban areas, with a focus on commercial areas to both single-family and multifamily developments to promote development of affordable rental and/or ownership housing. Bonuses shall be periodically reviewed and updated, as needed, to assure they are effective in creating affordable housing units, especially in coordination with any mandatory inclusionary affordable housing requirements that may be adopted.

H-135 King County shall exempt payment of impact fees in unincorporated areas for developments that will include affordable rental or ownership housing.

H-136 King County should provide opportunities within unincorporated urban growth areas and in Rural Towns for the development, rehabilitation, and preservation of rental residential buildings that have shared facilities, such as single-room occupancy buildings, boarding homes, micro-units buildings and clustered micro homes to provide opportunities for lower rent housing options and higher density ownership options including condominiums, co-operative mutual housing, cottage housing and other forms of clustered higher density ownership housing.

H-138 Housing developments in the urban unincorporated areas, consisting of not less than 100 acres, shall provide a mix of housing types and densities, including housing that is affordable to low-, moderate-, and middle-income households. This mix should include housing opportunities for older adults, persons who are experiencing homelessness and persons with behavioral, cognitive, physical, and/or developmental disabilities.

H-139 King County should provide opportunities for incorporation of the principles of healthy communities and housing, sustainability, and greenhouse gas emissions mitigation into policy initiatives on housing, affordable housing and community development in unincorporated areas.

H-140 King County shall allow five-story wood frame construction to increase the availability of multifamily housing while lowering development costs and maintaining fire safety.

H-141 King County shall explore the expansion of land use and financial incentives to preserve and improve existing housing in redeveloping areas through the use of programs such as transfer of development rights, tax credits and tax exemptions for new and preserved affordable housing, as well as tax abatements and restoration loans for housing designated as a historic landmark.

H-143 King County development standards should promote lower-cost infill development, such as accessory dwelling units, in a manner that allows existing housing to be retained through measures such as an innovative or flexible building envelope, access and infrastructure standards.

H-144 King County will ensure that mandatory and/or incentivized affordable housing units created through its land use policies and regulations are high quality, safe and integrated on-site with market rate housing.

H-145 **King County shall continue to require Evergreen Sustainable Development Standards, or an equivalent successor standard, and will work with partners and stakeholders to encourage the improvement in healthy housing elements of Evergreen Sustainable Development Standards, with emphasis on healthy housing elements that reduce asthma.**

H-146 **King County shall prohibit restrictive covenants or other land use, permitting, or property conditions that limit the ability of persons from protected classes (as defined in the King County Fair Housing Ordinance) to live in residences of their choice.**

H-147 **King County shall permit group living situations, including those where residents receive such supportive services as counseling, foster care or medical supervision, within a single-family house or apartment.**

D. Regional Affordable Housing Funding, Resources and Programs

The King County Consortium is a partnership that represents unincorporated areas and most cities outside of Seattle in obtaining, administering and distributing federal, state and local funds to address housing, homelessness and community development needs. The King County Consortium prepares a five-year strategic plan, the *Consolidated Housing and Community Development Plan*, that outlines the needs, resources available and housing and community development goals to be achieved. An Annual Action Plan details specific planned affordable housing and community development project projects.

Over the past ten years, King County has faced considerable funding challenges for developing affordable housing because of cutbacks in levels of state and federal housing funds along with local budget issues that have impacted housing and community/economic development funds. King County has been pro-active in working with local and national partners to seek out and advocate for new funding sources on the local and state levels, and to re-establish or expand federal funding levels.

Despite the decreases in some state and federal resources, King County and its partners have been successful in securing new housing resources, and continue to be able to fund the development and preservation of affordable housing. As a result, residents of King County continue to have affordable housing choices and housing stability programs. Local housing funds have also leveraged significant private and non-profit investment as well as other public funding resources.

H-148 King County shall work with cities, private sector and community representatives to establish new, countywide funding sources for housing development, acquisition, rehabilitation, preservation, and related services, such that cities and King County contribute on an equitable basis.

H-149 King County shall work with other jurisdictions, housing developers, and service providers throughout the state to urge federal and state government to expand both capital and operating funding for low-income housing, including low-income housing for older adults, people who are experiencing homelessness and people with behavioral health, cognitive, physical and developmental disabilities.

H-150 King County should encourage and support efforts by non-profit housing developers, housing agencies, and service providers to develop long-term nongovernmental funding sources, such as planned giving, endowments, and related economic development ventures.

H-151 King County shall seek opportunities to fund programs and projects where county funds are matched by additional public and private loans and investments, and/or contributions in order to increase the amount of financing available for affordable housing.

H-152 King County shall give priority in its affordable housing subsidy programs to projects that serve individuals and households at or below 80% of area median income, and/or that provide older adults, people with behavioral health, cognitive, physical or developmental disabilities, people who are experiencing homelessness and people who are at risk of homelessness and/or displacement.

H-153 King County shall encourage the inclusion of smoke-free housing policies in projects funded through its affordable housing subsidy programs, in a manner that limits the creation of new barriers to housing.

H-154 King County shall work with partners and stakeholders to encourage improvement in healthy housing elements in existing affordable housing sustainability standards, with emphasis on healthy housing elements that reduce problems such as asthma, falls, gun-related injury and violence, and unintentional poisoning.

H-155 King County shall give particular consideration in its affordable housing and community development investments to projects that provide housing and community development solutions in the areas of the county with the most disparate outcomes in health, economic prosperity and housing conditions, and where residents may be at high risk of displacement. King County shall work to coordinate planning and community development investments to support such communities as they experience changes in their demographics, built environment, and real estate markets.

H-156 King County shall give particular consideration in its affordable housing subsidy programs to projects in areas where there is a severe shortage of affordable housing, and where there is access to job opportunities, a healthy community and active transportation.

H-157 King County should expand its use of surplus county-owned property and air rights over county-owned property for affordable housing and its possible use for other public benefits, such as human services; and should consider conveyance of properties to public or non-profit housing developers and agencies at below-market cost for the purpose of building or providing affordable housing. Surplus county property shall be prioritized for housing development that will be consistent with King County adopted plans. This policy shall be carried out consistent with King County Charter Section 230.10.10 and other applicable laws, regulations and contract restrictions, such as grant funding requirements.

H-158 King County should support the efforts of non-profit developers and housing agencies to increase the supply of housing for low-income households, through affordable housing planning, policy and advocacy activities and the provision of technical assistance.

H-159 King County should support programs and projects that provide apprenticeship and employment training in the building trades through affordable housing development. King County should explore ways to partner with non-profit housing developers in offering pre-apprenticeship, apprenticeship and employment training opportunities.

H-160 When awarding subsidies for affordable housing developments to non-profit developers and housing agencies, King County may give additional weight to projects that incorporate and implement healthy housing and sustainable development elements and universal design features.

H-161 King County should develop and expand incentives and subsidy programs to preserve affordable housing threatened by market forces and expiring federal subsidies. Relocation assistance and replacement housing should be funded, where feasible, to help low-income households when displacement is unavoidable.

H-162 King County should assist owners of rental properties serving low- and moderate-income residents to acquire affordable financing for building health and safety improvements in exchange for long-term agreements to maintain affordable rents.

H-163 King County should coordinate preservation of existing affordable housing with city and county historic preservation programs and incentives, and should promote preservation and restoration of significant historic features in the rehabilitation of existing buildings and sites for housing.

H-164 For any subsidized housing project that preserves existing structures, King County shall ensure that usable structures are rehabilitated to an appropriate level of safety and habitability.

H-165 King County shall strive to adopt funding program policies that encourage the integration of publicly subsidized housing within mixed-income projects, and within all communities. Such funding policies shall support a fair distribution of publicly subsidized housing throughout the county and provide King County and local jurisdictions mutual support in meeting affordable housing needs. King County shall not apply mandatory dispersion requirements that limit where publicly subsidized housing may be located.

H-165a Through its funding programs, King County shall encourage developers and owners of publicly subsidized housing units to undertake activities to establish and maintain positive relationships with neighbors.

H-166 King County shall administer standards for publicly subsidized housing that will:

a. Increase the ability of people with physical disabilities to have physical access to housing and mobility within housing regardless of their residency status;

b. Allow household members to age in place through the inclusion of universal design principles that make housing units more accessible and usable by all persons;

c. Support the ability of older adults and people with behavioral health, physical, cognitive and developmental disabilities to find housing opportunities that allow them to live as independently as possible in the housing and community of their choice; and

d. Increase the ability of people to have access to smoke-free housing, while not creating barriers to housing.

H-167 King County should use opportunity mapping:

a. To support the siting of community facilities and assisted publicly subsidized affordable housing in locations where low- and moderate-income residents and persons with behavioral health, physical, cognitive and developmental disabilities have convenient access to transportation; employment opportunities; amenities, such as parks, trails, libraries and other public facilities; and services, such as grocery stores; and

b. To promote fair housing and diverse communities that are inclusive of residents with a range of abilities, ages, races, incomes and other diverse characteristics of the population of King County.

E. Support the Housing Stability of Households in King County

H-168 King County should support flexible programs and emerging strategies that help to prevent and reduce homelessness, such as emergency rental assistance, short-term rental assistance, diversion assistance, mortgage default and foreclosure counseling, and improvements to emergency services referral networks.

H-169 King County shall play a leadership role in implementing the All Home Strategic Plan to make homelessness rare, brief and one-time.

H-170 **King County shall work with jurisdictions and housing providers locally and across the state to urge state and federal governments to expand funding for direct assistance services such as flexible rental assistance, diversion assistance and emergency services. In addition to rental assistance, King County should support programs that help prevent homelessness and that improve prevention and emergency services referral networks, including an efficient coordinated intake system for families and individuals experiencing homelessness.**

H-171 **King County should support innovative and flexible tools and programs that assist low-income renters to maintain housing stability or to gain access to permanent affordable housing and private market housing, such as revolving loan funds that cover utility and damage deposits, and rental assistance programs.**

H-172 **King County shall support programs that provide landlord-tenant counseling, sessions and workshops, mediation in landlord-tenant disputes, and legislation that protects the rights of tenants and landlords, such as uniform protections for tenants and landlords and fair rental contracts.**

H-173 **King County shall provide financial assistance for ownership housing rehabilitation to low-income home owners, including owners of mobile/manufactured homes residing in parks or on their own land through individual or cooperative ownership. King County should also consider support for community-based repair programs, such as tool banks or painting programs.**

H-174 **King County should work with local lenders and non-profit organizations providing home ownership assistance to expand assistance for eligible income-qualified homebuyers, including homebuyer education and counseling, mortgage default and foreclosure counseling, culturally relevant low-cost financing and assistance with down payments and closing costs, and alternative ownership housing models such as land trusts, co-housing, etc.**

II. Regional Health and Human Services

King County has a regional role in health and human services, working with many partners, such as the federal, state, and other local governments, service providers, non-profit organizations, foundations, faith communities, businesses, schools, and the criminal justice system, to help those most in need. King County's investments in human services are guided by Health and Human Services Transformation and the joint transformation

initiatives[2] of the Department of Community and Human Services and Public Health Seattle King County; as well as policy and planning documents such as the Consolidated Housing and Community Development Plan 2015-2019[3] and the All Home Strategic Plan 2015-2019[4], the King County Youth Action Plan, Framework Policies for Human Services, the King County Board of Health Planning for Healthy Communities Guidelines and Recommendations and ultimately, the King County Strategic Plan.

The Framework Policies are contained in Chapter 2.51 of the King County Code. The purpose of the Framework Policies for Human Services is to communicate King County government's role in Human Services, the goals the county seeks to achieve and the principles that will underlie its investments. The Framework Policies are reviewed and revised as needed.

Health and Human Services Transformation, the Framework Policies and the Strategic Plan place a strong emphasis on prevention, stabilizing people and diverting them from jails, emergency rooms and crisis services by providing appropriate treatment and services for those with the high needs, as well as providing prevention and intervention services and opportunities that increase the stability and resiliency of children, youth and communities, and reduce the need for acute care and crisis interventions later in life.

King County has grappled with unsustainable costs in criminal justice and emergency medical services and is taking steps to reduce cost growth in this primary area of service responsibility. A major component of these efforts has been jail diversion programs and coordination with health and human services, in order to prevent unnecessary engagement with law enforcement and the criminal justice system. These efforts have begun to show results, and the Health and Human Services Transformation and Strategic Plan continue this emphasis.

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2 The initiatives of Health and Human Services Transformation include Familiar Faces, Communities of Opportunity, Accountable Communities of Health and its subcommittees, Best Starts for Kids Levy.

3 The Consolidated Housing and Community Development Plan is a HUD-required document that guides the investment of a significant portion of DCHS' funds for affordable housing and community/economic development, and a smaller portion of DCHS' funds to address homelessness.

4 The Committee to End Homelessness (CEH) is located in the Director's Office of DCHS, and is the regional planning entity and continuum of care for addressing homelessness in King County.

H-201 In coordination with local jurisdictions, funding partners and community partners, King County will seek to build and sustain coordinated regional health and human services and behavioral health systems to provide services, supports, safety and opportunity to those most in need. In carrying out its role in such systems, King County government will:

a. Work with other jurisdictions and organizations to define a regional health and human services and behavioral health systems and strengthen financing, access and overall effectiveness of services;

b. Collaborate with other funders to assure coordination in how funds are used, and continue to explore improvements to system design, contracting, data collection and analysis;

c. Retain responsibility for the development and implementation of mandated, through law or adopted county policy, countywide specialty systems for behavioral health (including mental health and substance use disorder treatment), physical, emotional and cognitive health, public health, drug and alcohol abuse and dependency, veterans, and people with developmental disabilities;

d. Define its regional role in other human service and prevention-oriented systems, including systems that address homelessness, older adults' needs, domestic violence, sexual assault, crisis diversion and re-entry, early intervention and prevention and youth and family services;

e. Assess and measure the health and needs of King County's residents on an ongoing basis and modify strategies to respond to changing needs, outcomes, and new research; and

f. Review the effectiveness and appropriateness of this policy framework periodically and revise if needed.

H-202 King County's priorities for human service investments will be programs and services that help people in need become more stable and resilient, and that prevent or reduce the need for costly emergency medical services, crisis services and involvement with the criminal justice system. King County will focus resources and efforts on effective intervention and prevention that improve individual and community quality of life and enhance equity and social justice. King County will preserve the resources necessary to collaborate as a true partner in regional human service systems. These focus areas include the following priority investment areas, which are consistent with other regional plans and initiatives:

a. Job readiness, support for job development in business innovation districts;

b. Affordable housing;

c. Community and economic development activities;

d. Strategies to make homelessness rare, brief and one-time; and

e. Behavioral health services (including crisis services, mental health treatment, substance use disorder treatment, co-occurring disorder treatment and housing support services).

H-203 King County will apply principles that promote effectiveness, accountability and equity and social justice. King County embraces the following principles in its health and human service actions and investments:

a. King County will provide information to the community on its health, human services and behavioral health system planning and evaluation activities, funding processes and criteria, and on the results of its investments in a transparent, accountable and culturally- and audience-appropriate manner;

b. King County will uphold federal, state and local laws against discrimination; promote culturally competent, equitable and relevant service delivery; and will work to end disparities in social, health and economic status among communities and people of different racial and ethnic backgrounds;

c. King County will work with local service providers to provide behavioral health services to low-income individuals in need, including high quality equitable prevention, crisis diversion, mental health, substance abuse disorder and co-occurring disorder treatment services to youth, young adults and older adults. The county will assume primary responsibility for coordinating the provision of countywide behavioral health services, working in partnership with cities and local service providers;

d. King County will encourage service approaches that promote recovery and resiliency and support individuals and families to achieve their full potential to live meaningful and productive lives in the community;

e. King County will foster integration of systems of care through increased information sharing and collaborative efforts across agencies and programs for the purpose of improved service delivery, coordination and shared outcomes; and

f. Together with its partners, King County will assess and respond to changing human service and behavioral health needs and use data, research, innovation, analysis and evidence-based practices to drive its investments.

H-204 King County shall strive to apply principles that lead to thriving healthy communities in all neighborhoods of the region. King County will support public health investments that help all residents to live in thriving communities where they have the opportunity to make healthy choices. King County shall support:

a. Access to safe and convenient opportunities to be physically active, including access to walking, bicycling, recreation and transit infrastructure;
b. Access to healthy, affordable foods and the elimination of food deserts;
c. Protection from exposure to harmful environmental agents, such as lead, and infectious disease;
d. Access to transportation infrastructure designed to prevent pedestrian, bicyclist and motor vehicle-related injuries;
e. Residential neighborhoods free from violence and fear of violence;
f. Protection from involuntary exposure to second hand tobacco smoke and under-age access to tobacco products;
g. Community amenities and design that maximizes opportunities for social connectivity and stress reduction; and
h. A range of health services, including timely emergency response and culturally-specific preventive medical, behavioral and dental care within their community.

H-205 King County will support and implement health-related policies and programs that address the social determinants of health and the built environment by partnering with health care services, community-based organizations, foundations, other regional agencies, boards, commissions and elected officials to improve public health.

H-206 King County will encourage significant increases in the role and influence of residents living in communities that have disproportionately lower health outcomes by intentionally engaging people who are affected by health and human services policy development, planning and service delivery in authentic and meaningful ways, especially residents living in communities that have disproportionately lower health outcomes.

H-207 King County recognizes that poverty, lack of affordable housing and lack of access to economic opportunity for all residents are critical public health issues. King County will take steps to address these issues through ongoing county plans, programs and funding.

H-208 **King County will, to the extent possible, locate health and human services facilities where service delivery is most cost effective and efficient. The equity and social justice opportunities and impacts of possible locations will be taken into account. Locations should be easily accessible to anticipated clientele via various transportation methods including public transit, make the best use of existing facilities and opportunities to co-locate services and be compatible with adjoining uses.**

H-208a **When a health and human services facility is being relocated, King County consideration the impact on current clients, such as accessibility, transportation options and services available at the relocated facility.**

Crime and perceived safety varies by geographic area in King County and is an equity and social justice concern. Safe communities promote resiliency and can act as a protective factor preventing violence and other crime. Gun violence, including suicide, is in particular a public health and public safety issue. Unsafely stored firearms are a risk factor for suicide or other violence in the home. In addition, unsafe storage contributes to gun theft, which can result in the gun finding its way into the hands of someone planning to use it for suicide, homicide or assault. Over half of King County residents who own firearms (approximately 123,000 people; based on 2014 data) report that they store at least one firearm unlocked. King County's Child Death Review regularly documents cases where unsafe firearm storage resulted directly or indirectly in a child's death. Evidence has shown that safely storing firearms -- unloaded and locked -- is a protective factor in preventing youth suicide. Safe storage can also limit theft, and the expansion of the illegal gun market. Education of firearm owners about safe firearm storage is a key public health strategy, as is making safe firearm storage an easy choice. Emerging evidence also shows that community and housing design can decrease violence in communities, including firearm violence.

H-209 **King County should work to address the public health and public safety crisis of gun violence by collecting epidemiological and other data, engaging with cities, local neighborhoods, and other stakeholders, and making information available that promotes safe firearm storage and fosters community safety.**

Although exposures to lead have generally decreased as a result of regulatory interventions, lead poisoning remains a significant, but preventable, environmental health problem. Our most vulnerable populations are children under 6 years of age. The largest source of lead exposure nationwide and in King County is lead-based paint. The greatest lead based paint risk is in housing built before 1978. The 2010-2014 American Community Survey 5-Year Estimates shows 54% of all King County housing was built prior to 1978 indicating that over 471,000 households, single family, and multi-units could pose a lead hazard. The preferred method for eliminating exposure from lead-based paint would be to remove it from all housing; however, it is impracticable to require this of all property owners. King County assists building and home owners and tenants to become

aware of the lead-based paint risks, its impacts to health, and the tools and requirement needed to reduce exposures including the use of lead safe work practices.

H-210 **King County should seek to develop strategies to decrease exposure to lead where children live, learn and play.**

H-211 **King County shall advocate for regional efforts to screen all children (at 12 months and 24 months) for exposure to lead poisoning.**

H-212 **King County should work to ensure all renovation, repair and painting work that disturbs painted surfaces in pre-1978 dwellings be performed in compliance with the requirements of the Washington Department of Commerce to reduce exposure to lead contaminated dusts.**

H-213 **King County should work to ensure strategies are used that minimize or eliminate the spread of lead dust during the demolition of pre-1978 residential and commercial buildings, including community education and notification.**



CHAPTER 5
ENVIRONMENT

The environment in King County includes a rich and valuable array of natural resources ranging from marine and freshwater environments, to highly urbanized areas, lower density rural areas, highly productive farm and forest land, to nearly pristine landscapes in the foothills of the Cascades. The policies in this chapter protect that environment, ensure its effective management, support its restoration where needed, and support the Strategic Plan's goal of a healthy environment.

King County residents depend on sound policies not only to protect public health and safety, but also to preserve quality of life for future generations. King County is committed to pursuing partnerships, cost-effective strategies, and best management practices to optimize the long-term protection and restoration of the environment within available resources. These polices guide King County's environmental development regulations as well as incentives, education, and stewardship programs in unincorporated King County.

One of the central tenets of the Growth Management Act, the Countywide Planning Policies, and King County's Comprehensive Plan is that new growth be focused within designated urban areas with the aim of protecting resource lands (forestry, agriculture, and mining) and reducing development pressure on the Rural Area and Natural Resource Lands. At the same time, the Growth Management Act requires that each city and county in Washington State identify, designate and protect critical areas found in their local environment. Critical areas, as defined by the Growth Management Act, include wetlands, areas with a critical recharging effect on aquifers used for potable water, fish and wildlife habitat conservation areas, frequently flooded areas and geologic hazard areas. Achieving development goals must be integrated with protecting critical area functions and values. Individual solutions can be tailored by following the guidance of comprehensive plan policies that recognize both critical area protection and the need to reduce urban sprawl.

All parts of the county—from densely developed urban areas, to farm and forest land, to the Rural Area—have a role to play and a common interest in environmental protection. Responsibility for environmental protection cannot fall on one geographic area or category of people alone. Tools for environmental protection, for all residents whether in the Urban Area, Rural Area or Natural Resource Lands, include buying locally grown produce at a Farmers Market, taking care to avoid polluted discharges to stormwater drainage systems, riding the bus, investing in natural resource programs like those offered by the King Conservation District, complying with stormwater standards, controlling invasive plants, protecting forest cover, and ensuring development minimizes flood risk.

For urban residents, environmental protection occurs through different means, including investing in wastewater treatment and stormwater improvements, protecting greenbelts and other remnants of native habitats, and living in densely developed areas. For rural residents, it means protecting aquifers used for drinking water, using development practices that slowly infiltrate stormwater, and using best management practices to protect water quality. On farm lands, forest lands, and lands in the Rural Area, stewardship and technical assistance provides opportunities for supporting long-term resource use while protecting the environment.

One of the most significant environmental issues facing King County during the past decade was the listing of Chinook salmon and bull trout as threatened under the Endangered Species Act. Since 2000, the region has seen unprecedented cooperation between local governments, residents, tribes, conservation districts, non-profit groups, and federal and state fisheries managers to develop watershed-based Water Resource Inventory Area plans for salmon conservation. These plans form the basis for the federal recovery plan for Chinook salmon. Watershed partners are continuing to work together to implement and monitor these plans through Water Resource Inventory Area Forums.

King County has taken significant steps to increase protections for Chinook and other salmon species and improve habitat through changes in daily operations (such as maintenance of county roads and parks), increased open space protection, tax incentives, updated development regulations, and construction of habitat restoration projects. The lessons learned and relationships developed through cooperative planning in response to the

Chinook salmon and bull trout listings should help to inform King County's response to new listings, and bolster efforts to prevent future species listings.

Individual species protections under the Endangered Species Act continue to play an important role. At the same time, both nationally and internationally, many governments are initiating multi-species approaches aimed at conserving biodiversity. Biodiversity refers not only to plants and animals but also to their habitats and the interactions among species and habitats.

Protection of biodiversity in all its forms and across all landscapes is critical to continued prosperity and quality of life in King County. In fisheries, forestry, and agriculture, the value of biodiversity to sustaining long-term productivity has been demonstrated in region after region. With the impending effects of climate change, maintaining biodiversity will be critical to the resilience of resource-based activities and to many social and ecological systems. The continued increase in King County's population and the projected effects of climate change make conservation a difficult but urgent task. The protection and restoration of biodiversity and of a full range of supporting habitats is important to King County. King County will incorporate these considerations in its operations and practices, ranging from its utility functions (such as wastewater, solid waste and stormwater management) to its regulatory and general government practices.

State and federal agencies are undertaking biodiversity initiatives. The Washington Biodiversity Council was created by the Governor in 2004, in part, with the aim of refocusing state conservation efforts from the species level to the ecosystem level. In 2009, the Washington Department of Fish and Wildlife released *Landscape Planning for Washington's Wildlife: Managing for Biodiversity in Developing Areas*. The goal of this document is to provide information to planners and others that can be used to minimize the impacts of development on fish and wildlife and to conserve biodiversity.

The U.S. Forest Service also integrates biodiversity principles into its land management practices. Internationally, Local Governments for Sustainability's Local Action for Biodiversity Project convenes local governments from around the world, including King County, to establish strategies for the conservation of urban biodiversity.

Climate change has the potential for severe and wide-ranging impacts on public health, safety, and welfare; the economy; and the environment. Climate change in the Pacific Northwest is projected to bring more severe weather events including heat events, winter storms and summer droughts, decreased water supplies for people and fish, and changes in habitat and species distribution. King County is a leader in taking steps to reduce greenhouse gas emissions and to adapt to climate change.

New approaches for stormwater management known as Low Impact Development, are providing additional options for stormwater management, especially in site development. Low Impact Development Best Management Practices can mimic the natural functions of soil and forest cover in slowing and filtering

stormwater runoff by infiltrating or dispersing stormwater onsite, or by capturing and reusing it. Used exclusively, or in conjunction with a comprehensive stormwater management program of structural controls and other best management practices, Low Impact Development Best Management Practices can reduce environmental impacts from stormwater runoff. Low Impact Development techniques also work in tandem with other strategies such as retaining forest cover, preserving native plants and preserving native soil.

These techniques help to meet other objectives such as retention of canopy cover, protection of riparian habitat and preservation of native soils that help protect biodiversity, improve air quality, and protect the ecological functions of the landscape and surface waters. These approaches help create a more sustainable environment and create a better quality of life for King County residents.

Environmental initiatives during the past decade have underscored the need for monitoring changes in the environment and the effectiveness of the County's efforts to protect it. Monitoring and performance measurement help local governments to target limited resources on existing and emerging environmental problems, determine whether actions are having their intended effect, promote accountability, and adapt approaches to environmental management. The Department of Natural Resources and Parks assesses environmental conditions with a variety of monitoring programs. The results are presented in the environmental indicator section of KingStat and are used to develop appropriate county responses and provide an opportunity to collaborate and partner with other organizations in making improvements.

This chapter reflects the overarching goal of the Countywide Planning Policies to protect, restore and enhance the quality of the natural environment in King County for future generations. This chapter has been updated to integrate county strategies for protection of land, air, and water; to emphasize implementation of salmon recovery plans; to reflect increased emphasis on climate change and biodiversity; and to support monitoring and adaptive management. These policies guide King County's environmental regulations and incentives, education and stewardship programs in unincorporated King County.

I. Natural Environment and Regulatory Context

A. Integrated Approach

Environmental protection efforts need to be integrated across species, habitats, ecosystems, and landscapes. Efforts to reduce flooding or protect water quality and habitat cannot work successfully in isolation from management of land use across the larger contributing landscape. Efforts to protect one particular species or resource type could be detrimental to another if such efforts are not considered in an ecosystem context.

Likewise, the tools King County uses to protect the environment—incentives, regulations, changes in county operations, planning, capital projects, land acquisition, education, stewardship, and monitoring—also need to be integrated. For example, the regulatory buffers placed around wetlands need to consider changing conditions in

the watershed around the wetland. These conditions are influenced by land use, stormwater runoff management, clearing and grading requirements, and protection of forest cover and open space. Incentives, education, and technical assistance programs also must work hand-in-hand so that land owners can access a seamless set of programs that work together to accomplish environmental protection.

As part of the Comprehensive Plan Update in 2004, King County updated its critical areas, stormwater runoff management, and clearing and grading regulations consistent with Growth Management Act requirements to include best available science. These regulations are functionally interrelated, with the standards for protection of wetlands, aquatic areas, and wildlife areas also working in tandem with landscape-level standards for stormwater management, water quality, and clearing and grading.

Habitat conditions vary throughout unincorporated King County, with higher quality habitat generally found in less developed areas of the county. However, both urban and rural habitats play a critical role for various species and during different life stages. The environmental protections the county uses should consider development patterns, habitat conditions, and the roles played by different geographic and ecologic areas. A geographic and watershed-based approach to planning, stewardship, and environmental protection acknowledges that different areas of King County may have different environmental and resource values and face different levels of development pressure. Therefore, methods of protecting critical areas that respect those distinctions must continue to evolve to balance the protection of the environment with the need to reduce urban sprawl and preserve the County's quality of life.

In 2004, the county strengthened incentives available to land owners through its Public Benefit Rating System, a tax incentive program through which landowners can receive reduced property taxes in exchange for commitments to protect open space and natural resources. However, incentives are not just limited to tax incentives, but can include regulatory flexibility (e.g., alternatives to fixed-width buffers), streamlined permit processing, reduced permit fees, and free or low-cost technical assistance. Additionally, the King County Strategic Plan, released in 2010 and updated in 2015 through Motion 14317, has a healthy environment goal to preserve open space and rural character while addressing climate change.

E-101 **In addition to its regulatory authority, King County should use incentives to protect and restore the natural environment whenever practicable. Incentives shall be monitored and periodically reviewed to determine their effectiveness in terms of protecting natural resources.**

E-102 **King County should take a regional role in promoting and supporting environmental stewardship through direct education, coordinating of educational efforts and establishing partnerships with other entities that share similar environmental concerns and stewardship opportunities.**

E-102a **King County will consider environmental and climate justice impacts and disparities in its planning, projects and services.**

King County coordinates many programs internally as well as with other agencies and governments. The cooperative development and implementation of watershed-based salmon recovery plans over the last decade has brought together local governments, federal and state agencies, residents, and interest groups. Continued collaboration at the watershed level is critical for successful implementation of these habitat-focused plans. Tribes with treaty reserved fishing rights and the Washington Department of Fish and Wildlife co-manage harvest and hatchery actions. Working closely with these co-managers is essential to ensure that watershed-based salmon recovery strategies effectively integrate habitat, harvest and hatchery actions.

The Puget Sound Partnership was created by the Washington State Legislature and Governor in July 2007 to achieve the recovery of the Puget Sound ecosystem by the year 2020. The Partnership's goal is to coordinate and significantly strengthen the federal, state, local, and private efforts undertaken to date to protect and restore the health of Puget Sound and its watersheds. Additional discussion of King County's participation in the Puget Sound Partnership is found later in this chapter.

King County also works closely with federal and state agencies, cities, and other counties to try to integrate and streamline compliance with federal mandates, including the Clean Water Act, Clean Air Act, and Endangered Species Act. In doing so, multiple benefits can be achieved. For example, in some cases mandated monitoring for Clean Water Act compliance can provide useful information to support salmon conservation efforts.

E-103 **King County should coordinate with local jurisdictions, universities, federal and state agencies, tribes, special interest groups, special districts, businesses, and residents to implement, monitor, and update Water Resource Inventory Area salmon recovery plans for all areas of King County.**

E-104 **Development of environmental regulations, restoration and mitigation projects, and incentive and stewardship programs should be coordinated with local jurisdictions, federal and state agencies, tribes, special interest groups and residents when conserving and restoring the natural environment consistent with Urban Growth Area, Rural Area and designated Natural Resource Land goals.**

King County will use existing and updated subarea and functional plans and Water Resource Inventory Area salmon recovery plans to provide guidance to programs, regulations and incentives to protect and restore environmental quality.

E-105 **Environmental quality and important ecological functions shall be protected and hazards to health and property shall be minimized through development reviews and implementation of land use plans, Water Resource Inventory Area salmon recovery plans, stormwater management plans and programs, flood hazard management plans, environmental monitoring programs, and park master plans. These plans shall also encourage stewardship and restoration of critical areas as defined in the Growth Management Act, and include an adaptive management approach.**

The State Environmental Policy Act requires King County to consider the environmental impacts of proposed actions that may have a significant adverse environmental impact. Over the years, King County has adopted development regulations that address many of the impacts that are likely to occur as a result of development. In many cases, King County's regulations adequately address environmental impacts and development proposals do not require additional mitigation under the State Environmental Policy Act. However, there may be certain development proposals or unusual circumstances not contemplated by the development regulations that require further mitigation under the State Environmental Policy Act. This principle is articulated in King County Code Chapter 20.44. The presence of a species listed as endangered or threatened by the federal government is such an unusual circumstance.

E-107 **Regulations to prevent unmitigated significant adverse environmental impacts should be based on the importance and sensitivity of the resource.**

E-108 **King County may exercise its substantive authority under the State Environmental Policy Act to condition or deny proposed actions in order to mitigate associated individual or cumulative impacts such as significant habitat modification or degradation that may actually kill, injure or harm listed threatened or endangered species by significantly impairing essential behavioral patterns, including breeding, feeding, spawning, rearing, migrating or sheltering.**

E-109 **King County should promote efficient provision of utilities and public services by exempting minor activities from its critical areas regulations, if the agency has an approved best management practice plan approved by King County, and the plan ensures that proposed projects that may affect habitat of listed species be carried out in a manner that protects the resource or mitigates adverse impacts.**

B. Policy and Regulatory Context

1. Endangered Species Act

In March 1998, The National Marine Fisheries Service proposed to list the Puget Sound Chinook salmon as "threatened" under the Endangered Species Act. This Chinook population was officially listed in March 1999. The listing of Chinook as threatened triggered a requirement for consultations with the National Marine Fisheries Service on any activity requiring a federal permit, relying on federal funds, or being sponsored by a federal agency.

Since that listing, several other aquatic species present in King County have been listed as threatened, including two additional salmonids: bull trout in November 1999, and steelhead in May 2007. Coho salmon are considered a Species of Concern. Puget Sound's southern resident Orca, which rely almost solely on Chinook salmon as a food source, were also listed under the Endangered Species Act as endangered in November 2005.

The National Marine Fisheries Service and the U.S. Fish and Wildlife Service have issued rules describing regulations deemed necessary to conserve Puget Sound Chinook and other West Coast salmonids. These rules, commonly referred to as "4(d) rules," legally establish the protective measures that are necessary to provide for conservation of a listed species. These rules also make it a violation of the Endangered Species Act for any person, government, or other entity to "take" a threatened species. Prohibited "take" under the Endangered Species Act includes harm through significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, spawning, rearing, migrating or sheltering.

The 4(d) rule for Chinook and steelhead also establishes conditions or limits under which certain categories of activities that may result in "take" may be conducted. King County takes actions under the conditions established for two categories of activity: routine road maintenance and habitat restoration projects funded by the State Salmon Recovery Funding Board.

Final Endangered Species Act Recovery Plans have been developed for Chinook (2007) and bull trout (2004). A final Recovery Plan for Orca whales was published in 2008. These plans describe recovery goals for the species, specific measures to address the factors that are limiting the health of the species, and timeframes and cost estimates for recovery measures. Conservation actions identified in Water Resource Inventory Area salmon recovery plans for King County watersheds are now being implemented subject to available funding and are anticipated to contribute significantly to the achievement of recovery goals for these species and their eventual removal from the Endangered Species list.

2. Clean Water Act

The Clean Water Act requires that all states protect and restore their waters to beneficial uses. This is accomplished through the development of a permitting framework called the National Pollutant Discharge Elimination System (NPDES) Permit program. Authority for administering the NPDES Program has been delegated by the Environmental Protection Agency to the Washington State Department of Ecology (Ecology), and King County holds a number of NPDES general permits for various specified activities.

For instance, the County must comply with permit conditions that cover ongoing construction site activities, industrial activities, and stormwater runoff discharges from the municipal stormwater system. Since 1995, Ecology has issued a NPDES Phase I Municipal Stormwater permit to King County, authorizing stormwater discharges from the County's municipal separate stormwater sewer system.

The current permit, set to expire July 31, 2018, contains prescriptive requirements for discovering, controlling and monitoring pollutants in municipal stormwater, as well as stormwater control design standards for site development, public education and outreach, mapping, and operating and maintaining municipal stormwater infrastructure.

The County complies with the current Phase I municipal NPDES stormwater permit by implementing the County's stormwater management program plan that can be found at the following website: http://www.kingcounty.gov/environment/waterandland/stormwater/pollution-discharge-permit/annual-reports.aspx

The implementation of the County's plan is reported to Ecology by submitting an annual report. The annual report documents compliance with permit requirements over the preceding year and the stormwater management plan outlines compliance activities for the upcoming year. The most current annual report can be found here: http://www.kingcounty.gov/environment/waterandland/stormwater/pollution-discharge-permit/annual-reports.aspx

Water Quality Standards and Total Maximum Daily Loads

When a particular water body falls short of state surface water quality standards Ecology must impose a Total Maximum Daily Load (TMDL). A TMDL is developed to restore beneficial uses to the water body by reducing or eliminating pollutants. In addition to the actions found in the County's stormwater management plan, the Permit also contains requirements for the County to implement actions that address four impaired water bodies. The Bear-Evans watershed, Issaquah Creek, and the Puyallup/White watershed are impaired by elevated levels of fecal coliform, and Cottage Lake is impaired by elevated levels of total phosphorous. The actions to counteract these elevated levels of pollution include: animal waste education and collection stations at municipal

parks, and inventorying and inspecting commercial animal handling facilities. King County's Illicit Discharge Detection and Elimination program also conducts field screening for pollution sources by designating high priority areas, and conducting bacteria sampling and monitoring.

In addition to the TMDLs found in the Permit, several others have been approved within King County: the Snoqualmie River, Little Bear Creek, Lake Fenwick, Lake Sawyer, the Duwamish River, Lower Green River, Pipers Creek, North Creek, Newaukum Creek, and Fauntleroy Creek. King County TMDLs under development or pending approval by the Environmental Protection Agency include Green River and Newaukum Creek, White and Puyallup Rivers, and Soos Creek. A list of these Water Quality Improvement Projects in King County can be found at:
http://www.ecy.wa.gov/programs/wq/tmdl/TMDLsbyCounty/king.html.

E-110 **Surface waters designated by the state as Water Quality Impaired under the Clean Water Act (water bodies included in Category 5 of the Water Quality Assessment) shall be improved through monitoring, source controls, best management practices, enforcement of existing codes, and, where applicable, implementation of Total Maximum Daily Load plans. The water quality of other water bodies shall be protected or improved through these same measures.**

E-111 **King County shall evaluate development proposals subject to drainage review in unincorporated King County to assess whether the proposed actions are likely to cause or contribute to violations of Washington State water quality standards in receiving waters for individual pollutants of concern and identify mitigation or requirements to avoid the impacts when appropriate.**

There are certain actions that can be used to help moderate water quality. Such actions may include maintaining and increasing connections between surface waters and shallow groundwater or hyporheic flow, promoting riparian vegetation and stormwater structural retrofitting using infiltration techniques including Low Impact Development techniques, and increasing the physical complexity of river channels.

E-112 **When environmental monitoring, testing or reliable data indicates human activities have caused impaired water quality, such as increased water temperature, fecal contamination, low oxygen, excess nutrients, metals, or other contaminants, King County shall take actions which will help moderate those impairments.**

3. Growth Management Act and Critical Areas Protection

The Growth Management Act requires that each city and county in Washington State identify, designate, and protect critical areas found in their local environment. Critical areas, as defined in the Growth Management Act, include wetlands, areas with a critical recharging effect on aquifers used for potable water, fish and wildlife habitat conservation areas, frequently flooded areas and geologically hazardous areas. This chapter establishes policies for designating and protecting critical areas in King County. King County Code Title 21A provides the regulatory framework for these policies.

The Growth Management Act also requires local governments to include the best available science in developing policies and development regulations to protect the functions and values of critical areas, and to give special consideration to the conservation or protection measures necessary to preserve or enhance anadromous (fish that spawn in freshwater and spend part of their lifecycle in salt water) fisheries.

E-112a **The protection of lands where development would pose hazards to health, property, important ecological functions or environmental quality shall be achieved through acquisition, enhancement, incentive programs and appropriate regulations. The following critical areas are particularly susceptible and shall be protected in King County:**

- **a. Floodways of 100-year floodplains;**
- **b. Slopes with a grade of 40% or more or landslide hazards that cannot be mitigated;**
- **c. Wetlands and their protective buffers;**
- **d. Aquatic areas, including streams, lakes, marine shorelines and their protective buffers;**
- **e. Channel migration hazard areas;**
- **f. Critical Aquifer Recharge Areas;**
- **g. Fish and Wildlife Habitat Conservation Areas; and**
- **h. Volcanic hazard areas.**

4. Shoreline Management Act

The Shoreline Management Act requires each city and county with Shorelines of the State to adopt a Shoreline Master Program that complies with state guidelines but that is tailored to the specific needs of the community. The Shoreline Management Act applies to all marine waters, streams with a mean annual flow of 20 cubic feet or more per second, and lakes that are 20 acres or more in size. The Shoreline Management Act also applies to upland areas called "shorelands" within 200 feet of these waters, as well as associated wetlands and floodplains. The program's goals are set by state law and include protecting natural resources, increasing public access to shorelines and encouraging businesses such as marinas along the waterfront.

Under the Shoreline Management Act, the Shoreline Master Program includes both a Shoreline Master Plan and implementing shoreline land use and development regulations. The Growth Management Act requires that a local government's Comprehensive Plan, Shoreline Master Plan, and development regulations, including both shoreline regulations and critical area regulations, must be consistent with each other. The Shoreline Master Program is included in its entirety in Chapter 6, Shorelines.

5. Puget Sound Partnership

The Puget Sound Partnership was created by the Washington State Legislature and Governor in July 2007 to achieve the recovery of the Puget Sound ecosystem by the year 2020. Its goal is to consolidate and significantly strengthen the federal, state, local, and private efforts undertaken to date to protect and restore the health of Puget Sound and its watersheds. The Puget Sound Partnership also serves as an umbrella group for salmon recovery efforts in Puget Sound, including implementation of salmon recovery plans prepared for Chinook salmon. King County, through its land use decisions, management of stormwater and wastewater discharges, development of recycled water supplies, cooperative habitat protection and restoration projects, work in flood risk reduction, salmon recovery, support for agricultural and natural land protection, actions to address climate change and ongoing environmental monitoring, is actively involved in the conservation and recovery of Puget Sound. King County has the opportunity, and responsibility, to make significant contributions to protecting and restoring Puget Sound. The Puget Sound Partnership's 2020 Action Agenda was revised in 2012, 2014 and 2016 focusing on three Strategic Initiatives: protecting and restoring habitat, preventing pollution from stormwater, and recovering shellfish beds. The Partnership anticipates updating the Action Agenda again in 2018.

E-113 **King County should actively participate in updating and implementing the Puget Sound Partnership's Action Agenda, through the South Central Caucus Group and Snohomish-Stillaguamish Local Integrating Organizations, consistent with King County goals.**

E-114 **King County should collaborate with other watershed forum partners to ensure that recommendations of watershed-based salmon recovery plans for King County are integrated with the Puget Sound Partnership recommendations.**

The Puget Sound Partnership maintains a Strategic Science Plan and Biennial Science Work Plan which provide an overall framework for development and coordination of specific science activities necessary to support Puget Sound ecosystem protection and restoration under the Partnership's Action Agenda. The Puget Sound Partnership also organizes the Puget Sound Ecosystem Monitoring Program, a collaborative effort to improve communication and data sharing among the many monitoring programs operating in Puget Sound, with the goal of assessing progress towards recovery of the health of the Sound. King County actively participates in the Ecosystem Monitoring Program.

E-115 **King County should identify opportunities for coordinating its existing monitoring programs with monitoring and assessment work conducted through Puget Sound Ecosystem Monitoring Program, the Puget Sound Partnership's Strategic Science Plan and the Puget Sound Partnership's Biennial Science Work Plan.**

6. Noxious Weeds

Left uncontrolled, noxious weeds can significantly impact public and private land use in the County. The State Noxious Weed Control Law (Revised Code of Washington 17.10) establishes all property owners' responsibility for preventing and controlling the spread of noxious weeds. Because plants grow without regard to property lines or political jurisdictions, everyone's cooperation is needed – city gardeners, government land agencies, foresters, and farmers all have a role to play. The key to successful noxious weed control is effective engagement and participation of landowners and communities in the stewardship of their lands. The law spells out these responsibilities and creates the government infrastructure needed to educate residents and implement regulatory processes.

E-115a **King County shall exercise its authority under Revised Code of Washington 17.10 to: (1) establish a county noxious weed control board to provide public oversight and direction, and (2) implement a program of activities that minimizes the impacts of noxious weeds to the environment, economy, recreation and public health within the County.**

II. Climate Change

Climate change is one of the paramount environmental and economic challenges for this generation. King County's 2015 Strategic Climate Action Plan, which was adopted by the King County Council through Motion 14449, is King County's comprehensive legislative and policy plan for climate action. It provides the blueprint for county decision-makers, employees, and the general public to learn about the County's climate change commitments. A subset of the policies and commitments from the Strategic Climate Action Plan are also reflected in this section of the Comprehensive Plan. To learn more about the Strategic Climate Action Plan: http://www.kingcounty.gov/climate.

Impacts from climate change have the potential to dramatically impact ecosystems, agriculture, economy, biodiversity, and public health and safety in myriad and interrelated ways. Impacts of a changing climate will be experienced differently by King County residents, influenced by factors such as income, age, health, and location. However, by working collaboratively to develop and implement strategies to prevent, respond to, and prepare for climate change, King County has many opportunities to address broader inequities. Sustaining quality of life and the environment requires a significant commitment on the part of King County to both

reducing greenhouse gas emissions, the primary driver of human caused climate change, and preparing for climate change impacts in an ever-changing and increasingly dynamic landscape.

Climate Change Science and Impacts

Human caused sources of greenhouse gas emissions, including carbon dioxide and methane, are causing unprecedented and severe changes in global and local climate systems. This is the consensus view of the world's leading scientists, including the Intergovernmental Panel on Climate Change and the US National Academy of Sciences.

In King County, decreasing mountain snowpack, increasing flooding, and rising sea levels are evidence that the climate system is changing. While many factors affect the climate system and natural environment, scientists have attributed many changes in significant part to recent increases in atmospheric greenhouse gas concentrations. The County faces significant environmental and economic challenges stemming from climate change, including stressed and rapidly changing ecosystems, costly impacts on public and private property, and new public health risks resulting from worsening air and water quality (e.g., toxic algal blooms), additional heat related impacts, and increased exposure to infectious disease.

King County Greenhouse Gas Emissions

Climate change over the last century has been caused primarily from increasing greenhouse gas emissions such as methane, carbon dioxide and nitrous oxide. King County is committed to reduce the greenhouse gas emissions of its operations and support broader efforts to reduce countywide emissions.

Government Operations

King County government operations create greenhouse gas emissions. Major government sources are associated with combustion of diesel and gasoline for transit buses and fleet vehicles, methane from landfills, electricity usage in buildings and for wastewater treatment, and emissions from the production, use and disposal of government purchased goods and services.

King County is making progress in reducing greenhouse gas emissions from county operations, with emissions from energy-related non-transit sources decreasing 14% between 2007 and 2014. During this time emissions directly associated with vehicles and transit service increased by six percent, primarily due to increased use of biodiesel and increased transit service.

Countywide

Within King County's geography, greenhouse gas emissions are primarily caused by fossil fuel use (gasoline and diesel) for transportation and to a lesser but significant extent to heat buildings (natural gas and heating oil). Additional significant emissions are associated with consumption in King County, but these sources do not necessarily occur within its geographic borders. These emissions are created through the production, transport, sale, use, and disposal of imported goods and services such as food and electronics.

Preparing for Climate Change Impacts

Even if all human sources of greenhouse gas emissions ceased today, global and regional temperatures would continue to increase for several decades. Therefore, King County must be proactive in preparing for local climate change impacts. For King County, this includes preparing for more frequent and severe flooding and droughts, developing recycled water sources, working with farm and forest owners to address climate change impacts, planning for effects of climate change on human health, taking steps to improve the resiliency of the natural and built environments, and ensuring that the County can continue to provide services such as transit, wastewater treatment, and flood protection.

E-201 **King County should participate in and support appropriate local, regional and national efforts and organizations focused on reducing greenhouse gas emissions and preparing for climate change impacts.**

Status of King County Climate Change Efforts

King County has a long record of innovation, leadership, and investment in reducing greenhouse gas emissions and preparing for the impacts of climate change. Consideration of climate change impacts and opportunities to reduce energy use and greenhouse gas emissions are deeply embedded throughout the work plans and capital investments of county departments and lines of business. Since 2010, the investments in energy efficiency and changes in operations have reduced building energy use and costs by over $3 million annually.

King County Metro has pioneered the use of hybrid bus technology is on track to have an all hybrid or electric bus fleet by 2018. As of 2015, the county is now producing renewable energy equivalent to 57% of its government operational energy needs. However, to make significant reductions in greenhouse gas emissions and ensure that the built and natural environment are resilient in the face of a changing climate, even bolder action and stronger collaboration with cities, businesses, and county residents is required.

The following sections of this section highlight and are consistent with key 2015 Strategic Climate Action Plan policies and commitments.

A. Assessment

King County has completed periodic inventories and assessments of greenhouse gas emissions associated with government operations as well as emissions associated with all resident and business activity in the county since 2000. These assessments have provided valuable data to inform actions that will reduce greenhouse gas emissions as well as to monitor progress toward meeting emissions reduction targets.

E-202 **King County shall assess and publicly report on:**

a. Its normalized and total energy usage and total greenhouse gas emissions associated with county operations;

b. Countywide greenhouse gas emissions associated with resident, business, and other local government activities; and

c. Countywide greenhouse gas inventories that quantify all direct local sources of greenhouse gas emissions as well as emissions associated with local consumption.

E-203 **King County shall collaborate to set transparent standards to account for the net energy and greenhouse gas emissions impacts of government actions such as constructing transportation infrastructure and providing services such as recycling and transit and shall assess and publically report these impacts as practicable.**

E-204 **King County shall collaborate with experts in the field of climate change, including scientists at the University of Washington's Climate Impacts Group, to monitor, assess and publicly share information about the impacts of climate change in King County.**

B. Reducing Greenhouse Gas Emissions

King County is leading by example in reducing operational sources of greenhouse gas emissions through efforts such as:

- Green building and sustainable development practices that reduce emissions of capital facilities projects;
- Purchasing and maintenance practices that reduce emissions associated with the production, use and disposal of goods and services;
- Modifying operations of county buildings and facilities that reduce emissions and resource demand;
- Purchasing and efficiently using alternative vehicles such as electric powered vanpools and hybrid cars and buses;
- Improving energy efficiency and producing renewable energy sources at King County's wastewater treatment and solid waste disposal facilities; and
- Protecting forested areas, encouraging and supporting active stewardship, and undertaking tree planting and restoration projects that enhance biological carbon sequestration.

King County is also supporting emissions reductions at the broader countywide scale through sustainable land use policies, transportation infrastructure, and through the provision of important services such as recycling and transit, including actions and policies such as:

- Land use designations and zoning that influence the pattern and density of development and the level of reliance on single occupancy vehicles;
- Use of voluntary tools such as Transfer of Development Rights to reduce development density on Rural Area and Natural Resource Lands;
- Building codes and facilities standards that can influence the types of building materials and future energy demands;
- Promoting the use of transit and non-motorized travel modes to decrease vehicle miles traveled; and
- Protecting Rural Area and Natural Resource Lands from further development through acquisition of fee title or conservation easements to redirect future growth to urban areas to reduce emissions related to transportation and new development.

Many actions that reduce greenhouse gas emissions result in additional benefits, such as saving energy and fuel costs, improving health, and minimizing other types of air and water pollution. For example, walkable, transit-oriented communities have been shown to have significantly below average per capita greenhouse gas emissions while at the same time saving residents money, supporting healthier lifestyles and creating stronger communities.

In some cases, county actions are direct sources of greenhouse gas emissions, but when considered at a broader scale have a net emissions reduction benefit. For example, providing public transportation results in significant direct greenhouse gas emissions, primarily from combusting diesel. At the same time, public transit offsets these direct operational emissions by more than three times by decreasing driving, providing traffic congestion relief, and supporting walkable, efficient land use. As this example shows, there are sometimes complex considerations that need to be taken into account in making decisions about greenhouse gas emissions reduction strategies.

Policies related to King County efforts to reduce operational and countywide greenhouse gas emissions are presented below. Policies related to reducing greenhouse gas emissions and adaptation strategies for agriculture and forestry can be found in Chapter 3: Rural Area and Natural Resource Lands. Policies related to reduction of Greenhouse Gas Emissions from transit and fleet vehicles can be found in Chapter 8: Transportation. Policies related to water supply, use of recycled water, and energy can be found in Chapter 9: Services, Facilities and Utilities. Policies related to green building and sustainable development can be found in Chapter 8: Services, Facilities and Utilities (as related to government operations) and Chapter 10: Economic Development (as related to private development).

Government Operations

E-205 King County shall reduce greenhouse gas emissions from all facets of its operations and actions associated with construction and management of county-owned facilities, infrastructure development, transportation, and environmental protection programs to achieve the emissions reductions targets set in E-206 and to work towards the carbon neutral goal in F-215b.

E-206 King County shall reduce total greenhouse gas emissions from government operations, compared to a 2007 baseline by at least 25% by 2020 and 50% by 2030.

E-206a King County's Department of Natural Resources and Parks, including the Wastewater Treatment Division, Solid Waste Division, Parks and Recreation Division, and Water and Land Resource Division, shall achieve net carbon neutrality for its operations by 2017.

E-206b King County's Wastewater Treatment Division and Solid Waste Division shall each independently achieve carbon-neutral operations by 2025.

E-207 King County shall develop and implement an operational "cost of carbon." The cost of carbon should be used in life-cycle assessments and decision making related to County operations, including for purchase of vehicles, buses and fuels, for facility construction and resource efficiency projects, and for related technology investments. King County should also pursue using the cost of carbon to inform broader County planning and decision making.

E-208 King County shall maximize the creation of resources from waste products from county operations such as gases produced by wastewater treatment and solid waste disposal in a manner that reduces greenhouse gas emissions and produces renewable energy.

E-209 King County will continue to evaluate its own maintenance and operations practices, including procurement, for opportunities to reduce its own emissions or emissions produced in the manufacturing of products.

Countywide

In 2014, King County and 39 King County cities came together to develop shared, countywide greenhouse gas emissions reduction targets. In July 2014, targets were unanimously adopted by the King County Growth Management Planning Council. The formal adoption of a shared, community scale greenhouse gas emissions target by local governments is relatively unusual, and provides a strong foundation and guidepost for community-scale efforts to reduce greenhouse gas emissions.

The shared targets are near- and long-term, ambitious and achievable, and consistent with what climate science says needs to be done in order to avoid the worst impacts of climate change. The adopted targets are significantly more ambitious than Washington State's greenhouse gas emissions reduction requirements (Revised Code of Washington 47.01.440).

E-210 **King County shall collaborate with its cities, and other partners, to reduce countywide sources of greenhouse gas emissions, compared to a 2007 baseline, by 25% by 2020, 50% by 2030, and 80% by 2050.**

E-212 **King County will work with its cities and other partners to establish a greenhouse gas emissions inventory and measurement framework for use by all King County jurisdictions to efficiently and effectively measure progress toward countywide targets.**

Renewable energy technology, such as solar power, has the potential for replacing a significant share of King County's energy portfolio. Renewable energy technologies that have the benefit of zero or very low levels of greenhouse gas emissions should be encouraged. The renewable technology industry is evolving and no single technology is guaranteed to fit all the county's alternative energy needs. King County should provide flexibility in its policies and regulations to adapt to the changing circumstances.

E-213 **King County should ensure that its land use policies, development and building regulations, technical assistance programs, and incentive programs support and encourage the use of viable renewable energy technologies that have zero or minimal greenhouse gas emissions.**

E-214 **King County, through its Comprehensive Plan policies and development regulations, should promote healthy community designs that enable walking, bicycling, and public transit use, thereby reducing greenhouse gas emissions and regional air pollution.**

New Development

Nearly every new development results in new sources of greenhouse house gas emissions. These include emissions from construction and land development, emissions created from producing and transporting building materials, energy used in operating buildings and structures, and transportation associated with the development. Although the emissions associated with construction occur today, the emissions associated with energy and transportation will occur over the life of the development, which may extend for 50 years or more. This means that decisions made today about development will have an effect on climate change far into the future.

E-215 **King County shall evaluate proposed actions subject to the State Environmental Policy Act for their greenhouse gas emissions. King County may exercise its substantive authority under the State Environmental Policy Act to condition or deny proposed actions in order to mitigate associated individual or cumulative impacts to global warming. In exercising its authority under this policy, King County should consider project types that are presumed to be not significant in generating greenhouse gas emissions and do not require review for their greenhouse gas emissions. Any standards related to consideration of greenhouse gas emissions through the State Environmental Policy Act process shall be subject to Council review and adoption by ordinance.**

C. Preparing for Climate Change Impacts

Climate change impacts are here and now; in the last century, sea level in Seattle has risen by eight inches and average annual temperatures in the Pacific Northwest have increased 1.5 degrees Fahrenheit. While greenhouse gas emissions must be reduced to avoid the worst impacts of climate change, impacts are projected even if global and local greenhouse gas emissions are drastically cut. The County is integrating climate change preparedness into:

- Operations and maintenance of infrastructure, programs and natural resources;
- Provision of public services; and
- Partnerships with other local governments, community groups and businesses.

Overarching Climate Change Preparedness Goals

E-215a **King County will collaborate with local cities, residents, and other partners to prepare for the effects of climate change on the environment, human health, public safety, and the economy.**

E-215b **King County will plan and prepare for the likely impacts of climate change on County-owned facilities, infrastructure, and natural resources.**

Coordination with Partners

E-215c King County should collaborate with the scientific community, state and federal agencies, and other jurisdictions to develop detailed, science-based estimates of the magnitude and timing of climate change impacts on air temperatures and heat waves, rainfall patterns and severe weather, river flooding, sea level rise, fish and wildlife, and ocean acidification in King County.

E-215d King County should share information on climate change impacts and collaborate on approaches to improving resiliency of infrastructure, disaster preparedness, and public engagement with local cities and other partners to make the best use of limited resources and more effectively engage King County residents.

Public Services and Education

E-216 King County shall integrate observed and projected climate change impacts, including severe weather, flooding, drought, fire, and landslides, into emergency management planning and programs.

E-217 King County will work with its cities and other partners to formulate and implement climate change adaptation strategies that address the impacts of climate change to public health and safety, the economy, public and private infrastructure, water resources, and habitat.

E-218 King County shall apply its Equity Impact Review process to help prioritize investments in making infrastructure, natural resources, and communities more resilient to the impacts of climate change.

County Infrastructure and Operations

E-219 King County shall integrate estimates of the magnitude and timing of climate change impacts into capital project planning, siting, design, and construction and also implement infrastructure operation and maintenance programs that consider full life-cycle costs and climate change impacts in asset management.

Natural Environment

E-220 King County shall periodically review and evaluate climate change impacts on natural resources that its resource programs are designed to protect, such as open space, forests, fisheries, productive farmland, and water quality and treatment, in order to assess and improve the efficacy of existing strategies and commitments.

E-222 **King County should collaborate with climate scientists in order to increase knowledge of current and projected climate change impacts to biodiversity.**

E-223 **King County shall consider projected impacts of climate change on habitat for salmon and other wildlife when developing long-range conservation plans and prioritizing habitat protection and restoration actions.**

E-224 **To foster resilience to climate change in ecosystems and species, King County should prioritize efforts such as: the restoration of floodplains to improve the resilience of major rivers to changing flow regimes and temperatures; the protection and restoration of riparian vegetation to reduce warming in cold water systems, of wetlands to reduce drought and flooding, and of connections between different habitats to maintain current seasonal migration; and facilitate migration opportunities for species whose ranges shift in latitude and altitude.**

Public Health

Vulnerable populations are often defined as groups whose unique needs may not be fully integrated into planning for disaster response. These populations include, but are not limited to, those who are physically or mentally disabled, blind, deaf, hard-of-hearing, cognitively impaired, or mobility challenged. Also included in this group are those who are non-English (or not fluent) speakers, geographically or culturally isolated, medically or chemically dependent, homeless, frail elderly and children. Public Health – Seattle & King County has established a Vulnerable Population Action Team (The Community Resilience + Equity Program) to address the needs of this population.

E-225 **Through land use and transportation actions, King County should work to reduce air quality and climate change related health inequities and the exposure of vulnerable populations to poor air quality and extreme weather events.**

E-226 **King County shall develop and incorporate into outreach efforts public health messages related to the health implications of climate change, particularly in urban communities, and the benefits of actions, such as using alternative transportation options that simultaneously reduce greenhouse gas emissions, improve air quality, and improve public health.**

D. Collaboration with Others

King County recognizes that the climate change challenge is worldwide in its scope, and that far reaching consequences to the environment and to humankind's quality of life may result if this issue is not addressed effectively. King County's actions are important contributors to addressing this issue; however, its global nature will require cooperation across local, regional, state and international boundaries. King County can play important roles in collaborating with others on solutions, especially through community outreach, education, advocacy, monitoring, and information sharing with other local governments and universities.

E-227 **King County supports comprehensive federal, regional and state science-based limits and a market-based price on carbon pollution and other greenhouse gas emissions. A portion of revenue from these policies should support local greenhouse gas emissions reduction efforts, such as funding for transit service, energy efficiency projects, and forest protection and restoration initiatives. King County also supports renewable energy standards for electricity production and vehicle efficiency performance standards.**

E-228 **King County should advocate for federal and state initiatives and grant and loan programs that support local investments in projects and programs such as community solar and energy efficiency retrofits to reduce greenhouse gas emissions and prepare for climate change impacts.**

E-229 **King County shall work with the business community to support efforts that reduce energy use and greenhouse gas emissions, and to promote King County and the Puget Sound region as a center for green manufacturing. The county shall also work with community groups, consumers, and the retail sector to promote the consumption of green-manufactured products.**

III. Air Quality

A. Overview

Clean air, free of pollutants, is essential for the day-to-day quality of life and long-term health of county residents. King County has shown critical leadership in forging solutions to air pollution and will continue to do so well into the future.

King County works for clean air in partnership with the Puget Sound Clean Air Agency, which has the lead regulatory and monitoring responsibilities for the region in accordance with the Clean Air Act. Underlying drivers of the Clean Air Act include protecting public health, reducing property damage, and generally protecting

the environment. Because air quality impacts water quality, a better understanding is needed regarding the input of pollutants via air transport from both local and distant sources.

The Puget Sound Clean Air Agency is responsible for monitoring and regulating six "criteria air pollutants" using standards set by the Environmental Protection Agency. The six "criteria" air pollutants are:

- Fine particulate matter (dust, soot, smoke);
- Ground-level ozone (smog);
- Carbon monoxide (gas primarily from vehicle exhaust);
- Sulfur dioxide (gas primarily from industrial processes like smelters, paper mills, and power plants);
- Oxides of nitrogen; and
- Lead.

The Puget Sound Clean Air Agency also focuses on reducing harmful air toxics that come primarily from wood smoke and diesel burning, as well as greenhouse gases such as carbon dioxide and methane from landfills. The Puget Sound Clean Air Agency is also responsible for regulating emissions of air pollution, such as asbestos and gasoline vapors, from businesses.

Efforts to address climate change and improve air quality are strongly linked. For example, conversion from conventional to hybrid buses and fleet vehicles not only helps to reduce greenhouse gas emissions, but also reduces emissions of particulates. Additionally, a likely impact of climate change on air quality is an increase in ground-level ozone because higher temperatures enhance the conversion of precursors into ground-level ozone. Ozone can exacerbate asthma and reduce respiratory system functioning. Because of these linkages, there is significant overlap with this section and the climate change section of this chapter. Section II, subpart B of this chapter relates to reducing greenhouse gas emissions. These strategies usually concurrently reduce other types of air pollution. Section II, subpart C of this chapter describes the linkages between climate change and health impacts, including policies related to minimizing health inequities among vulnerable populations more negatively impacted by climate change and air pollution.

B. Ozone, Fine Particulate and Toxics

Reducing criteria pollutants will continue to be a primary focus for King County. The ozone strategy identified by the Puget Sound Clean Air Agency for the central Puget Sound region focuses on reducing volatile organic compounds, which are precursors to ozone formation. Emission of volatile organic compounds results mostly from vehicles, as well as to a significant degree from household chemicals and paint evaporation.

In addition to ozone, fine particulates also represent a serious health threat. Health studies have shown a significant association between exposure to fine particles and premature death from heart or lung disease. Fine

particles can aggravate heart and lung diseases and have been linked to effects such as: cardiovascular symptoms; cardiac arrhythmias; heart attacks; respiratory symptoms; asthma attacks; and bronchitis. These effects can result in increased hospital admissions, emergency room visits, absences from school or work, and restricted activity days. Individuals that may be particularly sensitive to fine particle exposure include people with heart or lung disease, older adults, and children. Diesel emissions are one of the county's largest sources of fine particulate emissions. King County's participation in the ultra-low sulfur diesel program, known as "Diesel Solutions," has made tremendous strides in cleaning up King County Metro's fine particulate emissions. Indoor burning and outdoor burning are a major source of fine particulates.

As a large county with a mix of urban, Rural Area and Natural Resource Lands uses, King County will continue to face risks from air toxics. Examples of air toxics include benzene, formaldehyde, mercury, and dioxins. The air quality impact of toxics cannot be evaluated in isolation. Their greatest health risk comes from their combined effect. National air toxics assessment data indicate that air toxics risks in the Puget Sound region are in the top five percent in the nation. The Environmental Protection Agency and its regulatory partners at the state and local level identify steps to reduce toxic air pollutants and provide important health protections: reducing toxic emissions from industrial sources; reducing emissions from vehicles and engines through stringent emission standards and cleaner burning gasoline; and addressing indoor air pollution though voluntary programs.

Local air monitoring data done by the Washington State Department of Ecology indicates that diesel exhaust and wood smoke are key contributors to toxics.

In 2002, King County Metro became the first transit agency in the United States to test articulated hybrid-diesel electric buses. King County Metro currently owns 214 articulated hybrid buses, the largest such fleet in the nation. A National Renewable Energy Laboratory study found articulated hybrids provide a 30% reduction in greenhouse gases and are 40% more reliable than diesel fueled articulated buses.

Wood smoke is a leading contributor to air toxics. King County will examine proposals to curtail the impacts of woodstove burning and land-clearing practices in rural parts of the county.

The focus of King County air quality improvement efforts is to engage in projects and changed practices to reduce county emissions and promote policies that incorporate consideration of air quality impacts. Motorized vehicle and other fuel burning engine-related emissions are the primary source of ozone, fine particulate, toxics and greenhouse gas emissions in King County and therefore should be a primary focus for emissions reduction.

E-301 **King County should support initiatives that reduce emissions due to indoor and outdoor wood burning consistent with the actions of Puget Sound Clean Air Agency to control this source of public health threat.**

E-302 **King County will continue to actively develop partnerships with the Puget Sound Clean Air Agency, local jurisdictions, the state, and public, private, and not-for-profit groups to promote programs and policies that reduce emissions of ozone, fine particulates, toxics, and greenhouse gases, particularly for those populations already experiencing health disparities linked to air quality.**

More detailed policies related to reducing greenhouse gas emissions and improving air quality can be found in Section II of this chapter, Chapter 8: Transportation, and Chapter 9: Services, Facilities and Utilities.

IV. Land and Water Resources

A. Conserving King County's Biodiversity

It is King County's goal to conserve fish and wildlife resources in the county and to maintain countywide biodiversity. This goal may be achieved through implementation of several broad policy directions that form an integrated vision for the future. Each of the pieces is necessary for the whole to be successful. The policy objectives are to: (1) initiate multi-species, biodiversity management approaches, (2) integrate biodiversity conservation goals and climate change planning into new and existing developments and habitat restoration programs, (3) identify and protect fish and wildlife habitat conservation areas, (4) connect the fish and wildlife habitat conservation areas and other important conservation areas and protected lands through a habitat network system, (5) include working farmland and forestland within the larger conservation landscape, and (6) provide education and incentive opportunities to engage residents. Incentives can include, but are not limited to, tax incentives, regulatory flexibility (e.g., alternatives to fixed-width buffers), streamlined permit processing, reduced permit fees, and free or low-cost technical assistance. Conservation of biodiversity is necessary if benefits including important ecosystem services such as clean water, natural flood control, agricultural and timber production, climate regulation, and pollination currently enjoyed and relied upon by residents of the county are to be available for future generations.

1. Biodiversity

Because of its size, topography, and geology, the diversity of landscapes and habitats in King County is dramatic. From the Cascade Mountains to Puget Sound, alpine areas to lowland bogs, King County possesses an astonishing array of habitats and species. Approximately 220 species of breeding and non-breeding birds are usually seen on an annual basis in King County. Based on an analysis by the State of Washington, 69 species of mammals, 12 species of amphibians, and 8 species of reptiles are thought to be breeding in the county. About 50 species of native fish (and 20 species of introduced fish) are found in the freshwater streams, rivers, ponds, and lakes of King County. In the county's marine environment, over 200 species of fish, some 500 species of invertebrate animals, and eight species of marine mammals can be found. A total of 1,249 (383 introduced) species of vascular plants have been identified in the county. The diversity of geography combined with King

County's history of land use has shaped the biodiversity of the past and present and will continue affecting it into the future.

King County defines biodiversity as the variety of living organisms considered at all levels, from genetic diversity through species, to higher taxonomic levels, including the variety of habitats, ecosystems, and landscapes in which the species are found. The Washington Biodiversity Conservation Strategy provides another working definition: Biodiversity is the full range of life in all its forms, including the habitats in which they live, the ways species interact with each other and their environment, and the natural processes (such as flooding) that support those interactions.

The biggest threats to biodiversity in King County visible today are habitat loss and fragmentation from development, invasive plant and animal species, and climate change.

E-401 **King County shall strive to conserve the native diversity of species and habitats in the county.**

E-402 **In the Urban Growth Area, King County shall strive to maintain a quality environment that includes fish and wildlife habitats that support the greatest diversity of native species consistent with Growth Management Act-mandated population density objectives. In areas outside the Urban Growth Area, the county should strive to maintain and recover ecological processes, native landscapes, ecosystems, and habitats that can support viable populations of native species. This should be accomplished through coordinated conservation planning and collaborative implementation.**

E-403 **King County should develop a biodiversity conservation framework and conservation strategy to achieve the goals of maintaining and recovering native biodiversity. This framework should be coordinated with the Washington Biodiversity Conservation Strategy where applicable.**

E-404 **King County should collaborate with other governments and private and non-profit organizations to establish a bioinventory, an assessment and monitoring program, and a database of species currently using King County to provide baseline and continuing information on wildlife population trends in the county.**

2. Climate Change and Biodiversity

The effects of climate change on native biodiversity in the Pacific Northwest are likely to be serious, but as yet are largely unpredictable. In King County, some effects already are apparent as average temperatures over the last decade have increased slowly but steadily, especially in winter. For many native species, climate change will present added stresses to ecosystems and populations, including changes in distribution and availability of food, cover, and breeding habitat. Changes in temperature can alter productivity and growth rates or cause direct mortality, particularly for salmon, and trigger invasions of non-native species. The range and seasonal presence of some species will shift, and it is likely that the timing of when some species are in certain habitats won't match with the availability of their food sources. Finally, changing lake and ocean temperatures may have devastating impacts on the base of food web.

The effects of climate change are only beginning to be observed and understood in the county and are presumed to increase over time. In the face of climate change, biodiversity conservation may be of critical importance for buffering the effects of rising temperatures on regional ecosystems, damping the rates of ecological change, and reducing the potential for sudden, extreme changes in the environment.

E-405 **King County should evaluate a range of projected future climate scenarios based on best available science to help ensure that conservation efforts are able to meet their objectives in a changing climate.**

3. Biodiversity Conservation Approaches

This section provides guidance for biodiversity management of the county's natural resources. The following concepts and principles are based on current approaches to conservation biology, restoration ecology, and climate science combined with input from the new Washington State Climate Change Response Strategy.

a. Landscape Context

Natural resource protection occurs within an ecological context. Environmental management should consider not only the immediate site but also the spatial and temporal context that surrounds it. In terms of spatial context, different activities will require consideration of different scales—from small sub-basins of a few square miles to watersheds and ecosystems that contain many hundreds or thousands of square miles. For example, watershed boundaries are useful ways to define ecological planning units for resource protection of aquatic systems whereas large-scale vegetation communities may be more useful for terrestrial systems.

In terms of temporal contexts, habitat conditions and populations can fluctuate over long time periods. It may take decades to see the results of habitat restoration projects and other environmental management actions on populations, and in the interim climate change and possibly major events such as flooding will also impact the trajectory of restoration actions.

There is no single scale appropriate for all planning and management of conservation activities. Management within the context of a landscape helps to ensure the actions in one area will not be undone or rendered unsustainable by conditions in the surrounding watershed or ecoregion. Conservation efforts designed to protect only one species could have an unintended, detrimental effect on others. Ecological communities consist of multiple species often that interact in the same geographical area.

E-406 **King County's conservation efforts should be integrated across multiple landscape scales, species, and ecological communities.**

E-407 **Distribution, spatial structure, and diversity of native wildlife and plant populations should be taken into account when planning restoration activities, acquiring land, and designing, planning and managing parks.**

E-408 **King County should carry out conservation planning efforts in close collaboration with other local governments, tribes, state and federal governments, land owners, community groups, and other conservation planning stakeholders.**

"Ecoregions" are land areas that contain a geographically unique set of species, communities, and environmental conditions. Washington is a highly diverse state, with portions of nine ecoregions located within its boundaries. Three ecoregions cover parts of King County: the Puget Lowland Ecoregion in the western half of the county, the North Cascades Ecoregion in the northeastern and east central portion, and the Cascades Ecoregion in the southeastern portion of the county.

Ecoregions are the largest units of biodiversity in King County, and this scale is appropriate for broader natural resources planning and management. More localized habitats and species can be identified within these ecoregions, and can inform actions at the watershed and even property-specific level. Funding for landscape evaluations of this nature is extremely limited and will typically require grant funds. The County should take advantage of opportunities that may arise to collaborate with other ecoregional planning efforts.

E-409 **King County should develop a countywide landscape characterization system based on ecoregions as a key tool for assessing, protecting, and recovering biodiversity.**

b. Habitat connectivity

Protecting and enhancing habitat connectivity is a critical action for maintaining ecosystem integrity and resilience, particularly in the face of climate change. However, funding for such evaluations is extremely limited. Protection of isolated blocks of habitat is critical but not enough to adequately protect wildlife in King County. Critical wildlife habitats and refuges also need to be connected across the landscape through a system of habitat corridors, or networks.

How wide the corridors within the network should be is related to requirements of target wildlife species, length of network segment and other important characteristics within the network. Wider corridors will be required for larger species if the distance between refuges is great or if multiple uses, such as public access and trails, are desired. Because it may not be possible to protect wide corridors in the Urban Growth Area, it may not be possible to accommodate larger wildlife species in all areas. Networks will address some of the problems of habitat fragmentation for smaller species within the Urban Growth Area.

Open spaces set aside during subdivision of land should be located to make connections with larger offsite systems. This approach will also benefit other open space goals.

E-410 **Habitat networks for threatened, endangered and Species of Local Importance, as listed in this chapter, shall be designated and mapped. Habitat networks for other priority species in the Rural Area and Natural Resource Lands should be identified, designated and mapped using ecoregion information about the county and its resources and should be coordinated with state and federal ecosystem mapping efforts as appropriate.**

As mentioned above, protecting and enhancing habitat connectivity is critical for maintaining ecosystem integrity and resilience. Functional habitat connectivity is the degree to which a given species can easily move between habitat areas. Because individual species respond to the landscape, functional connectivity depends on both the features in the landscape and how particular species respond to that landscape. Focal species are used to identify important linkages between habitat areas that will be suitable for a variety of species.

E-411 **King County should conduct an analysis to identify areas critical for functional habitat connectivity. This assessment should be coordinated with state and federal mapping efforts as appropriate. Areas identified by this analysis as being critical for functional habitat connectivity should be prioritized by King County for land conservation actions and programs.**

In planning for climate change, it will be increasingly important to provide for habitat connectivity not only across jurisdictional boundaries, but also across a range of environmental gradients. As the *"Washington State Integrated Climate Change Response Strategy"* explains:

Habitat connectivity is expected to allow species and ecosystems to better withstand climate change by allowing them to follow changes in climate across the landscape and maintain critical ecological processes such as dispersal and gene flow. In general, it is much costlier and more difficult to restore connectivity than to maintain existing connectivity, yet ongoing development rapidly removes this opportunity. Planning for habitat connectivity in the near term will be far more economical the sooner it is implemented.

E-412 **King County should work with adjacent jurisdictions, state and federal governments, tribes, and landowners during development of land use plans, Water Resource Inventory Area salmon recovery plans, and site development reviews to identify and protect habitat networks at jurisdictional and property boundaries.**

Additional medium- and long-term strategies identified in the *"Washington State Integrated Climate Change Response Strategy"* that are appropriate for the County to consider when planning for connectivity include:

- Identifying and designating areas most suitable for core habitat and connectivity in view of a changing climate.
- Protecting and restoring areas most suitable for current core habitat, likely future core habitat, and connections between them.
- Protecting and re-establishing connectivity of rivers and their floodplains.
- Adjusting the size and boundaries of conservation areas (parks and natural areas) to accommodate anticipated shifts in habitat and species' ranges.
- Adjusting land use designations in important connectivity areas (for example, allowable density).
- Facilitating inland migration of marine shoreline habitats.

Connectivity is addressed further below, as the Wildlife Habitat Network is a designated Fish and Wildlife Habitat Conservation Area.

c. Ecosystem Resilience and Natural Processes

Ecosystems and habitats suitable for particular species communities are the result of various geologic, hydrologic, and biologic processes. Where habitat forming processes are intact, ecosystems and their inhabitants are more likely to persist in the face of environmental variation.

Further, reducing vulnerability of systems to large-scale disturbances including disease, invasive species, catastrophic fire, flooding, and drought is best accomplished by supporting resilience, which is the ability of a system to return to its former state after a disturbance. When an ecosystem is resilient, that system with its species communities is better able to bounce back following disturbance or change with ecological functions and processes still intact. In addition, current efforts such as the Washington State Department of Ecology's Watershed Characterization analysis can be used to inform decisions and direct resources for regarding land protection and restoration efforts with maximum ecological benefit.

E-413 **King County's efforts to restore and maintain biodiversity should place priority on protecting and restoring ecological processes that create and sustain habitats and species diversity.**

E-414 **When acquiring land for habitat protection, efforts should be made to protect and restore areas of each habitat type most likely to be resistant to and enhance resilience to climate change.**

"Structural diversity" is an accepted scientific term whose meaning varies depending on the ecosystem. For example in in a forest, structural diversity means the combination of tree species, tree height classes, and legacy components (snags, logs); the more of each of these there are, the greater the forest structural diversity. Structural diversity of a river or stream means the degree of sinuosity (meaning curviness of the river and more is better) combined with both native riparian habitat and natural in-stream structure, which includes downed wood, various-sized substrate, and a combination of pools, riffles, and glides. "Landscape diversity" means the size, shape, and connectivity of different ecosystems across a large area; a mosaic of heterogeneous land cover types and vegetation types; assemblages of different ecosystems.

E-415 **King County should conserve areas where conditions support dynamic ecological processes that sustain important ecosystem and habitat functions and values, and promote structural and landscape diversity.**

d. Decisions in the Face of Uncertainty

Both current and historical information on habitat conditions and species distribution can inform ecologists and decision-makers about environmental management decisions. However, decision-makers do not always have access to complete information.

E-416 **King County should use a mixture of information on historic, current, and projected future conditions to provide context for managing public hazards and protecting and restoring habitat.**

E-417 **King County should take precautionary action informed by best available science where there is a significant risk of damage to the environment. Precautionary action should be coupled with monitoring and adaptive management.**

e. Rare Ecosystems, Habitats, and Species

Rare or sensitive habitats and species are at a greater risk of extinction than those that are widespread and abundant and therefore should be a high priority for conservation. An important secondary benefit of protecting habitat for rare, endemic (native to a particular area), or keystone (a species that is central to the survival of a multitude of other species) species is that habitat for many other species is protected as well. For example, the most effective way to protect and enhance native salmonid populations is through protection of those river and

stream channels, riparian corridors, lakes, wetlands, groundwater, headwaters, and watersheds that provide or impact spawning and rearing habitat, food resources, and fish passage. Protecting these resources also enhances protection of habitat for other species.

E-418 **King County should assess the relative scarcity and sensitivity of different land types, habitats and resources, the role of these land types, habitats and resources in supporting sensitive species, and the level of threat to these land types, habitats, and resources in terms of habitat modifications that would likely reduce populations of sensitive species.**

E-419 **King County should give special consideration to protection of rare, endemic, and keystone species when identifying and prioritizing land areas for protection through acquisition, conservation easements, and incentive programs.**

E-420 **King County should incorporate climate change projections into new species protection plans and shall revise older species protection plans when feasible or when conducting regular plan updates to incorporate projected impacts from climate change.**

Rare ecosystems, habitats, and species are also addressed in the Fish and Wildlife Habitat Conservation Areas section below.

f. Integrated Land and Water Management and Planning

In the past, aquatic and terrestrial habitats and species have often been managed independently of each other. Effective conservation and resource management of aquatic and terrestrial systems requires coordinated planning among departments with authority over development regulations and guidelines, wastewater treatment, stormwater management, flood hazard management, groundwater protection, transportation planning and road building, water quality, natural resource management, agriculture, and fish and wildlife conservation. Effective conservation planning must include the interests of private landowners as well.

Coordinated planning and management can improve understanding of cumulative effects on terrestrial and aquatic systems, and can allow for a systems-based approach to avoiding or mitigating for adverse effects and improving habitat functions and value over time.

E-421 **Terrestrial and aquatic habitats should be conserved and enhanced to protect and improve conditions for fish and wildlife.**

E-422 **King County's land use and park planning, regulatory, and operational functions related to environmental protection, public safety, and equity should be closely coordinated across departments and with other applicable agencies and organizations to achieve an ecosystem-based approach.**

g. Habitat and Development

A key element in local wildlife conservation is the integration of wildlife and habitats into developments of all types. Wildlife protection does not have to be at odds with many types of development. Urban multifamily projects, industrial developments, new school facilities and rural open space projects all provide opportunities to enhance wildlife amenities. Residential developers and businesses have been able to use wildlife in marketing strategies to attract more potential homeowners, renters and quality employees.

Techniques such as minimizing clearing during site preparation, using native plant species in required buffers, landscaping, using bridges and wildlife-specific crossings rather than culverts to cross streams and innovative site design can be used to promote wildlife presence and connectivity and minimize problems with nuisance wildlife. Other plan elements, such as open space, road system design and housing density, also have related impacts on the remaining wildlife values that must be considered.

Benefits to wildlife are enhanced if screening and landscaping is composed of native vegetation. Retention of natural vegetation can provide wildlife and aesthetic benefits often at a lower cost than non-native or constructed options.

E-423 **New development should, where possible, incorporate native plant communities into the site plan, both through preservation of existing native plants and addition of new native plants.**

E-424 **King County shall steward public lands well and shall integrate fish and wildlife habitat considerations into capital improvement projects whenever feasible. Fish and Wildlife Habitat Conservation Areas should be protected and, where possible, enhanced as part of capital improvement projects.**

Standard buffers for streams and wetlands will not always adequately protect wildlife resources that utilize those sensitive areas. Areas with critical wildlife resources may need larger buffers to protect the resource.

E-425 **To protect or improve adjacent wetlands and aquatic habitats, stream and wetland buffer requirements may be increased to protect King County species of Local Importance and their habitats, as appropriate. Whenever possible, density transfers, clustering and buffer averaging should be allowed.**

h. Non-Native Species

Non-native species are often invasive because they did not evolve as part of the ecosystem and therefore do not have natural controls or competition. These species may be terrestrial, freshwater, or marine. Invasive species can create costly maintenance problems for both public and private landowners. Noxious and invasive weeds and animal species pose threats to the environmental health of all landscapes in King County, including natural, agricultural, wildlife, wetland, stream, and recreational areas. Weeds spread in a variety of ways, including the transport of seeds or plant parts by vehicles boats, shoes, clothing and animals (including pets, livestock, wildlife, birds and insects), in soil, gravel and other landscaping and building materials, down watercourses and in floods, by wind, and occasionally through deliberate introduction by people. They alter ecosystems through disrupting food chains, out-competing native species, and reducing habitat for native wildlife. Invasive species, including weeds, are widely recognized as having a significant negative impact on wildlife biodiversity.

King County offers technical assistance with identification and removal of non-native plants through programs, including Forest Stewardship and Naturescaping. The county also partners with volunteer groups to remove invasive plants from open space and natural areas. Some non-native species are classified as "noxious" weeds. The King County Noxious Weed Control Program provides many services to county residents, including: educational materials and workshops, current information on control and eradication of noxious weeds, support to volunteer and land owner groups, and annual road-side surveys. In addition, the Noxious Weed Control Program implements the State Weed Law (Revised Code of Washington chapter 17.10) in the county which requires all landowners to eradicate Class A noxious weeds and control designated Class B and county-selected Class C noxious weeds on their properties.

The State Weed Law applies to both private and public lands (except for federal and tribal lands). King County manages approximately 4,420 parcels of public land totaling over 36,000 acres. King County also owns or manages approximately 1,500 linear miles of roads and right of way. These lands are managed by multiple county agencies, including the King County Departments of Natural Resources, Transportation, and Executive Services. Since weed infestations can spread from property to property, on both public and private lands, it is critical that the county have a coordinated strategy for controlling noxious and invasive weeds on county-owned and managed lands.

E-426 **Introductions of non-native, invasive plant, vertebrate, and invertebrate species should be avoided in terrestrial, freshwater, and marine environs.**

E-427 **King County should promote and restore native plant communities where sustainable, feasible, and appropriate to the site and surrounding ecological context and should incorporate climate change considerations into planting design.**

E-428 **On county-owned lands, King County should use locally adapted native species for natural area landscaping, restoration, rehabilitation, and erosion control. Habitat restoration projects should include provisions for adequate maintenance of plantings to prevent invasion of weeds and ensure survival of native plantings.**

E-429 **King County should provide incentives for private landowners who are seeking to remove invasive plants and noxious weeds and replace them with native plants, such as providing technical assistance or access to appropriate native plants.**

E-430 **King County shall implement its strategy to minimize impacts of noxious weeds to the environment, recreation, public health and the economy on all lands in the County. This includes preventing, monitoring and controlling infestations of state-listed noxious weeds and other non-native invasive weeds of concern on county-owned and managed lands.**

E-430a **Through training and other programs, King County should actively encourage the use of environmentally safe methods of vegetation control. Herbicide use shall be restricted to low toxicity products applied by trained and licensed staff or contractors, and used only as necessary. King County shall be a good steward of public lands and protect water quality, by reducing the use of insecticides, herbicides and fungicides through the use of integrated pest and vegetation management practices.**

i. Adaptive Management

Adaptive management refers to modifying management actions based on ongoing monitoring and data analysis. To sustain native biodiversity and improve the county's efforts at conservation, it must always be advancing the understanding of the systems under its care and change its efforts accordingly.

E-431 **Management activities should, when feasible and practicable, be designed in a manner that can test them against management objectives and adjust as appropriate.**

Additional text and policies related to monitoring and adaptive management can be found at the end of this chapter.

4. Fish and Wildlife Habitat Conservation Areas

Fish and wildlife habitat conservation, according to the state's definition, means land management for maintaining populations of species in suitable habitats within their natural geographic distribution so that the habitat available is sufficient to support viable populations over the long term and isolated subpopulations are not created. This definition does not mean that all individuals of all species at all times must be maintained, but it does mean not degrading or reducing populations or habitats so that they are no longer viable over the long term. Additionally, it should be recognized that geographic distributions will shift with climate change.

King County's fish and wildlife policies and regulations have been informed by current state fish and wildlife guidance, recommendations, and requirements. The Growth Management Act directs local jurisdictions to designate and protect critical areas, including Fish and Wildlife Habitat Conservation Areas. Fish and Wildlife Habitat Conservation Areas are designated with the intent to ensure the conservation of individual species recognized as declining or imperiled as well as protect and connect specific areas of habitat deemed important. This approach of protecting individual species and their habitat comprises one of the five major objectives described above for protecting the county's biodiversity. Because biodiversity encompasses a variety of levels, from genes to ecosystems, and occurs at multiple spatial scales, a wider approach beyond single-species management is necessary to conserve biodiversity in King County. Additionally, most fish and wildlife species are not confined to small portions of the landscape; rather, they move about for feeding, breeding, rearing young, and interacting with other members of their species to insure adequate genetic exchange and population viability.

Federal laws have been enacted over the past century to protect a wide range of species. In addition to the Endangered Species Act, other federal laws include the Marine Mammal Protection Act, and the Migratory Bird Treaty Act. Individuals of Endangered Species Act -listed species, marine mammals, and migratory birds in King County are protected under the provisions of these laws.

In order to build a robust approach to biodiversity conservation, especially in view of a changing climate, individual species and habitat protections must be integrated with a landscape-scale approach to fostering and protecting resilient and diverse ecosystems. Fish and Wildlife Habitat Conservation Areas occur on both publicly and privately owned lands. Designating these areas is an important part of land use planning for appropriate development densities, urban growth area boundaries, open space corridors, incentive-based land conservation and stewardship programs, and acquisition planning. The policies in this section are intended to fulfill federal and state requirements for protection of specific species and habitats while implementing landscape-based approaches to conserve native biodiversity in the long term. Protection measures designed to help maintain populations of certain species may necessarily include protecting the habitat where those species have a primary association with the protected area such as spawning or breeding, and also for rearing young, resting, roosting, feeding, foraging, and migrating.

E-432 **King County shall designate the following areas as Fish and Wildlife Habitat Conservation Areas:**

- **a. Areas with which federal or state listed endangered, threatened or sensitive species have a primary association;**
- **b. Habitats of Local Importance and Habitats for Species of Local Importance;**
- **c. Wildlife habitat networks designated by the county;**
- **d. Commercial and recreational shellfish areas;**
- **e. Kelp and eelgrass beds;**
- **f. Herring, smelt, and sand lance spawning areas;**
- **g. Riparian corridors; and**
- **h. State aquatic reserves.**

E-433 **King County should map Fish and Wildlife Habitat Conservation Areas. King County shall protect Fish and Wildlife Habitat Conservation Areas through measures such as regulations, incentives, capital projects or purchase, as appropriate.**

The Washington Administrative Code guidelines suggest considering waters of the state, wetlands, salmonid habitat (which includes marine nearshore areas), and riparian ecosystems when designating fish and wildlife habitat conservation areas. All of these areas and their associated buffers are highly valuable wildlife habitat, and they serve many other functions as well. Protections for these areas are addressed more broadly in other provisions of this chapter.

a. Federal and State Listed Endangered, Threatened, Sensitive Species

The importance of designating seasonal ranges and habitat elements where federal and state listed endangered, threatened and sensitive species have a primary association is that these areas, if altered, may reduce the likelihood that the species will survive over the long term. The state recommends that King County and other local jurisdictions identify and classify these areas.

E-434 **Habitats for species that have been identified as endangered, threatened, or sensitive by the state or federal government shall not be reduced and should be conserved.**

b. Species and Habitats of Local Importance

Federal and state listings of species as endangered or threatened often encompass relatively large geographic areas. More localized declines of species within King County may not be captured by state and federal listings. For example, local monitoring data indicate the extinction of the Early Lake Sammamish Kokanee run, likely extinction of the Middle Lake Sammamish Kokanee salmon run, and a significant decline in the Late Lake Sammamish Kokanee salmon runs. In 2000, a petition to list just the Early run was filed with the U.S. Fish and

Wildlife Service, but by 2003 the run went extinct without any federal action to prevent that result. In 2007, a second petition was filed to list all remaining Lake Sammamish kokanee. This petition led to an official review of the population's status by the U.S. Fish and Wildlife Service.

On September 30, 2011, the U.S. Fish and Wildlife Service concluded that kokanee and sockeye throughout the Pacific Northwest should be considered together in their listing determination and therefore declined to list this unique kokanee population. However, King County believes the conservation of local native kokanee and its watershed habitat to be important to the quality of life and natural heritage of the region's residents. Towards that end the County maintains strong collaborative relationships with the watershed cities, the U.S. Fish and Wildlife Service, Washington Department of Fish and Wildlife, Washington State Parks, the Snoqualmie Tribe, Trout Unlimited and additional non-governmental organizations, schools, watershed residents and other key contributors. Together these partners work to improve kokanee habitat, conduct research, educate local residents and businesses, and support an artificial propagation program at the Issaquah Salmon Hatchery to increase the viability of the kokanee population.

King County defines Species of Local Importance as those species that are of local concern primarily because of their population status or their sensitivity to habitat manipulation. The county takes into consideration native species named as priority species by the Washington Department of Fish and Wildlife; anadromous salmonids aquatic species whose populations are particularly vulnerable to changes in water quality and quantity; species whose habitat or mobility is limited (local populations of species that are immobile or have very limited habitat); and species that can be directly impacted by King County (for example, where road projects or other infrastructure development can impact habitat; where the county may acquire, protect, or restore certain habitat types). King County Species of Local Importance are identified so that they and their habitats may be considered during land use planning and protected during project implementation and development. Habitats for Species of Local Importance are designated as a type of Fish and Wildlife Habitat Conservation Area and are covered by policies and regulations designed to protect those areas. However, individual animals or plants may also be at risk of injury from development or during construction or other changes to the landscape and may require additional measures to protect them from injury. For example, freshwater mussels may be protected from an instream project by relocating individual animals so they are not injured or killed during construction. Or, a rare individual plant may require the protection of an area of land because the plant cannot be relocated.

E-435 King County designates the following to be Species of Local Importance:

a. Salmonids and other anadromous fish – Kokanee salmon, Sockeye/red salmon, Chum salmon, Coho/silver salmon, Pink salmon, Coastal resident/searun cutthroat trout, Rainbow trout, Dolly Varden, and Pacific lamprey;

b. Native Freshwater Mussels – Western pearlshell mussel, Oregon and western floater, and western ridge mussel;

c. Shellfish – Dungeness crab, Pandalid shrimp, Geoduck clam, and Pacific oyster;

d. Marine Fish – White sturgeon, Pacific herring, Longfin smelt, Surfsmelt, Lingcod, Pacific sand lance, English sole, and Rock sole;

e. Birds – Western grebe, American bittern, Great blue heron, Brant, Harlequin duck, Wood duck, Hooded merganser, Barrow's goldeneye, Common goldeneye, Cinnamon teal, Tundra swan, Trumpeter swan, Surf scoter, White-winged scoter, Black scoter, Osprey, Western screech-owl, Sooty grouse, Band-tailed pigeon, Belted kingfisher, Hairy woodpecker, Olive-sided flycatcher, Western meadowlark, Cassin's finch, and Purple finch;

f. Mammals – American marten, mink, Columbian black-tailed deer, Elk in their historic range, mountain goat, Pika, roosting concentrations of Big-brown bat and Myotis bats;

g. Amphibians – Red-legged frog;

h. Reptiles – Western fence lizard;

i. Rare Plants – bristly sedge; Canadian St. John's-wort; clubmoss cassiope; Oregon goldenaster; toothed wood fern; Vancouver ground-cone; and white-top aster; and

j. High-quality ecological communities - Douglas-fir - Pacific Madrone / Salal; Douglas-fir - Western Hemlock / Swordfern; Forested Sphagnum Bog PTN, Low Elevation Freshwater Wetland PTN, North Pacific Herbaceous Bald and Bluff, Red Alder Forest; Western Hemlock - (Western Redcedar) / Bog Labrador-tea / Sphagnum Spp.; Western Hemlock - (Western Redcedar) / Devil's-club / Swordfern; Western Hemlock - (Western Redcedar) / Sphagnum Spp.; Western Hemlock / Swordfern – Foamflower; Western Redcedar- Western Hemlock / Skunkcabbage; and Willow Spp. Shrubland [Provisional]).

E-436 King County shall protect Species of Local Importance through measures such as regulations, incentives, capital projects, or purchase, as appropriate.

Caves, cliffs, and talus (a sloping mass of rocky fragments at the base of a cliff) occupy a very small percent of the total land area, yet they are disproportionately important as wildlife habitats. The same is true for sphagnum-dominated peat bogs, old-growth forest, and snag-rich areas, which have all declined as a result of development. Each of these habitats concentrates and supports a unique animal community. Plant associations adjacent to caves, cliff, and talus are important because they help stabilize light and wind patterns, and as with snag-rich areas, they provide perches for raptors. Caves, cliffs, talus, and sphagnum-dominated peat bogs are fragile environments that can be easily destroyed, but cannot be easily restored

E-437 **King County shall designate the following to be Habitats of Local Importance:**

a. Caves;

b. Cliffs;

c. Talus;

d. Old-growth forest;

e. Sphagnum-dominated peat bogs; and

f. Snag-rich areas.

The federal and state governments also designate "candidate" species. In the context of the Endangered Species Act, candidate means any species being considered for listing as an endangered or a threatened species but not yet the subject of a proposed rule. Lists of federal candidate species are updated annually. Review of these lists and the supporting assessments can provide valuable information about threats to species found within King County and can help the county to be proactive in preparing for potential future listings.

E-438 **King County should review federal and state candidate listings for information about candidate species that are under consideration for listing as an endangered or threatened species and found in King County. King County shall protect habitat for candidate species, as listed by the Washington Department of Fish and Wildlife or a federal agency. Information regarding candidate species should be used to inform King County's long-term wildlife conservation and planning efforts.**

E-439 **King County shall review fish and wildlife surveys and assessments with local application to King County and consider additional habitat protections where warranted. Habitat protection should be accomplished through incentives, cooperative planning, education, habitat acquisition, habitat restoration, or other appropriate actions based on best available science.**

E-440 **King County should regularly review the Washington Department of Fish and Wildlife's list of Priority Species and other scientific information on species of local importance, and evaluate whether any species should be added to or deleted from the lists in E-435 and E-437. Any additions or deletions should be made through the annual amendment process for the comprehensive plan.**

E-441 **Development proposals shall be assessed for the presence of King County Species of Local Importance. A comprehensive assessment should follow a standard procedure or guidelines and shall occur one time during the development review process.**

Salmon are particularly important because of their significance to local and regional character, tribes, salt and freshwater ecosystems, and recreational and commercial fisheries. A growing number of salmon stocks within King County and other areas of Puget Sound are in a serious state of decline. Three salmonid species present within King County have been listed under the Endangered Species Act, several others have significant potential for listing, and the salmon-dependent Orca whale has been listed as endangered.

The protection and restoration of river and stream channels, riparian corridors, lakes, wetlands, headwaters and watersheds, and marine nearshore habitats that provide or impact spawning and rearing habitat, food resources and fish passage is essential to the conservation of native fish populations. Intermittent streams also can be critical to native fish populations.

Hatcheries and other artificial propagation facilities that are properly managed to protect the abundance, productivity, genetic diversity, and spatial distribution of native salmon may contribute in the near term to both maintaining sustainable salmon stocks and harvest opportunities while habitat protection and restoration measures for salmon are implemented.

E-442 **King County should conserve and restore salmonid habitats by ensuring that land use and facility plans (transportation, water, sewer, electricity, gas) include riparian and stream habitat conservation measures developed by the county, cities, tribes, service providers, and state and federal agencies. Project review of development proposals within basins that contain hatcheries and other artificial propagation facilities that are managed to protect the abundance, productivity, genetic diversity, and spatial distribution of native salmon and provide harvest opportunities should consider significant adverse impacts to those facilities.**

c. Wildlife Habitat Network

The King County Wildlife Habitat Network was designed to help reduce the effects of fragmentation by linking diverse habitats through the developed and developing landscape. The network is intended to facilitate animal dispersal by connecting isolated critical areas, segments, open space, and wooded areas on adjacent properties. The corridors tend to follow riparian and stream corridors across the lowlands and the upland plateau to the east and southeast of Lake Washington into the foothills. The Wildlife Habitat Network is mapped on the "Wildlife Network and Public Ownership Map."

5. Conservation Incentives and Education

King County offers landowner technical assistance for protection of fish and wildlife habitat through programs including Forest Stewardship, Noxious Weed Control, the GoNative web site, and assistance for native plant restoration and landscaping. Other organizations, including King Conservation District, Natural Resource Conservation Service, Washington State University Extension, and Washington Department of Fish and Wildlife's Backyard Wildlife Sanctuary Program offer support to landowners to enhance fish and wildlife habitat. Landowners can also receive property tax reductions through the King County Public Benefit Rating System in exchange for protecting and improving habitat.

E-443 **King County should promote voluntary wildlife habitat enhancement projects by private individuals and businesses through educational, active stewardship, and incentive programs.**

E-444 **King County should partner with community associations, realtors, community groups, and other agencies to conduct targeted outreach to potential and new property owners about fish and wildlife habitat education and forestry education and incentive programs, particularly in Rural Areas and Natural Resource Lands in the county.**

B. Stormwater Quality

Rivers, streams, lakes, wetlands, and groundwater must be protected from the adverse impacts of development and land use change to continue functioning in a beneficial manner. Because development both increases runoff from storms and reduces streamflows in dry months by limiting infiltration, control of the rate, volume and quality of stormwater runoff is critical. Unmitigated stormwater runoff can cause erosion, sedimentation and flooding with resulting adverse impacts on water quality, fish and wildlife habitat, property and human safety. In addition, stormwater runoff can carry pollutants such as oil, heavy metals, fertilizers, herbicides, pesticides and animal wastes into waters. Sedimentation from soil disturbed by clearing, grading, farming and logging can reduce river or stream channel capacity, fill lakes and wetlands, and smother aquatic life and habitat.

King County stormwater management encompasses a wide range of strategies that integrate proven, traditional approaches with new and innovative concepts, such as low impact development practices intended to manage stormwater runoff onsite, reducing discharges of pollutants in stormwater runoff, and mimicking natural hydrology.

King County's stormwater management strategies include but are not limited to: encouraging an approach to site development that includes clustering or smart growth, minimizes impervious surfaces, and maximizes the amount of native plants and soils; using education and social marketing to increase the public's awareness of water quality issues and encourage behaviors that support water quality; improving pollution source control by legislating product or material restrictions; improving business practices by educating business owners and operators about pollution generating activities and best management practices to mitigate them; and constructing and maintaining an stormwater infrastructure system that controls, conveys and treats stormwater runoff. Together these strategies will reduce pollution and flow impacts of stormwater runoff on King County's surface and ground waters.

As required by the National Pollution Discharge Elimination System Phase I Municipal Stormwater Permit, King County is making low impact development the preferred and commonly used approach to site development. As a result of using the low impact development approach, an increasing number of stormwater management best management practices including, but not limited to, rain gardens, dispersion, permeable driveways and walkways, vegetated roofs, and the capture and reuse of rainwater, will be constructed on private property and will rely on private maintenance for their continuing function.

In addition to the stormwater strategies discussed above, as well as those discussed in Chapter 8: Transportation, effective stormwater management will require a basin or sub-basin approach that identifies areas that were built out under old or nonexistent stormwater design standards. Basins where deficiencies in flow control or water quality are identified would be prioritized to correct those deficiencies. These retrofits could include upgrades to existing stormwater management structures or the placement of new ones, including onsite low impact development best management practices like bioretention or raingardens, or the replacement of impervious pavement with permeable.

Achieving the goals of contemporary stormwater management may require improvements to best management practices and encouraging or requiring the use of different products. Approaches could include using green products, implementing new land development approaches such as cluster housing, and, in some areas, the setting aside of land and its dedication to riparian habitat, and maintaining natural vegetation.

E-445 **Stormwater runoff shall be managed through a variety of methods, with the goal of protecting surface water quality, in-stream flows, and aquatic habitat; promoting groundwater recharge while protecting groundwater quality; reducing the risk of flooding; protecting public safety and properties; and enhancing the viability of agricultural lands.**

E-446 **King County should evaluate the need for product or material restrictions because of water quality impacts.**

C. Upland Areas

1. Forest Cover

King County recognizes the value of trees and forests in both rural and urban communities for benefits such as improving air and water quality and enhancing fish and wildlife habitat. Forests absorb and slowly release rainwater to streams and aquifers, filter runoff, and provide food, shade, and cover for wildlife. In doing so, they help to prevent flooding and erosion, protect drinking water, and support fish and wildlife and their habitat. Therefore, it is important that regulations protecting critical areas like wetlands take into consideration both regulations and incentive programs intended to conserve forest cover in upland areas. Forests in rural King County are also relied upon for recreation and resource use, including harvest and firewood collection and cultivation of special forest products categorized as edibles, florals and medicinals. Forest Stewardship Plans provide mechanisms for tailoring regulations and best management practices for forest management to individual properties. Completion of one of these plans can also qualify landowners for tax incentive programs and streamlined permitting. The retention or restoration of forest cover and native vegetation also reduces stormwater runoff and maximizes natural infiltration processes, thus reducing the need for additional stormwater management.

E-447 **King County recognizes that conserving and restoring headwater and upland forest cover is important for preventing flooding, improving water quality, and protecting salmon and other wildlife habitat. The central role that forest cover plays in supporting hydrologic and other ecological processes should be reflected in policies and programs addressing stormwater management, flooding, wildlife, and open space.**

E-448 **King County's critical areas and clearing and grading regulations should provide for activities compatible with long-term forest use, including use of recreational trails, firewood collection, forest fire prevention, forest management, and control of invasive plants.**

E-449 **King County shall promote retention of forest cover and significant trees using a mix of regulations, incentives, and technical assistance.**

2. Soils and Organics

Soils play a critical role in the natural environment. The benefits of healthy soils include: (1) keeping disease-causing organisms in check, (2) moderating stormwater runoff, (3) filtering, binding, and biodegrading pollutants, (4) recycling and storing nutrients, and (5) serving as the basis for forest and agricultural fertility. More recently, the carbon storage properties of soils have been recognized as a major climate-moderating influence. The properties of a healthy soil are similar to those of a sponge, faucet and filter. They soak up and store water, naturally regulate the flow of water, and bind and degrade pollutants. The presence of millions of macro and microorganisms in soil creates a vibrant soil culture where organic material is consumed and air and water are retained. Nutrients are made available to plants to allow healthy root growth and oxygen generation.

It is common for healthy native soils to be removed during land development. Even when soils are not removed, development and other human activity often cause soil compaction, removal and erosion of healthy, native soils. Fewer organisms are present in disturbed soils. The resulting decrease in organic matter inhibits the soil's ability to hold water, which increases stormwater runoff. In addition, plants cannot thrive in disturbed soils because of the lack of nutrients. This, in turn, causes people to use more chemical fertilizers, pesticides, and water to induce plant growth. The combination of increased stormwater runoff and increased fertilizer and pesticide use results in greater water pollution downstream.

Increasing the organic content in disturbed soils can help restore their environmental function. Composted organic materials that might be used include yard debris, food and wood wastes, soiled paper, biochar, biosolids and/or livestock wastes, but not others, such as fly ash from industrial smokestacks. Benefits of incorporating composted organic materials in soils include: improving stream habitat, supporting healthier plants, reducing stormwater runoff, and closing the recycling loop for organic materials. The transformation of degraded soils to enhance their ability to uptake and store carbon may be the one of the most effective actions that can be taken to mitigate the near-term effects of climate change.

It is preferable to leave native soil and vegetation in place as much as possible so that it can continue to function as a natural sponge and filter, minimizing erosion and stormwater runoff. Where soil is disturbed or removed, soil function can be improved by providing soil with adequate depth and organic matter content.

E-450 **Site development practices should minimize soil disturbance and maximize retention of native vegetation and soils. Where soil disturbance is unavoidable, native soils should be stockpiled on site and reused on site in accordance with best management practices to the maximum extent practicable.**

E-451 **King County shall require the use of organic matter to restore disturbed soils on site developments.**

Salmon play an important role in sustaining the productivity of soils in riparian and floodplain areas. Salmon mature in saltwater environments and then spawn and die in their original spawning streams. In doing so, salmon transport nutrients back to watersheds that eventually become available to vegetation.

E-452 **The role of salmon in transferring nutrients and maintaining the productivity of riparian and floodplain soils should be incorporated in the development of salmon and soil conservation plans.**

Organics comprise a large portion of the waste generated by King County residences, businesses and farms. This organic waste stream requires significant solid waste, farm management, and wastewater treatment resources. Many of these "waste materials" (yard debris, food and wood waste, soiled paper, biosolids, and agricultural livestock wastes), can be recycled and reused to provide numerous uses that are beneficial to the environment and the economy.

King County has a long history of resource conservation and waste recycling. Programs have successfully captured organic materials for beneficial use such as yard debris and biosolids applications to farms, forests and composting. However, large volumes of organic waste continue to be disposed of in the landfill. Significant volumes of livestock waste generated in the suburbs, Rural Areas and Natural Resource Lands are inadequately managed, which can adversely impact water quality and fish habitat.

Although efforts are underway to increase the amount of organic materials that are recycled, the region still lacks the capacity to process all of these materials. Along with its efforts to promote beneficial use of these products, King County is working with organic material processors and others to try and increase the processing capacity in the region.

E-453 **King County should implement programs to improve availability and markets for organic materials for soils that have been disturbed by new and existing developments.**

E-454 **King County shall regard the region's organic waste materials as resources which should be reused as much as possible, and minimize the disposal of such materials.**

E-455 **King County shall work with regional stakeholders to ensure a viable and safe organics recycling infrastructure that allows for yard, food, wood, biosolids, manure and other organic wastes to be turned into resources benefiting climate change, soil health, water quality, and maximizing landfill diversion.**

King County seeks to divert as much material as possible from disposal to reduce overall costs of solid waste management, conserve resources, protect the environment, and strengthen the county's economy (see Chapter 9: Services, Facilities and Utilities, F-266). In many cases, organic materials can be recycled into a beneficial, highly valued resource helping to meet these diversion goals. Beneficial uses of organic materials include, but are not limited to, the following: soil amendment, mulch, erosion control, and even energy production.

King County recognizes that in most cases, the best management method for yard debris and livestock wastes is to compost it on the property where it is generated. Examples of residential onsite yard debris management techniques include grasscycling (leaving the grass on the lawn when it is cut) and backyard composting.

E-456 **King County shall promote, encourage, and require, where appropriate, the beneficial use of organic materials, including but not limited to their use in the following activities: agriculture and silviculture; road, park and other public project development; site development and new construction; restoration and remediation of disturbed soils; nursery and sod production; and landscaping. For these purposes, organic materials do not include fly ash.**

E-457 **King County agencies shall use recycled organic products, such as compost, whenever feasible and promote the application of organic material to compensate for historic losses of organic content in soil caused by development, agricultural practices, and resource extraction.**

E-458 **King County will seek to enhance soil quality, and protect water quality and biodiversity across the landscape by developing policies, programs, and incentives that support the goal of no net loss of organic material.**

Biosolids are the nutrient rich organic product from the wastewater treatment process which can be recycled as a soil amendment. At King County's wastewater treatment plant, solids are removed from the wastewater and treated in large digesters where the organic solids are stabilized, reducing the volume by half. After digestion, a portion of water is removed, leaving the semisolid material ready for recycling.

The Biosolids Management Program's mission is to safely and sustainably return carbon and nutrients to the land through the use of biosolids. The Biosolids Management Program pursues environmental stewardship through diverse public-private partnerships. One hundred percent of county biosolids are beneficially used through the forestry and agriculture programs. A portion of the County's biosolids are composted as a Class A product.

E-459 **King County supports and should explore ways to beneficially use biosolids locally, whenever feasible.**

On-farm composting as a method of managing livestock waste and other organic waste materials is becoming an important waste management strategy for farmers. Benefits of on-farm composting include:

- Additional revenue from the sale of compost;
- Reduced costs for water, fertilizers and pesticides, due to reduced water usage and reduced reliance on fertilizers and pesticides;
- Reduced impacts to surface waters; and
- Increased crop yields.

King County's Livestock Management Ordinance, adopted in December 1993, sets manure management standards in order to minimize impacts to water quality by preventing farm wastes from contaminating the region's watersheds. The Livestock Management Ordinance encourages farmers to implement farm plans in collaboration with the King Conservation District to protect and enhance natural resources, including water quality. The King Conservation District provides technical assistance and education to agricultural landowners on how to implement best management practices, which include manure storage facilities and pasture renovation, as well as stream and wetland buffer fencing and clean water diversion. The resulting farm plans can include provisions for onsite and offsite management of livestock wastes and strategies to integrate processing livestock wastes with other organic waste materials. These strategies should be consistent with the King County Comprehensive Solid Waste Management Plan, including but not limited to on-farm composting and land application of processed yard debris. Farm plans that address livestock waste management further compliance with the provisions of the Clean Water Act and other federal and state mandates regarding water quality.

E-460 **King County shall promote livestock waste management that keeps waste out of stormwater runoff and from infiltration to groundwater, and enhances soil health by methods such as combining livestock waste with other plant and animal waste material for incorporation into crop soils.**

D. Aquatic Resources

King County's aquatic resources include rivers, streams, lakes, wetlands, groundwater, and the marine waters of Puget Sound. These resources provide many beneficial functions, including fish and wildlife habitat; food supplies; flood risk reduction; water supply for agricultural, commercial, domestic and industrial use; energy production; transportation; recreational opportunities; and scenic beauty.

In order to preserve and enhance aquatic resources in King County, they must be managed as an integrated system together with terrestrial resources, and not as distinct and separate elements. The hydrologic cycle (the occurrence, distribution and circulation of water in the environment) is the common link among aquatic resources and describes their interdependence.

Use and modification of water resources and the surrounding terrestrial environment affects how the hydrologic cycle functions and can cause unintended detrimental impacts such as flooding, low stream and river flows, reduced groundwater availability, erosion, degradation of water quality, loss of fish and wildlife habitat, and loss of archeological and traditional cultural resources that depend upon but do not damage natural resources. In order to minimize adverse impacts on the water resources of King County and ensure the continued ability to receive the beneficial uses they provide, the county will need to promote responsible land and water resource planning and use. These beneficial uses include fish and wildlife habitat, flood risk reduction, water quality control, sediment transport, energy production, transportation; recreational opportunities, scenic beauty, and water supply for agricultural, municipal, and industrial purpose.

E-461 **King County shall use incentives, regulations, capital projects, open space acquisitions, public education and stewardship, and other programs like recycled water to manage its aquatic resources (Puget Sound, rivers, streams, lakes, freshwater and marine wetlands and groundwater) and to protect and enhance their multiple beneficial uses. Use of water resources for one purpose should, to the fullest extent practicable, preserve opportunities for other uses.**

E-462 **Development shall occur in a manner that supports continued ecological and hydrologic functioning of water resources and should not have a significant adverse impact on water quality or water quantity, or sediment transport, and should maintain base flows, natural water level fluctuations, unpolluted groundwater recharge in Critical Aquifer Recharge Areas and fish and wildlife habitat.**

1. Watersheds

A watershed is an area that drains to a common outlet or identifiable water body such as Puget Sound, a river, stream, lake or wetland. There are six major watersheds in King County (Cedar/Lake Washington, Green/Duwamish, Puget Sound, South Fork Skykomish, Snoqualmie and White) that, in turn, contain numerous smaller catchments and water bodies. Surface and ground waters are managed most effectively by understanding and considering potential problems and solutions for an entire watershed. Because watersheds frequently extend into several jurisdictions, effective restoration and preservation planning and implementation must be coordinated.

E-463 **King County shall integrate watershed plans with marine and freshwater surface water, flood hazard management, stormwater, groundwater, drinking water, wastewater, and recycled water planning, as well as federal and state Clean Water Act compliance and monitoring and assessment programs to provide efficient water resource management.**

E-464 **King County shall protect and should enhance surface waters, including streams, lakes, wetlands and the marine waters and nearshore areas of Puget Sound, on a watershed basis by analyzing water quantity and quality problems and their impacts to beneficial uses, including fish and wildlife habitat, flood risk reduction, and erosion control. Conditions of and impacts to the downstream receiving marine beaches and waters of Puget Sound shall be included in watershed management efforts.**

Over the past several years King County has been working cooperatively with many of the water utilities, local governments, state agencies, tribes, and other interested parties in the region to gather data and information to support a regional water supply planning process. (For more information and specific policies related to regional water supply planning, please see Chapter 9: Services, Facilities and Utilities). This cooperative work includes assessments of current and future water demands and supplies, potential climate change impacts on water, opportunities for use of recycled water, and potential improvements to steam flows. These cooperative efforts will provide valuable information to inform not only water supply planning but also salmon recovery planning and projects.

E-465 **King County should use the information from local and regional water supply planning processes to enhance the county's water resource protection and planning efforts, including implementation of Water Resource Inventory Area salmon recovery plans.**

E-466 **As watershed plans are developed and implemented, zoning, regulations and incentive programs may be developed, applied and monitored so that critical habitat in King County watersheds is capable of supporting sustainable and fishable salmonid populations. Watershed-based plans should define how the natural functions and values of watersheds critical to salmonids are protected so that the quantity and quality of water and sediment entering the streams, lakes, wetlands and rivers can support salmonid spawning, rearing, resting, and migration.**

E-467 **Responsibility for the costs of watershed planning and project implementation, including water quality, groundwater protection, and fisheries habitat protection, should be shared between King County and other jurisdictions within a watershed.**

King County contains a number of wetlands, lakes and river and stream reaches that are important to the viability of fish and wildlife populations and are therefore considered biological, social and economic resources. Some resource areas, including Regionally Significant Resource Areas and Locally Significant Resource Areas, were previously identified through basin plans and other resource inventory efforts. Additional high-priority habitat areas have been identified through Water Resource Inventory Area-salmon recovery plans, *"Waterways 2000,"* Cedar River Legacy Program, acquisition plans, and through basin conditions maps used to establish protective buffers along wetlands and streams under the Critical Areas Ordinance.

These areas contribute to the resource base of the entire Puget Sound region by virtue of exceptional species and habitat diversity and abundance when compared to basins of similar size and structure elsewhere in the region. These areas may also support rare, endangered or sensitive species, including Endangered Species Act-listed salmonids. They also provide wetland, lake, and stream habitat that is important for wildlife and salmonid diversity and abundance within the basin.

E-468 **King County's Shoreline Master Program, watershed management plans, Water Resource Inventory Area salmon recovery plans, flood hazard management plans, master drainage plans, open space acquisition plans, and critical areas regulations should apply a tiered system of protection that affords a higher standard of protection for more significant resources.**

E-469 **A tiered system for protection of aquatic resources should be developed based on an assessment of basin conditions using Regionally Significant Resource Area and Locally Significant Resource Area designations, Water Resource Inventory Area Plans, habitat assessments completed for acquisitions plans, the Water Quality Assessment, Total Maximum Daily Loads, ongoing monitoring programs, and best available science.**

2. Wetlands

Wetlands are valuable natural resources in King County. They include deep ponds, shallow marshes and swamps, wet meadows, and bogs. Wetlands comprise forested and scrub-shrub communities, emergent vegetation, and other lands supporting a prevalence of plants adapted to saturated soils and varying flooding regimes. Wetlands, with their highly diverse forms and diffuse distribution, can be particularly challenging to categorize and manage.

The federal and state governments also have roles in identifying and regulating certain types of wetlands and development activity. In order to streamline and synchronize regulatory standards for wetlands, the county relies on guidance from the Washington State Department of Ecology, U.S. Army Corps of Engineers Seattle District, and Environmental Protection Agency for wetland identification, delineation, categorization, and, where appropriate, mitigation.

E-470 **King County shall use current manuals and guidance from state and federal governmental agencies and departments to identify, delineate, and categorize wetlands and to establish mitigation requirements for wetlands.**

E-471 **King County will apply the current scientifically accepted methodology for wetland mitigation based on technical criteria and field indicators. Where appropriate, King County should rely on publications and recommendations from state and federal agencies to ensure King County-approved mitigation will be accepted by state and federal agencies with jurisdiction.**

Some wetlands are large and their physical boundaries as well as their functions and values extend beyond individual jurisdictional boundaries.

E-472 **King County shall communicate and coordinate with other jurisdictions and tribes to establish uniform countywide wetlands policies that provide protection of both regionally and locally highly-rated wetlands.**

Wetlands are productive biological systems, providing habitat for fish and wildlife. Wetlands also store flood waters and control runoff, thereby reducing flooding, downstream erosion and other damage. Further, wetlands protect water quality by trapping sediments and absorbing pollutants. They allow rain and snowmelt to infiltrate into aquifers, recharging them and potentially making that water available for human use. They discharge groundwater, making it available to plants and animals. Wetlands store peak flows and discharge to streams in dry periods, thus enabling fish and riparian animal populations to survive. They may serve as outdoor classrooms for scientific study. Some are used for hiking, hunting, and fishing. These wetland functions and values need consideration from a watershed perspective. Measures to protect wetland functions and values need to be taken at both the site-specific and watershed scale. In the urban growth area, land use authority is often shared by multiple jurisdictions at the scale of a drainage basin. Similarly, efforts to protect and restore wetlands may be sponsored by multiple parties, including local governments.

E-473 **King County's overall goal for the protection of wetlands is no net loss of wetland functions and values within each drainage basin. Acquisition, enhancement, regulations, and incentive programs shall be used independently or in combination with one another to protect and enhance wetlands functions and values. Watershed management plans, including Water Resource Inventory Area plans, should be used to coordinate and inform priorities for acquisition, enhancement, regulations, and incentive programs within unincorporated King County to achieve the goal of no net loss of wetland functions and values within each drainage basin.**

Buffers are necessary but often insufficient to adequately protect wetland values and functions especially when wetlands are small and the adjacent watershed large. Consequently, the location of development in addition to its size is important in determining its impact on wetland functions and values.

The functions and values of a wetland will change as the surrounding land is altered by development and other human activities, and as local conditions are influenced by climate change. Silviculture, agriculture, and development-related changes in forest cover and impervious surface affect stormwater runoff patterns, flooding, water quality, and wetland hydrology.

E-474 **Development adjacent to wetlands shall be sited such that wetland functions and values are protected, an adequate buffer around the wetlands is provided, and significant adverse impacts to wetlands are prevented.**

The diversity of plants and animals found in wetlands generally far exceeds that found in terrestrial habitats in the Pacific Northwest. Habitat loss and fragmentation are considered the greatest threats to this native biodiversity. Wetlands in the Urban Growth Area will experience the largest reduction in the distribution and number of native animals and plants due to habitat loss and fragmentation. It is anticipated that climate change will exacerbate the adverse effects of habitat loss and fragmentation by further reducing existing wetland habitat

and altering wetland hydroperiods thereby increasing the inter-habitat distances and potentially restricting the dispersal and movement of plants and wildlife between favorable wetlands and habitats.

Protecting wetland biodiversity depends upon supporting the natural processes (including hydrology, nutrient cycling, and natural disturbances) that shape wetland habitat, protecting wetlands functions and values from the impacts of adjacent land uses, maintaining biological linkages, and preventing fragmentation of wetland habitats. Small wetlands strategically located between other wetlands may provide important biological links or "stepping stones" between other, higher quality wetlands. Wetlands adjacent to habitat networks also are especially critical to wildlife because they allow individual animals to escape danger and populations to inter-disperse and breed. Wetlands adjacent to habitat networks should receive special consideration in planning land use.

E-475 **To improve adjacent wetlands and aquatic habitat, areas of native vegetation that connect wetland complexes should be protected. Whenever effective, incentive programs such as buffer averaging, density credit transfers, or appropriate non-regulatory mechanisms shall be used for this purpose.**

Many wildlife species require access to both wetlands and adjacent terrestrial lands to support them at different stages of their lives. For example, many amphibians breed in the water and need access to terrestrial habitat for feeding and for shelter during the winter. Fixed-width buffers alone are unlikely to adequately address these needs or entirely protect wetlands from surrounding human activity. Adjacent and accessible terrestrial habitat may be too small or fragmented to provide core feeding, overwintering, and other habitat needs.

E-476 **King County should identify upland areas of native vegetation that connect wetlands to upland habitats and that connect upland habitats to each other. The county should seek protection of these areas through acquisition, stewardship plans, and incentive programs such as the Public Benefit Rating System and the Transfer of Development Rights Program.**

E-477 **The unique hydrologic cycles, soil and water chemistries, and vegetation communities of bogs and fens shall be protected through the use of incentives, acquisition, best management practices, and implementation of the King County Surface Water Design Manual to control and/or treat stormwater within the wetland watershed.**

E-478 **Public access to wetlands for scientific, recreational, and traditional cultural use is desirable, providing that public access trails are carefully sited, sensitive habitats and species are protected, and hydrologic continuity is maintained.**

E-479 **Regulatory approaches for protecting wetland functions and values, including the application of wetland buffers and the siting of off-site compensatory mitigation, should consider intensity of surrounding land uses and basin conditions. King County shall continue to review and evaluate wetland research and implement changes in its wetland protection programs based on such information.**

E-480 **Enhancement or restoration of degraded wetlands may be allowed to maintain or improve wetland functions and values, provided that all wetland functions are evaluated in a wetland management plan, and adequate monitoring, code enforcement and evaluation is provided and assured by responsible parties. Restoration or enhancement must result in a net improvement to the functions and values of the wetland system. Within available resources, King County should provide technical assistance to small property owners as an incentive to encourage the restoration or enhancement of degraded wetlands.**

E-481 **Provided all wetland functions are evaluated, impact avoidance and minimization sequencing is followed, affected significant functions are appropriately mitigated, and mitigation sites are adequately monitored, alterations to wetlands may be allowed to:**

a. Accomplish a public agency or utility development;

b. Provide necessary crossings for utilities, stormwater tightlines and roads; or

c. Allow constitutionally mandated "reasonable use" of the property.

When adverse impacts cannot be avoided, compensatory mitigation may be allowed. This means wetland enhancement, restoration, or creation to replace project-induced losses of wetland functions and values. The county recognizes that, especially in the Urban Growth Area, allowing alteration of low-function wetlands in exchange for compensatory mitigation that contributes to wetlands of higher functions and values within a connected wetland system may achieve greater resource protection than simply preserving the low functioning wetland.

E-482 **A small Category IV wetland that is less than 2,500 square feet and that is not part of a wetland complex may be altered to move functions to another wetland as part of an approved mitigation plan that is consistent with E-483 and E-484.**

E-483 **Wetland impacts should be avoided if possible, and minimized in all cases. Where impacts cannot be avoided, they should be mitigated on site if the proposed mitigation is feasible, ecologically appropriate, and likely to continue providing equivalent or better biological functions in perpetuity. Where on-site mitigation is not possible or appropriate, King County may approve off-site mitigation.**

E-484 **Mitigation projects should contribute to an existing wetland system or restore an area that was historically a wetland. Mitigation should only create new wetlands after site monitoring indicates that hydrologic conditions exist to support a new wetland. Mitigation sites should be strategically located to reduce habitat fragmentation or to restore and enhance area-specific functions within a watershed.**

E-485 **Land used for wetland mitigation should be preserved in perpetuity. Monitoring and maintenance in conformance with King County standards should be provided or paid for by the project proponent until the success of the site is established. Long-term stewardship should occur at mitigation sites to ensure sites continue to provide desired functions and values.**

Mitigation banks and in-lieu fee programs are forms of watershed-based compensatory mitigation, with the goal of providing greater resource protection and benefit to the public. Both approaches can allow for the consolidation of multiple, small mitigation projects into a large-scale wetland or wetland complex, resulting in economies of scale in planning, implementation and maintenance. Depending on their location and functions, mitigation banks and projects constructed using in-lieu fee programs can result in wetlands of greater hydrologic, chemical, and biological value because of their size and ecological context and the commitment to long-term management. These mitigation approaches also provide applicants with a range of options for meeting their off-site mitigation obligations.

Mitigation banking allows compensatory mitigation to occur prior to the loss of existing wetlands and their functions and values, thereby reducing "temporal" losses. Mitigation banking allows a project proponent to mitigate for their impacts by contributing fees to a bank sponsor for the creation or restoration of the bank site. In-lieu fee programs, such as King County's Mitigation Reserves Program, allow an applicant to meet its off-site wetland mitigation requirements through payment of a fee to King County or another authorized agent with the capacity to design and construct, maintain, and monitor a successful mitigation project. Both types of programs enable fees to be pooled so that larger projects can be constructed to offset impacts elsewhere in a watershed.

Moreover, King County's Mitigation Reserves Program enables such projects to be constructed on lands with degraded wetlands or aquatic areas or lands with the potential to reestablish wetlands or aquatic areas that could be restored or enhanced to benefit overall watershed functions. These Mitigation Reserve lands are managed for

long term ecological protection, so that the landscape and stream basin context support a successful enhancement project. Such projects should be planned in a watershed context and may achieve multiple ecological objectives, including meeting salmon conservation and other habitat protection objectives as well as wetland enhancement needs.

E-486 **King County in partnership with other governmental entities and interested parties should encourage the development and use of wetland mitigation banks through which functioning wetlands or aquatic areas are enhanced, restored, or created prior to the impacting of existing wetlands or aquatic areas. The county shall encourage establishment of such banks by established government entities as well as by private, entrepreneurial enterprises.**

In 2008, the U.S. Army Corps of Engineers and the Environmental Protection Agency jointly issued new federal rules (40 Code of Federal Regulations Part 230 and 33 Code of Federal Regulations Part 332) regarding compensatory mitigation for losses to functions and values of aquatic resources associated with unavoidable permitted impacts. These rules require implementation of mitigation in a watershed context and consideration of functional losses to resources from permitted impacts and functional gains at mitigation sites.

King County revised its compensatory mitigation program in 2011 to comply with these new federal rules and is well positioned to become a regional service provider for compensatory in-lieu fee mitigation – both to permittees in unincorporated King County and within cities when appropriate agreements are in place. The revised program, authorized by state and federal agencies in 2012, offers private and public project proponents the opportunity to pay a fee to King County in lieu of completing their own mitigation. These fees in turn will be used to implement mitigation projects, equitably applied among larger- and smaller-scale developments, that address watershed needs as determined through analysis of best available science.

In approving mitigation proposals, King County should consider the ecological context of the impacted wetland, as well as the wetland impact acreage, functions, and values. Mitigation sites should be located in areas in which the project will enhance ecological conditions of the watershed and should first replace or augment the functions and values that are most important to the optimum functioning of the wetland being created, restored, or enhanced. These functions and values may differ from those lost as a result of the impacting development project. Wetland mitigation proposals should result in no net loss, and if possible, in an increase in overall wetland functions and values within the watershed in which the impacted site is located.

E-487 King County should continue to implement and encourage use of its Mitigation **Reserves Program to provide a fee-based option for permit applicants to mitigate for unavoidable impacts of permitted development on wetland and aquatic area functions and values. The fee structure shall be based on the full costs of land acquisition, site selection, design, construction and long-term maintenance and**

monitoring. Mitigation projects implemented through the Mitigation Reserves Program should occur within a watershed context.

E-488 **King County should be a regional service provider of compensatory mitigation through the Mitigation Reserves Program by working with local cities, other counties, and state agencies to establish partnerships for implementation of inter-jurisdictional in-lieu fee mitigation.**

A large portion of western Washington farming occurs in lands that were once wetlands. Region-wide, agricultural lands have been targeted as mitigation sites because the relative cost of land is low and the likelihood of success in returning wetland functions is high. King County's Agricultural Production Districts that are located in floodplains and the poorly drained Osceola soils of the Enumclaw Plateau are no exception. Unless carefully sited and engineered, wetland mitigation projects can inadvertently raise water tables on adjacent agricultural properties. King County has joined other counties in discouraging the use of productive farmland for wetland mitigation, while working with farmers on wetland enhancement and restoration at a scale appropriate to sustaining their farms.

Through the King County Mitigation Reserves Program, restoration sites are selected and pre-purchased in advance of development related impacts. Selected sites, with wetland or aquatic area enhancement, restoration or creation potential, will be purchased and actively managed as mitigation sites and will be protected in perpetuity as open space. Mitigation projects implemented through the Mitigation Reserves Program will enhance, restore, and/or create ecological functions at the site to compensate for wetland, stream, river, and/or buffer functions and values lost during unavoidable impacts associated with permitted construction of projects at other locations. Sites and projects through the Mitigation Reserves Program will occur where the projects will have sustainable long-term benefits to aquatic resources in the watershed, ensuring projects at protected sites occur in places with importance to ecological integrity of the watershed. King County's Mitigation Reserves Program has received approval from the U.S. Army Corps of Engineers, the Environmental Protection Agency and the Washington Department of Ecology to serve as an in-lieu fee program to mitigate for the impacts to wetlands and other aquatic resources subject to state and federal regulations.

E-489 **Wetland mitigation projects should avoid impacts to and prevent loss of farmable land within Agricultural Production Districts. Creation of wetland mitigation banks are not allowed in the Agricultural Production Districts when the purpose is to compensate for wetland impacts from development outside the Agricultural Production Districts.**

3. Lakes

There are approximately 700 lakes in King County ranging in size from less than one acre to Lake Washington's roughly 21,500 acres. These lakes provide habitat that is essential for various life stages of many species of fish and wildlife, including salmonids, as well as recreational opportunities and scenic beauty. Development and stormwater runoff into lakes can alter their functioning and lead to eutrophication (increases in nutrients), loss of shoreline habitat, and threats to human health. Although sewage treatment has greatly reduced pollution in urban lakes like Lake Washington, stormwater runoff polluted by oil, metals, sediments, pet waste, lawn fertilizers, and pesticides can threaten human health, aquatic life, and habitat. Construction of bulkheads and docks also has the potential to impact habitat by altering shoreline vegetation and natural erosion patterns.

King County conducts water quality monitoring assessment on lakes throughout King County, in some cases supported by interlocal agreements with cities. Some of the earliest evidence of climate change includes temperature changes in regional lakes. Changes in annual temperature cycles in King County's regional lakes, particularly Lake Sammamish, Lake Union, and Lake Washington, provide some of the most accurate measures of climate change available locally.

During the summer months, the county conducts regular monitoring at public swimming beaches. When monitoring indicates a public health hazard, the information is provided to Public Health -- Seattle & King County, which can issue a temporary closure order. The Washington State Department of Health issues fish and shellfish consumption advisories to protect human health. There are consumption advisories for a number of species in Lake Washington. King County recently implemented a monitoring program to track the level of select contaminants in some fish species in Lake Washington. These data are used to evaluate the potential for both human health (through consumption) and ecological impacts.

E-490 **Lakes should be protected through management of lake watersheds and shorelines. Lakes sensitive to nutrients shall be protected through the management of nutrients that stimulate potentially harmful algae blooms and aquatic plant growth. Where sufficient information is available, measurable standards for lake quality should be set and management plans established to meet the standards. Formation of lake management districts or other financing mechanisms should be considered to provide the financial resources necessary to support actions for protection of sensitive lakes.**

E-491 **King County, in partnership with other governments and community groups, should monitor and assess lake water and sediment quality, physical habitat, and biotic resources. Assessment should identify trends and describe impacts on human health, aquatic life, and wildlife habitat. The county should collaborate with other affected jurisdictions, Public Health -- Seattle & King County, the State Department of Health, and the State Department of Ecology to identify pollutant sources adversely impacting aquatic life or human health; through local or grant funding opportunities, the county should reduce or remove these inputs.**

E-492 **Swimming beaches on lakes should be monitored for bacterial contamination and algal toxins. When data shows public health to be at risk, Public Health -- Seattle & King County should take appropriate action to address public health risks.**

4. Groundwater Resources

Protecting groundwater is an important regional issue because groundwater provides approximately 30% of the water used in King County and is the primary source of water in the Rural Areas geography. On Vashon Island and in other sole-source aquifer areas, it is the only source of drinking water.

The natural hydrologic system can be altered by development practices and overuse of the aquifer. The result may be depletion of aquifers. Groundwater is also subject to contamination from human activity. Once a source of groundwater is contaminated it may be lost forever. The cost of protection is considerably less than the cost of remediation and replacement. Having accurate, up-to-date information on groundwater quality and quantity is essential for managing this resource. Mapping risk could be achieved for a variety of pollutants or pollutant classes by integrating groundwater protection level, distance to groundwater, soil type, pollutant mobility, and land use information into a new map layer for each pollutant. Finally, public education (particularly for individual well owners) and coordinated groundwater management efforts will help to protect this resource over the long-run.

E-493 **King County shall identify and map areas in unincorporated King County that are considered Critical Aquifer Recharge Areas and sole-source aquifers. The county shall periodically update this map with new information from adopted groundwater and wellhead protection studies and other relevant sources. King County should develop and maintain map layers of groundwater risk level when funding is available.**

E-494 King County should protect the quality and quantity of groundwater countywide by:

a. Implementing adopted Groundwater Management Plans;

b. Reviewing and implementing approved Wellhead Protection Programs in conjunction with cities, state agencies and groundwater purveyors;

c. Developing, with affected jurisdictions, best management practices for development and for forestry, agriculture, and mining operations based on adopted Groundwater Management Plans and Wellhead Protection Programs. The goals of these practices should be to promote aquifer recharge quality and to strive for no net reduction of recharge to groundwater quantity;

d. Refining regulations to protect Critical Aquifer Recharge Areas and well-head protection areas;

e. Educating the public about Best Management Practices to protect groundwater;

f. Encouraging forest retention and active forest stewardship;

g. Incorporating into its land use and water service decisions consideration of potential impacts on groundwater quality and quantity, and the need for long-term aquifer protection;

h. Coordinating groundwater management efforts with cities, water districts, groundwater committees, and state and federal agencies;

i. Requiring the proper decommissioning of any well abandoned in the process of connecting an existing water system to a Group A water system; and

j. When funding is available, monitoring groundwater status and trends, especially for the groundwater protection planning areas established by King County, and evaluating the groundwater monitoring results, along with groundwater monitoring performed by public water systems, plus their annual quantities of groundwater pumped over the five year period. Findings as an indicator of environmental quality should be reported for each groundwater management area.

E-495 King County should protect groundwater recharge quantity by promoting low impact development and other methods that infiltrate stormwater runoff where site conditions permit and where pollution source controls and stormwater treatment can prevent potential groundwater contamination.

E-496 **In making future zoning and land use decisions that are subject to environmental review, King County shall evaluate and monitor groundwater policies, their implementation costs, and the impacts upon the quantity and quality of groundwater. The depletion or degradation of aquifers needed for potable water supplies should be avoided or mitigated, and the need to plan and develop feasible and equivalent replacement sources to compensate for the potential loss of water supplies should be considered.**

E-497 **King County should protect groundwater in the Rural Area by:**

a. Preferring land uses that retain a high ratio of permeable to impermeable surface area, and that maintain and/or augment the natural soil's infiltration capacity and treatment capability for groundwater;

b. Evaluating impacts on groundwater, where appropriate, during review of commercial, industrial and residential subdivision development projects that are proposed to be located within critical aquifer recharge areas, and, where appropriate, requiring mitigation for anticipated groundwater impacts to domestic water supply resulting from these projects; and

c. Requiring standards for maximum vegetation clearing limits, impervious surface limits, and, where appropriate, infiltration of surface water.

Climate change has the potential to impact future groundwater availability. Warmer temperatures in the Pacific Northwest are projected to lead to greater demand for water in the summer and fall, while reduced snow pack and associated stream flows could reduce seasonal groundwater recharge. Further analysis of the potential impacts of climate change on groundwater supplies is needed to understand and mitigate for potential impacts.

E-498 **King County should, in partnership with water utilities, evaluate the likely effects of climate change on aquifer recharge and groundwater supplies and develop a strategy to mitigate potential impacts in coordination with other climate change initiatives.**

5. Rivers, Streams and Floodplains

There are approximately 3,100 miles of rivers and streams in King County and more than 52,000 acres of floodplains. The river and stream channels, the surrounding riparian (streamside) areas and upland areas, their floodplains all contribute to the functioning and integrity of rivers and streams. Many rivers and streams provide habitat that is essential for various life stages of many species of wildlife and fish, including salmonids.

Rivers, streams and floodplains are dynamic systems. When flood waters overtop banks, floodplains temporarily store that water. Depending on the depth and flow, floods can dramatically alter river and stream courses, creating new channels, eroding banks, and depositing sediment and gravel. Flooding and erosion can also

dislodge trees. These changes slow flood flows and help to support dynamic and complex habitat for fish and wildlife. At the same time, they can create public safety issues for people living along and recreating in rivers.

In addition, public access to rivers and streams is both a requirement of the Shoreline Management Act and a goal for King County to support the regional economy and provide recreational opportunities for the community. People enjoy rivers and streams for the scenic and recreation values, including boating, floating, swimming, fish and wildlife viewing, and fishing. Management of these systems needs to consider not only habitat protection, but also public health and safety and opportunities for education and stewardship.

E-498a **The existing flood storage and conveyance functions and ecological values of floodplains, wetlands, and riparian corridors shall be protected, and should, where possible, be enhanced or restored.**

E-499 **Rivers and streams are inherently dangerous. King County should coordinate across county departments and with other agencies and organizations to promote public awareness of the dynamics and dangers of river and stream systems and the need for personal responsibility when living near or recreating in or on rivers and streams.**

E-499a **When King County places large wood in rivers and streams for habitat restoration or enhancement, it should do so in a manner that minimizes danger to the public.**

Specific policies addressing management of large wood are found in the King County Flood Hazard Management Plan. In urban areas, rivers and streams in some cases also serve as stormwater drainage systems. During the winter months, stormwater runoff during storms can bring pollutants to these water bodies. During the summer months, lawn irrigation and other water uses can also carry pollutants to rivers and streams.

E-499b **River and stream channels, stream outlets, headwater areas, riparian corridors, and areas where dynamic ecological processes are present should be preserved, protected and enhanced for their hydraulic, hydrologic, ecologic and aesthetic functions, including their functions in providing large wood to salmonid-bearing streams. Management of river and stream channels should consider other beneficial uses of these water bodies, including recreation.**

E-499c **To protect or improve adjacent wetlands and aquatic habitat, the designation of buffers for aquatic areas, including rivers and streams, should take into account watershed-scale actions to mitigate the impacts of upland development on flooding, erosion, and habitat.**

E-499d **King County shall continue to monitor and assess river and stream flows, water and sediment quality, physical habitats, and biotic resources in rivers and streams. Assessment shall identify trends and describe impacts on human health and safety, aquatic life, and wildlife habitat.**

E-499e **To maintain and restore stream health, sources of uncontrolled stormwater flows contributing to peak flows in small streams should be managed using on-site structural or non-structural flow control techniques.**

Most streams in King County originate in either mountainous terrain or on rolling glacial uplands. These streams often descend through steep, narrow ravines before reaching the floodplain. At the point where these streams leave their ravines and flow onto the floodplain, the channel gradient (slope) and confinement decrease quickly, dramatically reducing the streams' ability to carry sediment. These are areas of natural sediment deposition and channel migration. The combination of sediment deposition and repeated channel migration creates fan-shaped depositional features known as alluvial "fans."

During periods of heavy rainfall, streams often carry large sediment loads from upstream that deposit on downstream alluvial fans. Landslides, beaver dam failures and other natural disturbances can create episodes of particularly high rates of sediment production and delivery. In many stream systems, instances of heavy sediment deposition may occur episodically with years or decades of apparent stability in the intervening periods. In many instances, sediment production and tributary or stream flow rates are exacerbated by upland land use conditions and associated stormwater effects.

Alluvial fans share many of the ecological attributes and land use risks associated with channel migration hazard areas and landslide hazards, though they are unique in many respects. In a natural environment, alluvial fans often provide some of the best available spawning habitat in a tributary stream, while also providing a source of gravel for areas downstream. In some heavily altered streams, the alluvial fan may represent the only remaining areas that are suitable for spawning. Alluvial fans can also form the highest ground available in the floodplain, and have historically been used for construction of buildings (including farm buildings), roads and other structures. Unfortunately, they are inherently unstable environments in which to build. During high flows coupled with sediment deposition, a stream may jump its bank in the area of the alluvial fan, in some cases damaging private property, disrupting agricultural activities, destroying culverts and road crossings, stranding fish, and creating risks to public safety. Protecting buildings, roads, and crops on and along alluvial fans often requires extensive, ongoing maintenance activities. Maintenance activities can have adverse effects on habitat.

The Rural Areas and Natural Resource Lands chapter calls for alluvial fan pilot projects to test best management practices and innovative solutions for reducing hazards to agricultural landowners and protecting and restoring habitat.

E-499f **King County should improve the management of alluvial fans by developing and clarifying definitions of alluvial fans, mapping the locations of existing alluvial fans, and developing appropriate management strategies. Strategies should protect intact habitat and restore degraded habitat, reduce threats to public safety, and accommodate existing land use. Findings from Alluvial Fan Management Pilot Projects should inform management strategies for alluvial fans.**

6. Puget Sound

There are approximately 110 miles of marine shoreline in King County, including 51 miles in unincorporated areas. Shorelines provide important functions for maintaining a healthy ecosystem and also provide essential habitat for a variety of important and listed species, including mammals, birds, fish, and invertebrates. In addition to recreational opportunities, the marine nearshore environment provides essential habitat for a variety of species including juvenile salmonids, forage fish, and several commercially important shellfish species. Kelp and eelgrass populations are particularly important for providing food and habitat, especially for juvenile life stages for a variety of key fish and invertebrate species. Marine resources and shorelines, especially embayments, are susceptible to impacts from water pollution, changes in upland vegetation, alteration of natural bluff and beach erosion patterns, and alteration of nearshore substrates and aquatic vegetation.

The majority of marine waters within King County are subtidal waters, which provide important ecosystem functions and essential habitat for a variety of important species, including marine mammals, birds, fish and invertebrates. Subtidal waters support geoduck, shrimp, and bottomfish commercial fisheries as well as provide migratory pathways for marine mammals and salmonids. Resident killer whales are often observed in King County subtidal waters feeding on salmonids. Adult life stages of many species, such as rockfish and Dungeness crab, use subtidal waters extensively. In addition, subtidal waters provide an important connection to Pacific Ocean waters as well as waters within other parts of Puget Sound. Subtidal habitat is susceptible to impacts from water pollution, over-utilizing of biological resources, and climate change.

King County conducts water quality monitoring in marine offshore and nearshore areas throughout King County as part of the Marine Monitoring Program. Nutrients and dissolved oxygen are measured along with other physical and chemical parameters. Biological parameters, such as chlorophyll and phytoplankton and zooplankton community structure are also assessed. Offshore sediment quality is assessed in various areas and nearshore sediments are assessed throughout King County. The Washington State Department of Health issues fish and shellfish consumption advisories to protect human health. There are consumption advisories for a number of species within King County marine waters. King County recently implemented a monitoring program to track the level of select contaminants in some species of fish and shellfish in Elliott Bay and King County's marine waters. These data are used to evaluate the potential for both human health (through consumption) and ecological impacts.

King County's freshwater and saltwater environments are integrally linked. Water, sediments, and nutrients move from upland areas to Puget Sound. Many species, including salmon, spend critical periods of their lives in both fresh and salt water. Salmon migrating from saltwater to their spawning areas bring marine-derived nutrients back to the upland areas. Given the functional linkages between freshwater and saltwater environments, it is critical that planning and management be integrated.

E-499g **King County should collaborate with the federal and state agencies (including the Puget Sound Partnership), cities, tribes, counties, and universities to monitor and assess Puget Sound marine waters, nearshore areas, and embayments. Monitoring and assessment should address water and sediment quality, bioaccumulation of chemicals, physical habitat, and biotic resources. Assessment should identify trends and describe impacts on human health and safety, aquatic life, and wildlife habitat. The county should collaborate with other affected jurisdictions, Public Health -- Seattle & King County, the State Department of Health, and the State Department of Ecology to identify pollutant sources adversely impacting aquatic life or human health; through local or grant funding opportunities, the county should reduce or remove these inputs.**

E-499h **King County should protect and enhance the natural environment in those areas recommended or adopted as Aquatic Reserves by Washington State Department of Natural Resources. This should include participation in management planning for the aquatic reserves and working with willing landowners adjacent to the reserve on restoration and acquisition projects that enhance the natural environment.**

Human waste contains high levels of nutrients and pathogens. These pollutants can enter Puget Sound marine waters from a variety of pathways including combined sewer overflow outfalls, septic systems, stormwater runoff, ships and boats, and rivers and streams. Nutrients are also present in treated wastewater effluent. Public Health – Seattle & King County is responsible for assuring that onsite sewage systems in King County meet state and local regulations. In addition, Public Health – Seattle & King County is required to identify areas where marine water quality is threatened or impaired as a result of contamination from onsite sewage systems, to designate these areas as Marine Recovery Areas, Public Health – Seattle & King County has developed a Marine Recovery Areas plan for Vashon Maury Island to identify failed septic systems within the Marine Recovery Areas, and to assure that these systems are repaired and maintained.

The State Department of Health conducts shoreline surveys, which identifies pollution sources that may impact water quality. Marine water sampling is to determine fecal coliform bacteria levels in the marine waters. Shellfish growing areas are classified determining whether or not shellfish in the area can be harvested for human consumption. Public Health – Seattle & King County, in partnership with Department of Natural Resources and Parks and King Conservation District, has implemented the Quartermaster Pollution Identification and

Correction programs to address the fecal coliform discharges that caused the shellfish beds to be prohibited from commercial harvesting.

The Marine Recovery Areas/Pollution Identification and Correction program has successfully returned portions of Quartermaster Harbor to harvestable condition and is continuing work on Vashon-Maury Islands to address fecal coliform sources such as properties that have on-site sewage systems that pre-date regulatory oversight systems or that have failing systems. In addition to Quartermaster Harbor, other King County commercial shellfish beds that are listed as threatened or concerned are East Passage and Colvos Passage on Vashon, and Poverty Bay on the mainland.

Most landowners act as responsible managers of their septic systems and maintain them effectively. However, those septic systems that are not maintained can fail, and impact the environment. The County and the State should work with landowners by providing technical assistance and support to prevent failures, take action to correct failing systems and address the associated problems.

E-499i **King County should work with landowners, other jurisdictions, the state Department of Health, sewer districts, and the Puget Sound Partnership to proactively address failing septic systems with a priority in environmentally sensitive areas, including constrained shoreline environments.**

7. Beavers and Beaver Activity

Beaver ponds, created when beavers dam watercourses, provide a protective pool for a beaver lodge and environmental benefits. They help retain stormwater runoff, trap sediment and pollutants, maintain stream flow during summer, reduce downstream flooding and erosion, raise groundwater levels and help create diverse plant and animal habitat.

Beaver dams may also cause upstream flooding of roads, utilities, and both public and private property, and create the potential for downstream risk to public safety and infrastructure should dam failure occur. If a dam is harmed or removed, the beavers will typically repair the damage quickly, because their survival depends on having the entrance to their lodge underwater.

For over 150 years beavers and humans were able to coexist in King County, because beaver populations were kept in balance through trapping and human development was confined to areas without large beaver populations. However, as the urban and suburban areas of King County extended out into areas with an abundance of beaver habitat and beaver populations increased, beavers have begun to come into greater conflict with humans.

These growing conflicts were exacerbated in 2000 with the passage of Initiative Measure 713 (I-713), a law that prohibited the use of body-gripping traps with the exception of a Conibear trap in water, a padded leg-hold trap,

or a non-strangling type foot snare, all of which require a special permit (see Revised Code of Washington 77.15.194). The results of these changes were that fewer beavers are being trapped and more beavers are repopulating historic habitat.

Fifteen years since I-713 went into effect, beavers continue to repopulate the water bodies of King County. Non-lethal/engineered solutions (beaver deceivers and pond levelers) help control water levels of beaver ponds and are part of the solution for co-existing with beavers. But these solutions are not always sufficient and will likely become less and less feasible in terms of maintenance capacity as beaver populations continue to expand.

E-499ii **King County supports the coexistence of beavers and people in rural King County. King County should prepare a beaver management strategy to guide a program on issues such as where and how beavers and humans can co-exist with or without engineered solutions and where beavers should be excluded or removed.**

E. Watershed-Based Salmon Recovery

The protection and recovery of salmonid species that are listed under the Endangered Species Act and encompassed by tribal treaty rights are and will continue to be a significant priority for King County. The listing of a species under the Endangered Species Act and decline of tribal treaty right protected species are cause for great concern, because wild Pacific salmon have great environmental, cultural, economic, nutritional, recreational and symbolic importance to local communities, in particular tribal communities, in the entire Puget Sound region.

It is King County's goal to ensure the recovery and maintenance of salmon populations to sustainable and harvestable levels, and to accrue the ecological, cultural, economic, and local food supply benefits that will be provided by healthy salmon stocks. King County will pursue salmon conservation strategies that sustain the region's vibrant economy. Successful restoration and maintenance of healthy salmon populations will require time, money and effort, and collaboration with federal, state, tribal and local governments, as well as businesses, environmental groups, and residents.

The increasing number and diversity of Endangered Species Act federally protected species in King County and around the Puget Sound calls for the development and implementation of species conservation actions that are embedded within a strategy that addresses natural resource management issues at the ecosystem scale. Although species are listed one at a time, managing them toward recovery and robust health that way increases the likelihood that conservation efforts will be incomplete, redundant, and more expensive.

As a means to address salmonid listings and to sustain this precious resource for generations to come, local governments in the Puget Sound region, in cooperation with state and tribal governments and other major stakeholders, have developed long-term salmon habitat conservation strategies at the Watershed Resource

Inventory Area level. The boundaries of Water Resource Inventory Areas are defined under state regulations, and generally adhere to the watershed boundaries of major river or lake systems.

King County participated as an affected jurisdiction in the development Water Resource Inventory Area plans for Water Resource Inventory Area 8 (Cedar/Sammamish Watershed), Water Resource Inventory Area 9 (the Green/Duwamish Watershed), Water Resource Inventory Area 7 (the Snohomish/Snoqualmie/Skykomish Watershed), about half of which is in King County, and Water Resource Inventory Area 10 (the White/Puyallup Watershed), a small percentage of which is in King County. Additionally, King County has acted as a service provider at the direction of multi-jurisdictional forums for the development and implementation of the salmon recovery plans for Water Resource Inventory Areas 8 and 9, and for the King County portion of Water Resource Inventory Area 7.

E-499j **King County shall continue to participate in the Water Resource Inventory Area salmon recovery plan implementation efforts and in other regional efforts to recover salmon and the ecosystems they depend on, such as the Puget Sound Partnership. King County's participation in planning and implementation efforts shall be guided by the following principles:**

- **a. Focus on federally listed salmonid species and declining stocks protected under tribal treaty rights first, take an ecosystem approach to habitat management and seek to address management needs for other species over time;**
- **b. Concurrently work on early actions, long-term projects and programs that will lead to improvements to, and information on, habitat conditions in King County that can enable the recovery of endangered or threatened salmonids, while maintaining the economic vitality and strength of the region;**
- **c. Address both King County's growth management needs and habitat conservation needs;**
- **d. Use best available science as defined in Washington Administrative Code 365-195-905 through 365-195-925;**
- **e. Improve water quality, water quantity and channel characteristics;**
- **f. Coordinate with key decision-makers and stakeholders; and**
- **g. Develop, implement and evaluate actions within a watershed-based program of data collection and analysis that documents the level of effectiveness of specific actions and provides information for adaptation** of salmon conservation and recovery strategies.

The Water Resource Inventory Area plans recommend an array of actions including the restoration, acquisition and preservation of landscapes, municipal programmatic activities, and public outreach and education. The plans suggest that programmatic activities for salmon habitat conservation can generally be accomplished with the following three tools: regulation, incentives and education. Consequently, in addition to capital projects,

local governments including King County will need to incorporate salmon recovery objectives and strategies into their normal operations, making best use of a wide range of their authorities and programs.

E-499k **King County should use the recommendations of approved Water Resource Inventory Area salmon recovery plans to inform the updates to development regulations as well as operations and capital planning for its surface water management, transportation, wastewater treatment, parks, and open space programs.**

E-499l **King County should seek to support Water Resource Inventory Area salmon recovery plan goals of maintaining intact natural landscapes through:**

- **a. Retaining low density land use designations such as Agriculture, Forestry and Rural Area designations;**
- **b. Promoting Current Use Taxation and other incentives;**
- **c. Promoting stewardship programs including development and implementation of Forest Plans, Farm Plans, and Rural Stewardship Plans;**
- **d. Promoting the use of Low Impact Development methods; and**
- **e. Acquiring property or conservation easements in areas of high ecological importance with unique or otherwise significant habitat values.**

Many of the county's functional plans, programs and development regulations assist in the county's effort to conserve and recover Endangered Species Act listed species. These include the code provisions governing zoning, critical areas, clearing and grading, landscaping, and the shoreline master program. County plans include the Surface Water Design Manual, the flood hazard management plan, and regional wastewater services plan. Finally the county's reliance on best management practices for vegetation management, use of insecticides, herbicides and fungicides, and pest management, as well as for management of agricultural and forest lands also play a crucial role in protecting Endangered Species Act listed species.

E-499m **King County will monitor and evaluate programs and regulations to determine their effectiveness in contributing to Endangered Species Act listed species conservation and recovery, and will update and enhance programs and plans as necessary. King County should amend regulations, plans and best management practices to enhance their effectiveness in protecting and restoring salmonid habitat, using a variety of resources, including best available science as defined in Washington Administrative Code 365-195-905 through 365-195-925.**

E-499n **Through the Watershed Resource Inventory Area planning process, geographic areas vital to the conservation and recovery of listed salmon species are identified. King County will evaluate this information to determine appropriate short and long-term strategies, including, but not limited to: designation of Fish and Wildlife Habitat Conservation Areas, development regulations (special district overlays, zoning, etc.), acquisitions, facility maintenance programs, and capital improvement projects.**

E-499o **King County may use its authority under the Growth Management Act, including its authority to designate and protect critical areas, such as fish and wildlife habitat conservation areas, to preserve and protect key habitat for listed salmonid species by developing and implementing development regulations and nonregulatory programs.**

E-499p **King County shall, in cooperation with the cities, ensure a no net loss of housing capacity that preserves the ability to accommodate adopted growth targets, while pursuing compliance with Endangered Species Act requirements. To achieve this goal, densities shall be increased on buildable lands, consistent with H-110.**

Local governments primarily have authority and influence over land use actions affecting habitat. However, protecting and restoring habitat is just one piece of the salmon recovery puzzle. Management of fish harvest, hatchery, hydropower, and water storage actions is also critical, and actions need to be coordinated with entities having authority in these areas.

E-499q **King County should continue to take actions that ensure its habitat restoration and protection actions are implemented as part of a watershed-based salmon conservation strategy that integrates habitat actions with actions taken by harvest and hatchery managers. Harvest and hatchery managers specifically include tribes, the Washington Department of Fish and Wildlife, the National Marine Fisheries Service, and the U.S. Fish and Wildlife Service. Appropriate venues for this coordination include watershed plan implementation groups and other local or regional salmon management entities that rely on actions by habitat, harvest and hatchery managers to achieve specific goals and objectives.**

To ensure the long-term success of salmon recovery actions, King County will need to develop and implement a program that provides for monitoring the effectiveness of recovery actions and the status and trends of priority fish populations and habitat conditions. Both types of monitoring provide valuable information to redirect and adapt salmonid recovery strategies and actions over time. Please see the Monitoring and Adaptive Management Section at the end of this chapter for policies related to this topic.

F. Flood Hazard Management

Floodplains are lands adjacent to lakes, rivers and streams that are subject to periodic flooding. Floodplains naturally store flood water, contribute to groundwater recharge, protect water quality and are valuable for recreation, agriculture and fish and wildlife habitat. Floodplains also provide a deposition zone for sediments mobilized by rivers and streams. Wetlands are often an integral part of floodplains.

There are two primary types of flood hazards: inundation and channel migration. Inundation is defined as floodwater and debris flowing through an area that is not normally under water. Such events can cause minor to severe damage, depending on the velocity and depth of flows, the duration of the flood event, the quantity of logs and other debris carried by flows, and the amount and type of development and personal property in the floodwater's path. Floodplains are designated based on the predicted frequency of flooding for a particular area. For example, a 100-year floodplain is a land area that has a one percent probability of experiencing flooding in any given year.

Channel migration results from erosion wears away of a riverbank by flowing water. Ongoing erosion of one riverbank coupled with sediment deposition along the opposite bank results in the lateral movement or migration of a channel across its floodplain. When this shift is abrupt it is called channel avulsion. Channel migration hazard areas are designated based on geomorphic analyses and review of historical channel migration patterns and rates, consistent with the King County Flood Hazard Management Plan and the Shoreline Management Act.

Development can reduce the floodplain's ability to store and convey floodwaters, thereby increasing the velocity and depth of floodwaters in other areas. In addition, floodplain development puts humans in harm's way and often occurs at the expense of important fish and wildlife habitat. King County has adopted the Flood Hazard Management Plan as a functional element of the King County Comprehensive Plan to detail regional policies, programs, and projects to reduce the risk to people and property from river flooding and channel migration in King County and to provide guidance for decisions related to land use and floodplain management activities.

E-499qq **King County shall implement a comprehensive local floodplain management program that protects lives, minimizes damage and disruption to infrastructure and critical facilities, preserves and restores natural floodplain functions, and ensures that new development does not put people in harm's way or cause adverse flooding impacts elsewhere, consistent with the King County Flood Hazard Management Plan.**

E-499qqq **King County shall continue to exceed the federal minimum standards stipulated by the National Flood Insurance Program for unincorporated areas to better protect public safety, reduce the risk of flood and channel migration hazards to existing public and private property.**

E-499r **King County's floodplain land use and floodplain management activities shall be carried out in accordance with policies, programs and projects detailed in the King County Flood Hazard Management Plan.**

G. Hazardous Waste

Throughout King County, businesses use and generate hazardous materials as part of their normal operations. There are numerous rules and requirements for the proper management of these materials and requirements can vary slightly by jurisdiction. Often the businesses will learn of these requirements after they have found out that they are not in compliance. To help mitigate the potential harmful effects to human health and the environment and to minimize the economic impacts to businesses that may generate hazardous chemicals, King County provides education and technical assistance to businesses on requirements for proper management and disposal of hazardous chemicals, as well as information on less toxic alternatives.

Contacting businesses with information on proper hazardous waste disposal as early as possible in the business development phase can help to prevent improper disposal of hazardous waste and associated risks to public safety and the environment. Taking a preventative approach can also help to avoid costly code violations.

E-499t **King County should review new business permit and change of use applications for businesses that propose to use hazardous chemicals or generate hazardous waste as part of their operations. The county should offer to provide technical assistance related to hazardous waste disposal requirements, spill response, and non-toxic alternatives.**

V. Geologically Hazardous Areas

King County is located at a tectonically active convergent plate margin, which is characterized by dynamic geologic processes including active mountain building, abundant seismic activity and volcanism. In addition, the relatively recent glacial history has resulted in the creation of numerous steep and unstable hillsides throughout the county, many of which are prone to naturally occurring landslides. Snow avalanches are also a common occurrence in the Cascade Mountains in Eastern King County.

Often times the result of these naturally occurring events can be beneficial to the environment, by providing gravel and woody debris in streams and rivers, and continuing the process of natural regeneration. Salmon need gravel for spawning and in-stream debris for cover and to provide shade and regulate temperature. King County

must balance the positive benefits of these natural occurrences with any adverse impacts that pose a threat to public health and safety. The county must also strike a balance between allowing naturally occurring landslides and erosion, and the need to prevent the unnatural acceleration of landslides and erosion due to development activities.

Coal mines have created additional areas of subsidence and instability in addition to those ((which)) that occur naturally. When human activity occurs in areas subject to such active geologic processes, the potential consequences to life, property and environmental integrity can be enormous. If geologic processes are recognized and appropriately addressed in the course of development activities, adverse consequences can be substantially reduced if not completely eliminated.

A. Erosion Hazard Areas

Virtually any area in King County can experience soil erosion if subjected to inappropriate grading and construction practices. The US Department of Agriculture Soil Conservation Service has identified certain soil types in King County as being especially subject to erosion, if disturbed. These Erosion Hazard Areas may not be well suited to high-density developments and intensive land uses because of the sensitivity of these soils to disturbance.

E-501 **Grading and construction activities shall implement erosion control best management practices and other development controls as necessary to reduce sediment and pollution discharge from construction sites to minimal levels.**

E-502 **Land uses permitted in Erosion Hazard Areas shall minimize soil disturbance and should maximize retention and replacement of native vegetative cover.**

E-503 **Slopes with a grade of 40% or more shall not be developed unless the risks and adverse impacts associated with such development can be reduced to a non-significant level. No-disturbance zones shall be designated where basin plans identify the need to prevent erosion damages in areas that are extremely sensitive to erosion impacts. Properly designed stormwater tightlines may be allowed within designated no-disturbance zones.**

Vegetation is an important component of the natural environment. This general term refers to all plant life growing at, below or above the soil surface. It includes trees, shrubs, herbs, grasses and aquatic plants. Vegetation, especially forests, provides many significant ecological functions. Vegetation absorbs, filters and slows surface water flow. This is particularly important over aquifer recharge areas. Native vegetation also provides wildlife habitat to which native species are well adapted. Forests are key components in atmospheric cycles; they absorb carbon dioxide, produce oxygen and filter particulate matter. Additionally, they absorb noise and are aesthetically pleasing.

Noxious weeds are nonnative invasive plants that pose a threat to health and safety, agriculture, wildlife, wetlands and recreational areas. They tend to spread in areas that have been disturbed by urban development and agriculture and are difficult to eradicate once they become established. Without natural predators, some noxious weeds can displace native plant communities, reducing plant diversity. Invasive plants also decrease the quality of wildlife habitats, reduce visual quality, and increase maintenance and production costs for natural resource managers and farmers.

E-504 **King County should protect native plant communities by encouraging management and control of nonnative invasive plants, including aquatic plants. Environmentally sound methods of vegetation control should be used to control noxious weeds.**

E-506 **The use of native plants should be encouraged in landscaping requirements and erosion control projects, and in the restoration of stream banks, lakes, shorelines, and wetlands.**

E-507 **In response to watershed-based salmon conservation Water Resource Inventory Area plans and as part of King County's continued basin planning and stewardship programs, King County may adopt vegetation retention goals for specific drainage basins. These goals should be consistent with R-334, as applicable. The county should adopt incentives and regulations to attain these goals, and the county should monitor their effectiveness.**

B. Landslide Hazard Areas

Certain hillsides in King County are either naturally unstable or susceptible to instability when disturbed. These hillsides contain slopes greater than 15%, are underlain by impermeable soils, and are subject to seepage. They also include areas that have experienced landslides in the past.

Many of the largest and most active landslides in King County are associated with the steep slopes adjacent to river corridors or along marine shorelines where glacial strata are eroded and steepened. Areas undergoing rapid undercutting due to stream bank erosion, wave action or human alteration of stormwater discharge are potentially unstable and such areas may be prone to damaging landslides.

Construction in areas susceptible to landslides is expensive and difficult. Landslides on such slopes following development can result in enormous public and private costs and severe threats to human health and safety. Such landslides can also cause severe natural resource damage.

Partly in response to the 2014 State Route 530 Landslide, King County has undertaken an effort to refine our knowledge of landslide hazard areas using updated mapping methods. King County initiated a project in 2014 to map and characterize landslide hazard areas using the best available Light Detection And Ranging imagery and recent geologic mapping to identify potential areas at risk of landsliding. Known and potential landslide hazard areas can be indicated by the known presence of shallow landslides, deep-seated slumps, debris fans and flows, rockfalls, avalanches, unstable and over-steepened slopes along river and stream channels, long runout presence or potential. The results of this work will be used to inform future planning, outreach and regulatory decisions.

E-507a **King County should work with partner jurisdictions to maintain a map and inventory of known and potential landslide hazard areas in unincorporated King County that is based upon the best available information. This information will be used to inform future planning and guide development regulations.**

E-507b **King County should make landslide hazards information readily available to the public in order to improve the general understanding of landslides and their associated hazards. This may include making information available on a public website and providing outreach and assistance to current and prospective property owners and developers.**

E-508 **Landslide hazard areas shall not be developed unless the risks and adverse impacts associated with such development are eliminated or minimized so that they are at a non-significant level. Development proposed in areas affected by landslide hazards shall be adequately reviewed and mitigated as needed to eliminate or minimize risk to the development as well as to ensure the development does not increase landslide or erosion hazards that would adversely impact adjacent properties or natural resources.**

E-508a **King County shall consider landslide hazards and related flooding hazards in the context of hazard communication, operational preparedness and emergency response.**

C. Seismic Hazard Areas

King County is an earthquake-prone region subject to ground shaking, seismically induced landslide and liquefaction of soil. Areas with low-density soils are likely to experience greater damage from earthquakes.

E-509 **In areas with severe seismic hazards, special building design and construction measures should be used to minimize the risk of structural damage, fire and injury to occupants and to prevent post-seismic collapse.**

D. Volcanic Hazard Areas

King County is located in a region characterized by active volcanism. The volcanic hazard that poses the greatest risk to safety and wellbeing of county residents would be from a lahar (volcanic mudflow) originating on Mt. Rainier and flowing down the White River valley (possibly overflowing into the lower Green River Valley). Ongoing investigations by the U.S. Geological Survey continue to clarify the nature of this hazard. Current information provides the basis for taking steps to mitigate that risk.

E-510 **King County should work with the U.S. Geological Survey to identify lahar hazard areas and shall work with local governments to assess the risk to county residents from lahars and to implement appropriate emergency planning and implement appropriate development standards.**

E. Coal Mine Hazard Areas

King County has a long and varied history of underground and surface coal mining. Some coal mining was conducted by large, well-capitalized mining companies that used methods such as detailed underground and surface mapping and protection of surface improvements. Other mines were small operations or re-mining operations that sought to maximize coal extraction with less regard for surface impacts or mapping. Some intensively developed areas of King County are located over abandoned underground coal workings, including Talbot Hill and the north Benson Hill of Renton, the Spring Glen area around Cascade Vista, East Fairwood, Black Diamond, southwest Issaquah, and the Newcastle/Coal Creek area.

The greatest dangers to people, wildlife and surface facilities typically exist around mine portals, timber chutes, air shafts, and workings which have collapsed to the surface. Other areas were deep mined by "room and pillar" mining techniques in which "pillars" of coal were left to provide support for the mining of adjacent "rooms." Once abandoned, pillars would collapse and rooms of mined-out coal would fill with collapsed roof material, coal debris and water. Regional downwarping of these areas was generally not observable and usually happened in the early years following mining of a section. Deep mined areas with a high ratio of overburden/cover-to-void usually present no hazards for surface development. However, areas with low overburden/cover-to-void ratio present higher risks and may require more advanced investigations and construction techniques for development. Mine portals, timber chutes, airshafts, and workings which have collapsed to the surface require the greatest need for detailed engineering studies to ensure that these sites are safe for new, productive use.

E-511 **King County will encourage efforts by public and private property owners and the Office of Surface Mining, Reclamation, and Enforcement to return lands to their highest productive use by safely minimizing or eliminating coal mine hazards.**

E-512 **King County shall require all development proposals potentially subject to coal mine hazards to assess the mine-related hazards, including risks to structures, improvements, occupants and public health and safety.**

E-513 **King County shall allow development within coal mine hazard areas if the proposal includes appropriate mitigation for identified, mine-related hazards using best available engineering practices and if the development is in compliance with all other local, state and federal requirements.**

E-514 **King County shall require all landowners proposing new development in coal mine hazard areas to document the potential hazard on the title of the parcel or parcels being developed. This notice may include reference to any available technical studies or detailed hazard delineations.**

VI. Planning for Disasters

King County has an active planning program, that goes beyond the land use and supporting services planning, that occurs through the Comprehensive Plan. This work takes into account mitigation of hazard impacts prior to disasters, as well as the rebuilding of communities following a disaster. The following diagram illustrates the facets of planning for disasters.

Figure: Resilient King County Planning Model



King County is susceptible to multiple hazards including earthquakes, flooding, and landslides. Based on the five phases of emergency management (depicted above), the process of mitigation allows the county to build more resilient communities by assessing vulnerabilities, and taking sustained action to permanently eliminate or reduce risk to future disasters. These actions can inform land use planning such as the Critical Areas Ordinance.

When a disaster does occur, the process of recovery allows the county to review the Comprehensive Plan and its core principles, develop a recovery strategy by engaging the community, and rebuild the community in a way that sustains physical, emotional, social, and economic well-being.

E-601 **King County shall incorporate into its land use and transportation planning, economic development efforts, and natural resource management the most promising actions to reduce impacts from natural hazards, such as earthquake, flooding, and landslide risk.**

VII. Monitoring and Adaptive Management

King County's environment is constantly changing in response to land and water management actions that are within its control, as well as climate cycles and geologic processes that are beyond human control. The county makes significant investments in projects, programs, and policy implementation to help ensure that its environment supports a range of ecological, cultural and economic values that are fundamental to the region's quality of life.

King County's policies, regulations, and actions to protect and restore the environment need to be assessed on an ongoing basis to ensure that they are having the intended effect, and that they are responding to changing conditions. Efforts to protect the environment will also need to reflect improvements in knowledge about the natural environment and how human activity impacts ecological systems, and uncertainties about ecological and biological processes.

Assessing the effectiveness of specific and cumulative actions requires data collected within rigorous monitoring programs. Monitoring provides essential information to track: (1) changes in the natural and built environment, (2) implementation of planned and required actions (like construction of wetland mitigation projects), and (3) effectiveness of environmental protection actions. Monitoring information can support a formal Adaptive Management program to modify policies, goals, and management decisions as necessary, and inform regulatory change.

Adaptive management can be used to help insure that projects, programs and policies are moving the county toward its environmental goals over time. Adaptive Management is defined as the process of making hypotheses of management outcomes, collecting data relevant to those hypotheses, and then using monitoring data to inform changes to policies and actions to better achieve intended goals. Adaptive management concepts are

often applied in programs intended to address complex natural resource management problems, for example in Water Resource Inventory Area plans for salmon recovery or in Habitat Conservation Plans to comply with the Endangered Species Act. The Washington Administrative Code calls for local governments to use monitoring and adaptive management to address uncertainties in best available science for protecting critical areas like wetlands.

King County conducts a diverse array of monitoring activities, ranging from project-specific monitoring of Capital Improvement Projects and legally required monitoring of municipal wastewater and stormwater discharges in compliance with National Pollutant Discharge Elimination System permit requirements, to watershed-wide ambient monitoring of groundwater, rivers, streams, lakes, and marine waters of Puget Sound to the extent that funding allows. King County maintains a continuous water quality monitoring program for freshwater streams, rivers, lakes, and marine waters. This long-term monitoring program informs the County's understanding of changes in water quality over time including those caused by climate change, and contributes to the identification of emerging pollution issues and sources of water pollution. The monitoring program also allows the quantification of water quality and aquatic habitat improvements. The data collected by these programs additionally provides the necessary baseline information for many scientific studies conducted in King County wetlands, lakes, streams, and marine waters by county scientists as well as scientists at universities and state and federal agencies.

Financial resources for environmental protection programs, including monitoring, are limited. Because baseline monitoring does not result in an actual project "on the ground," and often is not mandated, it may not compete well with other priorities for limited funding. However, investments in monitoring will provide essential information for evaluating the effectiveness of current actions and guiding future policy decisions, priorities, and investments. To make the most efficient use of limited resources, it is critical that the county look for opportunities to coordinate its data collection and dissemination efforts so that they can meet as many information needs as possible. The county should also partner with entities conducting monitoring, including other governments and universities.

When data are collected, it is important that its usefulness is maximized. "Metadata" is background information on data, and is necessary to facilitate the understanding, use, storage, sharing, and management of data. For example, metadata can describe how a particular data set was collected, provide definitions for types of data, and describe the reliability of the data.

E-701 **King County should conduct a comprehensive and coordinated program of environmental monitoring and assessment to track long-term changes in climate (e.g., precipitation, temperature), water quality and quantity, toxics in fish and shellfish, land use, land cover and aquatic and terrestrial habitat, natural resource conditions, and biological resources as well as the effectiveness of policies, programs, regulations, capital improvement projects, and stormwater treatment facility design. This monitoring program should be coordinated with other jurisdictions, state and federal agencies, tribes, and universities to ensure the most efficient and effective use of monitoring data.**

E-702 **King County should seek to develop and maintain a publicly accessible, geo-spatial database on environmental conditions to inform policy decisions, support technical collaboration, and inform the public. All King County monitoring data should be supported by metadata.**

E-703 **King County should establish a decision-support system suitable for adaptive management that uses data from its environmental monitoring programs.**

A. Performance Measurement, Performance Management and KingStat

Like adaptive management in realm of science, performance management includes collecting data, analyzing data to inform decision-making, and making programmatic course corrections based on this analysis.

King County reports to the public both community-level conditions and agency performance measures. Monitoring data referenced in this chapter serves as a core element of helping elected officials and the public stay informed about the state of the environment and the effectiveness of agency programs.

The executive's KingStat program is using environmental monitoring data to assess environmental conditions, develop appropriate county responses, and provide an opportunity to collaborate and partner with other organizations in making improvements. With respect to environmental conditions, data used in KingStat includes marine water, freshwater, terrestrial habitat, fish and wildlife, atmosphere, and resource consumption.

E-704 **King County should continue to collect data on key natural resource management and environmental parameters for use in KingStat, King County's Strategic Plan implementation goals and objectives, and other environmental benchmarking programs. Findings should be reported to the public, partner agencies, and decision-makers. The information collected should be used to inform decisions about policies, work program priorities and resource allocation.**

B. National Pollutant Discharge Elimination System Compliance

King County operates under a number of National Pollutant Discharge Elimination System Permits, including a general Phase I Municipal Stormwater permit, and a number of general Industrial and Sand and Gravel Stormwater permits for Transit, Solid Waste and Roads facilities. There are individual wastewater permits for wastewater treatment plants and a solid waste management facility. King County also is issued construction stormwater permits for capital projects involving land disturbance. Complying with these permits is a high priority for King County as part of its strategy for protecting ground and surface water quality.

E-705 **King County shall fully comply with the monitoring requirements in its National Pollutant Discharge Elimination System permits, including seeking compliance strategies that are cost-effective and useful.**

C. Water Resource Inventory Areas Salmon Recovery Plan Implementation

The Puget Sound region has responded commendably to the listing of Puget Sound Chinook. In King County, more than 40 jurisdictions have joined together to cooperatively lead salmon recovery in the County's watersheds. In the 10 years since the plans were adopted (2006-2015), King County has implemented 65 priority salmon restoration projects within its jurisdiction and has initiated work on an additional 33. In 2011, NMFS conducted a five-year assessment of progress to implement the Puget Sound Salmon Recovery Plan. The assessment concluded that good habitat projects are being implemented across Puget Sound, but that the pace of salmon recovery implementation is too slow primarily due to insufficient funding. The salmon recovery plans for the Snoqualmie portion of WRIA 7, WRIA 8 and WRIA 9 hit their ten year mark in 2015. King County renewed interlocal agreements with its 43 jurisdictional partners to continue to fund salmon recovery coordination in those watersheds for the next decade.

Key conclusions and recommendations from the five-year assessment completed in 2011 include:

- Habitat continues to decline, and the region needs to increase its scrutiny of the sources of habitat decline and the tools used to protect habitat sites and ecosystem process.
- Habitat protection needs improvement, and salmon recovery lead entities and regional groups should advocate for stronger regulatory programs to protect habitat.
- While extensive habitat work has taken place across King County and in the broader Puget Sound, funding has fallen well short of the need as identified in the work plans that have been developed in each watershed. Moreover, most sources only fund on-the-ground projects rather than the staffing that is needed to plan and coordinate overall recovery efforts.
- Adaptive Management Plans are not completed: A process should be established to recognize changes that are being made to Recovery Plan strategies as implementation proceeds.

Although Water Resource Inventory Area plans are Chinook salmon-focused, they are expected to also provide the basis for recovery planning for other listed aquatic species, including Orcas, steelhead and bull trout.

E-706 **King County should work with other Water Resource Inventory Area salmon recovery plan partners to establish a program (framework and methodology) for monitoring project specific and cumulative effectiveness of King County salmonid recovery actions. This program should include data collection and analysis and should provide information to guide an adaptive management approach to salmonid recovery.**

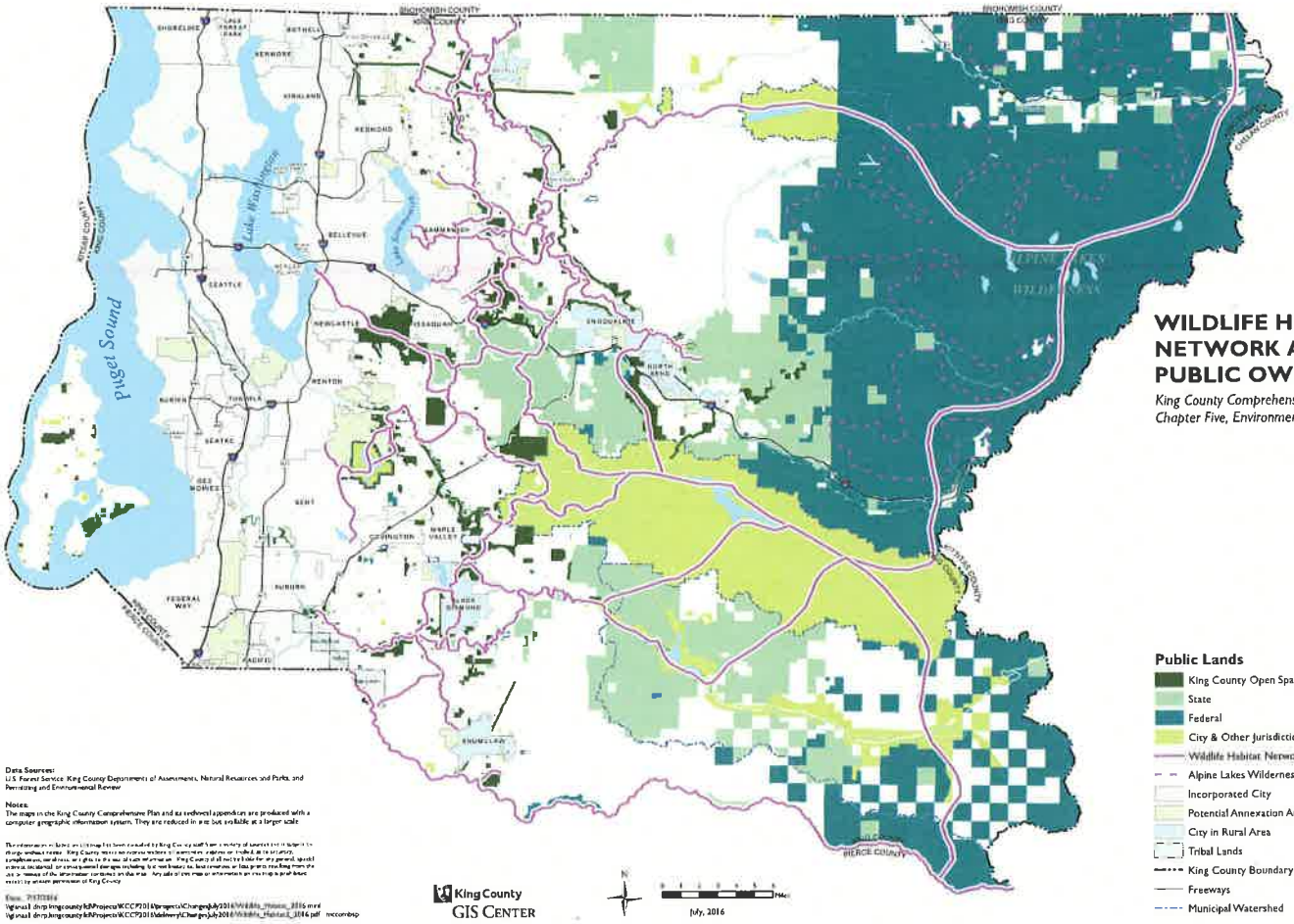
E-707 **King County shall continue to coordinate with other governments, agencies, tribes, non-governmental organizations and others to develop and implement regional and watershed-based Monitoring and Adaptive Management programs focused on achieving salmon recovery goals. The programs shall continue to include monitoring of salmon populations and habitat status and trends over time in order for the county and its partners in salmon recovery to be able to access the overall trajectory of salmon recovery efforts.**

D. Effectiveness of Critical Areas Regulations

Under the Growth Management Act, all counties and cities are required to periodically review their comprehensive plans and development regulations, including critical area regulations, for consistency with the Growth Management Act. Growth Management Act also requires local governments to include best available science in the development of land use policies and regulations to protect the functions and values of critical areas. Washington State Department of Commerce procedural criteria for adoption of comprehensive plans and development regulations provide direction on how local governments should include best available science in their critical area regulations (Washington Administrative Code 365-195). The procedural criteria call for the use of a precautionary approach, in which development and land use activities are strictly limited until the uncertainty is sufficiently resolved, where the science is uncertain.

Coupled with this precautionary approach should be an adaptive management program that allows for changes to regulations as new information comes in to address uncertainties. The adaptive management program is dependent upon a monitoring program that is designed to obtain the information needed to determine the effectiveness of regulations.

E-708 **King County should implement a framework for effectiveness monitoring of critical areas regulations, and use monitoring data to inform the future review and updates of its critical areas policies and regulations.**



WILDLIFE HABITAT NETWORK AND PUBLIC OWNERSHIP 2016

King County Comprehensive Plan, 2016
Chapter Five, Environment

Public Lands

- King County Open Space System
- State
- Federal
- City & Other Jurisdiction
- Wildlife Habitat Network
- Alpine Lakes Wilderness
- Incorporated City
- Potential Annexation Areas
- City in Rural Area
- Tribal Lands
- King County Boundary
- Freeways
- Municipal Watershed

King County
GIS Center

N

July, 2016

Data Sources:
U.S. Forest Service, King County Departments of Assessments, Natural Resources and Parks, and Permitting and Environmental Review

Notes:
The maps in the King County Comprehensive Plan and its technical appendices are produced with a computer geographic information system. They are reduced in size but available at a larger scale.

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CHAPTER 6
SHORELINES

I. Introduction

A. Recitals

King County adopts the following, which are based on the Shoreline Management Act legislative findings in Revised Code of Washington 90.58.020. These recitals represent King County's belief and agreement that a coordinated approach to utilizing, managing, and protecting the shoreline resource is necessary and essential. These recitals apply to the shoreline jurisdiction.

1. Shorelines are some of the most valuable and fragile of King County's natural resources. There is appropriate concern throughout the county relating to the utilization, protection, restoration, and preservation of the shoreline jurisdiction.
2. Ever increasing pressures of additional use are being placed on the shoreline jurisdiction, which in turn necessitates increased coordination in its management and development.
3. Much of the shoreline jurisdiction and the uplands adjacent thereto are in private ownership. Unrestricted construction on the privately owned or publicly owned shorelines is not in the best public interest; and therefore, coordinated planning is necessary in order to protect the

public interest associated with the shoreline jurisdiction while recognizing and protecting private property rights consistent with the public interest.

4. There is a clear and urgent demand for a planned, rational, and concerted effort, jointly performed by federal, state, and local governments, to prevent the inherent harm in an uncoordinated and piecemeal development of King County's shoreline jurisdiction.

5. It is the intent of King County to provide for the management of the shoreline jurisdiction by planning for and fostering all reasonable and appropriate uses. This program is designed to insure the development in a manner that, while allowing for limited reduction of rights of the public in the navigable waters, will promote and enhance the public interest.

6. King County shoreline policies are intended to protect against adverse effects to the public health, the land and its vegetation and wildlife, and the waters of the state and their aquatic life, while protecting generally public rights of navigation and corollary rights incidental thereto.

7. In the implementation of this chapter, the public's opportunity to enjoy the physical and aesthetic qualities of natural shorelines shall be preserved to the greatest extent feasible consistent with the overall best interest of the state, the county, and the people generally. To this end uses shall be preferred which are consistent with control of pollution and prevention of damage to the natural environment or are unique to or dependent upon use of the state's shoreline.

8. Alterations of the natural condition of the shoreline jurisdiction, in those limited instances when authorized, shall be given priority for single family residences and their appurtenant structures, ports, shoreline recreational uses including but not limited to parks, marinas, piers, and other improvements facilitating public access to shorelines, industrial and commercial developments that are particularly dependent on their location on or use of the shoreline jurisdiction, and other development that will provide an opportunity for substantial numbers of the people to enjoy the shorelines.

9. Shorelines and shorelands in King County shall be appropriately designated and these classifications shall be revised when circumstances warrant, regardless of whether the change in circumstances occurs through man-made causes or natural causes. Any areas resulting from alterations of the natural condition of the shorelines and shorelands no longer meeting the definition of "shorelines of the state" shall not be subject to the provisions of King County Shoreline Master Program.

10. Permitted uses in the shorelines zone shall be designed and conducted in a manner to minimize, insofar as practical, any resultant damage to the ecology and environment of the shoreline jurisdiction and any interference with the public's use of the water.

B. About King County and King County Shorelines

1. Geography

King County covers 2,130 square miles and extends from Puget Sound in the west to 8,000-foot Mt. Daniel at the Cascade crest in the east. King County's shoreline jurisdiction includes saltwater coastline, river floodplains, and extensive lakes and streams.

2. King County's shoreline jurisdiction

King County's diverse shorelines fringe or flow into Puget Sound. Puget Sound and surrounding lowland lakes and river valleys are relatively young in geologic terms. Puget Sound is a glacially-carved, deep fjord between the Cascade and Olympic mountains.

Puget Sound is King County's link to the Pacific Ocean via two connections: the Strait of Juan de Fuca and the Strait of Georgia. Water, people and a diverse array of fish and wildlife travel freely between the ocean and King County via Puget Sound and these Straits.

Puget Sound is a large estuary complex created by the freshwater it receives from streams, rivers and springs and tidal exchange introduced through the two Straits. It is one of the more prominent and productive estuaries in the world. In 1988, it was identified as an Estuary of National Significance by the United States government. Within Puget Sound are numerous small to large estuaries. The largest estuary in King County is the Green-Duwamish, although it is now a small remnant of its pre-development state.

Puget Sound consists of five basins. King County's portion of Puget Sound lies within the Central Basin and includes Vashon-Maury Island. The Central or Main Basin extends from Admiralty Inlet to Tacoma Narrows. It is the largest and deepest of the basins. The major drainages to the Central Basin, including Cedar River/Lake Washington watershed (including Lake Sammamish and the Sammamish River), the Green-Duwamish watershed, and Puyallup River/White River watershed, drain a total area of about 2,700 square miles and contribute slightly less than 20% of Puget Sound's freshwater input. The Snohomish watershed (including the Snoqualmie River Basin that lies mostly in King County) outlet into Puget Sound lies in Everett.

Puget Sound is located in a region that has great overlap between valuable natural resources and a burgeoning human population. The productivity, diversity and value of the resources are greatly affected by the extent and density of the population. Due to proximity to transportation routes and abundant food and water resources, most of the region's human development since the mid-1800s, when settlers of European descent started to explore and develop the region, has occurred along Puget Sound's shorelines, large lakes and rivers.

C. Washington State's Shoreline Management Act

1. Overview of Shoreline Management Act

Washington's Shoreline Management Act was passed by the Legislature in 1971 and adopted by the public in a 1972 referendum. The goal of the Shoreline Management Act is "to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines."

The Act establishes a broad policy giving preference to uses that:

- Protect the quality of water and the natural environment,
- Depend on proximity to the shoreline ("water-dependent uses"), and
- Preserve and enhance public access or increase recreational opportunities for the public along shorelines.

The Shoreline Management Act establishes a balance of authority between local and state government. Cities and counties are the primary regulators but the state, through the Department of Ecology, has authority to review local shoreline master programs and shoreline permit decisions.

Under the Shoreline Management Act, each city and county adopts a Shoreline Master Program that is based on the Department of Ecology's Shoreline Master Program rules or guidelines, but tailored to the specific needs of the community. More than 200 cities and all 39 counties have Shoreline Master Programs. Local Shoreline Master Programs combine both plans and regulations. The plans are a comprehensive vision of how shoreline areas will be used and developed over time. Regulations are the standards that shoreline projects and uses must meet.

The Department of Ecology provides technical assistance to local governments undertaking Master Program amendments. Master Programs and Master Program amendments are only effective after approval from the Department of Ecology. In reviewing Master Programs, the Department of Ecology is limited to a decision on whether or not the Program is consistent with the policy and provisions of the Shoreline Management Act and the Department of Ecology's guidelines.

Local governments may modify Master Programs to reflect changing local circumstances, new information, or improved shoreline management approaches. All changes to Master Programs require public involvement and approval from the Department of Ecology. At a minimum, local governments must hold public hearings.

In 2003, the Department of Ecology adopted revised state guidelines. Cities and counties with Shoreline Master Programs are required to update their Shoreline Master Programs to bring them into compliance with these new state guidelines.

2. History of shoreline management in King County

King County adopted its original Shoreline Master Program through two ordinances adopted by the King County Council and approved by the King County Executive, John Spellman, on May 2, 1978. Ordinance 3692 adopted the Shoreline Master Plan, which established the goals, objectives, and policies of the King County Shoreline Master Program. Ordinance 3688 adopted the development regulations that implemented the Shoreline Master Plan. By a letter dated June 30, 1978, the Department of Ecology stated that it had approved King County's Shoreline Master Program.

The 1978 Shoreline Master Plan addressed the required elements of the shoreline guidelines originally adopted by the Department of Ecology in 1972. The 1978 Plan established goals, objectives, and policies for eight different shoreline elements. For each of the four shoreline environments, it also established general policies.

The 1978 Plan stated that:

> "Each environment represents a particular emphasis in the type of uses and the extent of development that should occur within it. The system is designed to encourage uses in each Environment which enhance the character of the Environment while at the same time requiring reasonable standards and restrictions on development so that the character of the Environment is not destroyed."

Finally, the 1978 Shoreline Master Program included general policies for a variety of different shoreline use activities, including agriculture, mining, recreation, and residential development. Associated shoreline regulations establish the designation criteria, the allowed uses, and development standards for the four shoreline environments recognized by the 1972 state guidelines.

In 1990, the King County Council adopted regulations governing environmentally sensitive areas, some of which include areas also within shoreline jurisdiction. (Ordinance 9614) King County updated its critical areas regulations effective January 1, 2005. (Ordinances 15032, 15033, and 15034) King County's Critical Areas Regulations and its Shoreline Master Program both provide that the regulations that are most protective of the environment apply in the case of a conflict.

3. Shoreline jurisdiction under the Shoreline Management Act

Shorelines of the State in King County, as defined by the Shoreline Management Act, include all marine waters, lakes greater than 20 acres, and rivers and streams with a minimum of 20 cubic feet per second mean annual flow. The shoreline jurisdiction includes these water bodies and shorelands. Shorelands are defined as those areas extending landward for 200 feet from the ordinary high water mark, floodways and contiguous floodplain areas landward 200 feet from such floodways, and all associated wetlands and river deltas. King County currently includes the 100-year floodplain in its shoreline jurisdiction. Shoreline jurisdiction under the Shoreline Management Act does not include tribal reservation lands or lands held in trust by the federal government for the tribes.

Table S-1 below shows the number of shoreline miles managed under King County's Shoreline Master Program.

Table S-1. Miles of shoreline under King County's jurisdiction

Shoreline (miles)		
Lake	River/Stream	Marine
234	1,696	51

D. King County's Shoreline Master Program

The Shoreline Master Program adopted by King County provides a legal framework for decision making on land use and other activities that complies with the Shoreline Management Act. This section describes the elements of the Shoreline Master Program, with the details being further developed throughout this chapter.

1. Components of the Shoreline Master Program

The King County Shoreline Master Program consists of this chapter and the implementing shoreline management regulations.

This chapter describes King County's shoreline goals and policies. It addresses the shoreline jurisdiction, overall shoreline policy goals, shoreline element policies, Shoreline Master Program relationship to other laws, shoreline environment designations, environmental protection, shoreline use and modification, and administrative policies. The following documents provide supporting information for these goals and policies:

King County Shoreline Protection and Restoration Plan (September 2010): The Shoreline Protection and Restoration Plan summarizes the methods and results of King County's shoreline analysis with respect to restoration planning, the elements and applicability of the restoration plan, and the ways in which shoreline restoration is expected to occur over time.

King County Shoreline Public Access Plan (September 2010): The Shoreline Public Access Plan includes an inventory of existing formal and informal shoreline public access opportunities in the unincorporated area, and identifies gaps in public access opportunities. The Shoreline Public Access Plan describes King County's priorities for providing new public access to major shorelines in the unincorporated area.

King County Shoreline Cumulative Impacts Assessment (September 2010): The Shoreline Cumulative Impacts Assessment provides a mechanism for examining the potential success of county policies and regulations in meeting the goal of no net loss of shoreline ecological processes and functions.

King County Shoreline Inventory and Characterization (May 2007): The Shoreline Inventory and Characterization includes the data and analytic methods used to develop King County's shoreline inventory and shoreline characterization (including evaluation of existing physical and shoreline ecological processes

and functions, public access and recreation, land use and economic development, public facilities and utilities, and archaeological and historic resources). In addition, the Shoreline Inventory and Characterization includes methodologies for cumulative impact analysis associated with shoreline management and comprehensive shoreline restoration planning. Specific data can be found at: http://www.kingcounty.gov/shorelines.

King County Shoreline Map Folio (September 2010): The Shoreline Map Folio includes all maps produced and referenced as part of the Shoreline Master Program update, with the exception of those maps included in this chapter. All geographic information can be found at: http://www.kingcounty.gov/shorelines

The terms "Shoreline Master Program," "Shoreline Program" and "Program" are all used throughout this chapter to describe King County's shoreline policies (this chapter) and shoreline management regulations in their entirety.

2. Shoreline policies

The Shoreline Master Program contains specific policies relating to a wide variety of shoreline uses and issues.

Shoreline policies establish broad shoreline management directives. They are statements of intent by King County that direct or authorize a course of action or specify criteria for regulatory or non-regulatory action. The policies serve as the basis for regulations that govern use and development along the shoreline.

King County's shoreline policies must:

1. Be consistent with the Shoreline Management Act;
2. Address the Master Program elements of Revised Code of Washington 90.58.100;
3. Include policies for environmental designations as described in Washington Administrative Code 173-26-211;
4. Be designed and implemented in a manner consistent with all relevant constitutional and other legal limitations on regulation of private property; and
5. Be consistent with the King County Comprehensive Plan and functional plans adopted as components of the Comprehensive Plan.

Shoreline policies provide a comprehensive foundation for the Shoreline Master Program regulations, which are more specific standards that are used to evaluate shoreline development proposals. King County must evaluate permit applications in light of the shoreline policies and may approve a permit only after determining that the development conforms to the policies in the Shoreline Master Plan.

In addition, shoreline policies assist in prioritizing King County's spending on facilities and services within shorelines of the state. Finally, the shoreline policies provide direction for regional issues such as resource management, environmental protection, transportation, inter-governmental coordination and regional planning.

3. Shoreline Environments

The Shoreline Management Act requires that shoreline management programs classify shoreline areas into specific environment designations. The Department of Ecology's guidelines recommend six different environment designations, but does not require that local programs adopt this particular scheme. King County's 1978 Shoreline Master Program adopted the four environment designations recommended by the Department of Ecology at that time: Urban, Rural, Conservancy, and Natural. In this update, King County is adopting eight environment designations in total, based on the recommendations from the Department of Ecology. These environment designations are:

High Intensity Shoreline Environment: Applied to areas that provide high-intensity water-oriented commercial, transportation, and industrial uses.

Residential Shoreline Environment: Applied to accommodate residential uses at urban densities, while allowing for non-residential uses that are consistent with the protection of the shoreline jurisdiction.

Rural Shoreline Environment: Applied to accommodate rural residential shoreline development, while allowing for rural non-residential uses that are consistent with the protection of the shoreline.

Conservancy Shoreline Environment: Applied to protect and conserve the shoreline for ecological, public safety, and recreation, purposes. Includes areas with important shoreline ecological processes and functions, valuable historic and cultural features, flood and geological hazards and recreational opportunities. Residential areas can also be designated as conservancy shorelines.

Resource Shoreline Environment: Applied to allow for mining and agriculture land uses, except for shorelines that are relatively intact or that have minimally degraded shoreline processes and functions.

Forestry Shoreline Environment: Applied in areas to allow for forest production and protect municipal water supplies.

Natural Shoreline Environment: Applied to shorelines that are relatively intact or have minimally degraded shoreline processes and functions that are intolerant of human use.

Aquatic Shoreline Environment: Applied to the areas waterward of the ordinary high water mark.

4. Shoreline program elements

The Shoreline Management Act identifies eight "program elements" that must be addressed and included in local shoreline master programs:

Economic development element that considers the location and design of industries, industrial projects of statewide significance, transportation facilities, port facilities, tourist facilities, commerce, and other developments that are particularly dependent on shorelines of the state.

Public access element that considers public access to publicly owned land along shorelines of the state.

Recreational element that identifies recreational opportunities along shorelines, such as parks, tidelands, beaches, and recreational areas, and that pursues acquisition through implementation of the King County Shoreline Master Program.

Circulation element that consists of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other public utilities and facilities.

Land use element that considers the general distribution and location, as well as the extent of use on the shorelines and adjacent areas for housing, business, industry, transportation, agriculture, natural resources, recreation, education, public buildings and grounds, and other categories of public and private use of the land.

Conservation element that addresses the preservation of natural resources including, but not limited to, scenic vistas, aesthetics, and vital estuarine areas for fish and wildlife.

Historic, cultural, scientific and educational element that prevents the destruction of or damage to any site having historic, cultural, scientific, or educational value as identified by the appropriate authorities, including affected Tribes, and the state office of archaeology and historic preservation.

Flood hazard element that considers the prevention and minimization of flood damages.

5. Shoreline modifications and uses

The Shoreline Management Act requires that local Shoreline Master Programs distinguish between shoreline modifications and shoreline uses.

Shoreline modifications are generally related to construction of a physical element such as a dike, breakwater, dredged basin, or fill, but can include other actions such as clearing, grading or application of chemicals. A shoreline modification is usually undertaken in support of or in preparation for a shoreline use.

Shoreline uses are classified as "water-dependent," "water-related," "water-enjoyment," or "water-oriented."

A water-dependent use is a use or portion of a use that cannot exist in a location that is not adjacent to the water and that is dependent on the water by reason of the intrinsic nature of its operations.

A water-related use is a use or portion of a use that is not intrinsically dependent on a waterfront location but whose economic viability is dependent upon a waterfront location because:

(a) The use has a functional requirement for a waterfront location such as the arrival or shipment of materials by water or the need for large quantities of water; or

(b) The use provides a necessary service supportive of the water-dependent uses and the proximity of the use to its customers makes its services less expensive or more convenient.

A water-enjoyment use is a recreational use or other use that facilitates public access to the shoreline as a primary characteristic of the use; or a use that provides for recreational use or aesthetic enjoyment of the shoreline for a substantial number of people as a general characteristic of the use and which, through location, design and operation, ensures the public's ability to enjoy the physical and aesthetic qualities of the shoreline. In order to qualify as a water-enjoyment use, the use must be open to the general public and the shoreline-oriented space within the project must be devoted to the specific aspects of the use that fosters shoreline enjoyment.

A water-oriented use is a use that is water-dependent, water-related, water-enjoyment, or a combination of such uses.

II. Shoreline Jurisdiction

A King County's Responsibility to Regulate Shorelines

1. King County assumes primary responsibility for shoreline planning and regulation

King County has primary responsibility for shoreline management planning and for the administration of shoreline regulations within its jurisdiction.

S-101 **King County has primary responsibility within its boundaries for planning required by the Shoreline Management Act and for administering its shoreline regulatory program.**

King County recognizes that its Shoreline Master Program is subject to review and approval by the Washington State Department of Ecology and that the Shoreline Master Program must be consistent with the policies and provisions of the Shoreline Management Act (Revised Code of Washington 90.58).

2. King County's Shoreline Master Program is intended to be consistent with the Shoreline Management Act & Guidelines

King County's Shoreline Master Program is intended to be consistent with the required elements of the Department of Ecology's guidelines for implementing the Shoreline Management Act that are found in Washington Administrative Code 173-26 and 173-28. King County's Shoreline Master Program shall be interpreted consistently with the Shoreline Management Act. In the event of a conflict between Shoreline Management Act and King County's Shoreline Master Program, the Shoreline Master Program should be interpreted to give meaning and effect to the Shoreline Management Act.

S-102 **King County's Shoreline Master Program is to be interpreted consistently with the policies and requirements of the Shoreline Management Act (Revised Code of Washington 90.58).**

S-103 **King County's Shoreline Master Program is to be interpreted consistently with the required elements of the shoreline guidelines found in Washington Administrative Code 173-26 and 173-28.**

3. King County's Shoreline Master Program is to be liberally construed

The Shoreline Management Act explicitly provides that it is exempt from the rule of strict construction and must be liberally construed to give full effect to the Act's objectives and purposes. By adopting a liberal standard of construction, the state Legislature demonstrated the importance it attached to protecting the shoreline and accomplishing the goals and policies of the Shoreline Management Act. Consistent with this mandate, and because King County believes that accomplishing the goals and objectives of the Shoreline Management Act within the county is of primary importance, the Shoreline Master Program is to be liberally construed to accomplish its objectives and purpose.

S-104 **King County's Shoreline Master Program is exempted from the rules of strict construction and shall be construed liberally to give full effect to its objectives and purpose.**

B. Shoreline Jurisdiction

1. Shoreline jurisdiction extends over all "shorelines" and "shorelines of statewide significance" within unincorporated King County

The Shoreline Management Act applies to all "shorelines of the state." "Shorelines of the state" are defined to include "shorelines" and "shorelines of statewide significance." It is important to understand the distinction between the terms "shorelines" and "shorelines of statewide significance." Both terms are used throughout the Shoreline Management Act and define the scope of King County's shoreline jurisdiction. The distinction is important because the Shoreline Management Act imposes greater and more specific obligations when dealing with shorelines of statewide significance.

a. "Shorelines"

Shorelines are defined in the Shoreline Management Act as follows:

> "Shorelines" means all of the water areas of the state, including reservoirs, and their associated shorelands, together with the lands underlying them; except (i) shorelines of statewide significance; (ii) shorelines on segments of streams upstream of a point where the mean annual flow is 20 cubic feet per second or less and the wetlands associated with such upstream segments; and (iii) shorelines on lakes less than 20 acres in size and wetlands associated with such small lakes.

b. "Shorelines of statewide significance"

Shorelines of statewide significance, as specifically defined in the Shoreline Management Act include:

- Those areas of Puget Sound between the ordinary high water mark and the line of extreme low tides;
- Lakes, whether natural, artificial or a combination thereof, with a surface acreage of 1,000 acres or more measured at the ordinary high water mark; and
- Natural rivers or segments thereof downstream of a point where the mean annual flow is measured at

1,000 cubic feet per second or more.

In unincorporated King County, the water bodies that qualify as shorelines of statewide significance include:

- The marine waters around Vashon-Maury Island
- Northeast Lake Washington (north of Kirkland) and southwest Lake Washington (west of Renton)
- Lake Sammamish at Marymoor State Park and Lake Sammamish State Park
- Mud Mountain Reservoir and White River from river mile 15.5 to river mile 46 (excluding the Muckleshoot Indian Reservation between river mile 8.9 and river mile 15.5)
- Green River from its confluence with the Duwamish River to river mile 95
- Duwamish River from river mile 3.5 to river mile 5
- Chester Morse Lake (Reservoir)
- Tolt Reservoir
- Mainstem Snoqualmie River to river mile 43 and Middle Fork Snoqualmie River to river mile 39
- South Fork Skykomish River to river mile 30

Associated shorelands that are adjacent to shorelines of statewide significance are included within the shoreline of statewide significance jurisdiction.

c. "Shorelands"

Shorelines includes "associated shorelands" which are defined in the Shoreline Management Act as follows:

> "Shorelands" or "shoreland areas" means those lands extending landward for 200 feet in all directions as measured on a horizontal plane from the ordinary high water mark; floodways and contiguous floodplain areas landward 200 feet from such floodways; and all wetlands and river deltas associated with the streams, lakes, and tidal waters which are subject to the provisions of this chapter.

d. Shoreline jurisdiction

King County's shoreline jurisdiction consists of the combination of shorelines, shorelines of statewide significance, and shorelands.

S-105 **King County's shoreline jurisdiction extends over all shorelines of the state, as that term is defined in the Shoreline Management Act, in unincorporated King County. This includes jurisdiction over shorelines, shorelines of statewide significance and shorelands.**

e. Options to extend geographic jurisdiction over shorelines and shorelines of statewide significance

The Shoreline Management Act gives King County two options concerning the scope of its shoreline jurisdiction.

The first option allows the county to include 100-year floodplains:

> Any county or city may determine that portion of a 100-year floodplain to be included in its Master Program as long as such portion includes, as a minimum, the floodway and the adjacent land extending landward 200 feet therefrom.
> (Revised Code of Washington 90.58.030(2)(f)(i))

In its original Shoreline Master Program adopted in 1977, King County included the 100-year floodplain. The continued regulation of the 100-year floodplain is necessary to comply with certain federal requirements under the National Flood Insurance Program. Therefore, King County continues to extend its shoreline jurisdiction to cover 100-year floodplains.

S-106 **King County includes within its shoreline jurisdiction the 100-year floodplains of shorelines of the state.**

The second option allows the extension of shoreline jurisdiction to include land necessary for buffers for critical areas that extend beyond the 200 foot shoreland jurisdiction:

> Any city or county may also include in its master program land necessary for buffers for critical areas, as defined in chapter 36.70A Revised Code of Washington, that occur within shorelines of the state, provided that forest practices regulated under chapter 76.09 Revised Code of Washington, except conversions to non-forest land use, on lands subject to the provisions of this subsection (2)(f)(ii) are not subject to additional regulations under this chapter.(Revised Code of Washington 90.58.030(2)(f)(ii))

King County is not exercising its option to extend its shoreline jurisdiction to include lands for buffers for critical areas.

S-107 **Where critical areas are located within the unincorporated King County shorelands, the shoreline jurisdiction shall not include the critical area buffers that extend outside of the shoreline jurisdiction boundary.**

2. Jurisdictional map

Applying these definitions within King County has involved an extensive survey of the shoreline jurisdiction, which is discussed in detail in the King County Shorelines Inventory and Characterization (May 2007). The Shorelines of the State map at the end of this chapter shows the complete scope of King County's shorelines and shorelines of statewide significance.

III. Shoreline Policy Goals

A. Introduction to Shoreline goals

King County's shoreline has a long history of settlement because of the abundant natural resources, availability of water, and usefulness as transportation routes. The shoreline also draws people to enjoy the aesthetic and recreational value that marine beaches, lakes, and rivers provide. The shoreline supports some of the region's most important industries, such as shipping, fishing, and tourism.

Because of the unique and irreplaceable value of the shorelines of the state, King County recognizes that it is in the public interest to protect shoreline ecological processes and functions, while allowing reasonable and necessary use of shorelines to support the regional economy and provide recreational opportunities for the public.

The high demand for shoreline use over time has degraded shoreline ecological processes and functions in many areas. Many segments of King County's shoreline jurisdiction are devoid of native vegetation, the banks are hardened with additions of rock and other materials, sediment movement is no longer driven by natural forces, and valuable fish and wildlife habitat is gone or impaired to a significant extent. Unaltered shorelines are increasingly rare. It has become critical to restore and enhance degraded shorelines.

A vast majority of the shoreline jurisdiction, particularly in the lower parts of the regional watersheds and along the marine shorelines, is in private ownership, giving the residents of King County an important role in protecting unique and irreplaceable shoreline values. The challenge for King County is to manage these lands in a manner that protects, restores, and enhances King County's shoreline jurisdiction, while respecting private property rights and protecting the public interest.

King County has established a set of general policy goals that provide overarching guidance for discretionary decision-making, support shoreline regulations, and define the vision that King County has for the use, protection, restoration and enhancement of the shorelines of the state. These policy goals reflect the wide range of Shoreline Management Act mandates, while at the same time preserving the maximum possible flexibility for King County to address the unique shoreline conditions within its jurisdiction.

B. Statement of Applicability

The Shoreline Management Act includes a requirement that development proposals must obtain a shoreline substantial development permit. However, the Shoreline Management Act includes a number of exemptions from this requirement. For example, proposals to construct a single family residence or to construct a bulkhead to protect a single family residence are exempt from the requirement to obtain a substantial development permit.

Activities that do not require a shoreline substantial development permit can, individually and cumulatively, adversely impact adjacent properties and natural resources. King County has both the authority and the responsibility to enforce Shoreline Master Program regulations on all uses and development in the shoreline jurisdiction. In order to ensure that permit-exempt activities comply with the Shoreline Management Act and the County's Shoreline Master Program, King County generally requires applicants with exempt projects to apply for a shoreline exemption.

Because there has been confusion in the past regarding the scope of the Shoreline Management Act, Ecology requires that all Master Programs contain the following policy statement:

S-201 **All proposed uses and development occurring within King County's shoreline jurisdiction must conform to the Shoreline Management Act and to King County's Shoreline Master Program.**

C. Shoreline Preferred Uses

The Shoreline Management Act establishes mandatory preferences for uses that are unique to or dependent upon a shoreline location. These preferred uses apply to the entire shoreline jurisdiction, both the shorelines and shorelines of statewide significance. The Shoreline Management Act preferred uses are recognized in the following policies.

S-202 **In establishing and implementing shoreline policies and development regulations, King County shall give preference to uses that are unique to or dependent upon a shoreline location.**

S-203 **King County, when determining allowable uses and resolving use conflicts in the shoreline jurisdiction, shall apply the following preferences and priorities in the order listed below:**

a. **Reserve appropriate areas for protecting and restoring shoreline ecological processes and functions to control pollution and prevent damage to the natural environment and to public health.**

b. **Reserve shoreline areas for water-dependent and associated water-related uses. Harbor areas, established pursuant to Article XV of the State Constitution, and other areas that have reasonable commercial navigational accessibility and necessary support facilities, such as transportation and utilities, should be reserved for water-dependent and water-related uses that are associated with commercial navigation, unless adequate shoreline is reserved for future water-dependent and water-related uses and unless protection of the existing natural resource values of such areas preclude such uses. Shoreline mixed-use developments may be allowed if they include and support**

water-dependent uses and address specific conditions that affect water-dependent uses.

c. Reserve shoreline areas for other water-related and water-enjoyment uses that are compatible with ecological protection and restoration objectives.

d. Locate single family residential uses where they are appropriate and can be developed without significant impact to shoreline ecological processes and functions or displacement of water-dependent uses.

e. Limit nonwater-oriented uses to those locations that are inappropriate for higher priority uses or where the nonwater-oriented uses demonstrably contribute to the objectives of the Shoreline Management Act.

S-204 In particular circumstances, the preferred use policies, the local economic and land use conditions, and the policies and regulations that assure protection of shoreline resources may result in a determination that other uses may be considered as necessary or appropriate. These other uses may be accommodated, provided that the preferred uses are reasonably provided for throughout the shoreline jurisdiction.

D. General Policy Goals

The Shoreline Management Act policies of protecting shoreline ecological processes and functions, fostering reasonable use, and maintaining the public right of navigation and corollary uses result in certain mandatory policy goals for the shoreline jurisdiction.

These policies apply to both shorelines and shorelines of statewide significance. The policies are not ranked in a specific order. King County reserves the right to balance these general policies based on the unique circumstances, location and physical condition of the shoreline.

S-205 The following policy goals apply to all of the shoreline jurisdiction. The goals are not ranked in importance and have been assigned a number for identification purposes only.

a. The use of the shoreline jurisdiction for those economically productive uses that are particularly dependent on shoreline location or use.

b. The use of the shoreline jurisdiction for public access and recreation.

c. Protection and restoration of the ecological processes and functions of shoreline natural resources.

d. Protection of the public right of navigation and corollary uses of waters of the state.

e. **The protection and restoration of buildings and sites having historic, cultural, and educational value.**

f. **Planning for public facilities and utilities correlated with other shorelines uses.**

g. **Prevention and minimization of flood damage.**

h. **Recognizing and protecting private property rights.**

i. **Preferential accommodation of single family residential uses.**

j. **Coordination of shoreline management with other relevant local, state and federal programs.**

E. Shorelines of Statewide Significance Policy Goals

The Shoreline Management Act identifies certain shorelines as "shorelines of statewide significance" and raises their status by setting use priorities and by calling for a higher level of effort in implementing the Shoreline Master Program. The state legislature has declared that the interest of all people shall be paramount in the management of shorelines of statewide significance.

S-206 **The interests of all people shall be paramount in the management of shorelines of statewide significance within King County.**

The legislature has established policy goals that govern shorelines of statewide significance. Significantly, these policy goals are ranked in order of preference, i.e., the first goal must be given priority over all subsequent goals.

The following policy recognizes and accepts the policy goals as directed by the Shoreline Management Act for shorelines of statewide significance:

S-207 **In developing and implementing its Shoreline Master Program for shorelines of statewide significance, King County shall give preference, in the following order of preference, to uses that:**

a. **Recognize and protect the statewide interest over local interest;**

b. **Preserve the natural character of the shoreline;**

c. **Result in long-term over short-term benefit;**

d. **Protect the resources and ecology of the shoreline;**

e. **Increase public access to publicly owned areas of the shorelines;**

f. **Increase recreational opportunities for the public in the shoreline; and**

g. Provide for any other element as defined in Revised Code of Washington **90.58.100.**

S-208 **In developing and implementing policies relating to shorelines of statewide significance, King County shall provide for optimum implementation of policies that satisfy the statewide interest.**

F. State-Owned Shoreline Policy Goals

The state also owns property within King County. The Shoreline Management Act requires that certain policies be adopted with regard to shoreline land owned by the state. This is distinct from shorelines of statewide significance, which may or may not be in state ownership. Because state-owned shoreline is often adapted to providing recreational activities for the public, King County has given special consideration to these factors in developing the Shoreline Master Program.

S-209 **King County should encourage and help facilitate the use of state-owned shorelines for public recreational activities, where appropriate.**

G. Balancing Policy Goals

The policy goals for the management of the shoreline jurisdiction have the potential for conflict. King County shorelines are considered among the most valuable and fragile of King County's natural resources. These shorelines are valuable for economically productive industrial and commercial uses, recreation, navigation, residential amenity, scientific research, and education. They are fragile because shorelines depend upon a balance between physical, biological, and chemical systems that may be significantly altered by both natural forces (earthquakes, volcanic eruptions, landslides, storms, droughts, floods) and human activities (industrial, commercial, residential, recreation, navigational). Unbridled use of the shorelines ultimately could destroy their utility and value for human use.

S-210 **The policy goals of King County's Shoreline Master Program relate both to the use and protection of the extremely valuable and vulnerable shoreline resources of the state.**

S-211 **King County shall accommodate in the shoreline jurisdiction all reasonable and appropriate uses consistent with protecting against adverse effects to the public health, the land and its vegetation and wildlife, and the waters of the state and consistent with public rights of navigation.**

S-212 **The policy of achieving both shoreline use and protection is reflected in the provision that permitted uses in the shoreline jurisdiction shall be designed and conducted in a manner to avoid or minimize, in so far as practical, any resultant damage to the ecology and environment of the shoreline area and the public's use of the water.**

S-213 **King County shall balance shoreline use and shoreline protection when meeting the policy goals of the Shoreline Management Act.**

H. Multiple Approaches to Accomplishing Policy Goals

The policy goals in the Shoreline Master Program may be achieved through a variety of methods that go beyond simply regulating development within the shoreline jurisdiction. There are a wide range of non-regulatory tools available that provide incentives for property owners to work cooperatively with King County to achieve these policy goals. In addition, King County works closely with other public and non-profit groups to achieve mutually beneficial objectives.

S-214 **The King County Shoreline Master Program policies may be achieved by a number of different means, both regulatory and non-regulatory. These include, but are not limited to:**

- **a. Regulations controlling development within the shoreline jurisdiction;**
- **b. Acquisition of land and easements by purchase, lease, or gift, either alone or in concert with other local governments;**
- **c. Accepting grants, contributions, and appropriations from any public or private agency or individuals;**
- **d. Public facility and park planning;**
- **e. Watershed planning;**
- **f. Voluntary salmon recovery projects; and**
- **g. Incentive programs, such as the transfer of development rights or the public benefit rating system.**

IV. Shoreline Element Policy Goals

A. Need for shoreline elements

The Shoreline Management Act requires local master programs to include a number of elements that range from use of shorelines for economic benefit and accommodating necessary infrastructure to protecting both cultural and natural resources. These elements are addressed separately throughout this chapter and are based on the following overarching King County Shoreline Master Program element policy goals.

B. Economic Development Element

King County's economy is the largest and most significant in the Puget Sound Region and in Washington State. With almost half of the state's nonagricultural jobs and almost 83,900 businesses, it is essential that the King County accommodate the industries and infrastructure to support a healthy and vibrant economy. Most of the county's industry and infrastructure lies within the incorporated cities and is not subject to the King County

Shoreline Master Program. However, there are some portions of the shoreline jurisdiction in unincorporated King County that provide for economic development of the region.

S-301 **King County should plan for the location and design of industries, transportation facilities, port facilities, tourist facilities, commerce and other developments that are particularly dependent on their location on or use of the shorelines of the state.**

C. Public Access Element

King County believes the shoreline should be accessible to the general public to enjoy and use within the limitations of private property rights and ecological considerations. Since a significant amount of shoreline property is in private ownership, the responsibility to maintain and provide public access falls primarily on public projects. Not all sites are appropriate for use by the public and must be evaluated carefully to ensure that public access can be safely provided without harm. Provisions should also be retained and sought to provide opportunities for the public to enjoy views of the water and shoreline.

S-302 **King County shall:**

- **a. Support the public interest with regard to rights to access waters held in public trust by the state, while protecting private property rights and public safety, as well as considering impacts on shoreline ecological processes and functions.**
- **b. Protect the rights of navigation and the space necessary for water-dependent uses.**
- **c. To the greatest extent feasible consistent with the overall best interest of the state and the people generally, protect the public's opportunity to enjoy the physical and aesthetic qualities of shorelines of the state, including views of the water.**
- **e. Regulate the design, construction, and operation of permitted uses in the shorelines of the state to minimize, insofar as practical, interference with the public's use of the water.**

When planning shoreline public access, King County should try to achieve an integrated system that can supplement, and be coordinated with, multimodal transportation planning. King County has identified areas of potential public access that will be assessed in more detail through shoreline permits and public projects. The King County Shoreline Public Access Plan (July 2009) provides details on the analysis of existing shoreline public access in King County, identified public access gaps and opportunities, and the resulting shoreline Public Access Plan.

S-303 **The King County Shoreline Master Program should increase the amount and diversity of public access to the shoreline jurisdiction in areas identified within a shoreline public access gap. New public access should minimize impacts to shoreline ecological processes and functions, preserve natural shoreline character as much as possible, protect private property rights and consider public safety.**

S-304 **Public agencies, including local governments, port districts, state agencies, and public utility districts, should include public access in their development proposals if public access is compatible with the activity and can be provided safely. An assessment of the impact of public access on the shoreline and constructed features should also be conducted.**

S-305 **King County shall require public access to shorelines of the state for water-enjoyment, water-related, and nonwater-dependent non-residential uses and for subdivisions of land into more than four parcels unless:**

a. **The development proposal is not compatible with public access;**
b. **There is a safety or security concern;**
c. **Inclusion of public access will have an environmental impact that cannot be mitigated; or**
d. **There are legal limitations on allowing public access.**

S-306 **King County shall adopt development regulations that establish maximum building height limits, setbacks, and view corridors to minimize the impact to existing views from public property or a substantial number of residences. Where providing direct public access or allowing for water dependent shoreline uses conflicts with maintaining existing views, the direct public access or water dependent shoreline uses shall have priority.**

D. Recreational Element

Shorelines provide many opportunities for recreation, such as boating, swimming, beach combing, hiking, and nature viewing. Since much of the shoreline jurisdiction is in private ownership, using public lands for recreation will become increasingly important. Opportunities should be sought through public projects to protect and enhance recreational opportunities.

S-307 **King County should protect and, when possible, expand recreational opportunities, including but not limited to parks, beaches, tidelands, swimming beaches and boat launches.**

S-308 **King County should evaluate opportunities to acquire shoreline property for purposes of public recreation from willing sellers of private property.**

E. Circulation Element

Circulation and transportation planning is conducted at many levels in King County. The overarching transportation planning agency in the Puget Sound region is the Puget Sound Regional Council, an association of cities, towns, counties, ports, and state agencies that serves as a forum for developing policies and making decisions about growth and transportation issues in the Puget Sound region. At the local level, cities and counties approve local circulation patterns for their individual jurisdictions. King County should consider the policy goals in this Shoreline Master Program when participating in regional and local transportation planning discussions.

S-309 **The King County Shoreline Master Program should guide the county's transportation plans and projects within the shoreline jurisdiction.**

F. Land Use Element

Land use in King County is established through implementation of the Washington State Growth Management Act. To implement the Growth Management Act, King County relies primarily on the King County Comprehensive Plan and functional plans that are adopted as part of this Comprehensive Plan for facilities and services. This Comprehensive Plan establishes an Urban Growth Area and designates land use and zoning for the unincorporated portions of King County. It also delineates and protects Agricultural Production Districts, Forest Production Districts and mineral resource sites.

S-310 **The King County Comprehensive Plan should consider the policy goals of the King County Shoreline Master Program when designating land use and zoning on shorelines of the state and adjacent lands.**

G. Conservation Element

The Shoreline Management Act requires local master programs to include a conservation element for the preservation of natural resources, including critical areas, scenic vistas, aesthetics, and vital freshwater, saltwater and estuarine areas for fish and wildlife.

1. Critical areas

King County's critical areas ordinance is based on best available science and protects coal mine hazard areas; erosion hazard areas; flood hazard areas; seismic hazard areas; landslide hazard areas; volcanic hazard areas; steep slope hazard areas; critical aquifer recharge areas; wetlands; aquatic areas (including lakes, rivers and streams and marine areas); and wildlife habitat conservation areas. The Growth Management Act requires that

a Shoreline Master Program provide a level of protection for critical areas located within shorelines that assures no net loss of shoreline ecological functions necessary to sustain shoreline natural resources. Policy S-403 adopts this requirement.

Past development of the shorelines has degraded the habitat for many species by activities such as armoring banks against wave action and the erosive force of water flowing downstream; removal of vegetation; straightening channels; installing in-stream structures for flood control, hydroelectricity and water supply; and allowing stormwater runoff that degrades water quality. Degraded shorelines should be restored and shorelines that are in good condition should be preserved.

S-311 **King County shall protect shoreline critical areas and, where possible, should restore degraded habitat and critical area functions and values.**

2 Scenic vistas

The natural topography of King County provides numerous scenic vistas of the shoreline. King County should ensure that development occurring both within and outside the shorelines of the state avoids impacts on scenic vistas and protects view corridors while balancing other policy goals of this plan.

S-312 **King County should consider and, when possible, require protection of scenic vistas of the shoreline jurisdiction when reviewing public and private development proposals.**

3 Aesthetics

Natural shorelines are visually aesthetic in their natural state. When these shorelines are altered through development, the aesthetic value of the shoreline should be preserved as much as possible. In areas where shorelines have already been developed with little consideration of the aesthetics, restoration should return the shoreline to an aesthetically-pleasing environment.

S-313 **King County should ensure that public and private development proposals protect and restore the aesthetic quality of shorelines in the project design.**

H. Historic, Cultural, Scientific and Educational Element

The historic, cultural, scientific and educational element provides for protection and restoration of historic resources. Historic resources include historic building, sites, objects, districts and landscapes, prehistoric and historic archaeological resources and traditional cultural places.

S-314 Historic resources in the shoreline jurisdiction should be protected to prevent the destruction of, or damage to, any site having archaeological, historic, cultural, or scientific value through coordination and consultation with the appropriate local, state and federal authorities, including affected tribes.

a. Sites should be protected in collaboration with appropriate tribal, state, federal, and other local governments. Cooperation among public and private parties is to be encouraged in the identification, protection, and management of cultural resources.

b. Where appropriate, access to such sites should be made available to parties of interest. Access to such sites must be designed and managed in a manner that gives maximum protection to the resource.

c. Opportunities for education related to archaeological, historical and cultural features should be provided where appropriate and incorporated into public and private programs and development.

S-315 King County should work with tribal, state, federal and local governments to maintain an inventory of all known historic resources. King County shall protect these inventories from public disclosure to the extent permitted or required under applicable federal and state law. As appropriate, such sites should be preserved and restored for study, education and public enjoyment to the maximum possible extent.

S-316 Provisions for historic resource preservation, restoration and education should be incorporated with open space or recreation areas in site development plans whenever compatible and possible.

S-317 Cooperation among involved private and public parties should be encouraged to achieve these historic, cultural, scientific and educational objectives.

S-318 Private and public owners of historic resources should be encouraged to provide public access and educational opportunities at levels consistent with long term protection of both historic values and shoreline ecological processes and functions. Site-specific conditions may require public site access to be restricted at times, but educational means should be provided whenever possible.

S-319 Historic resource development should be planned and carried out so as to prevent impacts to the resource. Impacts to neighboring properties and other shoreline uses should be limited to temporary or reasonable levels.

S-320 **Owners of historic resource are encouraged to make substantial development plans known well in advance of application so that appropriate agencies, such as the Washington State Department of Archaeology and Historic Preservation, Tribes and others, may have ample time to assess the site and make arrangements to preserve historic, cultural, scientific and educational values as applicable.**

S-321 **If development is proposed adjacent to an historic resource, the proposed development should be designed and operated so as to be compatible with continued protection of the historic, cultural or archaeological resource.**

V. Shoreline Plan Relationship to Other Laws

A. Washington's Growth Management Act

The Growth Management Act, passed by the Washington State Legislature in 1990 and 1991, seeks to further protect the quality of life in Washington State. The Growth Management Act requires that the state's most populous and fastest growing counties and their cities prepare comprehensive land use plans that anticipate growth for a 20-year horizon. Smaller communities and those communities that are experiencing a slow rate of growth may choose to plan under the Growth Management Act, but are not required to do so. Comprehensive Plans adopted in accordance with the Growth Management Act must manage growth so that development is directed to designated urban areas and away from the Rural Area and Natural Resource Lands. The Growth Management Act also requires local governments to designate and protect critical areas and to identify and protect natural resource lands, which include commercially significant forestry, agriculture, and mining areas. In 1997, the Washington State Legislature amended both the Growth Management Act and the Shoreline Management Act in an effort to achieve consistency between the two statutes. Among the amendments to the Growth Management Act was a provision that makes the policies and goals of the Shoreline Management Act also policies and goals of the Growth Management Act. See Revised Code of Washington 36.70A.480.

S-401 **The King County Shoreline Master Program must be consistent with the Washington State Growth Management Act.**

B. King County Countywide Planning Policies

King County, along with the City of Seattle, City of Bellevue, and suburban cities established the Growth Management Planning Council to prepare a coordinated policy framework for future development in King County. In July 1992, the Growth Management Planning Council adopted Phase 1 of the Countywide Planning Policies. Phase 2 was adopted in 1994. The King County Countywide Planning Policies have been ratified by a majority of the jurisdictions in King County and therefore apply to all jurisdictions. The Countywide Planning Policies address critical areas, land use patterns, transportation, community character and open space, affordable

housing, development and provision of urban services, siting of public capital facilities, economic development, and regional financing and governance.

S-402 **The King County Shoreline Master Program must be consistent with and coordinated with the King County Countywide Planning Policies.**

C. Critical Areas Regulations

Critical areas located within shorelines are regulated under the Shoreline Management Act and implemented through local Shoreline Master Programs. The Growth Management Act requires that shoreline master programs provide a level of protection for shoreline critical areas that assures no net loss of shoreline ecological functions necessary to sustain shoreline natural resources.

S-403 **The King County Shoreline Master Program and implementing regulations shall provide a level of protection for critical areas in the shoreline jurisdiction that assures no net loss of shoreline ecological functions necessary to sustain shoreline natural resources.**

The Shoreline Management Act provides options for assuring consistency with the Growth Management Act protection of critical areas. These options range from including the Growth Management Act critical areas regulations in the Shoreline Master Program to preparing a discrete set of shoreline regulations.

S-404 **The King County Shoreline Master Program includes by reference portions of the King County critical areas regulations into the Shoreline Master Program to meet the requirements of Revised Code of Washington 90.58.090(3) and 90.58.090(4).**

D. Zoning, Clearing and Grading, and Stormwater Regulations

King County has adopted a wide array of development regulations that protect various aspects of the environment and implement other King County policies. These regulations generally include King County's surface water management regulations, clearing and grading regulations, and zoning. In the shoreline jurisdiction, the Shoreline Master Program may impose additional requirements. Shoreline development regulations must:

1. Be sufficient in scope and detail to ensure implementation of the Shoreline Management Act statewide shoreline management policies, this chapter, and the King County Comprehensive Plan and functional plans adopted to implement the Comprehensive Plan;
2. Include regulations that apply to the environmental designations classified under Washington Administrative Code 173-26-211;
3. Include general regulations, specific use regulations that address issues of concern in regard to specific uses, and modification regulations;

4. Include clearing and grading and stormwater regulations that protect the ecological processes and functions of the shorelines; and
5. Design and implement regulations and mitigation standards in a manner consistent with all relevant constitutional and other legal limitations on the regulation of private property. (Revised Code of Washington 90.58.100)

However, to the extent that it can, consistent with requirements of the Shoreline Management Act, King County will rely on its existing regulations to meet the requirements of the Shoreline Management Act.

S-405 **To the maximum extent practical, King County's Shoreline Master Program shall rely on King County's existing regulations, including critical areas regulations, surface water management regulations, clearing and grading regulations, and zoning in order to comply with the Shoreline Management Act and the Ecology's guidelines.**

E. Flood Hazard Management Plan

The King County Flood Hazard Management Plan directs floodplain management within King County. This Plan was developed in coordination with incorporated cities within King County as directed by Revised Code of Washington 86.12.210 and is binding on each jurisdiction located within King County. The goals of the King County Flood Hazard Management Plan are:

1. To reduce the risks from flood and channel migration hazards.
2. To avoid or minimize the environmental impacts of flood hazard management.
3. To reduce the long-term costs of flood hazard management.

Flood hazard regulations are implemented within unincorporated King County. Each jurisdiction within King County is required under the Flood Hazard Management Plan to adopt flood hazard management regulations that meet the minimum requirements of the National Flood Insurance Program.

In 2007, the King County Council approved the formation of a countywide Flood Control Zone District under the authority in Revised Code of Washington 86.15.025. The overarching countywide strategies and objectives include:

1. Improving levee protection through major commercial, industrial and residential areas;
2. Improving flood water conveyance and capacity;
3. Reducing hazards by removing flood, erosion, and landslide prone residential structures;
4. Providing safe access to homes and businesses by protecting key transportation routes;
5. Minimizing creation of new risks to public safety from development pressure.

The King County Flood Control Zone District is governed by a District Board of Supervisors that consists of the members of the King County Council. An advisory committee advises the board of supervisors of the Flood Control Zone District on regional flood protection issues by providing recommendations to the board of

supervisors on the district's work program and budget, including capital improvement program projects. King County will rely on the Flood Hazard Management Plan and the Flood Control Zone District to meet the general shoreline master program provisions for flood hazard reduction in Washington Administrative Code 173-26-221(3).

S-406 **The King County Shoreline Master Program will rely on the policies and programs established in the King County Flood Hazard Management Plan and flood hazard regulations to meet the requirements of the Shoreline Management Act and the Department of Ecology's guidelines for flood hazard reduction.**

IV. Shoreline Environment Designations

A. Introduction to shoreline environment designations

Shoreline management addresses a wide range of physical conditions and development settings. The Shoreline Master Program classifies shoreline reaches into defined environment designations, based on the existing use pattern, the current biological and physical character of the shoreline, and the goals and aspirations of the community. King County prescribes environmental protection measures, allowable use provisions, and development standards for each shoreline environment designation.

King County has established eight shoreline environment designations:

A. High Intensity Shoreline
B. Residential Shoreline
C. Rural Shoreline
D. Conservancy Shoreline
E. Resource Shoreline
F. Forestry Shoreline
G. Natural Shoreline
H. Aquatic

This section sets forth the purpose, criteria and management policies for each shoreline environment. The Shoreline Environment Designation maps at the end of this chapter show how the environment designations apply to shoreline reaches within the shoreline jurisdiction in unincorporated King County. Shoreline areas that meet the jurisdictional criteria, but that are not mapped or designated, are assigned a Conservancy designation until the Shoreline Master Program is amended to assign a shoreline environment to that shoreline reach.

Environment Designation Criteria

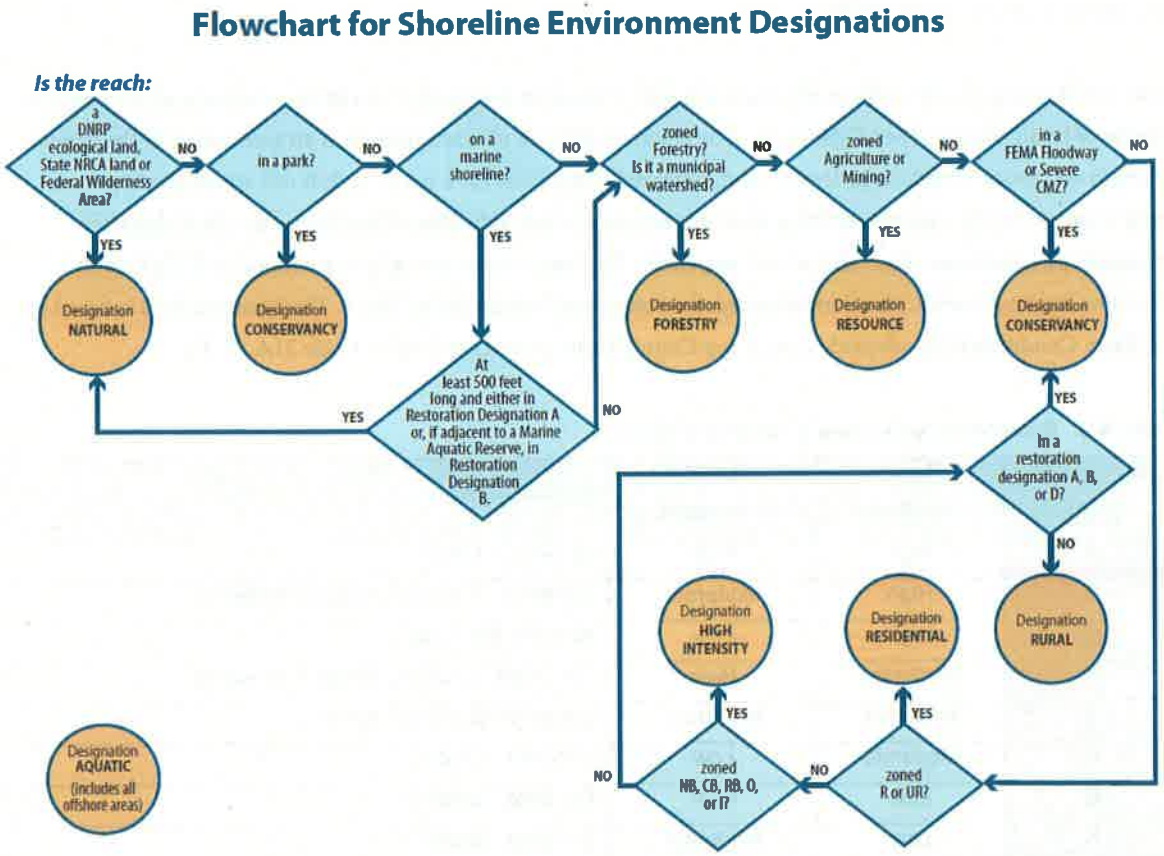
King County has a long history of comprehensive planning and basin planning. Beginning in the 1980s, basin plans were developed throughout the county and helped identify fragile aquatic resources. Relying on these plans, King County has assigned zoning that is appropriate given the nature of the resources that need protection. As a result, fragile resources generally have zoning classifications that permit only low intensity development. King County's zoning regulations limit high intensity development to urban areas designated under the Countywide Planning Policies and the King County Comprehensive Plan.

King County recognizes, however, that zoning by itself is insufficient to determine the shoreline environment designations. Other factors are also important in assuring that the shoreline environment designations help King County achieve the goals of the Shoreline Management Act. These factors include, for a given shoreline:

- Existing development patterns together with zoning, the King County Comprehensive Plan land use designations and other officially adopted plans;
- Existing shoreline ecological processes and functions and the degree of human alteration;
- Whether the reach has a restoration priority that demonstrates it has both basin conditions and existing shoreline condition that support extra efforts to maintain shoreline ecological processes and functions and the length of such reaches;
- Federal, state, county, tribal and municipal watershed ownership status;
- The goals of King County residents for their shorelines as set forth in this chapter;
- Pursuant to Revised Code of Washington 90.58.100(4), for state-owned shorelines the public demand for wilderness beaches and other recreational activities and for ecological study areas; and
- Other state policies in the Shoreline Management Act and the Department of Ecology's guidelines (Revised Code of Washington 90.58.020 and Washington Administrative Code 173-26, respectively).

Figure S-1 depicts the decision making process that is used to determine the appropriate shoreline environment designation for a given shoreline.

Figure S-1: Pathway of decisions in applying criteria to produce shoreline designations.



The shoreline environment designations take into account several elements. Areas currently meeting the criteria for high levels of protection are given greater levels of protection. The determination of whether an area deserves a greater level of protection is based either on its current ownership and condition, e.g. publicly owned natural areas or wilderness areas, or on its restoration rating. The restoration rating is discussed in more detail below. Zoning is also an important criterion. King County has for years implemented zoning as a means to protect more sensitive areas from intense development. Shoreline environment designations also take into account whether a reach is located within a floodway and severe channel migration hazard area and gives greater protection to these areas due to their importance in maintaining shoreline ecological processes and functions and because of public health and safety concerns.

The restoration rating (see King County Shoreline Protection and Restoration Plan (July 2009)) is included in the designation as a way to incorporate more strongly the current degree of alteration along the shoreline, the biological importance of the reach in a watershed context, and the restoration priorities associated with the combination of the two analyses. The restoration designations are largely concerned with whether it is most appropriate to implement measures to protect or conserve a site, restore it to a previous condition, or undertake projects to enhance its current condition or to create new features with shoreline ecological processes and

functions. These ratings also provide guidance on areas where it is important to protect existing shoreline ecological processes and functions.

Restoration ratings combine the reach characterization based on the results from an alterations analysis with the context of basin analyses (See Table S-2). The reach or drift cell characterization is an assessment of the extent to which ecosystem structure, processes, and, ultimately, functions for a reach or drift cell are affected by anthropogenic factors. Scores resulting from this assessment are indicative of the degree to which shoreline ecological processes have been altered and impaired. The reach characterizations are found in King County Shoreline Inventory and Characterization: Methodology and Results (May 2007). The basin analysis is based on the Basin Condition Map adopted by the King County Council in King County Code 21A.24.065.

Table S-2. Restoration scores and associated actions.

Restoration Score	Basin Condition	Reach Condition	Actions
A	High	High	Conserve, Preserve
B	High	Moderate	Conserve, Preserve, Restore, Enhance
C	High	Low	Restore, Enhance
D	Moderate	High	Conserve, Enhance, Restore, Preserve
E	Moderate	Moderate	Conserve, Enhance, Restore
F	Moderate	Low	Enhance, Restore
G	Low	High	Enhance, Conserve
H	Low	Moderate	Enhance, Create
I	Low	Low	Enhance, Create

Each designation has specific restoration goals associated with it, based on the conditions observed onsite and in the basin. Depending on condition, as indicated by the degree of alteration, reaches and drift cells were placed into one of nine categories of preferred actions. These range from preservation and conservation under the highest conditions (high basin and reach conditions, i.e., the least altered from natural) to enhancement and creation under the poorest condition (low basin and reach conditions, the most altered from natural).

The various actions are defined as follows:

- **Preserve** – To protect intact processes, often through acquiring lands or easements to exclude activities that may negatively affect the environment.
- **Conserve** – To maintain biodiversity by protecting or increasing the natural potential of landscapes to support multiple native species. Typically, this is accomplished through financial incentives for landowners intended to offset any economic loss resulting from managing the land for conservation.
- **Restore** – To transform degraded conditions to a close approximation of historical conditions. Restoration generally involves more intense and extensive modification and manipulation of site

conditions than would occur with enhancement projects. Example actions include levee breaching, removal, or setback.

- **Enhance** – To improve a targeted ecological attribute and/or process. Example actions may include culvert replacement, riparian plantings and fencing, invasive species removal, and streambank stabilization.
- **Create** – To construct or place habitat features where they did not previously exist in order to foster development of a functioning ecosystem. Examples include tidal channel excavation and the placement of dredge material intended to create marsh or other habitat. Creation represents the most experimental approach and, therefore, may have a lower degree of success, particularly when landscape-scale ecological processes are not sufficient to support the created habitat type.

The marine shoreline, which in unincorporated King County occurs only around Vashon/Maury Island, is treated a little differently than freshwater shorelines in the designation strategy. This is in recognition of both the differing character of marine shorelines, which are subject to tidal influences, wakes from large commercial vessels, and some variation in the ecological processes affecting them, as well as the creation of the Maury Island Environmental Aquatic Reserve along Maury Island and Quartermaster Harbor shorelines by the Washington state Department of Natural Resources. More protection by shoreline designation was afforded to marine shorelines with active feeder bluffs and little alteration to processes. As a result, in these areas, areas with a restoration rating of A or B were designated natural in recognition of the importance of conserving existing shoreline ecological functions and processes in this area.

B. High Intensity Shoreline Environment

Purpose

The purpose of the High Intensity Shoreline Environment is to provide for high intensity water-oriented commercial and industrial uses.

High Intensity Designation Criteria

S-501 **A shoreline may be designated High Intensity if the shoreland is characterized by high intensity development or uses or is zoned Neighborhood Business (NB), Commercial Business (CB), Regional Business (RB), Office (O), or Industrial (I), and:**

a. **The shoreland does not contain limitations on urban uses, such as** geological hazards or flood hazards; and

b. **The shoreline does not provide important shoreline ecological processes and functions that would be significantly compromised by high intensity residential, commercial, or industrial use.**

High Intensity Management Policies:

S-502 In the High Intensity Shoreline Environment, King County shall give priority to non-residential land uses that are water-dependent or water-related.

S-503 King County shall discourage non-water-oriented, non-residential land uses in the High Intensity Shoreline Environment. Shoreline mixed-use developments that include and support water dependent uses may be allowed. King County should allow non-water-oriented land uses in the High Intensity Shoreline Environment only in limited situations and only if they do not conflict with or limit opportunities for water-dependent uses or are located on sites where there is no direct access to the shoreline.

S-504 Prior to allowing expansion of a high intensity non-water-oriented use in the shoreline environment, King County shall determine that there is no feasible alternative for locating the expansion outside of the shoreline jurisdiction.

S-505 King County should require visual or physical public shoreline access to be provided whenever feasible in the High Intensity Shoreline Environment.

S-506 King County shall protect the aesthetic character of the shoreline in the High Intensity Shoreline Environment through development regulations, including sign controls, development siting criteria, screening requirements and architectural standards, landscaping requirements and maintenance of natural vegetation.

S-507 King County shall require that the scale and intensity of new uses and development within the High Intensity Environment is compatible with, and protects or enhances, the existing character of the area.

C. Residential Shoreline Environment

Purpose

The purpose of the Residential Shoreline Environment is to accommodate residential and commercial uses on a scale appropriate with urban residential zones.

Residential Shoreline Designation Criteria

S-508 A shoreline may be designated Residential Shoreline if the shoreland is characterized by urban levels of residential development or uses or is zoned Urban Residential (R) or Urban Reserve (UR) and:

a. The shoreland does not contain limitations on urban uses, such as geological hazards or flood hazards; and

b. The shoreline not provide important shoreline ecological processes and functions that would be significantly compromised by urban levels of residential development.

Residential Shoreline Environment Management Policies:

S-509 King County shall require that the scale and intensity of new uses and development within the Residential Shoreline Environment is compatible with, and protects or enhances the existing character of the area.

S-510 King County should encourage public or private outdoor recreation facilities that are compatible with the character of the area in the Residential Shoreline Environment. Water-dependent and water-enjoyment recreation facilities that provide opportunities for people to access and enjoy the shoreline are preferred uses in the Residential Shoreline Environment.

S-511 King County should discourage non-water-oriented commercial uses in the Residential Shoreline Environment. A non-water-oriented commercial use may be allowed as part of a shoreline mixed-use development or if the non-water-oriented use provides a substantial benefit with respect to the goals and policies of this Program, such as providing public access or restoring degraded shorelines.

D. Rural Shoreline Environment

Purpose

The purpose of the Rural Shoreline Environment is to accommodate land uses normally associated with rural levels of development while providing appropriate public access and recreational uses to the maximum extent practicable.

Rural Shoreline Environment Designation Criteria

S-512 **A shoreline may be designated Rural Shoreline if the shoreland is characterized by rural levels of development or if the shoreland is zoned Rural Area (RA-2.5, RA-5, RA-10, and RA-20) and:**

- **a. The shoreland does not contain limitations on rural residential uses, such as geological hazards or flood hazards; and**
- **b. The shoreline does not provide important shoreline ecological processes and functions that would be significantly compromised by rural levels of residential development.**

Rural Shoreline Environment Management Policies:

S-513 **King County should limit uses in the Rural Shoreline Environment to those rural development activities and associated services that sustain the shoreline's physical and biological resources and that protect options for restoration to maximum extent practicable given the nature of rural development.**

S-514 **King County should require that multi-family and multi-lot residential and recreational developments in the Rural Shoreline Environment provide public access and joint use for community recreational facilities.**

E. Conservancy Shoreline Environment

Purpose

The purpose of the Conservancy Shoreline Environment is to conserve areas that are a high priority for restoration, include valuable historic properties or provide recreational opportunities.

Conservancy Shoreline Environment Designation Criteria

S-515 **A shoreline may be designated Conservancy Shoreline if it is in an area where important shoreline ecological processes have not been substantially degraded by human activities, where important shoreline ecological processes would be degraded by development or present a public health or safety risk, or where the shoreline is in public ownership and is managed for public access or recreation. Areas that may be included in Conservancy Shoreline are:**

- **a. Shoreline reaches primarily within an identified FEMA floodway or severe channel migration hazard zone;**
- **b. Lake shorelines or river shorelines with a restoration plan rating of A, B, or D;**
- **c. Marine shorelines with a restoration plan rating of A, B, or D; and**
- **d. Shorelines in public ownership and managed for public access or recreation.**

Conservancy Shoreline Environment Management Policies:

S-516 **King County should limit uses in the Conservancy Shoreline Environment to those that sustain the shoreline area's physical and biological resources or to uses of a nonpermanent nature that do not substantially degrade the rural or natural character of the shoreline area or disturb historic and cultural resources. King County should discourage non-residential uses in the Conservancy Shoreline except as follows:**

a. **King County should allow aquaculture, forestry and agriculture in the Conservancy Shoreline Environment; and**

b. **King County should allow water-dependent and water-enjoyment recreation facilities as preferred uses if significant adverse impacts to the shoreline are mitigated.**

S-517 **King County shall require that new uses or development in the Conservancy Shoreline Environment preserve the existing character of the shoreline consistent with the purpose of the environment, including:**

a. **Limiting the total effective impervious surface in the shoreline jurisdiction to no more than ten percent in order to maintain the existing hydrologic character of the site; and**

b. **Allowing more effective impervious surface coverage on lots legally created prior to the date of adoption of this update to King County's Shoreline Master Program. In these cases, effective impervious surface coverage shall be limited to the maximum extent practicable.**

F. Resource Shoreline Environment

Purpose

The purpose of the Resource Shoreline Environment is to allow for mining and agricultural uses on lands that have been designated under the Growth Management Act as agricultural lands of long-term commercial significance or mineral resource lands where those lands do not provide significant shoreline ecological processes and functions.

Resource Shoreline Environment Designation Criteria

S-518 **A shoreline may be designated Resource Shoreline if the shoreland is zoned Agriculture or Mineral and the shoreline is not designated Natural Shoreline under Policy S-525.**

Resource Shoreline Environment Management Policies:

S-519 **King County should limit uses in the Resource Shoreline Environment to agricultural and mining activities.**

S-520 **King County shall adopt development standards for the Resource Shoreline Environment to preserve the existing character of the shoreline consistent with the purpose of the environment.**

G. Forestry Shoreline Environment

Purpose

The purpose of the Forestry Shoreline Environment is to allow for forestry uses in the Forest Production District and to protect municipal watersheds.

Forestry Shoreline Designation Criteria

S-521 **A shoreline may be designated Forestry Shoreline if the shoreland is within the Forest Production District and the shoreline is not designated as a Natural Shoreline or a Conservancy Shoreline.**

Forestry Shoreline Management Policies:

S-522 **King County shall require forest practices in the Forestry Shoreline Environment to comply with standards that provide protection for shoreline ecological processes and functions equal to or greater than the forest practice rules adopted by the Washington State Department of Natural Resources and in effect on January 1, 2007.**

S-523 **King County shall allow activities related to the direct management and delivery of municipal domestic water supplies in the Forestry Shoreline Environment only when consistent with municipal domestic water supply best management practices.**

S-524 **King County shall allow agricultural and aquaculture uses within the Forestry Shoreline Environment if the use is subject to appropriate limitations or conditions to ensure that the use does not expand or alter practices in a manner inconsistent with the purpose of the designation.**

H. Natural Shoreline Environment

Purpose

The purpose of the Natural Shoreline Environment is to protect those shoreline areas that are relatively free of human influence and are of high ecological quality. This designation allows only very low intensity uses in order to maintain the existing high levels of ecological process and function.

Natural Shoreline Environment Designation Criteria

S-525 **A shoreline may be designated Natural Shoreline if the shoreline is:**

- **a. Of high ecological quality and is performing an important, irreplaceable ecological process or function that would be damaged by human activity;**
- **b. Unable to support new development or uses without significant adverse impacts to shoreline ecological processes and functions or risk to human safety;**
- **c. A federally designated wilderness area or in an area managed by the King County Department of Natural Resources and Parks as natural lands; or**
- **d. A marine shoreline reach that extends at least five hundred feet along the ordinary high water mark and either has a restoration plan rating of A or has a restoration plan rating of B and is located adjacent to the Maury Island Marine Aquatic Reserve.**

Natural Shoreline Environment Management Policies:

S-526 **King County shall not allow new shoreline armoring in the Natural Shoreline Environment.**

S-527 **King County shall not allow the following new uses in the Natural Shoreline Environment:**

- **a. Commercial uses;**
- **b. Industrial uses;**
- **c. Nonwater-oriented recreation uses that require shoreline modification in order to provide shoreline access;**
- **d. Mining and associated facilities, such as docks, piers, and loading facilities; and**
- **e. Transportation facilities, utility corridors, and parking areas that can be located outside of the Natural Shoreline Environment.**

S-528 King County may allow single family residential development in the Natural Shoreline Environment as a shoreline conditional use if the scale and intensity of the use is limited to protect shoreline ecological processes and functions and is consistent with the purpose of the environment. King County shall require new subdivisions and short-subdivisions in the Natural Shoreline Environment to locate new structures and impervious surfaces outside of the shoreline jurisdiction to the maximum extent practicable.

S-529 King County shall allow scientific, historical, cultural, and educational research uses in the Natural Shoreline Environment if no significant ecological impact on the area will result.

S-530 Except for removal of noxious weeds or invasive vegetation as provided for in S-645, King County shall not allow vegetation removal in the Natural Shoreline Environment that will reduce the capability of vegetation to perform normal ecological processes and functions.

S-531 King County shall allow agricultural and aquaculture uses of a very low intensity nature within the Natural Shoreline Environment if the use is subject to appropriate limitations or conditions to ensure that the use does not expand or alter practices in a manner inconsistent with the purpose of the designation.

S-532 King County shall allow passive and low-impact recreational activities in the Natural Shoreline Environment. New passive and low impact recreation activities shall use designs that avoid or minimize impacts to shoreline processes and functions. Maintenance of trails and campsites shall minimize disturbance and restoration of impacted areas is encouraged.

S-533 King County should use tax incentives, easements, and buyouts to protect shorelines in the Natural Shoreline Environment with important fish and wildlife habitat at risk from moderate to high intensity development.

I. Aquatic Environment

Purpose

The purpose of the Aquatic Environment is to protect, restore, and manage the unique characteristics and resources of the areas waterward of the ordinary high water mark.

Aquatic Shoreline Environment Designation Criteria

S-534 A shoreline shall be designated Aquatic if it is waterward of the ordinary high water mark of the shoreline.

Aquatic Shoreline Environment Management Policies:

S-535 King County shall allow new in-water and over-water structures in the Aquatic Shoreline Environment only for water-dependent uses, public access, or ecological restoration.

S-536 King County shall limit the size of new over-water structures in the Aquatic Shoreline Environment to the minimum necessary to support the structure's intended use.

S-537 King County shall encourage multiple uses of over-water facilities in the Aquatic Shoreline Environment in order to reduce the impacts of shoreline development and increase the effective use of water resources.

S-538 King County shall require all developments and uses on navigable waters or their beds in the Aquatic Shoreline Environment to be located and designed to minimize interference with surface navigation, to consider impacts to public views, and to allow for the safe, unobstructed passage of fish and wildlife and materials necessary to create or sustain their habitat, particularly those species dependent on migration.

S-539 King County shall not allow uses in the Aquatic Shoreline Environment that adversely impact the ecological processes and functions of critical saltwater and freshwater habitats, except when necessary to achieve the objectives of Revised Code of Washington 90.58.020, and then only when the adverse impacts are mitigated according to the sequence described in Washington Administrative Code 173-26-201(2)(e) as necessary to assure no net loss of shoreline ecological processes and functions.

S-540 King County shall consider the guidance in the Maury Island Aquatic Reserve Management Plan in making decisions about permitted uses in the shoreline jurisdiction.

VII. Environment Protection Policies

A. General Environmental Protection Policy Goals

The Department of Ecology's guidelines recognize that shoreline ecological processes and functions may be impaired not only by shoreline developments that are required to obtain shoreline substantial development permits, but also by past actions, unregulated activities, and developments that are exempt from the shoreline substantial development permit requirements. The loss or degradation of shoreline ecological processes and functions from any of these activities can significantly impact shoreline natural resources and may also adversely impact human health and safety.

The concept of ecological processes and functions recognizes that any ecological system is composed of a wide variety of interacting physical, chemical, and biological processes. These processes are interdependent in varying degrees and at different scales, and that result in the landscape, habitats and species as they exist at any time. Ecological functions are the work performed or roles played individually or collectively within ecosystems by these processes.

1. Cumulative Impacts and "No Net Loss" of Ecological Processes and Functions

Nearly all shoreline areas, even substantially developed or degraded areas, retain important ecological processes and functions that contribute to the survival and successful reproduction of plants and animals. For example, an intensely developed harbor area may also have an important function as a fish migration corridor and feeding area critical to species survival. In addition, ecosystems are interconnected and many species may depend on the functioning of multiple systems for critical resources. As examples, anadromous fish depend upon the viability of freshwater, marine, and terrestrial shoreline ecosystems, and many wildlife species associated with shorelines depend on the functioning of both terrestrial and aquatic environments. Therefore, the policies for protecting and restoring ecological processes and functions should apply to the maximum extent practical to all shoreline areas, not just those that remain relatively unaltered.

The Shoreline Management Act requires that King County's Shoreline Master Program achieve no net loss of shoreline ecological processes and functions from new uses or development, and that it address the cumulative impacts on shoreline ecology that would result from future shoreline development. The Shoreline Management Act also requires local governments to plan for restoration of shoreline ecological processes and functions where they have been impaired, thus working towards actual improvement in shoreline ecological processes and functions. The following policies ensure that King County will address cumulative impacts of existing and proposed shoreline development and work towards improving shoreline ecological processes and functions.

S-601 King County shall ensure that new uses, development and redevelopment within the shoreline jurisdiction do not cause a net loss of shoreline ecological processes and functions.

S-602 King County should protect shorelines and conduct restoration in areas that have been previously degraded.

S-603 King County shall require shoreline uses and modifications to be designed and managed to prevent degradation of water quality and alteration of natural hydrographic conditions to the maximum extent practical.

S-604 King County's Shoreline Master Program shall include regulations and mitigation standards to ensure that permitted and exempt developments in the aggregate will not cause a net loss of shoreline ecological processes and functions.

S-605 King County's Shoreline Master Program goals and policies will promote restoration of impaired shoreline ecological processes and functions. Policies and programs and non-regulatory actions that contribute to restoration goals will be identified. King County should consider the direct and indirect effects of regulatory or non-regulatory programs of other local, state, and federal governments, as well as any restoration effects that may result from shoreline development regulations and mitigation standards.

S-606 The King County Shoreline Master Program identifies restoration opportunities and planning elements that together should improve the overall condition of habitat and resources within the shoreline jurisdiction.

S-607 King County should provide options for property-specific technical assistance and tailored applications of shoreline management regulations through Rural Stewardship Plans for single family residential uses in the upland areas of the Rural, Conservancy and Natural Shoreline Environments. Rural Stewardship Plans must be consistent with the goals of the Shoreline Management Act and King County Shoreline Protection and Restoration Plan, and ensure no net loss of shoreline ecological processes and functions.

S-608 The King County Shoreline Master Program shall consider the cumulative impacts of reasonably foreseeable future development to ensure no net loss of shoreline ecological processes and functions.

S-609 **The Shoreline Master Program is intended to fairly allocate the burden of addressing cumulative impacts. King County should adopt policies and regulations that are designed to avoid the need for individualized cumulative impacts analysis for commonly occurring and planned development.**

S-610 **King County shall prefer and provide special permitting considerations for docks and piers that are shared among multiple landowners.**

S-611 **When updating the Shoreline Master Program, King County should analyze proposed policies and regulations to determine whether they will cause cumulative adverse impacts to the shoreline and consider how such impacts may be avoided. The evaluation of cumulative impacts should consider:**

a. **Current condition of the shorelines and associated natural processes;**
b. **Reasonably foreseeable future development and shoreline uses;**
c. **An appropriate evaluation of the effect on shoreline ecological processes and functions caused by unregulated activities, development exempt from permitting, and effects such as the incremental impact of residential bulkheads, residential piers, or runoff from newly developed properties; and**
d. **Beneficial effects of any established regulatory programs under other local, state, and federal laws.**

S-612 **King County should use the shoreline permitting or shoreline conditional use permitting processes for development proposals that may have impacts that cannot be anticipated or uncommon impacts that have not been considered or identified at time of adoption of the King County Shoreline Master Program to ensure that all impacts are addressed and that there is no net loss of ecological function of the shoreline after mitigation.**

S-613 **King County shall consider and address cumulative impacts of shoreline development on shoreline ecological processes and functions and on shoreline uses given priority under Revised Code of Washington Chapter 90.58.**

2. Ongoing Evaluation, Review of Cumulative Impacts and Duty to Update

King County will periodically review the Shoreline Master Program and make amendments that it determines are necessary to reflect changing local circumstances, new information and improved data, and to meet the requirements of Revised Code of Washington 90.58.080 and applicable guidelines. King County will also monitor actions taken to implement the Shoreline Master Program and the shoreline conditions to inform updates of Shoreline Master Program provisions and improve shoreline management over time.

S-614 **King County shall periodically review and amend its Shoreline Master Program using a process that inventories and ensures meaningful understanding of current and potential ecological processes and functions provided by affected shorelines.**

B. Shoreline Critical Areas

1. Standard for protection under the Shoreline Management Act

The Growth Management Act requires King County to protect the functions and values of critical areas, which are defined as wetlands, critical aquifer recharge areas, frequently flooded areas, geologically hazardous areas, and fish and wildlife habitat conservation areas. Critical areas located within the shoreline jurisdiction are protected under the Shoreline Master Program rather than the Growth Management Act. The Shoreline Master Program provides a level of protection for critical areas to assure no net loss of shoreline ecological functions. In addition, the Shoreline Management Act requires King County to give optimum protection of shorelines of state-wide significance. The King County Comprehensive Plan and functional plans adopted as elements of the King County Comprehensive Plan also guide the protection of critical areas within the shoreline jurisdiction.

2. Use of scientific and technical information

The Shoreline Management Act requires local governments to use scientific and technical information when establishing protection measures for critical areas. To achieve this requirement, King County has, to the extent feasible:

1. Used a systematic interdisciplinary approach that ensures the integrated use of the natural and social sciences and the environmental design arts;
2. Consulted with and obtained the comments of any federal, state, regional, or local agency having any special expertise with respect to environmental impacts;
3. Considered all plans, studies, surveys, inventories, and systems of classification made or being made by federal, state, regional, or local agencies, by private individuals, or by organizations dealing with King County shorelines;
4. Used all available information regarding hydrology, geography, topography, ecology, economics, and other pertinent data;
5. Employed, when possible, all appropriate, modern scientific data processing and computer techniques to store, index, analyze, and manage the information gathered.

King County has reviewed and synthesized a wide range of scientific information resulting in regulatory standards based on the best available science for the protection of critical areas. In addition, King County considered state, tribal and federal programs to provide a full spectrum of planning and regulatory measures to guide critical areas protection in shorelines.

S-615 **In considering development regulations to protect shoreline ecological processes and functions, King County shall consider the scientific and technical information contained in functional plans adopted to implement the Comprehensive Plan, adopted watershed plans, King County critical areas regulations and state, tribal and federal programs.**

In order to ensure no net loss of shoreline ecological processes and functions resulting from development proposed in shoreline critical areas, the King County Shoreline Master Program requires that development proposals analyze the environmental impacts of the proposal and consider measures to avoid, if possible, and then mitigate for the adverse environmental impacts.

S-616 **King County shall apply the following sequence of steps listed in order of priority in evaluating the impacts of development and redevelopment on critical areas within the shoreline jurisdiction:**

- **a. Avoid the impacts altogether;**
- **b. Minimize impacts;**
- **c. Rectify impacts by repairing, rehabilitating or restoring the affected environment;**
- **d. Reduce or eliminate the impacts over time;**
- **e. Compensate for impacts by replacing, enhancing or providing substitute resources; and**
- **f. Monitor the impact and taking appropriate corrective measures.**

3. Wetlands

When determining allowed uses within wetlands and their buffers in shorelines of the state, consideration should be given to those uses that would result in no net loss of wetland area and wetland function. Consideration should be given to specific uses that are likely to positively impact the physical, chemical, and biological processes that create and sustain wetlands.

S-617 **King County wetland regulations shall address the following uses to achieve, at a minimum, no net loss of wetland area and functions:**

a. **Removal, excavation, grading, or dredging of soil, sand, gravel, minerals, organic matter, or material of any kind;**
b. **Dumping, discharging, or filling with any material, including discharges of stormwater and domestic, commercial, or industrial wastewater;**
c. **Draining, flooding, or disturbing of the open water level, duration of inundation, or groundwater table;**
d. **Driving of pilings;**
e. **Placing of obstructions;**
f. **Construction, reconstruction, demolition, or expansion of any structure;**
g. **Significant vegetation removal, except for non-conversion forest practices regulated under Revised Code of Washington chapter 76.09;**
h. **Other uses or development that results in a significant ecological impact to the physical, chemical or biological characteristics of wetlands; and**
i. **Activities reducing the functions of buffers.**

Wetlands shall be categorized based on rarity, irreplaceability, or sensitivity to disturbance, as well as the functions the wetland provides. The Shoreline Management Act provides the option of using specified wetland rating systems or developing a regionally specific system, provided the system is scientifically based and provides a method to distinguish wetland quality and function. King County adopted the Washington State Wetland Rating System for Western Washington for use in categorizing wetlands under the Growth Management Act critical areas development standards.

S-618 **King County shall categorize wetlands within shorelines of the state as provided for in Chapter 5: Environment, of the King County Comprehensive Plan.**

The King County Shoreline Master Program provisions that would allow limited alterations to wetlands shall be consistent with the policy of no net loss of wetland area and functions, wetland rating, and scientific and technical information.

S-619 **King County should allow alterations to wetlands only if there is no net loss of wetland functions and values.**

The King County Shoreline Master Program requires buffers be delineated and protected around wetlands. The size of the wetland buffer is based on the classification of the wetland and its characteristics and whether the wetland is located within or outside of the Urban Growth Area. Mitigation measures have been established to obtain a reduced buffer width in return for added measures to address light, noise, toxic runoff, change in water regime, pets and human disturbance, dust, and degraded buffer condition. Other modifications to buffer widths

are allowed through buffer averaging. Circumstances, such as the presence of threatened or endangered species or proximity to steep slopes, may authorize increased buffer widths.

S-620 **King County shall delineate buffers around wetlands to protect and maintain wetland functions. Buffer widths shall be based on ecological function, characteristics and setting, potential impacts with adjacent land use, and other relevant factors.**

The King County Shoreline Master Program requires that mitigation measures achieve equivalent or greater wetland functions including, but not limited to, habitat complexity, connectivity and other biological functions, and seasonal hydrological dynamics. Preferential consideration is given to measures that replace the impacted functions directly and in the immediate vicinity of the impact.

S-621 **In determining appropriate mitigation measures applicable to shoreline development, the mitigation sequencing requirements described in Washington Administrative Code 173-26-202(d)(e) require that lower priority measures shall be applied only where higher priority measures are determined to be infeasible or inapplicable.**

King County may authorize alternative compensatory mitigation within the watershed that addresses limiting factors or identified critical needs for shoreline resource conservation based on watershed or comprehensive resource management plans applicable to the area of impact. Authorization of compensatory mitigation measures may require appropriate safeguards, terms, or conditions as necessary to ensure no net loss of shoreline ecological processes and functions.

S-622 **King County may allow compensatory mitigation only after a mitigation sequence is applied (see Policy S-616) and higher priority means of mitigation are determined to be infeasible.**

a. Compensatory mitigation replacement ratios or other mitigation provisions shall consider:

1. The risk of failure of the compensatory mitigation action;

2. The length of time the compensatory mitigation action will take to replace adequately the impacted wetland functions and values; and

3. The gain or loss of the type, quality, and quantity of the ecological functions of the compensation.

b. Performance standards shall be established to evaluate the success of compensatory mitigation.

c. Long-term monitoring shall be required to determine if performance standards are met.

d. Long-term protection and management shall be required for compensatory mitigation sites.

4. Critical Aquifer Recharge Areas

King County has classified and mapped critical aquifer recharge areas according to the vulnerability of the aquifer. Vulnerability is the combined effect of hydrogeological susceptibility to contamination and the contamination loading potential. High vulnerability is indicated by land uses that contribute contamination that may degrade groundwater and by hydrogeologic conditions that facilitate degradation. Low vulnerability is indicated by land uses that do not contribute contaminants that will degrade groundwater and by hydrogeologic conditions that do not facilitate degradation. Critical aquifer recharge areas are required to be protected under the Growth Management Act as a critical area.

S-623 **The King County Shoreline Master Program shall protect critical aquifer recharge areas consistent with the King County Comprehensive Plan and critical areas regulations.**

5. Geologically Hazardous Areas

Geologically hazardous areas include areas susceptible to erosion, sliding, earthquake, or other geological processes and events. They pose a threat to the health and safety of residents when incompatible commercial, residential, or industrial development is sited in areas of significant hazard. Some geological hazards can be reduced or mitigated by engineering, design, or modified construction or mining practices, so that risks to health and safety are acceptable. When technology cannot reduce risks to acceptable levels, building in geologically hazardous areas is best avoided. Under the King County Shoreline Master Program, geologically hazardous areas include:

1. Erosion hazard areas;
2. Landslide hazard areas;
3. Seismic hazard areas;
4. Coal mine hazard areas;
5. Volcanic hazard areas; and
6. Steep slope hazard areas.

The following policies to protect health and safety and also to reduce the loss of shoreline ecological processes and functions apply to geological hazardous areas located within the shoreline jurisdiction.

S-624 **Development regulations for geologically hazardous areas shall meet the minimum requirements in Washington Administrative Code 365-190-080(4).**

S-625 **King County shall prohibit development and new lot creation in geologically hazardous areas if it would result in increased risk of injury to people or property damage, consistent with King County Code chapter 21A.24.**

S-626 **King County shall prohibit new development that requires structural stabilization in geologically hazardous areas. Stabilization will be allowed in these areas only if the stabilization is necessary to protect existing allowed uses, there is no alternative location available, and no net loss of shoreline ecological processes and functions will result. Stabilization measures shall conform to Washington Administrative Code 173-26-231.**

S-627 **King County may allow stabilization structures or measures in geologically hazardous areas to protect existing primary residential structures, if there are no alternatives, including relocation or reconstruction of the residential structure, the stabilization is in conformance with Washington Administrative Code 173-26-231, and no net loss of shoreline ecological processes and functions will result.**

6. Fish and Wildlife Habitat Conservation Areas

King County is required by the Growth Management Act to protect fish and wildlife habitat conservation areas as critical area. The Washington State Department of Commerce adopted guidelines to assist local governments in designating critical areas, including fish and wildlife habitat conservation areas. The Department of Commerce guidelines are designed to define and protect areas necessary to maintain species in suitable habitats within their natural geographic distribution, at least in part so that isolated subpopulations are not created. The Department of Commerce identifies the following areas as being suitable for fish and wildlife habitat conservation areas:

1. Areas with which endangered, threatened, and sensitive species have a primary association; areas critical for habitat connectivity;
2. Habitats and species of local importance;
3. Commercial and recreational shellfish areas;
4. Kelp and eelgrass beds; herring, smelt and sand lance spawning areas;
5. Naturally occurring ponds under twenty acres and their submerged aquatic beds that provide fish or wildlife habitat;
6. Waters of the state;
7. Lakes, ponds, streams, and rivers planted with game fish by a governmental or Tribal entity; or
8. State natural area preserves and natural resource conservation areas.

The King County Comprehensive Plan and its development regulations protect the functions and values of fish and wildlife habitat conservation areas through its provisions governing aquatic areas and wildlife habitat conservation areas.

The Department of Ecology's guidelines divide fish and wildlife habitat conservation areas into critical saltwater and critical freshwater habitats.

a. Critical saltwater habitat

Critical saltwater habitats include all kelp beds, eelgrass beds, spawning and holding areas for forage fish, such as herring, smelt and sand lance; subsistence, commercial and recreational shellfish beds; mudflats, spits, intertidal habitats with vascular plants, and areas with which priority species have a primary association. Critical saltwater habitats include both the shorelines and the adjacent submerged areas.

S-628 **King County shall provide a high level of protection to critical saltwater habitats due to the important ecological functions they provide.**

S-629 **Protection and restoration of critical saltwater habitats should integrate management of shorelands as well as submerged areas.**

Comprehensive planning for the protection and restoration of critical saltwater habitat should include state resource agencies, local and regional government entities including, but not limited to the Port of Seattle and Sound Transit, and affected tribes. To reverse the impacts from development on critical saltwater habitats, the King County Shoreline Master Program should look for opportunities to restore critical saltwater shorelines and protect them from further degradation. All resources should be reviewed and considered.

S-630 **As part of its management planning for critical saltwater habitats, King County should include an evaluation of current data and trends regarding:**

- **a. Available inventory and collection of necessary data regarding physical characteristics of the habitat, including upland conditions, and any information on species population trends;**
- **b. Terrestrial and aquatic vegetation;**
- **c. The level of human activity in such areas, including the presence of roads and level of recreational types. Passive or active recreation may be appropriate for certain areas and habitats;**
- **d. Restoration potential;**
- **e. Tributaries and small streams flowing into marine waters;**
- **f. Dock and bulkhead construction, including an inventory of bulkheads serving no protective purpose;**
- **g. Conditions and ecological function in the near-shore area;**
- **h. Uses surrounding the critical saltwater habitat areas that may negatively impact those areas, including permanent or occasional upland, beach, or over-water uses;**
- **i. Potential tribal uses of critical saltwater habitats to ensure that these uses are protected and restored when possible; and**
- **j. An analysis of what data gaps exist and a strategy for gaining this information.**

Because of the need for a higher level of protection for critical saltwater habitat, allowed uses should be carefully limited and only allowed to meet other policy goals of the Shoreline Management Act.

S-631 **Docks, bulkheads, bridges, fill, floats, jetties, utility crossings, and other human-made structures shall not intrude into or over critical saltwater habitats except when all of the conditions below are met:**

- **a. The public's need for such an action or structure is clearly demonstrated, and the proposal is consistent with protection of the public trust, as embodied in Revised Code of Washington 90.58.020;**
- **b. Avoidance of impacts to critical saltwater habitats by an alternative alignment or location is not feasible or would result in unreasonable and disproportionate cost to accomplish the same general purpose;**
- **c. The project, including any required mitigation, will result in no net loss of ecological functions associated with critical saltwater habitat; and**
- **d. The project is consistent with state and Tribal interests in resource protection and species recovery.**

S-632 **Public or private noncommercial docks for public, individual residential or community use may be authorized provided that:**

- **a. Avoidance of impacts to critical saltwater habitats by an alternative alignment or location is not feasible; and**
- **b. The project, including any required mitigation, will result in no net loss of ecological functions associated with critical saltwater habitat.**

b. Critical freshwater habitat

Critical freshwater habitats are equally important to saltwater areas as fish and wildlife habitat conservation areas along shorelines of the state. Critical freshwater habitats include streams and rivers, with their associated channel migration zones, floodplains, wetlands, and lakes. Shorelines along these freshwater habitats often have been highly developed and are currently adversely impacted by improper stormwater, sewer, or industrial outfalls; unmanaged clearing and grading; and stormwater runoff from buildings and parking lots. Some impacts include altered quality and quantity of stormwater runoff, as well as destruction or alteration of vegetation. Potential impacts from vegetation changes can include increased water temperatures and altered hydrographic conditions. All of these changes create inhospitable conditions in water bodies for priority species and, in addition, make them more susceptible to problems stemming from catastrophic flooding, droughts, landslides and channel changes.

Some freshwater habitats, particularly rivers and floodplains, often are considered as hazardous areas that can threaten life and property during catastrophic events, such as flooding. Development can exacerbate such conditions.

As with critical saltwater habitats, comprehensive planning for the protection and restoration of critical freshwater habitat should include state resource agencies, local and regional government entities including, but not limited to the Port of Seattle, Sound Transit, and affected tribes. To reverse the impacts from development on critical freshwater habitats, the King County Shoreline Master Program should look for opportunities to restore critical freshwater shorelines and protect them from further degradation. All resources should be reviewed and considered.

S-633 **King County shall provide a high level of protection to critical freshwater habitats due to the important ecological functions they provide.**

S-634 **King County should establish priorities for protection and restoration, where appropriate, along unincorporated river corridors and lake shorelines.**

S-635 **King County should regulate uses and development as necessary within and along stream channels, associated channel migration zones, wetlands, lake shorelines, and floodplains within the shoreline jurisdiction, to assure that no net loss of shoreline ecological processes and functions results from new development near freshwaters of the state, including associated hyporheic zones.**

S-636 **King County shall protect ecological functions associated with critical freshwater habitat as necessary to assure no net loss from shoreline activities and associated changes.**

S-637 **King County should facilitate authorization of appropriate restoration projects.**

C. Frequently Flooded Areas and Channel Migration Hazard Areas

The King County 2006 Flood Hazard Management Plan was adopted as a functional plan of the King County Comprehensive Plan. The Flood Plan outlines the policies, programs, and projects that King County uses to reduce the risk from flooding and channel migration. The King County 2006 Flood Hazard Management Plan was reviewed for consistency with the Shoreline Management Act and determined to be consistent with it. King County maps Channel Migration Hazard Areas and applies critical areas regulations to assure that channel migration can be accommodated.

S-638 **The policies contained within the King County Flood Hazard Management Plan, or its successor, constitute the policies for the protection of frequently flooded areas and channel migration within shorelines. Provisions implementing these policies are included in the critical areas regulations.**

S-639 **King County shall continue mapping channel migration zones on all of its rivers and streams within shoreline jurisdiction where channel migration zones have not already been mapped.**

D. Shoreline Vegetation Conservation

A major intent of vegetation conservation is to protect and restore the ecological processes and functions performed by stands of vegetation along shorelines. Vegetation conservation can also be undertaken to protect human safety and property, to increase the stability of river banks and coastal bluffs, to reduce the need for structural shoreline stabilization measures, to improve the visual and aesthetic qualities of the shoreline, to protect particular plant and animal species and their habitats, and to enhance shoreline uses.

In King County, aquatic environments, as well as their associated upland and wetland vegetated areas, provide significant habitat for a wide variety of fish and wildlife species. Healthy environments for aquatic species are inseparably linked with the ecological integrity of the surrounding terrestrial ecosystems. For example, nearly continuous stretches of mature forest characterize the natural riparian conditions of the Pacific Northwest. Riparian areas along marine shorelines provide the same or similar functions as their freshwater counterparts. The most commonly recognized functions of the shoreline vegetation include, but are not limited to:

- Providing shade necessary to maintain cool water temperatures required by salmonids, spawning forage fish, and other aquatic biota.
- Providing external organic inputs critical for some aquatic life.
- Providing food for various insects and other benthic macro invertebrates, which are in turn food sources for fish, birds, and other wildlife.
- Stabilizing banks, minimizing erosion, and reducing the occurrence of landslides. The roots of trees and other riparian vegetation provide the bulk of this function.
- Reducing fine sediment input into the aquatic environment through stormwater retention and vegetative filtering.
- Filtering and vegetative uptake of nutrients and pollutants from groundwater and storm runoff.
- Providing a source of large woody debris for introduction into the aquatic system. Large woody debris is a primary structural component in streams that functions as a hydraulic roughness element to moderate flows and store sediment. Large woody debris also serves a pool-forming function, providing critical salmonid rearing and refuge habitat. Abundant large woody debris increases aquatic diversity and stabilizes systems.
- Regulating microclimates in the lake and stream-riparian and intertidal corridors.
- Providing critical wildlife habitat, including migration corridors and feeding, watering, rearing, and refuge areas.

The length, width, and species composition of a shoreline vegetation community all contribute substantively to aquatic ecological functions. Likewise, the biological communities of the aquatic environment are essential to ecological functions of the adjacent upland vegetation. The ability of vegetated areas to provide critical ecological functions diminishes as the length and width of the vegetated area along shorelines is reduced. When shoreline vegetation is removed, there is a greater risk that important ecological functions will not be provided.

Sustaining different ecological functions requires varying widths, compositions, and densities of vegetation. The importance of the different functions, in turn, varies with the type of shoreline setting. For example, in forested shoreline settings, periodic introduction of fallen trees, especially conifers, into the stream channel is an important attribute that is critical to natural stream channel maintenance.

Vegetation conservation includes activities to protect and restore vegetation that contributes to the ecological functions of shoreline areas along or near marine and freshwater shorelines.[1] Vegetation conservation provisions generally include the prohibiting or limiting plant clearing and earth grading, restoring vegetation, and controlling invasive weeds and nonnative species.

S-640 **King County shall adopt planning provisions to address vegetation conservation and restoration and regulatory provisions to address conservation of vegetation, as necessary, to assure no net loss of shoreline ecological processes and functions, to avoid adverse impacts to soil hydrology, and to reduce the hazard of slope failures or accelerated erosion.**

S-641 **Vegetation conservation provisions apply to all shoreline uses and developments, whether or not the use or development requires a shoreline substantial development permit.**

S-642 **Vegetation conservation standards shall not apply retroactively to existing uses and structures, such as existing agricultural practices.**

S-643 **King County should identify which ecological processes and functions are important to the local aquatic and terrestrial ecology, and then conserve sufficient vegetation to maintain these functions. Vegetation conservation areas are not necessarily intended to be closed to use and development, but should provide for management of vegetation in a manner adequate to assure no net loss of shoreline ecological processes and functions.**

[1] Vegetation conservation does not include those activities covered under the Washington State Forest Practices Act, except for conversion to other uses and those other forest practice activities over which local governments have authority.

S-644 **King County should adopt development regulations for vegetated areas along streams, which once supported or could in the future support mature trees, that include buffers of sufficient width to facilitate the growth of mature trees and periodic recruitment of woody vegetation into the water body to support vegetation-related shoreline functions.**

S-645 **King County should adopt mechanisms to implement the vegetation conservation policies of this chapter. These mechanisms may include setback or buffer requirements, clearing and grading standards, regulatory incentives, environment designation standards, or other provisions. Selective pruning of trees for safety and view protection may be allowed. Removal of noxious weeds and invasive vegetation should be allowed as long as appropriate best management practices are followed.**

E. Water Quality, Stormwater and Non-Point Pollution

The Shoreline Master Program must protect against adverse impacts to the public health, to the land with its vegetation and wildlife, and to the waters of the state and their aquatic life. The intent of water quality, stormwater and non-point pollution policies is to provide shoreline protection by preventing adverse impacts to shoreline ecological processes and functions, aquatic habitats, and water dependent uses such as aquaculture and fishing.

S-646 **Shoreline Master Program water quality, stormwater, and non-point pollution policies apply to all development and uses in the shoreline jurisdiction that affect water quality.**

S-647 **King County should work to prevent impacts to water quality and stormwater quantity that would result in a net loss of shoreline ecological functions, degraded aesthetic qualities, loss of recreational opportunities or reduction in water-dependent uses, such as aquaculture and fishing.**

S-648 **King County should ensure mutual consistency between shoreline management provisions and other regulations that address water quality and stormwater quantity, including Public Health—Seattle & King County standards, the King County Surface Water Design Manual, and King County surface water management regulations. The regulations that are most protective of ecological functions shall apply.**

S-649 **The Shoreline Master Program shall include provisions to implement the water quality, stormwater and non-point pollution policies in this chapter.**

F. Preparing for Climate Change

As discussed in Chapter 5 of the King County Comprehensive Plan, climate change has the potential for significant impacts on shorelines and shoreline habitats. Sea-level rise and storm surges may place at risk infrastructure, habitat restoration projects, and other development, including residential development. New development and maintenance or replacement of existing development should take into account the potential for harm that may result from sea-level rise.

S-650 **King County shall ensure that new projects for and major maintenance or replacement of utilities, roads, and other public infrastructure consider the impacts of sea-level rise in the location, design, and operation of the projects.**

S-651 **Habitat protection and restoration projects in the shoreline jurisdiction shall consider implications of sea-level rise and other climate change impacts to promote resiliency of habitats and species.**

VIII. Shoreline Use and Shoreline Modification

A. Shoreline Use versus Shoreline Modification

The Shoreline Management Act makes a distinction between a shoreline use and a shoreline modification. A shoreline use is an activity that is allowed within the shorelines jurisdiction. In most cases in order to engage in an activity, the shoreline must be modified. Shoreline modifications often involve construction of a physical element, such as a dike, breakwater, dredged basin, or fill, as well as other actions such as clearing, grading, application of chemicals, or significant vegetation removal. This means that shoreline modifications are often undertaken in support of or in preparation for an activity along shorelines.

B. Shoreline Use

1. Generally

Land uses in King County are based on federal, state, and county policies and regulations. The baseline permitted uses are established in zoning regulations. Land uses that would be allowed in zoning may be further limited by the King County Shoreline Master Program and shoreline management regulations.

S-701 **King County shall give preference to uses in the shoreline that are consistent with the control of pollution and prevention of damage to the natural environment or are unique to or dependent upon the shoreline.**

S-702 **Development within the shoreline jurisdiction shall protect the public's health, safety, and welfare, as well as the land, including its vegetation and wildlife, and protect property rights while implementing the policies of the Shoreline Management Act.**

S-703 **Where there is a conflict between the uses permitted in the land use zone and the Shoreline Master Program for a site, the Shoreline Master Program shall control and preference shall be given first to water-dependent uses, then to water-related uses, and finally to water-enjoyment uses.**

S-704 **Shoreline Master Program development regulations shall ensure no net loss of shoreline ecological processes and functions.**

S-705 **King County shall adopt use policies and development regulations to achieve consistency among and between shorelands and adjacent lands as required by Revised Code of Washington 90.58.340.**

2. Shoreline Conditional Uses

For the purposes of the King County Shoreline Master Program, a shoreline conditional use may be appropriate in order to:

1. Effectively address unanticipated uses that are not classified in the Shoreline Master Program;
2. Address cumulative impacts; or
3. Provide the opportunity to require specially tailored environmental analysis or design criteria for types of use or development that may otherwise be inconsistent with a specific designation within the Shoreline Master Program or with the Shoreline Management Act policies.

S-706 **The following types of uses and development should require a shoreline conditional use permit:**

1. **Uses and development that may significantly impair or alter the public's use of the waters of the state;**
2. **Uses and development which, by their intrinsic nature, may have a significant impact on shoreline ecological processes and functions depending on location, design, and site conditions; and**
3. **Development in critical saltwater habitats.**

3. Agriculture

The Shoreline Management Act defines agricultural activities as:

> "agricultural uses and practices including, but not limited to: Producing, breeding, or increasing agricultural products; rotating and changing agricultural crops; allowing land used for agricultural activities to lie fallow in which it is plowed and tilled but left unseeded; allowing land used for agricultural activities to lie dormant as a result of adverse agricultural market conditions; allowing land used for agricultural activities to lie dormant because the land is enrolled in a local, state, or federal conservation program, or the land is subject to a conservation easement; conducting agricultural operations; maintaining, repairing, and replacing agricultural equipment; maintaining, repairing, and replacing agricultural facilities, provided that the replacement facility is no closer to the shoreline than the original facility; and maintaining agricultural lands under production or cultivation".

The Shoreline Management Act prohibits shoreline master programs from requiring modification to or limiting existing agricultural activities on agricultural lands in the shoreline jurisdiction. This limitation does not apply to new agricultural activities.

S-707 **The King County Shoreline Master Program shall not require modification of or limit existing agricultural activities in the shoreline jurisdiction. Existing agricultural activities in the shoreline jurisdiction shall be governed by existing provisions of the King County Comprehensive Plan and the King County Code.**

S-708 **New agricultural activities in the shoreline jurisdiction shall comply with the critical areas regulations incorporated into the shoreline master program as they apply to agricultural activities.**

As required by the Growth Management Act, King County has designated agricultural lands of long-term commercial significance. These lands have been included in Agricultural Production Districts under the King County Comprehensive Plan. Land uses meeting the definition of "agricultural activities" also occur outside the designated Agricultural Production Districts. The King County Shoreline Master Program encourages agricultural uses, but they must be compatible with the shoreline designation in which they are proposed. In addition, under the rare circumstances when land is removed from the Agricultural Production Districts, any development occurring on that land must be consistent with the shoreline designation where it is located.

S-709 **New agricultural activities within the shoreline jurisdiction and outside the Agricultural Production Districts shall be consistent with the shoreline designation where the land is located.**

S-710 **New agricultural activities within the shoreline jurisdiction and outside the Agricultural Production Districts shall be located and designed to ensure no net loss of shoreline ecological processes and functions and shall not result in an adverse impact on other shoreline resources and ecological values.**

S-711 **Development and uses on land removed from the Agricultural Production Districts shall be consistent with the shoreline designation where the land is located.**

4. Forestry

In general, the Department of Ecology's guidelines require local shoreline master programs to rely on the Forest Practices Act and the rules implementing that Act and the Forest and Fish Report as adequate management of commercial forest uses within the shoreline jurisdiction. When a property owner chooses to convert commercial timber land to a use other than timber production, the regulations for commercial forestry no longer apply.

S-712 **If land is being converted to a non-forest use through Class IV-General forest practice, the provisions of the King County Shoreline Management Program that apply to development activities governs the proposed land use.**

Because shorelines of statewide significance require a higher level of protection, special provisions apply to forestry within shorelines of statewide significance.

S-713 **Within shorelines of statewide significance, selective commercial timber cutting shall be used for timber harvest within two hundred feet abutting landward of the ordinary high water mark so that no more than thirty percent of the merchantable trees may be harvested in any ten year period of time. Through a shoreline conditional use permit, King County may approve:**

- **a. Other timber harvesting methods in those limited instances where the topography, soil conditions, or silviculture practices necessary for regeneration render selective logging ecologically detrimental; and**
- **b. Clear cutting of timber that is solely incidental to the preparation of land for other uses authorized by the King County Shoreline Master Program.**

S-714 **For forest practice conversions and other Class IV-General forest practices, where there is a likelihood of conversion to nonforest uses, King County shall ensure that there is no net loss of shoreline ecological processes and functions and that there are no significant adverse impacts to other shoreline uses, resources, and values such as navigation, recreation, and public access.**

5. Surface Drilling for Oil and Gas

The Shoreline Management Act prohibits surface drilling in the waters of Puget Sound north to the Canadian boundary and the Strait of Juan de Fuca seaward from the ordinary high water mark and on all lands within one thousand feet landward from that line.

S-715 **Surface drilling for oil or gas shall be prohibited in Puget Sound seaward from the ordinary high water mark and on all lands within one thousand feet landward from the ordinary high water mark on Puget Sound.**

6. Aquaculture

Aquaculture is the culture or farming of food fish, shellfish, or other aquatic plants and animals. Aquaculture is dependent on the use of the water area and, when consistent with goals for aesthetics, public access, control of pollution and prevention of damage to the environment, is a preferred use of the water area. Aquaculture is a growing industry of statewide significance. Aquaculture should be accommodated so long as it does not result in a net loss of shoreline ecological processes and functions. The visual and aesthetic impacts of aquaculture should not overwhelm adjacent land uses.

S-716 **Aquaculture is a water-dependent use and is a preferred use of the shoreline when consistent with control of pollution and avoidance of adverse impacts to the environment and preservation of habitat for native species, (Washington Administrative Code 173-26-241(3)(b)).**

S-717 **Potential locations for aquaculture activities are relatively restricted because of specific requirements related to water quality, temperature, oxygen content, currents, adjacent land use, wind protection, commercial navigation, and salinity. The technology associated with some forms of aquaculture is still experimental and in formative states. Therefore, when implementing development regulations related to aquaculture, King County should provide flexibility in its development regulations governing the siting of aquaculture facilities. Those regulations shall require avoidance of adverse impacts to existing uses, to the maximum extent practical, and no net loss in shoreline ecological functions and processes.**

S-718 **Aquaculture activities shall be designed, located and operated in a manner that supports long-term beneficial use of the shoreline and protects and maintains** shoreline ecological processes and functions. Aquaculture shall not be **permitted where it would result in net loss of shoreline ecological functions; net loss of habitat for native species including eelgrass, kelp, and other macroalgae; adverse impacts to other habitat conservation areas; or interference with navigation or other water-dependent uses.**

S-719 Aquaculture facilities shall be designed, operated and located so as not to spread disease to native aquatic life, establish new nonnative species that cause significant ecological impacts, or substantially impact the aesthetic qualities and public access of the shoreline.

S-720 Preference should be given to those forms of aquaculture that involve lesser environmental and visual impacts and lesser impacts to native plant and animal species. In general, projects that require no structures, submerged structures or intertidal structures are preferred over those that involve substantial floating structures. Projects that involve little or no substrate modification are preferred over those that involve substantial modification, recognizing that in some circumstances that the importation of sand or pea gravel on rocky or cobble substrates may result in more diverse habitat. Projects that involve little or no supplemental food sources, pesticides, herbicides or antibiotic application are preferred over those that involve such practices.

S-721 Aquaculture shall not be permitted if it involves significant risk of cumulative adverse effects on water quality, sediment quality, benthic and pelagic organisms, or wild fish populations through potential contribution of antibiotic resistant bacteria, or escapement of non-native species, or other adverse effects on native species or threatened or endangered species and their habitats.

S-722 King County shall consider the potential beneficial impacts and the potential adverse impacts of new aquaculture development on the physical environment; on other existing and approved land and water uses, including navigation; and on the aesthetic qualities of a project area.

S-723 Legally established aquaculture uses, including authorized experimental projects, should be protected from incompatible uses that may seek to locate nearby. King County may deny uses or developments that have a high probability of damaging or destroying a legally established existing aquaculture.

S-724 King County should review and make permit decisions on restoration projects associated with aquaculture in a timely manner.

S-725 Experimental aquaculture projects in water bodies should be limited in scale and should be approved for a limited period of time. Experimental aquaculture means an aquaculture activity that uses methods or technologies that are unprecedented or unproven in the State of Washington.

S-726 **King County should actively seek substantive comment regarding potential adverse impacts of any shoreline permit application for aquaculture from all appropriate Federal, State and local agencies; the Muckleshoot Tribe, the Puyallup Tribe of Indians, the Tulalip Tribes and other tribes with treaty fishing rights; and the general public. Comments of nearby residents or property owners directly affected by an aquaculture proposal should be considered and evaluated, especially in regard to use compatibility and aesthetics.**

S-727 **The rights of treaty tribes to aquatic resources within their usual and accustomed areas should be addressed through the permit review process. Direct and early coordination between the applicant or proponent and the tribe should be encouraged.**

7. Boating Facilities

Boating facilities provide the boating public recreational opportunities on waters of the state, but should be sited carefully to assure no net loss of shoreline ecological processes and functions and to maintain the aesthetic quality of the shoreline. For purposes of the King County Shoreline Master Program, "boating facilities" do not include docks serving four or fewer single-family residences.

S-728 **Boating facilities shall be located only at sites with suitable environmental conditions, shoreline configuration, access, and neighboring uses, and:**

- **a. Meet health, safety and welfare requirements;**
- **b. Mitigate aesthetic impacts;**
- **c. Provide public access in new marinas, unless there is a safety or security concern;**
- **d. Prevent the impacts to shoreline resources from boaters living on their vessels;**
- **e. Restrict vessels should be restricted from extended mooring on waters of the state unless authorization is obtained from the Washington Department of Natural Resources and impacts to navigation and public access are mitigated;**
- **f. Assure no net loss of shoreline ecological processes and functions or other significant adverse impacts; and**
- **g. Protect the rights of navigation.**

8. Commercial Development

Some commercial uses within the shoreline jurisdiction may be required to incorporate appropriate design and operational elements to qualify as water-related or water-enjoyment. Public access and ecological restoration are considered appropriate mitigation for the impact to shorelines unless it is determined public access is infeasible or inappropriate. Most commercial land in unincorporated King County is located outside the shoreline jurisdiction.

S-729 **King County shall require all commercial development on public land to provide public access, unless the use is incompatible with public access or there are public safety concerns.**

S-730 **King County shall permit non-water-oriented commercial uses in the shoreline jurisdiction only if:**

- **a. The non-water-oriented commercial use is limited to the minimum size necessary for the use;**
- **b. The use provides a significant public benefit with respect to the Shoreline Management Act's objectives such as providing public access and ecological restoration; and**
- **c. The use is part of a mixed-use project that includes water-dependent uses; or navigability is severely limited at the proposed site.**

S-731 **King County may allow nonwater-oriented commercial development in the shoreline jurisdiction if the site is physically separated from the shoreline by another property or public right-of-way.**

S-732 **King County shall allow over-water nonwater-dependent commercial uses only in existing structures or if the use is auxiliary to and necessary to support a water-dependent use. The area of any over-water structure shall be limited to the maximum extent practical.**

S-733 **King County shall prohibit commercial development that will have significant adverse impact to other shoreline uses, resources and values, such as navigation, recreation and public access. King County shall require mitigation for all commercial development in the shoreline jurisdiction to ensure that it does not cause a net loss of shoreline ecological processes and functions.**

9. Industry

The King County Shoreline Master Program establishes a hierarchy for industrial development within the shoreline jurisdiction. Most industrial land in King County is located within cities rather than within unincorporated King County.

S-734 **In the shoreline jurisdiction, King County shall give preference to industrial uses in the following order: first, water-dependent industrial uses; second, water-related industrial uses; and third, non-water-oriented industrial uses.**

S-735 **To mitigate for the impacts of industrial development within the shoreline jurisdiction, King County should require ecological restoration and public access, unless it determines that public access is infeasible or inappropriate.**

S-736 **King County shall require industrial uses located on public land in the shoreline jurisdiction to provide public access, unless the use is incompatible with public access or there are public safety concerns.**

S-737 **King County should encourage industrial development and redevelopment to be located where environmental cleanup and restoration of the shoreline can be incorporated.**

S-738 **King County shall permit new nonwater-oriented industrial development in the shoreline jurisdiction only if:**

- **a. The use is part of a mixed-use project that includes water-dependent uses or navigability is severely limited; and**
- **b. The use provides a significant public benefit with respect to the Shoreline Management Act's objectives, such as providing public access and ecological restoration.**

S-739 **King County may allow nonwater-oriented industrial uses in the shoreline jurisdiction if the site is physically separated from the shoreline by another property or public right-of-way.**

10. In-Water Structures

"In-water structure" means a structure placed by humans within a stream, river, or lake waterward of the ordinary high-water mark that either causes or has the potential to cause water impoundment or the diversion, obstruction, or modification of water flow. In-water structures may include those for hydroelectric generation, irrigation, water supply, flood control, transportation, utility service transmission, fish collection weir, or other purposes.

S-740 **In-water structures shall provide for the protection and preservation of shoreline ecological processes and functions, and cultural resources, including, but not limited to, fish and fish passage, wildlife and water resources, shoreline critical areas, hydro-geological processes, and natural scenic vistas.**

S-741 **The location and planning of in-water structures shall give due consideration to the full range of public interests and shoreline ecological processes and functions, with special emphasis on protecting and restoring habitat for threatened or endangered species.**

11. Mining

King County has identified and designated land that is appropriate for the removal of sand, gravel, soil, minerals and other extractable resources. In King County, gravel removal was a common method of flood control in the first half of the 20th century. However, mining within shorelines can have significant impacts, particularly to habitat for threatened and endangered aquatic and riparian species.

S-742 **Mining may be allowed within the shoreline jurisdiction if it is:**

- **a. Consistent with the environment designation policies of the King County Shoreline Master Program and provisions of the Shoreline Management Act; and**
- **b. Located within mineral resource lands designated by the King County Comprehensive Plan.**

S-743 **New mining and associated activities shall be designed and conducted to comply with the regulations of the environment designation where the activity occurs and the provisions applicable to critical areas where relevant. Accordingly, meeting the standard of no net loss of ecological function shall include avoidance and mitigation of adverse impacts during the course of mining and** reclamation. It is appropriate, however, to determine whether there will be no net **loss of ecological function based on evaluation of final reclamation required for the site. Preference shall be given to mining proposals that result in the restoration, creation, or enhancement of habitat for threatened or endangered species.**

S-744 The King County Shoreline Master Program provisions and permit requirements for mining should be coordinated with the requirements of Revised Code of Washington Chapter 78.44.

S-745 The proposed subsequent use of mined property shall be consistent with the provisions of the shoreline environment designation in which the property is located.

S-746 King County shall permit mining within the active channel of a river only as follows:

a. Removal of specified quantities of sand and gravel or other materials at specific locations will not adversely affect the natural processes of gravel transportation for the river system as a whole;

b. The mining and any associated permitted activities will not have significant adverse impacts to habitat for threatened or endangered species nor cause a net loss of shoreline ecological processes and functions;

c. The determinations required by items 1 and 2 of this policy shall be consistent with Revised Code of Washington 90.58.100(1) and Washington Administrative Code 173-26-201(2)(a). Such evaluation of impacts should be appropriately integrated with relevant environmental review requirements of the State Environmental Policy Act and the Department of Ecology guidelines;

d. In considering renewal, extension, or reauthorization of gravel bar and other in-channel mining operations in locations where they have previously been conducted, King County shall require compliance with this policy if no such review has previously been conducted. Where there has been prior review, King County shall review the previous determinations in order to ensure that current site conditions comply with the Program; and

e. These requirements do not apply to dredging of authorized navigation channels when conducted in accordance with Washington Administrative Code 173-26-231(3)(f).

S-747 King County shall require a shoreline conditional use permit for mining activity within a severe channel migration hazard zone located within the shoreline jurisdiction.

12. Recreational Development

Recreational development includes uses and activities designed to allow public enjoyment and use of the water and shoreline. King County recreational planning provides for parks, trails, open space, and opportunities for both active and passive recreational use in King County.

S-748 **Recreational development is allowed in the shoreline jurisdiction and must be consistent with the shoreline environment designation in which the property is located.**

S-749 **King County shall plan to provide public recreational uses on county-owned shoreline, consistent with the goals of this chapter.**

13. Residential Development

The Shoreline Management Act recognizes single family residential development as a priority use within shorelines of the state. The term "residential development" also includes attached and multifamily dwelling units as well as subdivision of shoreline land into new residential lots. In King County, single detached dwelling units are the most common shoreline development. Residential development is often fairly high density to maximize water frontage. Care must be taken to assure that shoreline residential development and the related impacts from shoreline armoring, stormwater runoff, on-site sewage disposal systems, introduction of pollutants, and vegetation modification and removal do not result in significant damage to the shoreline.

S-750 **Single family residential development is a priority use in the shoreline jurisdiction in King County.**

S-751 **King County shall require a conditional use permit for construction or expansion of a single-family residence that is located within an aquatic area buffer in the Forestry or Natural Shoreline Environment.**

S-752 **Shoreline residential development, including accessory structures and uses, should be sufficiently set back from steep slopes and shorelines vulnerable to erosion so that structural improvements, including bluff walls and other stabilization structures, are not required to protect these structures and uses.**

S-753 **New over-water residences, including floating homes, are not a preferred use and shall be prohibited in the shoreline jurisdiction. Existing communities of floating or over-water homes should be reasonably accommodated to allow improvements associated with life-safety matters and to ensure protection of private property rights. King County shall limit the expansion of existing floating homes, including over-water and underwater footprint, and over-water communities to the minimum necessary to ensure consistency with constitutional and other legal limitations that protect private property.**

S-754 **King County should require multifamily residential development and subdivisions within the shoreline jurisdiction creating more than four lots to provide public access.**

S-755 **King County shall require subdivisions and short subdivisions to:**

a. **Be designed, configured and developed in a manner that ensures no net loss of shoreline ecological processes and functions at full build-out of all lots;**

b. **Prevent the need for new shoreline stabilization or flood risk reduction measures that would cause significant impacts to other properties or public improvements, a net loss of shoreline ecological processes and functions, or interfere with channel migration; and**

c. **Implement the provisions and policies for shoreline designations and the general policy goals of this chapter.**

14. Transportation and Parking

Providing for transportation and parking is necessary to support water-dependent uses, to support the regional economy, and for access to privately owned property. However, transportation facilities should be located and designed to have the least impact on the ecological processes and functions of the shoreline. Transportation planning in shorelines should not be focused totally on automobiles, but should consider a wide range of options, including buses, light rail, commuter rail, bicycle, equestrian, and pedestrian facilities. Transportation planning can be a tool for finding opportunities to provide public access to the shorelines.

S-756 **King County shall require transportation and parking plans and projects located in the shoreline jurisdiction to be consistent with the public access policies in this chapter and environmental protection provisions.**

S-757 **Where appropriate, circulation system planning in the shoreline jurisdiction shall include systems for pedestrian, bicycle and public transportation and combining transportation uses to minimize the footprint of transportation facilities. Circulation planning and projects should support existing and proposed shoreline uses that are consistent with the King County Shoreline Master Program.**

S-758 **Transportation and parking facilities located in the shoreline jurisdiction shall be planned, located and designed to have the least possible adverse impact on unique or fragile shoreline features, not result in a net loss of shoreline ecological processes and functions or adversely impact existing or planned water-dependent uses. Where other options are available and feasible, new transportation facilities or transportation facility expansions should not be constructed within the shoreline jurisdiction.**

S-759 **Parking facilities in the shoreline jurisdiction are not a preferred use. King County shall allow parking facilities in the shoreline jurisdiction only when necessary to support an authorized use and when an alternatives analysis shows there are no feasible alternatives outside of the 200-foot shoreline jurisdiction. Parking facilities in the shoreline jurisdiction shall use Low Impact Designs, such as porous concrete and vegetated swales, and be planned, located and designed to minimize the environmental and visual impacts.**

15. Utilities

Utilities include services and facilities that produce, convey, store, or process power, gas, water, sewage, stormwater, communications, oil, or waste. Utilities that are classified as on-site utilities serving only one primary use are considered "accessory utilities" and are considered part of the primary use.

S-760 **Utility facilities shall be designed and located to assure no net loss of shoreline ecological processes and functions, preserve the natural landscape, and minimize conflicts with present and planned land and shoreline uses, while meeting the needs of future populations in areas planned to accommodate growth.**

S-761 **King County shall allow modification of existing utility facilities and the location of new water-oriented portions of utility facilities in the shoreline jurisdiction provided that a mitigation sequence is applied (see policy S-616) and there is no net loss of shoreline ecological processes and functions. To the maximum extent practical, those parts of utility production and processing facilities that are not water-oriented, such as power plants and sewage treatment plants, shall be located outside of the shoreline jurisdiction.**

S-762 **Transmission facilities for the conveyance of services, such as power lines, cables, and pipelines, shall be located outside of the shoreline jurisdiction where feasible. Transmission facilities located within the shoreline jurisdiction shall assure no net loss of shoreline ecological processes and functions.**

S-763 **Utilities should be located in existing developed rights-of-way and corridors to the maximum extent practical.**

S-764 **Unless no other feasible alternative location exists, King County should discourage:**

a. **Locating pipelines and cables in water, on tidelands or roughly parallel to the shoreline; and**

b. **The development of facilities that may require periodic maintenance that disrupts shoreline ecological processes and functions.**

King County shall ensure that any utility facilities that are allowed do not result in a net loss of shoreline ecological processes and functions or significant adverse impacts to other shoreline resources and values.

C. Shoreline Modifications

1. General Policies Governing Shoreline Modifications

A shoreline modification is construction of a physical element, such as a dike, breakwater, dredged basin, or fill, as well as other actions such as clearing, grading, application of chemicals, or significant vegetation removal to support or prepare for a shoreline use. These activities should be directly related to a legal shoreline use and should not be conducted for other purposes.

S-765 King County should allow structural shoreline modifications only when **necessary to support or protect a legally established structure or a legally existing shoreline use that is in danger of loss or substantial damage, or when a modification is necessary for reconfiguration of the shoreline for mitigation or enhancement purposes.**

S-766 **In order to reduce the adverse effects of shoreline modifications, King County should limit shoreline modifications in number and extent to the maximum extent practicable.**

S-767 **King County shall only allow shoreline modifications that are appropriate to the specific type of shoreline and environmental conditions for which they are proposed.**

S-768 **King County shall ensure that shoreline modifications individually and cumulatively do not result in a net loss of shoreline ecological processes and functions. In order to achieve this goal, King County shall give preference to those types of shoreline modifications that have a lesser impact on the shoreline and by requiring mitigation of identified impacts resulting from shoreline modifications.**

S-769 **Where applicable, King County shall develop regulations and impose conditions based on scientific and technical information and a comprehensive analysis of shoreline conditions for drift cells for marine waters or reaches for lakes and river and stream systems.**

S-770 **King County should plan for the enhancement of impaired shoreline ecological processes and functions where feasible and appropriate, while accommodating permitted uses. To the maximum extent practical, King County should incorporate appropriate measures to protect shoreline ecological processes and functions from the impacts of shoreline modifications.**

2. Shoreline Stabilization

Shorelines are impacted by wind and wave action, currents, tides, and flood waters, resulting in erosion of banks and shifts in channels. These impacts are natural processes that support shoreline ecological processes and functions, but they also impact human use of shorelines.

These natural processes are likely to be affected by climate change. Lowland rivers may see higher flows in the autumn and winter and mid-elevation rivers may see higher winter flows. In both cases, these changes could lead to more frequent flooding. The marine shorelines around Vashon and Maury Islands and the Duwamish Estuary may also see effects due to sea-level rise. Increased sea elevations will make development and infrastructure in low-lying areas more susceptible to flooding due to high tides and storms. Waves will encroach further onto low-lying beaches and cause greater beach erosion, threatening or damaging low-lying structures. At the same time steep slopes may receive increased moisture due to predicted changes in precipitation patterns, potentially resulting in an increase in landslides that may cause property destruction and threaten human safety.

Humans have long desired to "control" these natural processes by constructing shoreline stabilization structures. The negative side of structural solutions includes the high cost of construction, long-term cost of maintenance and repair, the false sense of security for humans relying on these structures, and the high impact to the shoreline environment. These negative impacts are likely to increase as the effects of climate change become more apparent. These impacts include:

1. Beach starvation where sediment is prevented from supplying the beach, thus impeding a dynamic process.
2. Habitat degradation, particularly through removal of shoreline vegetation.
3. Sediment impoundment where the sources of sediment are lost and longshore transport is diminished, resulting in lowering of down-drift beaches, narrowing of the high tide beach, and the coarsening of beach sediment.
4. Exacerbation of erosion as wave energy is reflected back from hard surfaces onto the beach, increasing erosion.
5. Groundwater impacts that can lead to a rise of the water table on the landward side of an erosion control structure, which results in increased pore pressures in the beach material and accelerated erosion of sand-sized material from the beach.
6. Hydraulic impacts where wave energy is reflected back onto the beach, resulting in scour lowering the beach elevation, or coarsening the beach, resulting in failure of the structure.
7. Loss of shoreline vegetation and the loss of erosion control that the vegetation provided, as well as loss of the habitat function provided by vegetation.
8. Loss of large woody debris, which plays an important role in biological diversity and habitat as well as stabilizing the shoreline.
9. Restriction of channel movement and creation of side channels, impacting recruitment of large woody debris and gravel for spawning.

As alternatives to constructing a hard-surfaced structural facility, nonstructural methods that have lesser impacts on shoreline ecological processes and functions are available. These nonstructural methods may also allow for adaptation to the effects of climate change. For example, if buildings are constructed further away from the existing water edge, beyond the range of sea-level rise, shoreline protection would be unnecessary. For most projects, a range of options is available. These include "soft" measures, such as revegetation to stabilize banks, which provide a variety of other ecological processes and functions, and "hard" measures, such as bulkheads, which often detract from or provide only limited ecological function. Shoreline stabilization options include, but are not limited to:

1. Vegetation enhancement;
2. Upland drainage control;

3. Biotechnical measures;
4. Beach enhancement;
5. Anchor trees;
6. Gravel placement;
7. Rock revetments;
8. Gabions;
9. Concrete groins;
10. Retaining walls and bluff walls;
11. Bulkheads; and
12. Seawalls.

S-771 **King County shall require shoreline stabilization to be consistent with Washington Administrative Code 173-26-221(5) for vegetation retention and Washington Administrative Code 173-26-221(2) for protection of critical areas.**

S-772 **King County shall adopt standards to first avoid then mitigate the impact to shoreline ecological processes and functions when alteration of the shoreline is allowed for the construction of single detached dwelling units and accessory structures. These standards shall address the design and type of protective measures and devices that are allowed.**

When structural shoreline stabilization is proposed to protect existing development, the following measures apply:

S-773 **King County may allow construction of new or replaced structural shoreline stabilization and flood control works to protect an existing structure if King County determines there is a documented need, including a geotechnical analysis that the structure is in danger from shoreline erosion caused by tidal action, currents or waves.**

When new development occurs within the shoreline jurisdiction, the following measures apply:

S-774 **King County shall require new shoreline development to be located and designed to avoid the need for future shoreline stabilization to the maximum extent practicable.**

S-775 **King County shall require that lots in new subdivisions and short subdivisions to be created so that shoreline stabilization will not be necessary in order for reasonable development to occur, using geotechnical analysis of the site and shoreline characteristics.**

S-776 **King County shall require new development on steep slopes or bluffs to be set back sufficiently to ensure that shoreline stabilization is unlikely to be necessary during the life of the structure, as demonstrated by a geotechnical analysis.**

S-777 **King County shall not allow new development that requires shoreline stabilization that will cause significant adverse impacts to adjacent or down-current properties and shoreline areas.**

S-778 **King County should notify all prospective developers of new development along Vashon and Maury Islands that their development may be impacted by sea-level rise and should encourage all such new development to be set back a sufficient distance to avoid the need for shoreline protection during the expected life of the development.**

New "hard" structural stabilization measures should be used as a last resort after exploring and evaluating other soft measures.

S-779 **King County shall require the use of soft methods of shoreline stabilization to the maximum extent practicable. King County shall allow new hard structural stabilization measures only as follows:**

a. To protect existing nonwater-dependent development and structures, including single-family residences, if:

1. The erosion is not the result of upland conditions, such as the loss of vegetation and drainage;

2. Nonstructural measures, such as locating the development further from the shoreline, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient;

3. The need to protect primary structures from damage due to erosion is demonstrated through a geotechnical report submitted by a qualified specialist. The damage must be caused by natural processes, such as tidal action, currents and waves; and

4. Mitigation is provided such that the erosion control structure will not result in a net loss of shoreline ecological processes and functions.

b. To protect water-dependent development if:

1. The erosion is not the result of upland conditions, such as the loss of vegetation and drainage;

2. Nonstructural measures, planting vegetation or installing on-site drainage improvements are not feasible or not sufficient;
3. The need to protect primary structures from damage due to erosion is demonstrated through a geotechnical report submitted by a qualified specialist; and
4. The erosion control structure will not result in a net loss of shoreline ecological processes and functions.

c. To protect shoreline restoration projects or hazardous substance remediation projects pursuant to Revised Code of Washington Chapter 70.105D if:

1. Nonstructural measures, planting vegetation or installing on-site drainage improvements are not feasible or not sufficient; and
2. The erosion control structure will not result in a net loss of shoreline ecological processes and functions.

The King County shoreline jurisdiction includes a large number of shoreline stabilization structures, many of which were constructed years ago with little or no consideration of the impact on shoreline ecological processes and functions.

S-780 An existing shoreline stabilization structure may be replaced with a similar structure if there is a demonstrated need to protect principal uses or structures from erosion caused by currents, tidal action, or waves.

S-781 King County shall require replaced shoreline protection structures to be designed, located, sized, and constructed to assure no net loss of shoreline ecological processes and functions.

S-782 Replacement walls or bulkheads to protect a residence shall not encroach waterward as measured at an elevation of two-feet above the current ordinary high-water mark, unless:

a. The residence was occupied prior to January 1, 1972;
b. There are overriding safety or environmental concerns; and
c. The replacement structure shall abut the existing shoreline stabilization structure and be located on the landward side of the existing structure.

S-783 If a net loss of ecological processes and functions associated with critical saltwater habitats will result from leaving an existing shoreline protection structure that is proposed for replacement, King County shall require the structure to be removed as part of the replacement measure.

S-784 **King County shall encourage the use soft shoreline stabilization measures that use placement or growth of natural materials that closely resemble natural scales and configurations and that provide restoration of shoreline ecological processes and functions waterward of the ordinary high-water mark.**

S-785 **King County should encourage replaced structural shoreline stabilization located on Vashon and Maury Islands to be relocated outside of the 100-year floodplain whenever possible. The edge of the 100-year floodplain is consistent with a two-foot sea-level rise.**

King County should make decisions on shoreline stabilization measures based on technical studies and reports that objectively analyze the current conditions and the impact of the proposed stabilization measure. A geotechnical report addressing geologic and habitat conditions developed by a qualified geologist or geotechnical engineer and habitat specialist should be a requirement of a development proposal application that includes shoreline stabilization as part of the development.

S-786 **When shoreline stabilization is proposed, King County shall require a geotechnical report to address the need to prevent potential damage to a primary structure. The report shall estimate time frames and rates of erosion and the urgency associated with the specific situation. King County should not allow hard armoring solutions, unless a geotechnical report confirms that there is a significant possibility that the structure will be damaged within three years as a result of shoreline erosion in the absence of such hard armoring measures, or where waiting until the need is immediate would foreclose the opportunity to use measures that avoid impacts on shoreline ecological processes and functions. If the geotechnical report confirms a need to prevent potential damage to a primary structure, but the need is not as immediate as the three years, the report may still be used to justify more immediate authorization to protect against erosion using soft measures.**

The construction of shoreline stabilization measures results in impacts to the ecological processes and functions of the shoreline. The following measures should be considered to mitigate the impacts of shoreline stabilization projects.

S-788 **If structural shoreline stabilization measures are demonstrated to be necessary,** King County shall:

1. **Limit the size of stabilization measures to the minimum necessary;**
2. **Require the use of measures designed to assure no net loss of shoreline ecological processes and functions;**
3. **Require the use of soft approaches, unless they are demonstrated not to be sufficient to protect primary structures, dwellings, and businesses.**

S-789 **King County shall ensure that publicly financed or subsidized shoreline erosion control measures do not restrict appropriate public access to the shoreline, except where such access is determined to be infeasible because of incompatible uses, safety, security, or harm to shoreline ecological processes and functions. Where feasible, King County shall require ecological restoration and public access improvements to be incorporated into the project.**

S-790 **King County shall discourage new development and redevelopment on feeder bluffs. Where a legal building lot exists and the landowner has no option to locate new development or redevelopment away from feeder bluffs and other areas that affect beach sediment-producing areas, King County shall require that they avoid, to the maximum extent practicable, and then minimize the adverse impacts to sediment conveyance systems from erosion control measures.**

S-791 **King County should prioritize feeder bluffs as areas for protection using acquisition, easement, transfer of development rights and other programs that eliminate or reduce development threats.**

Erosion is the breakdown of soil, mud, rock, and other particles by the agents of wind, water, or ice or by living organisms. These materials are moved downward or down-slope in response to gravity. Upland conditions may contribute to this on-going natural physical process and may impact the ability of people to use the shoreline. Mass wasting is the geomorphic process by which soil, mud, rock, and other particles move downslope under the force of gravity. Types of mass wasting include creep, slides, flows, topples, and falls, each with its own characteristic features. Mass wasting may occur at a very slow rate, particularly in areas that are very dry or those areas that receive sufficient rainfall such that vegetation has stabilized the surface. It may also occur at very high speed, such as in rock slides or landslides, with disastrous consequences. The desire to protect shoreline development from these impacts leads to proposals for shoreline stabilization.

S-792 **The impacts of erosion and mass wasting should be mitigated through protection of geological hazardous areas.**

3. Piers and Docks

Piers and docks are some of the most commonly requested modifications to the shorelines. Because they extend over the water, piers and docks can have a significant impact on the shoreline ecological processes and functions. Careful consideration should be given to the construction of new piers and docks, and how they are constructed in order to minimize their impacts.

S-793 King County shall allow new piers and docks only for water-dependent uses or public access. If it is designed and intended as a facility for access to watercraft, a dock associated with a single-family residence is considered a water-dependent use. As an alternative to individual private moorage for residential development: mooring buoys are preferred over floats or docks and shared moorage facilities are preferred over single use moorage, where feasible or where water use conflicts exist or are predictable.

S-794 King County shall require pier and dock construction to be limited to the minimum size necessary to meet the needs of the proposed water-dependent use.

S-795 King County may allow water-related and water-enjoyment uses as part of a shoreline mixed-use development on over-water structures where they are clearly auxiliary to and in support of water-dependent uses, provided the minimum size requirement needed to meet the water-dependent use is not violated.

S-796 King County shall allow new pier or dock construction, excluding docks accessory to single-family residences, only when the applicant has demonstrated that a specific need exists to support the intended water-dependent uses.

S-797 If new piers or docks are allowed, King County shall require new residential development of two or more dwelling units, subdivisions and short subdivisions to provide joint use or community dock facilities, when feasible, rather than individual docks for each dwelling unit or lot. King County shall allow only one pier or dock associated with residential development on a parcel.

S-798 King County shall require piers and docks, including those accessory to single-family residences, to be designed and constructed to avoid and then minimize and mitigate the impacts to shoreline ecological processes and functions. King County shall require piers and docks to be constructed of non-toxic materials. Where toxic materials, such as treated wood, are proposed, the proponent must show that no non-toxic alternative exists.

4. Fill

Fill means the addition of soil, sand, rock, gravel, sediment, earth retaining structures, or other material to an area waterward of the ordinary high water mark, in wetlands, or on shorelands in a manner that raises the elevation or creates dry land. Fill is not permitted within the 100-year floodplain without providing compensatory flood storage to prevent a rise in the base flood, which is a flood having a one percent chance of being equaled or exceeded in any given year, often referred to as the "100-year flood." Fill can impact shoreline ecological processes and functions, including channel migration.

S-799 **King County shall require fill to be located, designed, and constructed to protect shoreline ecological processes and functions and ecosystem-wide processes, including channel migration and side channels.**

S-800 **King County shall allow fill waterward of the ordinary high-water mark only when necessary to support:**

1. **Water-dependent use;**
2. **Public access;**
3. **Cleanup and disposal of contaminated sediments as part of an interagency environmental clean-up plan;**
4. **Disposal of dredged material considered suitable under, and conducted in accordance with, the dredged material management program of the Washington Department of Natural Resources;**
5. **Expansion or alteration of transportation facilities of statewide significance currently located on the shoreline and then only upon a demonstration that alternatives to fill are not feasible; or**
6. **Mitigation actions, environmental restoration, beach nourishment, enhancement projects; or**
7. **Flood risk reduction projects implemented consistent with the goals, policies and objectives of the King County Flood Hazard Management Plan where no reasonable alternative exists.**

S-801 **King County shall require a shoreline conditional use permit for fill waterward of the ordinary high-water mark for any use, except for projects for ecological restoration or for the maintenance, repair or replacement of flood protection facilities.**

5. Breakwaters, Jetties, Groins and Weirs

Breakwaters, jetties, groins, and weirs are all structural elements that are constructed to absorb or deflect wave action or to control excess sediment. A breakwater is an off-shore structure, either floating or not, which may or may not be connected to the shore and is designed to absorb and reflect back into the water body the energy of the waves. A jetty is an artificial barrier used to change the natural littoral drift to protect inlet entrances from clogging by transported sediment. A groin is a barrier-type structure extending from the backshore into the water across the beach, which is constructed to interrupt sediment movement along the shore. A weir is a small dam in a stream or river to control the flow of water. Although each of these structural elements may sometimes be appropriate, they should be allowed only under limited circumstances.

S-802 **King County shall allow breakwaters, jetties, and weirs located waterward of the ordinary high-water mark only where necessary to support water-dependent uses, public access, shoreline stabilization, or other specific public purpose.**

S-803 **Groins are prohibited except as a component of a publicly-sponsored project to protect or restore shoreline ecological processes and functions.**

S-804 **King County shall require a shoreline conditional use permit for the construction of breakwaters, jetties, groins, weirs, and similar structures, except for those structures installed to protect or restore shoreline ecological processes and functions, such as woody debris installed in streams.**

S-805 **Breakwaters, jetties, groins, and weirs shall be designed to protect critical areas and shall provide for mitigation according to the sequence in policy S-616 and defined in Washington Administrative Code 173-26-201 (2)(e).**

6. Beach and Dunes Management

Washington's beaches and their associated dunes lie along the Pacific Ocean coast between Point Grenville and Cape Disappointment and, as shorelines of statewide significance, are mandated to be managed from a statewide perspective by the Shoreline Management Act. There are no beaches and associated dunes in King County.

7. Dredging and Dredge Material Disposal

Dredging is the removal, displacement, or disposal of unconsolidated earth material such as sand, silt, gravel, or other submerged materials, from the bottom of water bodies, ditches, or natural wetlands. Long-term maintenance and support activities are also considered dredging. Dredging can cause significant ecological damage, which cannot always be avoided. Mitigation measures should be required to assure no net loss of shoreline ecological processes and functions.

King County has a channel monitoring program for King County rivers, which can be used to inform decisions on dredging activities. While only certain reaches of these rivers have been surveyed, King County recognizes the need to continue and enhance the channel monitoring program. In addition, King County should avoid development of shorelines that would require new or maintenance dredging.

S-806 **King County shall require that new development should be sited and designed to avoid, to the maximum extent practical, and then to minimize the need for new or maintenance dredging.**

S-807 **King County shall allow dredging for the purpose of establishing, expanding, or relocating or reconfiguring navigation channels and basins when necessary to assure safe and efficient accommodation of existing navigational uses. Significant adverse ecological impacts shall be minimized and mitigation shall be provided to ensure that there is no net loss of shoreline ecological processes and functions. Maintenance dredging of established navigation channels and basins should be restricted to maintaining previously dredged or existing authorized location, depth, and width.**

S-808 **King County shall not allow dredging waterward of the ordinary high-water mark for the primary purpose of obtaining fill material, except when the material is necessary for the restoration of shoreline ecological processes and functions. When allowed, the site where the fill is to be placed shall be located waterward of the ordinary high-water mark. The project must be either associated with a habitat restoration project under the Model Toxics Control Act or the Comprehensive Environmental Response, Compensation, and Liability Act, or, if approved through a shoreline conditional use permit, any other significant habitat enhancement project.**

S-809 **King County shall not allow disposal of dredge material on shorelands and in side channels within a river's channel migration zone. King County shall not allow disposal of dredge material in wetlands located within the shoreline jurisdiction. In the limited instances where it is allowed, such disposal shall require a shoreline conditional use permit.**

S-810 **King County shall require dredging to be conducted consistent with Policy** RCM-3 of the 2006 King County Flood Hazard Management Plan.

8. Shoreline Habitat and Natural Systems Enhancement Projects

Shoreline habitat and natural systems enhancement projects should be supported and coordinated with other planning processes, such as salmon conservation plans and the 2006 King Count Flood Hazard Management Plan.

S-811 **King County should allow for habitat and natural systems enhancement projects that include, but are not limited to:**

- **a. Modification of vegetation;**
- **b. Removal of nonnative or invasive plants;**
- **c. Shoreline stabilization using soft or non-structural techniques; and**
- **d. Dredging, and filling, provided that the primary purpose of such actions is clearly restoration of the natural character and shoreline ecological processes and functions of the shoreline.**

S-812 **Habitat and natural systems enhancement projects should assure that the projects address legitimate restoration needs and priorities.**

IX. Primary and Administrative Policies

A. Reservation of Right to Appeal Department of Ecology Decisions

By law, King County's Shoreline Master Program must be approved by the Department of Ecology, which has the power to reject or modify part or all of King County's Shoreline Master Program elements.

1. Reservation of right to submit alternate proposal to Ecology

If the Department of Ecology recommends a change to some or all of the elements in King County's Shoreline Master Program, King County reserves the right to submit an alternate proposal for approval.

S-901 **If the Department of Ecology recommends changes to any elements of the King County Shoreline Master Program, King County reserves the right to submit an alternate proposal to the Department for its review and approval.**

2. Appeal of Ecology's decision to reject or modify King County Shoreline Master Program.

If the Department of Ecology rejects or modifies part or all of the elements of in King County's Shoreline Master Program, King County reserves the right to appeal this decision, in whole or part, to the Growth Management Hearings Board and the courts.

S-902 **If the Department of Ecology rejects part or all of King County's Shoreline Master Program, or if the Department of Ecology recommends changes that are unacceptable to King County, King County reserves the right to appeal the Department's decision to the Shoreline Management Hearings Board.**

B. Posting Notice of Effective Date of King County's Shoreline Master Program and Shoreline Regulations

The King County Shoreline Master Program and any amendments to the Shoreline Master Program take effect only after approval by the Washington State Department of Ecology.

S-903 **Upon receipt of the letter from the Department of Ecology approving the King County Shoreline Master Program or any amendments to the Shoreline Master Program, King County will promptly post on its web site a notice that the Department of Ecology has taken final action and approved the Shoreline Master Program or SMP amendments. The notice will indicate the effective date.**

C. Treaty Rights Not Affected by Shoreline Master Program

King County has sought the input of and consulted with tribes located in and adjacent to King County when developing the Shoreline Master Program. However, the Shoreline Master Plan and associated shoreline regulations shall not be construed to affect any treaty rights established between the United States and the individual tribes.

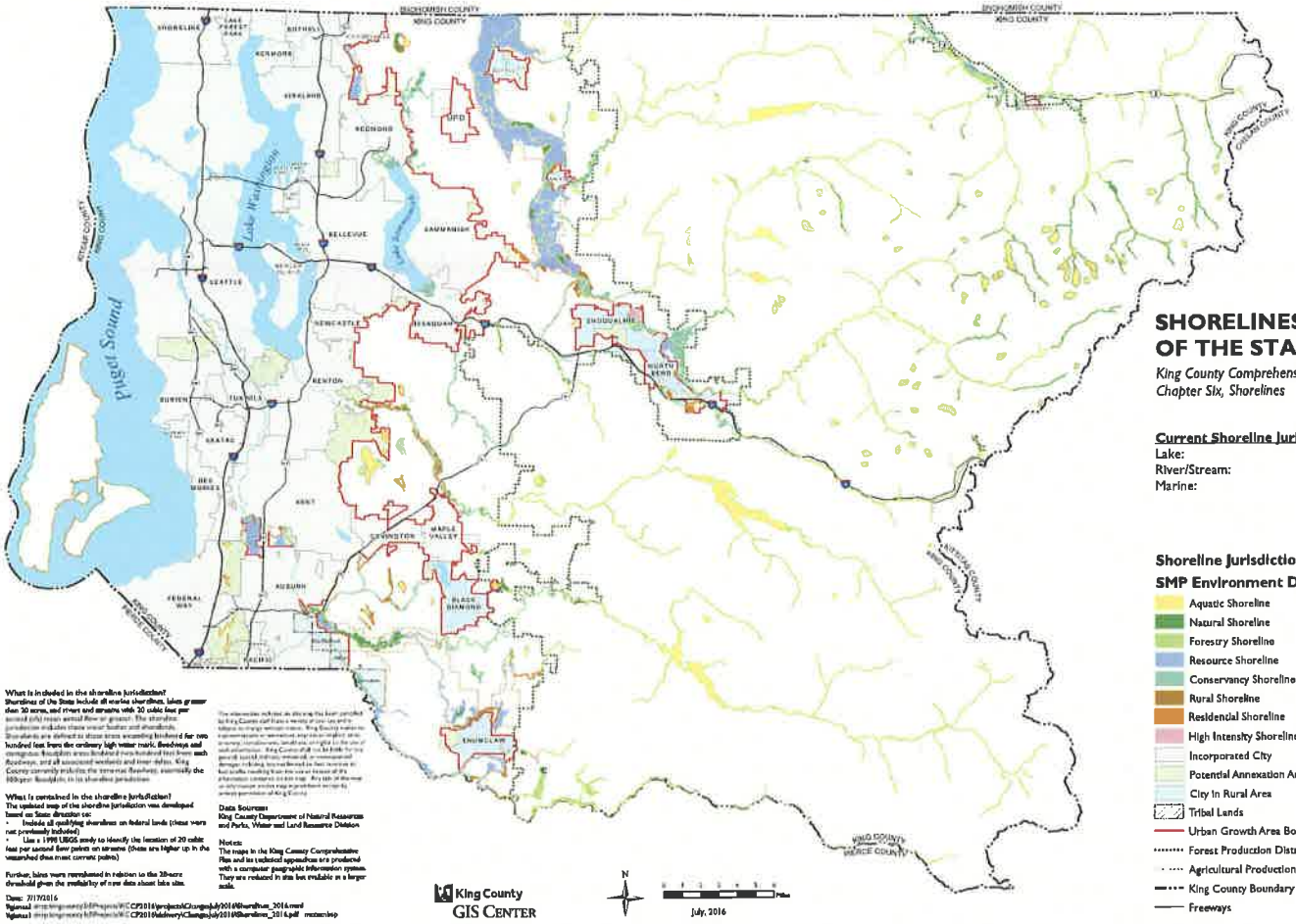
S-904 **Nothing in the King County Shoreline Master Program nor in any action taken under the Shoreline Master Program shall be construed to affect any treaty right to which the United States is a party.**

D. Power to Abate Nuisance Retained by King County and the State Of Washington

Adoption of the Shoreline Master Program is a requirement of the Shoreline Management Act. King County's compliance with this state law should not be construed in any way to limit or modify all other powers possessed by King County.

S-905 **Nothing in the King County Shoreline Master Program shall be construed to limit the power of King County or the State of Washington to abate nuisances within the shoreline jurisdiction.**

S-906 **King County specifically reserves all rights, power, and authority granted to it by law. Nothing in the King County Shoreline Master Program shall be construed in any way to limit any power or authority possessed by King County.**



What is included in the shoreline jurisdiction?
Shorelines of the State include all marine shorelines, lakes greater than 20 acres, and rivers and streams with 20 cubic feet per second (cfs) mean annual flow or greater. The shoreline jurisdiction includes these water bodies and shorelands. Shorelands are defined as those areas extending landward for two hundred feet from the ordinary high water mark. Floodways and contiguous floodplain areas landward two hundred feet from such floodways, and all associated wetlands and river deltas. King County currently includes the terrestrial floodway, essentially the 100-year floodplain, in its shoreline jurisdiction.

What is contained in the shoreline jurisdiction?
The updated map of the shoreline jurisdiction was developed based on State direction to:

- Include all qualifying shorelines on federal lands (these were not previously included)
- Use a 1998 USGS study to identify the location of 20 cubic feet per second flow points on streams (these are higher up in the watershed than most current points)

Further, lakes were reevaluated in relation to the 20-acre threshold given the availability of new data about lake size.

Date: 7/19/2016
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The information included on this map has been compiled by King County staff from a variety of sources and is subject to change without notice. King County makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. King County shall not be liable for any general, special, indirect, incidental, or consequential damages including, but not limited to, lost revenues or lost profits resulting from the use or misuse of the information contained on this map. Any sale of this map or any reproduction of this map without the explicit permission of King County is prohibited.

Data Sources:
King County Department of Natural Resources and Parks, Water and Land Resource Division

Notes:
The maps in the King County Comprehensive Plan and its technical appendices are produced with a computer geographic information system. They are reduced in size for publication at a larger scale.

SHORELINES OF THE STATE 2016

King County Comprehensive Plan, 2016
Chapter Six, Shorelines

Current Shoreline Jurisdiction Miles

Lake:	220
River/Stream:	1,696
Marine:	51

Shoreline Jurisdiction
SMP Environment Designations

- Aquatic Shoreline
- Natural Shoreline
- Forestry Shoreline
- Resource Shoreline
- Conservancy Shoreline
- Rural Shoreline
- Residential Shoreline
- High Intensity Shoreline
- Incorporated City
- Potential Annexation Areas
- City in Rural Area
- Tribal Lands
- Urban Growth Area Boundary
- Forest Production District Boundary
- Agricultural Production District Boundary
- King County Boundary
- Freeways



CHAPTER 7
PARKS, OPEN SPACE AND CULTURAL RESOURCES

The quality of life in King County is directly linked to the quality of the region's environment, with its diverse landscapes reaching from Puget Sound to the Cascade Mountains, scenic beauty and the variety of cultural and recreational opportunities that enriches lives. These vital natural and cultural resources contribute to the physical, mental, and emotional well-being of county residents and are integral to attracting employment and business activity.

The policies in this chapter focus on the county's role as a regional leader in acquiring and protecting its system of county-owned parks, forests, natural areas, trails and other open spaces. In addition to protecting these natural resources, the county promotes a high quality of life by supporting cultural opportunities such as music, theater, ethnic heritage museums, literary activities, public art collections, urban historic districts, and rural landmarks.

I. Parks, Recreation and Open Space

The Growth Management Act requires cities and counties to identify open space corridors within and between Urban Growth Areas, including lands useful for recreation, wildlife habitat, trails, and connection of critical areas. The county's designation of open space includes those lands that are part of the King County open space system as well as state parks and natural resource conservation areas and federal wilderness areas in unincorporated King County. See the Land Use Map is located at the end of Chapter 1, Regional Growth Management Planning. The Growth Management Act states that counties are the providers of regional services and local rural services, while cities are the appropriate providers of local urban services. As the regional government, King County manages a regional open space system of parks, regional trails, natural or ecological areas and working resource lands. While the cities are the managers of local parks, trails and open space lands in the Urban Growth Area, King County will continue to be the provider of local parks, trails and open space lands in the Rural Area and Natural Resource Lands.

Population growth and associated development continue to transform the county's landscape as forested and open lands have been converted to urban uses resulting in the fragmentation of wildlife corridors and riparian habitat, as well as the depletion of working resource lands and open vistas. The policies in this section provide guidance for the open space system of lands the county owns and manages to protect and restore the health of natural systems, provide recreational opportunities, shape community character, and help sustain agriculture and forestry economics. Additional benefits of the open space and regional trails systems include providing transportation alternatives as well as health benefits from physical activity and access to the outdoors for those who have mobility disabilities. Large forested parks and natural areas help maintain air quality, water quality and quantity, and help mitigate the effects of climate change. Parks and green spaces also provide stress relief, rest and relaxation and contribute to improved mental health and well-being. The policies also reinforce the county's focus on linking components of the open space system with an emphasis on completing the regional trails system, connecting riparian habitat and reducing forestland fragmentation.

Regional recreation and multiuse parks serve a countywide population and provide high-quality, developed facilities that support multiple events, large group gatherings and special events. Passive parks serve less formal, organized or intense activities. Local rural park sites provide for active and passive recreation close to home. The Regional Trails System forms the foundation for King County and other agencies' shared use path networks that reach broadly throughout the county linking cities, other counties and the state, and offering extensive recreation opportunities. The Regional Trails System is also an essential part of King County's multimodal transportation system, providing interconnected nonmotorized travel options. Local trails provide circulation within local communities and access to the larger regional trails system.

Natural areas and working forest sites can provide opportunities for informal, low intensity and low impact activities which enable the understanding, appreciation and significance of natural resources. Passive recreation use of these sites requires little infrastructure, although amenities such as backcountry trails and trailhead

facilities may be needed to accommodate appropriate types and levels of public use. Natural areas often contain undeveloped or un-developable acreage that is managed primarily to support habitat to provide ecological benefits and contribute to biodiversity. Forested areas provide carbon sequestration and reduction in greenhouse gas emissions, and play a role in adaptation to climate change.

P-101 **For the purposes of the King County open space system: "regional" shall define sites and facilities that are large in size, have unique features or characteristics or significant ecological value, and serve communities from many jurisdictions; and "local" shall define sites and facilities that serve unincorporated communities predominately in the Rural Area and Natural Resource Lands.**

A. The Regional Open Space System of Parks, Trails, Natural Areas and Working Resource Lands

The policies in this chapter provide the basis to develop a contiguous and functional open space system, connecting and including recreation and multiuse parks, natural areas, working resource lands and regional trails. The components of this vital system contribute to the physical, mental and emotional well-being of county residents. Other publicly-owned lands such as Farmland Preservation Program and Flood Hazard Management properties also contribute to the system and its environmental benefits. The Open Space System Map shows these publicly-owned open space lands and provides the basis for identifying the linkages necessary to strengthen the physical and functional connectivity of the county's open space system. The following policies reinforce the importance of the county's open space system, and guide planning and management of appropriate recreational opportunities that best meet regional and local rural needs, preserve ecologically significant resources and protect working resource lands.

P-102 **King County shall be a regional leader in the provision of a regional open space system consisting of parks, regional trails, natural areas, working resource lands, and flood hazard management lands. The regional network of open spaces provides benefits to all county residents including: recreation facilities, conservation of natural and working resource lands, improving air and water quality, flood hazard management and related programs and services, thereby contributing to the physical, mental and emotional well-being of county residents.**

P-103 **King County will preserve wildlife corridors, riparian habitat, contiguous forest land, as well as open space areas separating Urban Areas from Rural Areas and Natural Resource Lands as part of its open space system.**

B. Components of the Regional Open Space System

King County's regional open space system contains lands with many functions including: active and passive recreation; special purpose sites such as pools and trails; natural areas, with educational, scientific, wildlife habitat, cultural or scenic values; working resource lands including agriculture and forest lands; and community-defining systems, including physical and or visual buffers between areas of urban and rural development. Many sites within the open space system serve more than one function, but each site generally serves a primary role within the system.

1. Recreation Sites

Regional Parks

King County's regional recreation parks and facilities accommodate a wide range of active and passive recreational activities. Recreation sites that make up a functional system include: highly developed sites with organized, scheduled activities such as soccer and softball; passive or low impact recreation sites that include both physical activities and less intense activities such as informal play, trail use, and picnicking; and multiuse sites that include a combination of active recreation and passive recreation with less intensely developed facilities and natural areas. Regional recreation parks serve a broad spectrum of users. These parks and their facilities include those not generally viable for individual communities due to site or specialized facility requirements or the unique nature of the offering requiring a broader user base to support them.

P-104 **King County shall provide regional parks and recreational facilities that serve users from multiple neighborhoods and communities. Regional parks include unique sites and facilities that should be equitably and geographically distributed.**

Educational and interpretive programming promotes appropriate and enjoyable use of the park system, public awareness of the park system's resources and values, and builds support and stewardship for the system and its resources. Programming and special events provide activities and entertainment that attract people to the parks.

P-105 **King County should facilitate affordable and culturally-accessible educational, interpretive and aquatic programs on county-owned properties that further the enjoyment, understanding and appreciation of the natural, cultural and recreational resources of the park system and the region.**

P-106 **King County should facilitate and seek regional and national programs and special events at regional sites and facilities.**

2. Local Parks

In the Rural Area, the large geographic area and dispersed populations, individual lots, low residential density and economies of site management dictate fewer and smaller individual park sites. Nearby regional parks and other open spaces also provide recreational opportunities in the Rural Area and Natural Resource Lands. King County's role in the Rural Area and Natural Resource Lands will reflect rural levels of service. These vital local parks, local trails, and recreational facilities contribute to the physical, mental and emotional well-being of county residents.

P-107 **King County shall provide local parks, trails and other open spaces in the Rural Area. Local parks, trails and other open spaces that complement the regional system should be provided in each community in Rural Areas to meet local recreation needs and enhance environmental and visual quality.**

P-108 **King County should provide local parks within rural communities with fields and other facilities that provide opportunities for active sports. These facilities shall be in addition to and compatible with King County's regional parks.**

3. Regional Trails System

The Regional Trails System is a major element of the county's greater open space system that provides opportunities for recreation and nonmotorized transportation, as well as corridors often used by wildlife. This system contributes to the health and well-being of both county residents and the environment. King County is home to one of the largest nonmotorized regional trail networks in the North America. King County and local jurisdictions collectively offer approximately 300 miles of shared-use (multi-purpose) paved and unpaved paths connecting communities and linking Puget Sound urban areas with Rural Areas, Natural Resource Lands and the Cascade Mountains. These facilities are classified as shared use paths by the Federal Highway Administration and are a component of the federally-designated regional transportation plan administered by the Puget Sound Regional Council. The King County government stewards some 175 miles of the overall network. The remaining portions of the network are managed by local cities, the Port of Seattle, and Washington State.

Regional trails are non-motorized facilities used for bicycling, walking, jogging, skating, horseback riding where appropriate, and other activities. The paths provide both recreational opportunities and mobility options, connecting users in neighborhoods and communities with schools, parks, employment, and other important destinations. Regional trails may be paved or soft-surface (gravel) or a combination of both. The network reaches more than 30 cities throughout King County, and use is extensive. It has been estimated that 12 million bicycle and pedestrian trips are made on the network in King County annually. These paths serve a wide range of land uses, both urban and rural. They link urban centers, business districts, neighborhoods, universities, schools, parks, and transportation centers. They run through cities, along waterfronts and scenic shorelines, through river valleys and farmlands, and into the Cascade forests.

While intended originally as recreational amenities and linear parks, the regional trails in King County have evolved to provide not only extensive recreation, but also important active transportation opportunities, and social((/)) and cultural venues. Today, thousands of daily trips are made on paths such as the Burke-Gilman Trail between suburban cities and Seattle.

Recreation remains the primary use, but an increasing number of those trips are made for work and school, combining the healthy recreational benefits of cycling and walking with the workday commute. The trails are also used for a variety of special activities that enrich life in the central Puget Sound region, from art-related treks to community fundraisers to long-distance cycling events.

Regional trails in King County now include not only decades-old popular routes like the Burke-Gilman Trail, but also trails networking many landscapes and destinations. Routes follow abandoned railroad lines, water pipeline and power line corridors, river levees, and other special features or they may establish their own alignments as they seek out practical courses between destinations. More interconnections provide more travel opportunities. Paths access parks and scenic landscapes, but they also now serve urban centers, major transit facilities, and other important everyday destinations. Future facilities will continue to provide the joint benefits of recreation and regional mobility. More information regarding King County's Regional Trails System including the proposed future regional trails plan, the Regional Trails Needs Report, can be found in the Appendices.

P-109 **King County shall complete a regional trails system, linking trail corridors to form a countywide network. King County will continue to primarily own the land necessary for the operation and management of the trail system and pursue public-private funding opportunities for development and maintenance, while ensuring opportunities for access for all King County residents.**

Policies related to the planning, development, and management of the Regional Trails System can be found in the King County Parks Open Space Plan, a functional plan of the King County Comprehensive Plan. Additional policies can also be found in Chapter 8, Transportation.

Eastside Rail Corridor

The Eastside Rail Corridor provides a rare and unique opportunity to develop a major north-south, dual use (recreational trail and public transportation) corridor in support of mobility through transit, nonmotorized and active transportation, including access to transit outside the corridor, consistent with its federal railbanked status. The owners share other multiple objectives for the corridor including accommodating utilities, parks, recreation and cultural amenities, and encouraging equitable access to these facilities, and to housing and jobs, in support of economic opportunity for all King County residents. The corridor will be the focus of regional trail planning and development by King County Parks, connecting regional growth centers, urban communities, other regional trails, and both local and high-capacity transit. The trail will connect to existing major regional trail corridors including the Mountains to Sound/I-90 Trail, State Route 520 Trail, Sammamish River Trail, Lake to Sound

Trail, and others. The trail will provide opportunities for safe recreation and mobility as a component of King County's Regional Trails System and provide opportunities for environmental benefits to the region.

P-110 **King County shall include the planning and development of a regional trail in the Eastside Rail Corridor, to enhance regional recreation and mobility. This facility will be planned and developed in coordination with other owners of BNSF's former interests, and in close coordination with King County Department of Transportation and other state and local agencies, in support of the commitment to dual use (recreational trail and public transportation), consistent with federal railbanking, and multiple objectives of King County and the other owners. The trail will be identified in King County's regional trails plan, the Regional Trails Needs Report, as a priority capital facility.**

P-110a **The Eastside Rail Corridor regional trail shall be developed to enhance connectivity between regional growth centers, urban communities, other regional trails, and local and high-capacity transit, consistent with a commitment to dual use (recreational trail and public transportation), and consistent with federal railbanking. The trail will enhance the quality of life by providing important recreation and mobility options for adjacent land uses.**

P-110b **The Eastside Rail Corridor regional trail shall be developed to the most current regional trail standards, ensuring safe recreation and mobility in accessing trails, streets and transit consistent with a commitment to dual use (recreational trail and public transportation), and consistent with federal railbanking. The trail corridor will include high-quality landscaping and environmental features where appropriate to enhance the trail experience and to provide ecologic benefits to the region.**

4. Multi-Use Sites

Each portion of a multi-use site will be developed and managed to support the level of use or conservation appropriate to that portion of the site.

P-110c **Multi-use sites include lands that have areas of environmental value, but also may accommodate extensive public access and active and/or passive recreation opportunities.**

5. Natural Areas

The King County open space system includes many sites whose primary purpose is to conserve and restore ecological value. These sites may allow varying types of public use that do not harm the ecological resources of the site. These sites include many scenic and environmental features of King County's landscape, which play a role in protecting a diversity of vegetation and fish and wildlife important to the beauty and character of the region. King County will focus on linking natural areas to create regional open space corridors of greenways and waterways along the major natural systems such as rivers and shorelines.

Preserving these areas in partnership with other agencies, private groups and individuals will provide multiple values including environmental and economic benefits of air and water quality, surface water management, aquifer recharge, and fish and wildlife habitat preservation and enhancement.

P-111 **King County will manage its natural areas to protect, preserve and enhance important natural resource habitat, biological diversity, and the ecological integrity of natural systems.**

P-112 **King County shall recognize and protect the natural character and ecological value of its natural areas. These areas are important for preserving fish and wildlife and their habitat, native vegetation, and features of scientific and educational value. Development and public use may be limited to preserve the natural state and reduce disturbance of the natural resources. Site improvements should be focused on providing educational and interpretive opportunities. Public access should be directed to the less fragile portions of a site to ensure continued protection of the ecological resources.**

6. Working Resource Lands

The county's open space system includes lands that are managed as working farms and forests. The county has purchased these properties in fee or less than fee ownership with the intention of conserving the resource use on the site. County ownership and management of these lands conserves the resource land base, allowing the resource activity to continue, while contributing to the local rural economy, providing healthy foods, reducing carbon emissions associated with importing food into the region, providing education about agriculture and forestry, and providing passive recreational opportunities on some properties. The county's policies to conserve farmland and encourage agriculture are discussed in Chapter 3, Rural Areas and Natural Resource Lands.

Farmland

The Farmland Preservation Program is a county program that preserves farmland through the purchase of development rights. The farms in the Farmland Preservation Program generally remain in private ownership. The county has purchased a farm outright in a few cases, with the intention of reselling the land without the development rights to a private farmer. The county has developed a program to lease farms to small-scale farmers until such time that the property can be resold.

P-113 **Farmland owned by King County shall contribute to the preservation of contiguous tracts of agricultural land and make affordable farmland available for use by small-scale and new farmers.**

P-114 **Farmers leasing properties owned by King County shall use Agricultural Best Management practices, Integrated Pest Management and other sustainable farming methods.**

P-115 **The use and management of farmlands owned by King County shall be consistent with any requirements imposed by the funding program used to purchase each property and shall serve to meet and enhance the objectives of the King County Agriculture Program.**

Forestland

One goal of the King County Open Space System is the conservation of forestland, through acquisition of land or conservation easements, to decrease threat of conversion resulting from development and fragmentation, as well as promote the understanding of the importance of forest management, including restoration of the forests to more natural conditions. The working forests owned by King County are generally very large parcels of land (several hundred acres or more) that support sustainable forest management practices and contribute to the retention of a contiguous forest.

These properties contain valuable fish and wildlife habitat, provide environmental services (such as stormwater management, clean air and water and carbon sequestration), and help mitigate the impacts of climate change, as well as provide high-quality passive recreation, scenic vistas and educational/interpretation opportunities.

P-116 **Working forest land and conservation easements owned by King County shall provide large tracts of forested property in the Rural Forest Focus Areas, the Forest Production District and Rural Area that will remain in active forestry, protect areas from development or provide a buffer between commercial forestland and adjacent residential development.**

P-117 **Forest land owned by King County shall be used to sustain and enhance environmental benefits, demonstrate progressive forest management and research, and provide revenue for the management of the working forest lands.**

P-118 **Forest land owned by King County shall provide a balance between sustainable timber production, conservation and restoration of resources, and appropriate public use.**

7. Backcountry Trails

Backcountry trails are not a separate open space category; rather they are facilities located within King County's multi-use sites, forest lands and natural areas. These trails allow visitors to directly experience the county's beautiful natural environment as found in its forests, meadows, and marine and fresh water shoreline. Unlike multi-purpose regional trails that network urban and rural landscapes throughout the county, these soft-surface are intended for passive recreation and appreciation and enjoyment of a natural experience with forest and trees, streams and wetlands, shorelines and birds and wildlife. Where backcountry trails are developed on lands containing fish and wildlife resources, development and management of such trails is undertaken so as to minimize the impacts on those resources.

P-118a **King County will continue to provide and manage a backcountry trail system on its lands in collaboration with other public and private landholders and consistent with its Trail Programmatic Permit.**

8. Other Open Spaces

Preservation of open space in the county reaches beyond the county owned system. Large areas of the county are owned and managed by federal agencies, the state, and other local jurisdictions that manage the land for environmental protection, resource production, or a wide range of recreational opportunities. Additionally, open space benefits are often provided by private land owners managing their land in ways that protect the environment, conserve natural resources, or provide scenic vistas. King County acquires property for other reasons, such as flood hazards or providing needed public facilities. These lands can also provide open space conservation benefits.

King County has acquired lands and manages facilities along major river and stream systems for the primary purpose of floodplain management and flood hazard management. Major streams and rivers are vital components of the county's open space system, therefore the flood hazard management lands contribute critical links in the county's open space network. The King County Flood Control District will continue to maintain flood hazard management land and facilities within available funding levels. The county will also seek innovative measures for maintaining and improving flood hazard management, reducing maintenance costs, integrating flood hazard management and recreational opportunities, and achieving wildlife habitat protection and salmon recovery.

C. Achieving the Open Space System

Parks and other county-owned open space lands ensure a quality of life today and a legacy to future generations. In King County, many types of open spaces and fish and wildlife habitat remain in private ownership and may be subject to future development. To ensure that these lands and resources are protected and to offer an alternative to acquisition, the county offers landowners a wide variety of tools to preserve their property. Policies outlining strategies for using these tools can be found in Chapters 3, Rural Areas and Natural Resource Lands, 4, Housing and Human Services, and 7, Parks, Open Space and Cultural Resources.

Cooperation, coordination and partnerships with public agencies, private groups and individuals are necessary to develop the regional parks and open space system, to meet existing needs for park and recreation facilities and to accommodate the needs of growth. The Mountains-to-Sound Greenway, along the I-90 corridor, is a successful model for coordination of efforts by public and private entities to protect the backbone of the county's open space system. King County will achieve the multiple benefits of resource protection and recreation by building partnerships and coordinating with providers and user groups of the parks and open space system. Working together, stewardship can be fostered and these lands and facilities can be enhanced, restored and operated more economically and efficiently to benefit all county residents.

1. Priorities

P-119 **Open space lands should be acquired to expand and enhance the open space system as identified in the King County Open Space Plan: Parks, Regional Trails and Natural Areas.**

P-120 **Regional trail corridors should be acquired when identified in King County's Regional Trails Needs Report or other trails plans.**

P-121 **King County shall consider equity in the location, development and acquisition of its open space system to help in the reduction of health disparities and in the promotion of social and environmental justice.**

2. Criteria

P-122 **Lands preserved for public parks, regional trails or other open space should provide multiple benefits whenever possible.**

P-123 **Decisions on acquisition and development of park, regional trail, and other open space sites should consider funding needs for long term maintenance and operations.**

P-124 **A variety of measures should be used to acquire, protect, manage and develop regional and local parks, regional trails and open space. Measures can include: county funding and other funding mechanisms, grants, partnerships, incentives, regulations, dedications and contributions from residential and commercial development based on their service impacts and trades of lands and shared development activities.**

3. Managing the System

As the caretaker of 200 parks, 175 miles of regional trails, more than 200 miles of backcountry trails, 28,000 acres of open space, and 145,000 acres of conservation easements, King County is one of the region's important providers and managers of public lands. As such, the principles and policies that guide stewardship and management of these lands and resources are critical to ensure these assets continue to contribute to the region's quality of life now and for future generations.

P-125 **Management of the regional open space system of parks, regional trails, natural areas and working resource lands is guided by the King County Open Space Plan: Parks, Trails and Natural Areas.**

P-126 **Development and management of parks, regional trails and open space sites should be consistent with the purposes of their acquisition and in consideration of their funding sources.**

P-127 **Open space lands shall be classified to identify their role in the open space system and the purpose of the acquisition as recreation site, trail, natural area park, multiuse site, or working resource land.**

P-128 **King County will adopt an entrepreneurial approach to managing and operating the open space system and work aggressively to implement multiple and appropriate strategies to fiscally sustain the open space system.**

P-128a King County should develop management plans (such as master plans, forest stewardship plans or site management guidelines) that outline goals and objectives and management recommendations for sites within the open space system as appropriate.

P-128b King County's use of pesticides and fungicides will be based on integrated pest management principles.

4. Coordination and Partnerships

P-129 King County shall be a leader in establishing partnerships with cities, adjacent counties, tribes, state and federal agencies, school and special purpose districts, community organizations, non-profit organizations, land owners and other residents. The county and these partners should work to promote and protect all aspects of environmental quality, while addressing equity and social justice goals to complete the regional parks and open space system through joint planning and management of local and regional sites and facilities.

P-130 In the Urban Area, King County shall work in partnership with other jurisdictions to facilitate annexation and transfer of local parks, and local trails to cities or other providers to ensure continued service to the community.

P-131 King County should work with cities to share operational and maintenance costs of parks and other open spaces in unincorporated areas in which a substantial portion of the users are from incorporated areas.

P-132 King County will encourage and support volunteer efforts to maintain and enhance programs, sites and facilities.

5. Public Participation

P-133 King County will encourage and seek input, advice and participation from the public in decisions about management of the open space system that relate to key issues such as funding, planning, acquisition, development and stewardship.

P-134 King County will invite and involve a wide variety of interests via a diversity of individuals, groups and agencies consistent with the County's equity and social justice policies. King County will intentionally engage communities that are the most affected by proposals and plans.

P-135 **King County will use a variety of methods to ensure public involvement from all county residents such as public meetings, advisory groups, surveys, web and social media postings, news releases, park site signage, mailing lists, newsletters and through various community groups (including Community Service Areas). These methods will allow for early, continuous and broad public participation.**

II. Cultural Resources

Cultural resources make a significant contribution to the quality of life in King County. Arts and heritage organizations, public art and historic and archaeological properties contribute to the region's economic vitality, play an essential role in cultural tourism, and contribute significantly to the county's overall quality of life. As King County grows, the need to protect, support and enhance cultural opportunities and resources is essential in order to sustain livability. King County plays an important role in supporting the region's cultural life. 4Culture, a County-chartered Public Development Authority serves as the county's cultural services agency. 4Culture has operational responsibility for advancing the work of the cultural community in King County by advocating for, supporting, promoting, and enhancing:

- arts;
- heritage;
- preservation; and
- public art.

4Culture's historic preservation program provides funding, advocacy, assistance and support in preserving and conserving the county's historical and archeological resources through projects and programs including: interpretation, community education and outreach, cultural tourism, and rehabilitation of historical resources. The King County Historic Preservation Program, housed in the County's Department of Natural Resources and Parks, also plays an important role ensuring that historic properties throughout King County are protected and enhanced.

King County government can lead by example through stewardship and wise management of its own cultural resources. Historic public buildings and facilities, such as bridges and roads, can be preserved and continue to be used; other historic resources can be converted to public use. As set by policy ED-106, found in Chapter 10, Economic Development, in order to enhance the region's quality of life and economic vitality, the county will engage in programs and projects to protect cultural resources and promote expanded cultural opportunities for the county's residents and visitors.

P-201 **King County shall be a steward of cultural resources under its control. It shall identify and evaluate cultural resources, preserve public art works and significant historic properties, and interpret and provide public access to them whenever appropriate. County departments and divisions shall collaborate with the Historic Preservation Program to nominate eligible properties for landmark designation.**

P-202 **King County shall consider equity and social and environmental justice in its promotion and protection of cultural resources.**

P-203 **King County shall encourage preserving, reusing and recycling historic buildings in its facilities planning and other relevant actions.**

A. Relationships

County residents need arts and heritage opportunities. These include both attendance-driven programs and projects, as well as more localized, community-orientated opportunities of hands-on participation and education. The county's cultural system is comprised of regional and local arts and heritage organizations, individuals and venues. It also involves relationships with both public and private entities to preserve the region's history, as well as to enhance placement of art in public places. As such, cultural resource management crosses jurisdictional boundaries and involves countless public and private entities and artists throughout the region. The range and complexity of cultural activity in the region requires coordination and cooperation. King County, through its creation of 4Culture, provides this regional coordination and leadership.

While 4Culture is not a county department, the county and 4Culture maintain a unique cooperative relationship. Historically over 95% of 4Culture's budget has been funded by King County resources from either dedicated tax revenue or capital improvement project budgets. The council approves the executive's nominations for membership on 4Culture's board. Three councilmembers serve on 4Culture's board. The council annually receives briefings from 4Culture on its work program and to discuss plans for the coming year. Therefore, it is through 4Culture that King County maintains its regional role with regard to cultural resource management.

P-204 **King County shall support the retention and promotion of the region's cultural legacy, promote cultural education, and encourage the preservation and celebration of cultural diversity and creativity.**

P-205 **King County shall support and encourage development of regional cultural organizations, facilities, and services that address a countywide audience or are dedicated to unique and significant cultural themes or disciplines.**

P-206 **King County shall support and encourage community cultural organizations, facilities, and services to provide opportunities for local access and participation by all residents throughout the county.**

P-207 **King County shall encourage excellence and vitality in the arts by supporting opportunities for attendance at and participation in diverse arts and cultural activities throughout the county.**

P-208 **King County shall pursue its cultural resource goals by working with residents, property owners, cultural organizations, public agencies, tribes, schools and school districts, and others.**

P-209 **King County shall provide leadership in pursuing its cultural resource goals by actively advancing the protection, enhancement, and ongoing use of county-owned and other cultural resources, and by promoting intergovernmental cooperation and partnerships for the preservation and use of cultural resources.**

P-210 **King County shall partner with cities to protect and enhance historic resources and public art located within city boundaries and annexation areas.**

B. Arts, Heritage and Public Art

The region's artistic environment parallels its natural features in variety and richness. Its arts organizations, artists and opportunities are widely known and valued for their diversity and excellence in music, theater, dance, literary activity, and visual arts. Museums, historical societies, heritage groups, historians, archivists, folklorists and other heritage specialists enrich community life and provide rich cultural experiences for county residents and visitors. Without preservation and stewardship of local history by these groups, the county's rich history would be lost.

P-211 **King County shall support, preserve and enhance its heritage by encouraging opportunities for public attendance and participation in diverse heritage activities throughout the county.**

P-212 **The King County executive and the King County council shall regularly seek advice from 4Culture on programs, policies and regulations that support, enrich and increase access to the arts, public art and King County's heritage.**

Public art means art for shared public space in King County, including King County buildings and infrastructure. King County's public art collection includes portable, permanently sited and architecturally integrated artworks that help define county buildings as cultural spaces. Public art also includes art installed or incorporated in places developed by others, but accessible to the public. Public art enhances community character and diversity,

sparks imagination, and provides a direct cultural experience for county residents and visitors every day. For new or changing communities, public art is a powerful contributor to local character, sense of place and belonging. Public art can also help mitigate the adverse effects of new development.

P-213 **King County shall incorporate public art in its construction and mitigation projects, as well as its undertakings involving public-private partnerships, and development authorities that include public funds or resources or have publicly accessible components.**

P-214 **Maintenance and conservation shall be a consideration in the development and management of public art.**

C. Historic Preservation

Preservation of historic properties provides multiple benefits. Historic properties maintain a tangible connection with the past and contribute to community understanding, character, and diversity. Preservation saves energy, conserves existing housing and commercial buildings, and retains historically significant open space. Historic properties also play a major role in attracting tourists. The mission of the King County Historic Preservation Program, housed in the County's Department of Natural Resources and Parks, is to conserve existing historic housing, commercial buildings and other significant properties and foster heritage tourism throughout county. It provides technical and other assistance to cities lacking preservation programs. It also supports the work of the King County Landmarks Commission.

P-215 **The King County executive and the King County council shall regularly seek advice from the Landmarks Commission on programs, policies and regulations that support and enhance preservation and protection of significant historic properties.**

Many municipalities do not have sufficient resources to administer an historic preservation program. As a result, the history of the region is endangered. Comprehensive and coordinated protection of significant historic properties is necessary in order to ensure that King County's history is preserved.

P-216 **King County shall administer a historic preservation program to identify, protect and enhance historic properties throughout the region.**

Historic preservation is an ongoing process that requires identification, evaluation, designation and protection of significant properties, and attention to long-term enhancement and interpretation. Historic properties are often destroyed through neglect. Regular maintenance and other management practices that protect historic properties are critical to long-term preservation. King County government can lead by example through stewardship and wise management of its own historic properties.

P-217 **King County shall acquire and preserve historic properties for use by county and other public agencies and shall give priority to occupying historic buildings whenever feasible.**

Review of development proposals and other actions affecting historic properties resources is necessary in order to eliminate or minimize adverse effects of development or changing land use. Archaeological sites are particularly sensitive and endangered because they are not visible and may be unexpectedly encountered. King County government can also protect historic properties through careful planning and review of its own undertakings, both directly and in partnerships with private parties and other agencies.

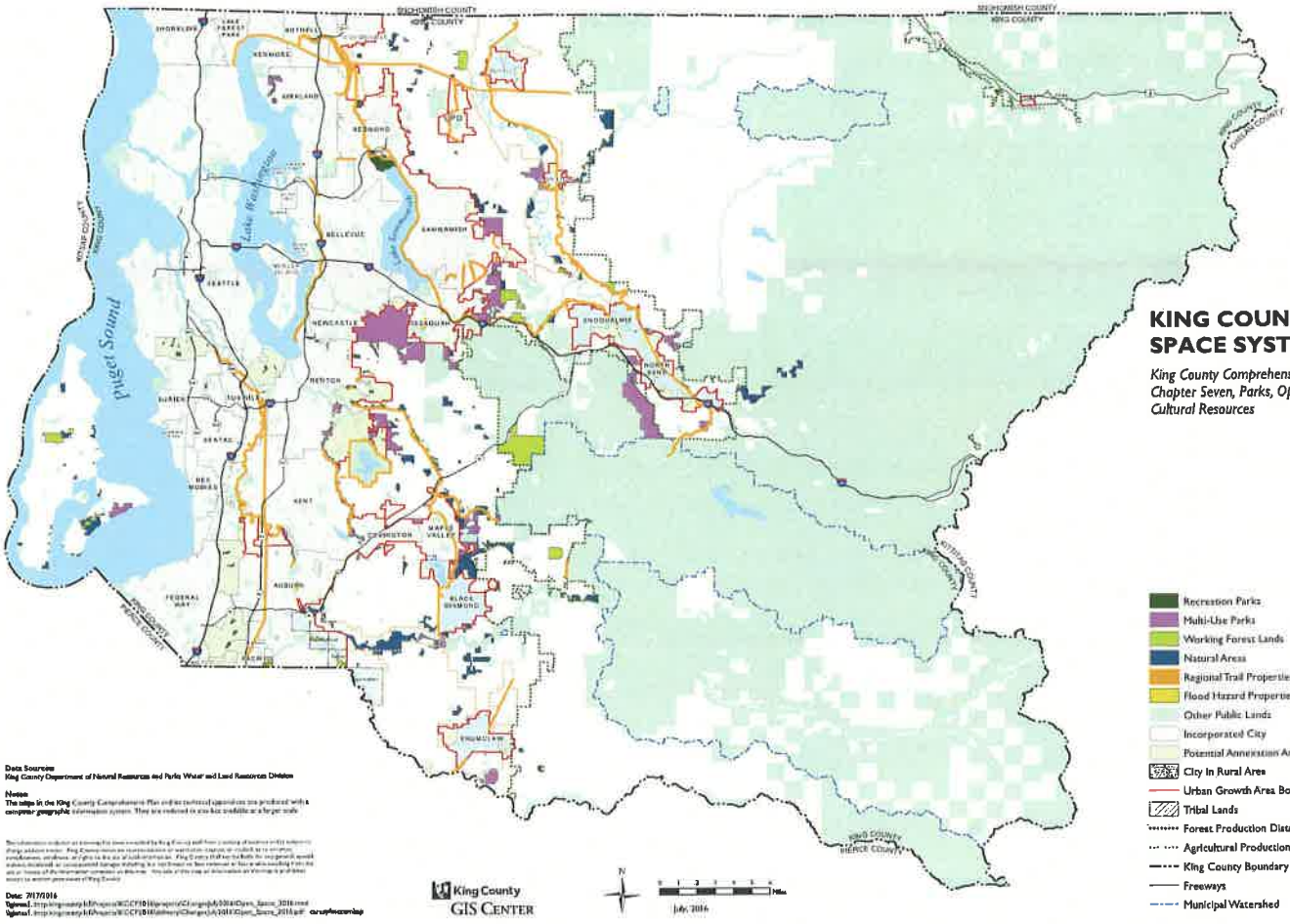
P-218 **King County shall establish comprehensive review and protection procedures for historic properties affected by public and private projects.**

P-219 **King County may condition public and private projects in order to protect historic properties. King County agencies shall coordinate with the Historic Preservation Program to provide consistent review and mitigation for their projects and undertakings throughout the county.**

P-220 **King County shall encourage land uses and development that retain and enhance significant historic properties and sustain historic community character. County building and zoning codes and other regulations and standards should provide flexibility to accommodate preservation and reuse of historic properties. Zoning actions should take into account the effects of zoning on historic properties.**

P-221 **King County shall maintain an inventory of historic properties in order to guide its historic preservation decision making.**

Preservation requires active support by governments and cooperation with property owners. Incentives such as tax reduction, revolving loans, transfer of development rights, expedited permitting, reduced permit fees, zoning flexibility, technical assistance and other measures can be used to encourage preservation. As set by policy ED-208, found in Chapter 10, Economic Development, the county shall assist businesses, property owners, and other jurisdictions in preserving and enhancing historic properties, including historic business districts, through a variety of incentives and economic development measures.



KING COUNTY'S OPEN SPACE SYSTEM 2016

King County Comprehensive Plan, 2016
Chapter Seven, Parks, Open Space and Cultural Resources

- Recreation Parks
- Multi-Use Parks
- Working Forest Lands
- Natural Areas
- Regional Trail Properties
- Flood Hazard Properties
- Other Public Lands
- Incorporated City
- Potential Annexation Areas
- City in Rural Area
- Urban Growth Area Boundary
- Tribal Lands
- Forest Production District Boundary
- Agricultural Production District Boundary
- King County Boundary
- Freeways
- Municipal Watershed

Data Sources
King County Department of Natural Resources and Parks Water and Land Resources Division

Notes
The maps in the King County Comprehensive Plan and its technical appendices are produced with a computer geographic information system. They are indexed to one but inevitably at a larger scale

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CHAPTER 8
TRANSPORTATION

Transportation is critically important to King County and the surrounding region and has profound effects on quality of life and the vitality of the economy. Transportation provides access to jobs, education, services, recreation, and other destinations throughout King County. King County plays a central role in the regional transportation sector, supporting a variety of motorized, nonmotorized, air and marine transportation needs and providing services and facilities ranging from local to international.

The county has direct responsibility for the unincorporated area road network. It provides transit services and facilities throughout the county, including within cities, and also performs many of Sound Transit's services under contract.

King County Metro also operates the City of Seattle South Lake Union streetcar. The King County International Airport/Boeing Field is owned, operated and maintained by the county.

King County's Marine Division operates passenger-only ferry service from downtown Seattle to Vashon Island and West Seattle.

The county also provides requested road-related services to over two dozen cities or other agencies through contractual agreements where there is mutual benefit to the county and its customer cities and agencies.

I. Creating an Integrated, Sustainable, and Safe Transportation System that Enhances Quality of Life

A. Introduction

King County collaborates with the state and other local governments with the goal of providing an integrated, multi-modal transportation system for the Puget Sound region. These intergovernmental partnerships seek to ensure that the county's transportation system is designed, operated and maintained in a manner that provides mobility options for a wide range of users, contributes to safe communities for all, and helps to safeguard and enhance King County's natural resources and environment. It is important for the county's and the region's transportation system to achieve equitable travel opportunities for all people and communities. It is also important for all jurisdictions, including King County, to exercise sound financial management in the provision of transportation services and infrastructure.

The King County Strategic Plan, as updated in 2015 by Motion 14317, provides policy direction for transportation under the "Mobility" goal, through which the county aims to "deliver a seamless network of transportation options to get people where they need to go, when they need to get there." Transportation and mobility are further implemented at King County through the functional plans: the Strategic Plan for Public Transportation, the Long Range Plan for Public Transportation, the Strategic Plan for Road Services, the King County International Airport Strategic Plan and the King County Ferry District 2014 Strategic Plan, discussed later in the chapter.

The following summarizes county priorities for responding to policy direction established and articulated in the King County Strategic Plan, the King County Comprehensive Plan, County transportation agencies' functional plans, and the associated state and regional laws and planning requirements:

- Coordinate and develop multimodal services and facilities for an integrated and seamless regional and local transportation system;
- Deliver transportation services that support density and growth in the urban area, and meet the transportation needs of Rural Areas and Natural Resource Lands without creating additional growth pressure;
- Maintain and preserve infrastructure that facilitates the efficient movement of freight and goods to support economic vitality and regional trade;
- Maintain safe and secure county-owned infrastructure, including roads, bridges, trails, buses and passenger ferries, transit and ferry facilities, and airport facilities;
- Provide transportation choices and support travel modes that use less energy, produce fewer pollutants and reduce greenhouse gases in the region;

- Provide opportunities for people to make active transportation choices by increasing the convenience, accessibility, safety and comfort of taking transit, walking and bicycling;
- Address the transportation needs of people of color, low-income communities, immigrant and refugee populations, people with limited English proficiency, and others who may have limited transportation options;
- Identify and adapt to the impacts of climate change on transportation infrastructure and services;
- Incorporate sustainable development practices into the design, construction and operation of infrastructure and facilities;
- Establish and implement clear transportation service priorities and guidelines - with a focus on equity and social justice -and use transportation resources wisely and efficiently;
- Develop sustainable funding sources to support the level of services needed by communities; and
- Monitor and measure system performance and use this feedback to continuously improve transportation products and services.

The current and projected economic climate, however, places severe constraints on the county's ability to meet these important goals. The strategic plans for the Metro Transit, Marine, and Road Services Divisions identify priorities, analyze available funding and constraints, and set targets to help reach these goals.

B. Components of the Transportation Element

The following documents address the Growth Management Act requirements for the transportation element:

a. This Transportation chapter, which includes the narrative and policy language;

b. Technical Appendix C of this Comprehensive Plan, which contains the Travel Forecast Summary, the Arterial Functional Classification Map, a transportation inventory; and Transportation Needs Report that contains a multi-year financial forecast and a multi-year list of road facility needs

c. The roads Capital Improvement Program;

d. The Strategic Plan for Public Transportation, the Long Range Plan for Public Transportation and the Transit Capital Improvement Program; and

e. Concurrency regulation, which implements the concurrency requirements and is codified at King County Code Title 14.

C. Consistency with Plans

The framework and direction for the development of Comprehensive Plans are provided by the Growth Management Act. The transportation element of the King County Comprehensive Plan is consistent with and meets the requirements of regional and countywide plans and policies that respond to the Growth Management Act. The Countywide Planning Policies have been used to guide the development of the transportation element and to ensure consistency with plans and programs developed by adjacent jurisdictions.

Regional direction for the transportation element is set by *Transportation 2040,* developed by the Puget Sound Regional Council. *Transportation 2040* is consistent with the region's urban growth strategy, *VISION 2040*, also developed by the Puget Sound Regional Council.

King County identifies improvements and strategies needed to carry out the land use vision and meet the Level of Service requirements for transportation. Road improvements are guided by the Strategic Plan for Road Services, prioritized in the Transportation Needs Report and funded in the Roads Capital Improvement Program. Public transportation investments are guided by the Strategic Plan for Public Transportation and are identified in the Transit Capital Improvement Program, and the King County Ferry District 2014 Strategic Plan, 2014 – 2018, or successor plans. Operation and management of the King County International Airport/Boeing Field is guided by the King County International Airport Strategic Plan.

D. Transportation System, Services, and County Responsibilities

The region's transportation system is comprised of the following elements:

a. Highways, arterial streets and local/neighborhood streets;

b. Bridges;

c. Local and express bus transit and paratransit services and facilities, including Americans with Disabilities Act service programs;

d. High-capacity transit;

e. High-occupancy-vehicle lanes and ridesharing facilities;

f. Facilities and programs for pedestrians, bicycle riders and equestrians;

g. Facilities to accommodate freight and goods movement, including railroads, intermodal yards and distribution centers;

h. Marine transportation services, ferries and ferry facilities, and navigable waterways;

i. Airports;

j. Transportation Demand Management programs, systems, facilities and technologies; and

k. Facilities to maintain the transportation system elements.

The specific responsibilities of King County government are described below.

1. Public Transportation

Public transportation is vitally important to the Puget Sound region. It provides connections to jobs, schools, and other destinations, and enables those with limited mobility options to travel. Public transportation enhances regional economic vitality by freeing up roadway capacity and improving the mobility of people, goods, and services. It saves the region time and money. It helps accommodate regional growth by making better use of the region's existing infrastructure and benefiting the environment. Public transportation improves the quality of life and health for residents and visitors to the Puget Sound region. King County provides public transportation services through the Metro Transit Division, as well as passenger ferry service through the Marine Division.

Metro Transit Division

The King County Department of Transportation's Metro Transit Division (Metro) is the designated public transit provider for King County. Metro's mission is to provide the best possible public transportation services and improve regional mobility and quality of life in King County. Metro provides more than 120 million fixed-route transit rides per year. Its fixed route system includes a network of all-day, two-way bus routes between residential, business and other transit activity centers; peak-period commuter service to major destinations from many neighborhoods and from a network of park-and-ride lots; and local bus services that connect people to the larger transportation system. In addition to bus service, Metro provides alternative services, such as commuter vanpools, Access paratransit service, Commute Trip Reduction programs, and Rideshare Online, as well as community programs such as In Motion and car-sharing.

Metro augments its own investments by developing partnerships with local jurisdictions, other agencies, employers, and institutions to increase public transportation services and improve service effectiveness. Metro enters into agreements with public and private entities to fund new or improved public transportation services, where the partner contribution may be in the form of direct funding or investment that results in transit speed or reliability improvements. Metro also forms partnerships to develop and promote alternative commute programs and to manage parking and traffic to make public transportation more efficient and attractive. Metro works with the Washington State Department of Transportation and local cities to provide services that help mitigate the impacts of major construction projects.

Metro is guided by its Strategic Plan for Public Transportation 2011-2021, the King County Metro Service Guidelines, and its Long Range Plan for Public Transportation. The Strategic Plan for Public Transportation defines a vision and mission for public transportation services in King County and describes the strategies to implement that vision. It also defines desired outcomes and describes how progress will be measured. The Strategic Plan for Public Transportation and Service Guidelines strike a balance between productivity, social equity and geographic value to ensure Metro serves areas that have many low-income and minority residents - and others who may depend on transit – and that public transportation needs are met throughout the

county. The Metro Service Guidelines augment the Strategic Plan for Public Transportation by identifying detailed methodologies for how Metro should measure the performance of Metro's overall transit network, as well as each individual bus route, and by providing clear guidance on how Metro should use transit resources in alignment with the County's Equity and Social Justice Ordinance. The Long Range Plan sets the long term vision for service and supporting capital infrastructure.

Increasing the use of public transportation plays an important role in King County's efforts to mitigate climate change and support livable, healthy communities. Public transportation reduces greenhouse gas emissions by eliminating private vehicle trips, mitigating traffic congestion, and supporting efficient land use. Metro's use of green vehicles, such as electric trolleys and hybrid diesel-electric buses, and cleaner-burning fuels, such as Ultra Low Sulfur diesel, add to the environmental advantage of combining many riders in a single vehicle. Metro's wide range of transportation alternatives—including vanpools, carpools, and Access paratransit—and its support of choices such car- and bicycle-sharing, biking and walking make transit a powerful tool to help reduce pollution and support active, healthy lifestyles.

In addition to reducing single occupant vehicle trips, Metro is also committed to being a leader in environmentally-friendly operating and maintenance practices and minimizing its energy use. Metro educates its employees about reducing energy consumption at work and using public transportation to commute. The agency also incorporates cost-effective green building and sustainable development practices in all capital projects that it plans, designs, constructs, remodels, renovates, and operates.

Metro also is committed to providing equitable opportunities for people from all areas of King County to access the public transportation system. It provides travel opportunities and supporting amenities for historically disadvantaged populations, such as low-income people, students, youth, seniors, immigrants and refugee populations, people with disabilities, and others with limited transportation options.

Water Taxis: King County's Marine Division

On January 1, 2015, the King County Ferry District was assumed by King County. The Marine Division continues to operate passenger-only ferry service routes from downtown Seattle to West Seattle and Vashon Island. State legislation passed during the 2014 legislative session allowed King County to take this action. King County gained many administrative efficiencies as the Marine Division will no longer be maintaining two separate budgets, transferring funds between multiple agencies and accounts, and providing reports to two governments.

The Marine Division is guided by the King County Ferry District 2014 Strategic Plan, which was developed while under the King County Ferry District's governance. The plan expresses the vision and goals for passenger-only ferry service in King County for the next three to five years. The strategies are the broad initiatives to pursue the vision and goals, with specific actions listed under each strategy. The plan's vision is to be a leader in regional mobility benefiting the community and economic development needs of King County

through providing water taxi service that is safe, reliable, and a great customer experience while being responsive and accountable to the public. The goals are to: 1) provide reliable and safe service; 2) deliver financially sustainable water taxi service; and 3) to integrate water taxi service with the broader regional transportation system and economy. The strategies to achieve these goals include: 1) build on strengths and grow ridership; 2) achieve financial stability; 3) coordinate with regional planning and emergency management efforts; and 4) explore growth and partnership opportunities.

Similar to Metro, King County's passenger-only ferries also use cleaner-burning fuels such as Ultra Low Sulfur diesel and a blend of biodiesel (B-10).

Bus, rail, and passenger-only ferry transit services provide the critical transportation links on which the regional economy depends. In addition, public transportation services depend on convenient connections to roads, highways, and nonmotorized systems. As the region grows, coordinating transit and passenger-only ferry routes and schedules among agencies and modes will make public transportation a more viable and convenient option for people traveling in King County. King County seeks input from a broad spectrum of county residents and businesses to identify needs and provide services to meet those needs.

2. Road System

Travelers in King County use a system of interconnected roads that includes interstate highways, state highways, urban and rural arterials, local access roads, private roads and forest/logging roads. King County is responsible for all county-owned roads, bridges, and related infrastructure in the unincorporated areas of the county, and must meet the road-related transportation needs of a very large and geographically and demographically diverse service area. The county's many bridges are an integral part of the road system, as are other components such as sidewalks, shoulders and pathways, bicycle lanes, guardrails, stormwater drainage and water quality treatment facilities, traffic control equipment, and traffic cameras. Interstate highways, state highways, city roads and private roads are not under county jurisdiction; rather, they are the responsibility of other government agencies or property owners.

The Strategic Plan for Road Services defines the vision and mission for the King County Department of Transportation's Road Services Division. The Strategic Plan for Road Services provides detailed direction for the response to the many complex challenges, including two trends that have had significant impacts on the county's road services. One is that annexations, consistent with the goals of the Growth Management Act, have reduced the urban unincorporated area and therefore the tax base that supports the unincorporated road system has shrunk significantly. By 2020, when the next major Comprehensive Plan update is developed, Road Services Division's responsibilities will likely focus almost entirely on the Rural Area and Natural Resource Lands. A second trend is the decline in County road funding, described in greater detail in Section IV. The Strategic Plan for Road Services guides the Road Services Division as it is faced with the consequences of a smaller service area and reduced funding and seeks to manage the unincorporated King County road system through focused

investment of available resources to facilitate the movement of people, goods and services, and respond to emergencies.

The county-owned unincorporated-area road system includes approximately:

- 1,469 miles of roadway;
- 181 bridges, including several jointly owned with cities;
- 78 traffic signals;
- 44,000 traffic control signs;
- 50 traffic cameras; and
- 114 miles of protective guardrail.

The users of the county road system may travel on foot or by car, public transit, truck, or bicycle, or even on horseback. They may live in an unincorporated area, in one of the county's 39 cities, or in another county. The unincorporated road system supports local trips close to home, commuter trips, the movement of freight and goods, and regional travel between jurisdictions. The system also provides access to outdoor recreational activities in King County, which has one of the largest concentrations of outdoor recreation enthusiasts in the state. Public service providers, such as police, fire, emergency medical responders, Metro Transit, and school buses are also key users. In total, more than one million daily trips are taken on King County's unincorporated road network. During this time of tight budgets, changing communities, annexations, and increasing traffic on aging roads and bridges, the county must manage facilities and services with exceptional care and efficiency.

3. Air Transportation

The King County International Airport/Boeing Field is located in south Seattle in the Duwamish River Industrial Corridor. It operates on a 24/7 basis and in all weather. Established in 1928, the airport is supported by revenue generated by its operations, rather than relying on general tax revenues. King County plans, designs, and implements services, programs, and facilities for the King County International Airport in compliance with Federal Aviation Administration regulatory requirements to support a safe, secure, and efficient international aerospace system. The airport is also a significant employment center and supports more than 150 aviation-related businesses including The Boeing Company. The airport is a port of entry for international flights and serves regional air carriers, national and regional cargo carriers, corporate aviation, and general aviation.

King County International Airport/Boeing Field is the 34th busiest airport in the United States and ranks 25th in cargo handling. The airport's air taxi carrier serves the San Juan Islands. It is also the largest corporate aircraft center in the Pacific Northwest. Airport business activities are estimated to support almost 5,000 direct jobs, plus more than 16,000 additional jobs in the region. The airport's total positive economic impact within the Puget

Sound Region and Washington State is more than $3.5 billion in direct and induced economic activity, including the sale of goods and services, labor income, and tax revenues.

The King County Department of Transportation has developed a strategic plan for King County International Airport/Boeing Field. This plan was the result of a strategic planning process, which was guided by an advisory committee comprised of Airport Roundtable members and staff from both the executive and legislative branches of King County. The Strategic Plan complements the Federal Aviation Administration's mandated Airport Master Plan and Airport Layout Plan.

The Bandera and Skykomish Airports, located in eastern King County near the communities of North Bend and Skykomish, are state owned and operated. King County does not have operating or regulatory authority over these airports, but does control land use activity adjacent to the facilities. All airports in the county should make every effort to minimize noise impacts to land uses that are especially sensitive to the effects of noise such as residential areas, hospitals and schools.

E. General Policy Guidance

T-101 **King County should provide a system of transportation services and facilities that offers travel options to all members of the community.**

T-101a **King County should seek to ensure that its system of transportation services and facilities serves the mobility needs of disadvantaged communities and people with limited transportation options, including people of color, low income communities, people with limited English proficiency, immigrant and refugee populations, students, youth, seniors, and people with disabilities.**

T-102 **As a transportation provider and participant in regional transportation planning, King County should support, plan, design, and implement an integrated, coordinated and balanced multimodal transportation system that serves the growing travel needs of the county safely, effectively and efficiently and promotes a decrease in the share of trips made by single occupant vehicles.**

T-103 **In striving to meet the growing need for transportation services, King County shall seek to maximize the efficiency and effectiveness of its services, infrastructure and facilities.**

T-104 **The Strategic Plan for Public Transportation 2011-2021, King County Metro Service Guidelines and the King County Metro Long Range Plan for Public Transportation, or successor plans, shall guide the planning, development and implementation of the public transportation system and services operated by the King County Metro Transit Division.**

T-105 **The King County Ferry District 2014 Strategic Plan, or successor plans, shall guide the planning, development and implementation of the passenger only ferry system and services operated by the King County Marine Division.**

T-106 **The King County Strategic Plan for Road Services, or successor plans, shall guide the planning, development and implementation of the unincorporated road system managed by the King County Road Services Division.**

T-107 **The King County International Airport Strategic Plan, or successor plans, shall guide the planning, development and implementation of airport facilities and services managed by the King County Airport Division.**

T-108 **King County shall consider equity impacts and benefits when planning, developing, and implementing transportation programs, projects and services.**

T-109 **As directed by King County's Comprehensive Emergency Management Plan, King County shall seek to protect its transportation system against disasters, to the extent possible, by developing prevention and recovery strategies in partnership with other jurisdictions and agencies, and coordinating emergency transportation response.**

II. Providing Services and Infrastructure that Support the County Land Use Vision

This section of Chapter 8 discusses county transportation services and policies as they support the county's land use strategy, which seeks to concentrate development and services in urban areas, conserve and enhance Rural Areas and Natural Resource Lands, and create communities that have a positive effect on public health and climate change. One focus of this section is on issues related to the county's responsibilities in the unincorporated area, including Level of Service standards for county roads, transportation concurrency management, mitigation of growth-related impacts, avoidance of road expansion in Rural Areas and Natural Resource Lands, prevention of airport/land use conflicts, and support for nonmotorized transportation options. Another focus is on county transportation activities that affect a broader region, notably the four-county region's policy of concentrating development in more densely populated urban areas. King County Metro operates a majority of the transit service in the region and provides transportation demand management services to cities and employers. Consequently, the region's success in achieving its development goals will depend to a great extent on King County's ability to provide appropriate transit services within King County.

A. Land Use and Growth Strategy

The transportation element of this Comprehensive Plan is grounded in a firm understanding of the important relationship between land use and transportation. A thoughtfully designed transportation system that supports the county's long-term land use vision and regional growth strategy should provide improved mobility and greater accessibility for all users and contribute to vibrant, thriving communities. It should also facilitate more efficient travel that reduces energy consumption and greenhouse gas emissions and other forms of pollution.

Integrated transportation and land use planning is called for at the regional level in *Vision 2040, Transportation 2040*, and the Countywide Planning Policies regarding transportation, which outline and support a regional growth strategy built around the concept that additional infrastructure and services are to be provided in areas that accept an increased share of the region's growth. The Countywide Planning Policies - Housing and Employment Growth Targets (2006-2031) adopted by King County and its cities, represent each jurisdiction's agreed upon fair share of future growth and have been incorporated into the travel demand forecast developed for this plan.

Vision 2040, Transportation 2040, and the Countywide Planning Policies also promote the concept of maximizing mobility choices through a multimodal approach to moving people, goods and services efficiently within and beyond the region. Travel to and within regional growth centers is emphasized, with a focus on the availability of transit and nonmotorized modes in centers. These urban centers are characterized by compact, pedestrian-oriented development, with a mix of different office, commercial, civic, entertainment, and residential uses and can be efficiently and cost-effectively served by transit and nonmotorized travel options. In addition, these regional plans and policies address the importance of protecting and preserving the Rural Area and Natural Resource Lands and avoiding construction of major new roads and capacity expansion on existing roads in Rural Areas and Natural Resource Lands.

A multimodal transportation system supports healthful choices by providing greater access to housing, jobs, schools, medical care, healthy food, shopping, recreation, and other services-- all of which contribute to a high quality of life. Designing highly connected communities that support safe nonmotorized travel and facilitate nonmotorized access to the transit system reduces vehicle miles traveled, reduces air pollution, and leads to opportunities for greater levels of physical activity through walking and bicycling.

Regional and countywide guidance also encourages innovative approaches to transportation and land use management, including Transportation Demand Management strategies designed to reduce vehicle miles traveled, single-occupant vehicle trips, and greenhouse gas emissions.

Metro operates transit service throughout King County, including in cities, while the county's road system service area is limited to the unincorporated area. Due to annexations and incorporations, the unincorporated road system is transitioning to become primarily rural. In the Rural Area and Natural Resource Lands,

protection of natural resources, agriculture and forestry, and the rural lifestyle and character are a high priority. At the same time, there is still a certain amount of growth within the Rural Area and on Natural Resource Lands, as well as high growth in some adjacent Cities in the Rural Area or beyond the county's boundaries, that must be considered in managing the road system.

The county's urban areas, Rural Areas and Natural Resource Lands form a complex landscape, and the urban/rural boundary is not a simple straight line. As a result, the county's arterial network weaves through both urban areas, Rural Areas and Natural Resource Lands as it facilitates regional mobility. This complex urban/rural/resource pattern presents challenges to planning for the region's mobility needs and providing safe and adequate roadways. Issues include regional arterial corridors that link designated urban areas by crossing Rural Areas and Natural Resource Lands, and roads located in the Urban Growth Area. High traffic volumes on these roads may necessitate road improvements to ensure safe and efficient travel. However, it is critical to ensure that appropriate development regulations and access management strategies are first in place in order to prevent unplanned and unwanted growth in Rural Areas and Natural Resource Lands.

Growth management envisions different landscapes and infrastructure for urban and rural communities. King County is committed to managing its transportation system consistent with that vision.

T-201 **Multimodal transportation options such as public transportation, bicycling and walking, are most effective in densely developed urban areas. As resources allow, King County's transportation investments in urban areas should emphasize public transportation and road services and facilities that support multiple modes and facilitate connections between them.**

T-202 **As resources allow, King County's transportation investments in Rural Areas and Natural Resource Lands should emphasize maintaining and preserving safe road infrastructure that is compatible with the preservation of rural character and does not promote urban or unplanned growth.**

T-202a **In areas not well suited to fixed route transit, the county should work with partners to develop a range of alternative service options such as community shuttles, real-time rideshare, community vans and other innovative options.**

T-203 **As funding permits, King County should partner with jurisdictions and the private sector to spur infrastructure investments that enhance opportunities for transit, pedestrians, bicyclists, car and van pools, and other alternatives to single occupant vehicles.**

B. Travel Forecasts

Travel demand forecasts are used to project transportation system needs. They provide an important link between land use and transportation. The Puget Sound Regional Council's Forecasting Model uses regionally adopted growth targets for the year 2031, and was used to develop the travel demand forecasts for this plan and the Transportation Needs Report.

Recent generations of the Puget Sound Regional Council model have increased the level of detail in unincorporated King County, allowing improved analysis of future transportation system performance and system improvement needs, within the framework of growth management and regional and county policy guidance regarding appropriate urban and rural levels of service.

C. Public Transportation System

Metro and the Marine Division play an important role in achieving the region's growth strategy by focusing public transportation services in the urban growth area of King County and providing service to designated centers and other areas of concentrated activity. Centers and other communities that are compact and friendly to pedestrians and bicycles are most easily served by transit. Such communities foster healthier, more active lifestyles while reducing auto dependency and associated road investments. By the same token, transit service can support and encourage development that is more compact.

Metro and the Marine Division support municipal, agency and private development of transit-supportive, pedestrian- and bicycle-friendly communities through partnership, coordination and delivery of public transportation services. Metro also promotes partnerships to implement transit –supportive infrastructure to improve access to transit. Metro also partners with jurisdictions and the private sector to spur transit-oriented development through redevelopment opportunities at or adjacent to park-and-rides.

T-204 **King County should support local and regional growth plans and policies by focusing transit services on centers and other areas of concentrated activity.**

T-205 **King County should support, encourage, and implement high-capacity transit facilities and services that are consistent with, and supportive of, the Comprehensive Plan, Metro's Strategic Plan for Public Transportation, Metro's Long Range Plan for Public Transportation and the King County Ferry District 2014 Strategic Plan, or successor plans.**

D. Road System

T-206 Except as provided in T-209, King County shall not construct and shall oppose the construction by other agencies of any new arterials or highways in the Rural Area or Natural Resource Lands.

T-207 King County recognizes the importance to regional and local mobility of state highways that traverse the Rural Area and Natural Resource Lands and should advocate for state and federal agencies to improve performance of these facilities, consistent with the county's adopted Comprehensive Plan policies to prevent unplanned development in the Rural Area and Natural Resource Lands and preserve rural character.

T-208 King County shall not add any new arterial capacity in the Rural Area or Natural Resource Lands, except for segments of rural regional corridors that pass through Rural Areas and Natural Resource Lands to accommodate levels of traffic between urban areas. Rural regional corridors shall be identified in the Transportation Needs Report (Appendix C) and shall meet all of the following criteria:

a. Connects one urban area to another, or to a highway of statewide significance that provides such connection, by traversing the Rural Area and Natural Resource Lands;
b. Classified as a principal arterial;
c. Carries high traffic volumes (at least 15,000 average daily traffic); and
d. At least half of P.M. peak trips on the corridor are traveling to cities or other counties.

T-209 King County shall avoid construction of major roads and capacity expansion on existing roads in Rural Areas and Natural Resource Lands. Where increased roadway capacity is warranted to support safe and efficient travel through Rural Areas and Natural Resource Lands, appropriate rural development regulations and strong commitments to access management should be in place prior to authorizing such capacity expansion in order to prevent unplanned growth in these areas.

T-210 **Any capacity increases to rural regional corridors shall be designed to accommodate levels of traffic between urban areas consistent with the county's adopted Comprehensive Plan policies regarding development in the surrounding Rural Area or Natural Resource Lands. The county shall seek to maximize the efficient use of existing roadway capacity before considering adding new capacity to rural regional corridors.**

T-211 **Any segment of a county roadway that forms the boundary between the Urban Growth Area and the Rural Area or Natural Resource Lands should be designated urban and all associated road right-of-way fully contained within the Urban Growth Area boundary. Such urban boundary roads shall be designed and constructed to urban roadway standards on both sides of the roadway segment.**

T-212 **King County shall work with cities for the annexation of county-roadways and/or street segments located in the urban area and within or between cities, in order to provide for a consistent level of urban services on the affected roads and reduce the burden on unincorporated taxpayers that are supporting this urban infrastructure.**

E. Airports

T-213 **King County should use its authority including zoning, permitting and development standards to protect the public use airports of Banderra near the town of North Bend and Skykomish airport in King County from encroachment of non-compatible land uses. Compatible airport land uses are those that comply with generally accepted Federal Aviation Administration guidance on location, height, and activity that provide for safe aircraft movement, airport operations, including expansion, and community safety.**

F. Level of Service Standards

The Growth Management Act requires Level of Service standards for all arterials and transit routes to judge performance of the transportation system. The Growth Management Act also calls for specific actions and requirements for bringing into compliance facilities or services that are not meeting the adopted Level of Service standard. King County's Level of Service standards comply with growth management policies of encouraging growth in the urban area while restricting growth in the Rural Area and Natural Resource Lands.

Level of service for arterials is a qualitative measure that describes traffic flow and is often represented by a system using the letters A through F. Level of Service A represents the least congested conditions and Level of Service F represents the most congested conditions. Level of Service B is indicative of stable traffic flow. However, unlike Level of Service A, operating speed is beginning to be restricted by other traffic. At Level of

Service E, operation is unstable, and speeds are reduced but will fluctuate widely from point to point. There is little independence of speed selection and maneuverability at Level of Service E. Level of Service F is indicative of forced flow of traffic with extremely low speeds and long delays at intersections.

King County has been one of the most successful jurisdictions in the state in implementing the Growth Management Act by directing growth to urban areas and encouraging annexation by cities, which are the preferred provider of municipal services. As a result, the majority of the urbanized area is contained within cities and the final remaining urban unincorporated islands are expected to annex by 2020. While annexations have helped support the county's land use, density and service goals, unincorporated King County no longer has the tax base to support growing travel needs with transportation capacity improvements in the urban area. The urban pockets that remain are influenced by development in surrounding cities and during the peak travel times commute travel is heavily impacted from people traveling to and from cities and other counties.

King County recognizes a profound difference between the nature and character of the Rural Area and Natural Resource Lands as compared with the urban area and therefore sets Level of Service standards for arterials to allow less congestion in the Rural Area and Natural Resource Lands. In the Rural Area and Natural Resource Lands the vast majority of the road network operates at Level of Service B; however there are key arterials (typically the Rural Regional Corridors) that are frequently congested from carrying traffic from one urban area to another and these often operate at a Level of Service C or lower.

In addition, King County recognizes certain areas, called Mobility Areas, where land use designations support a greater variety of transportation mode choices. The Level of Service standards for Mobility Areas are set to recognize these greater choices and support and encourage people to use forms of transportation other than cars. The Rural Mobility Areas are the Rural Towns of Vashon, Snoqualmie Pass and Fall City.

In addition to the Mobility Areas, certain large Rural Neighborhood Commercial Centers are recognized as having distinct mobility characteristics and will have a Level of Service standard consistent with their land use character. The large Rural Neighborhood Commercial Centers are: Cottage Lake, Maple Valley, Preston and Cumberland.

The framework for identifying appropriate levels of service for King County Metro services is established in the Strategic Plan for Public Transportation and the King County Metro Service Guidelines.

T-214b **King County shall design a new concurrency management methodology that is efficient to administer, incorporates travel demand management principles, includes measures of congestion based on optimizing movement of people rather than cars, and promotes increased efficiency of the transportation system as a whole.**

T-215 **The Level of Service standard for the Urban Area shall be E except as provided in T-216. The Level of Service standard for the Rural Area and Natural Resource Lands shall be B except as provided in T-216, T-217, and T-218. These standards shall be used in concurrency testing.**

T-216 **The Level of Service standard for certain minor residential and minor commercial developments, along with certain public and educational facilities, shall be Level of Service F. This standard shall be used in concurrency testing.**

T-217 **The Level of Service standard for designated Rural Mobility Areas shall be E. This standard shall be used in concurrency testing.**

T-218 **The Level of Service standards for the Cottage Lake, Maple Valley, Preston and Cumberland Rural Neighborhood Commercial Centers shall be D. This standard shall be used in concurrency testing.**

G. Concurrency

The Growth Management Act requires local jurisdictions to adopt and enforce ordinances that prohibit development approval if the development causes the Level of Service on identified county arterials to decline below the adopted Level of Service standards. King County's Transportation Concurrency Management program was developed to address the Growth Management Act's concurrency requirement. The Transportation Concurrency Management program requires that adequate transportation facilities must be available to carry the traffic of a proposed development at county Level of Service standards, or construction for needed improvements funded in the adopted Six-Year Roads Capital Improvement Program, or else the proposed development cannot be approved.

The requirements of King County's Transportation Concurrency Management program may apply to transportation facilities designated by the Washington State Department of Transportation as "highways of statewide significance." The portions of certain highways of statewide significance that do not have limited access and function like county arterials may be included in the King County concurrency test.

The Transportation Concurrency Management program has been designed to meet the following goals:

- Fulfill the requirements of state growth management legislation;
- Be simple to understand, easy to implement and administer and transparent to those affected by its processes and regulations;
- Consider and encourage multimodal travel;
- Encourage growth in urban areas where provision of transportation infrastructure and services is most efficient and economical; and
- Efficiently integrate concurrency determination into the permit system process and database.

Transportation concurrency is a plan-level system that does not require testing of individual developments. Instead, concurrency status is determined by broad geographic areas called travel sheds, which were drawn to reflect where travel patterns share common characteristics. Trips associated with development within a particular travel shed would use or be affected by arterials located within and bordering that travel shed. A development proposal (including both residential and nonresidential proposals) will be considered to meet the transportation concurrency standard if it is located in a travel shed that meets Level of Service standards as depicted on the concurrency map in effect at the time of development application. Development proposals must still meet all applicable zoning and land use regulations.

T-219 **For the purposes of concurrency testing, a travel shed is a geographic area within unincorporated King County where trips generated by development within the travel shed would likely use or be affected by traffic on arterials within the travel shed.**

T-220 **The concurrency program shall include provision for mobility areas within travel sheds as provided in T-217. Rural Mobility Areas shall be defined as unincorporated Rural Towns as designated in the King County Comprehensive Plan.**

T-221 **The concurrency map shall identify the travel sheds that meet or do not meet concurrency standards. Any proposed development in travel sheds that meet concurrency standards will be deemed concurrent.**

T-222 **The concurrency test shall be based on the Level of Service on arterials in unincorporated King County using the county's adopted methodology. The test may be applied to designated Highways of Statewide Significance.**

T-223 **The concurrency test may include provision of factors for safety, pavement condition and availability of multiple modes of transportation.**

T-224 **In the Rural Area, the concurrency test may include a provision that allows the purchase of Transferable Development Rights in order to satisfy transportation concurrency requirements.**

H. Impact Mitigation

The State Environmental Policy Act establishes environmental review of project impacts on all elements of the environment including transportation. In addition, the county has a mitigation payment system whereby developments are charged proportionate shares for transportation projects and services needed as a result of the related growth.

T-225 **Needed rights-of-way, strategies to manage transportation demand and off-site improvements should be identified and required as conditions of development approval to the extent that such conditions are directly related to impact mitigation.**

T-226 **King County shall encourage the development of highly connected, grid-based arterial and nonarterial road networks in new developments and areas of in-fill development. To this end, the county should:**

a. Make specific findings at the time of land-use permit review to establish a nonarterial grid system for public and emergency access in developments; and

b. Require new commercial, multifamily, and residential subdivisions to develop highly connective street networks to promote better accessibility and avoid single street only access.

T-227 **Development proposals should extend the public road system through dedication when the extension is in the public interest. Conditions that may warrant such an extension include, but are not limited to, impacts on neighborhood circulation, increases in the use of arterials for local vehicular trips, reductions in traffic safety through uncoordinated and inadequately spaced street access to arterials, and restrictions on the availability of alternative emergency access routes.**

T-228 **As mitigation for the impacts of new development and as a condition of development approval, King County shall require the improvement of existing offsite roadways and undeveloped road rights-of-way, and other strategies to reduce demand on roads. Impacts that may warrant such mitigation include, but are not limited to, those that create safety concerns, raise road operational issues or increase the number of residences served by a single access route.**

T-229 **King County shall implement a system that establishes fees needed to mitigate the growth-related transportation impacts of new development. The fees will be used to pay a development's proportionate share of transportation capital projects needed to support growth including, but not limited to, road, transit, and nonmotorized facilities. Such fees are in addition to any requirements established for transportation services and facilities needed solely as a result of the development.**

I. Nonmotorized Transportation Program

Vision 2040, the region's long-range growth management, economic and transportation strategy, and *Transportation 2040*, the adopted Metropolitan Transportation Plan, and the associated Active Transportation Plan call for the development of a regional transportation system that offers a variety of travel choices while preserving environmental quality and open space. Nonmotorized transportation plays a key role in achieving these goals and is an essential component of King County's multimodal transportation system. Pedestrians, bicyclists and in some parts of the county, equestrians, are nonmotorized users of the transportation system.

Biking and walking are energy efficient, economical, low-impact modes of travel that promote health and don't contribute to air or water pollution. By providing options for nonmotorized travel, King County helps to reduce automobile dependency and congestion, reduce greenhouse gas emissions, and create opportunities for individuals to integrate healthy exercise into everyday activities. The ability to safely bicycle and walk can provide varying levels of accessibility and mobility to almost everyone, including young, elderly, physically disabled, or low-income people and others who may not drive. Well-designed, strategically located bicycle and pedestrian facilities can also provide increased and safer access to transit for more people. Bicycle, pedestrian, and equestrian trails are important community amenities that foster vibrant communities and may help spur economic development. Equestrian travel is also an important aspect of the rural heritage and lifestyle of King County as well as a very popular recreational activity.

In unincorporated King County, the Road Services Division is responsible for nonmotorized facilities such as bicycle lanes, sidewalks, or shoulders on county roads. The division also provides crosswalks and specialized signals or signage that help facilitate safer nonmotorized travel. The King County Road Design and Construction Standards include accommodation for nonmotorized uses and specify bicycle lane, sidewalk, or road shoulder criteria for unincorporated urban and rural roads. Road-related nonmotorized capital needs in the unincorporated area are included in the Transportation Needs Report and are programmed in the six-year Roads Capital Improvement Program as funding allows. The HealthScape Transportation Programming Tool, along with other criteria, is used in evaluating nonmotorized projects in the Transportation Needs Report.

King County also plays a countywide role in nonmotorized transportation through its Regional Trails System and transit services. The regional trail network, discussed in Chapter 7, Parks, Open Space and Cultural Resources, is an integral component of the county's transportation system. It includes facilities located both in

cities and the unincorporated area. The trail network functions as the spine of the county's nonmotorized system in many areas. Transit and walking or biking are highly synergistic; transit use tends to be highest in locations where walking and biking are prevalent, and vice versa. The Metro Transit Division supports nonmotorized transportation programs such as bicycle racks on transit buses and bicycle lockers at park-and-ride lots, employment sites and other locations.

T-230 **King County shall consider the needs and abilities of nonmotorized users of the transportation system in the planning, design, construction, maintenance, preservation and operation of road infrastructure and other transportation facilities to the extent feasible given available funding.**

T-231 **Consistent with the priorities defined in the County's functional transportation plans, and the Regional Growth Strategy, nonmotorized transportation system investments should aim to increase safety and mobility, facilitating mode integration and intermodal connections, access to centers where appropriate, and providing opportunities for healthy activity and alternatives to driving for all populations.**

T-232 **King County shall evaluate and implement nonmotorized transportation improvements in its road construction projects where appropriate and feasible.**

T-233 **In unincorporated areas of King County, the following needs will be given the highest priority when identifying, planning, and programming nonmotorized improvements:**

- **a. Addressing known collision locations;**
- **b. Fostering safe walking and bicycling routes to schools and other areas where school-aged children regularly assemble;**
- **c. Filling gaps in, or enhancing connections to, the regional trail system;**
- **d. Locations of high concentration of pedestrian and/or bicycle traffic; and**
- **e. Providing safe routes to transit.**

T-234 **In urban areas, nonmotorized improvements should increase access to transit and urban centers while enhancing connections to parks, local trails, shopping, libraries, healthcare, and other public and private services and facilities.**

T-235 The King County Regional Trails System is the centerpiece of the nonmotorized system in the Rural Area and Natural Resource Lands. The county's efforts to enhance the Rural Area and Natural Resource Lands nonmotorized network should include filling in the Regional Trails System's missing links, coordinating road and trail projects whenever possible, considering access from roadways such as trailhead parking, and enhancing access to transit, especially park and rides and transit centers.

T-236 In Rural Areas and Natural Resource Lands, nonmotorized improvements shall be consistent with providing rural levels of service, preserving rural character, and avoiding impacts to the environment and significant historic properties.

T-237 To increase equitable access to walking, bicycling and transit mobility options, the county should actively seek grant funding to improve nonmotorized infrastructure that serves the needs of people of color, low-income communities, people with limited English-speaking proficiency, immigrant and refugee populations, and others who may have limited transportation options such as students, youth, seniors, and people with disabilities.

T-238 New school development should address safe walking and bicycling routes for students. If the existing transportation infrastructure within a one-mile radius, together with the school's road frontage improvements, cannot support safe walking or bicycling to school, King County shall use its development review authority to require the school district and the new school to address the long-term transportation needs of students, including through the state-mandated Safe Routes to School program.

T-239 New land use plans and subdivisions shall seek to accommodate internal nonmotorized mobility and access to nearby shopping, parks, trails, schools, healthcare, community resources and other public and private services and facilities, consistent with the different needs and service levels for urban and Rural Areas and Natural Resource Lands.

T-240 The specifications in the King County Road Design and Construction Standards shall support nonmotorized safety and accessibility, consistent with the County's adopted policies regarding appropriate urban and rural levels of service.

T-241 In supporting equestrian travel in the Rural Areas and Natural Resource Lands, King County should emphasize safety and connection to the Regional Trail System and other established trail networks open to equestrian use.

T-242 **King County shall seek opportunities to acquire and develop nonmotorized transportation corridors. Evaluation of requests to vacate unused road rights-of-way will consider existing nonmotorized uses and future development of such uses.**

T-243 **King County should coordinate with bicycling, pedestrian and equestrian stakeholders and advocacy organizations to ensure that their input is included early in the planning and project design process for projects with nonmotorized elements or that have the potential to affect nonmotorized users.**

T-244 **King County participated in the Puget Sound Regional Council's regional bicycle network planning efforts; related project needs within King County's jurisdiction should be considered in the county's nonmotorized planning and project prioritization processes as financial resources allow.**

J. Transportation Demand Management

Transportation affects every aspect of the lives of King County residents, not only in terms of mobility but also in terms of health, economy, and environment. Transportation Demand Management consists of a broad range of strategies that provide for reduced reliance on single occupancy vehicle trips, reduced vehicle miles traveled and increased efficiency of the whole transportation system. Transportation Demand Management results in lower greenhouse gas emissions and other pollutants.

King County, both as a government and as an employer, is a leader in implementing transportation initiatives and encouraging land uses, policies and development that lead people and businesses to reduce single occupant vehicle trips and vehicle miles traveled, while decreasing the impacts of greenhouse gas emissions from the transportation sector. King County's ability to provide for the mobility needs of its residents will increasingly depend on actively managing the existing transportation system.

Transportation Demand Management strategies include (but are not limited to):

- Public education/information;
- Public transportation (i.e. bus, rail, passenger ferry, and vanpool);
- Nonmotorized travel options;
- State-mandated Commute Trip Reduction and Growth and Transportation Efficiency Centers;
- Roadway and lane management (such as ridesharing, intelligent traffic systems, and active traffic management);
- Congestion pricing strategies (such as high-occupancy toll) lanes, express toll lanes, corridor tolling, cordon tolling, system-wide tolling, and vehicle miles traveled charges);

- Joint use and intermodal transfer facilities (such as park and rides);
- Parking management and pricing (such as connecting supply with mode split targets);
- Telecommunications substitutes for physical travel (such as telecommuting, e-government, and internet-based business-to-business activities); and
- Land use decisions (such as site design standards and concurrency).

In its application of Transportation Demand Management strategies, King County fulfills many roles, including:

- The jurisdiction responsible for land use, transportation infrastructure and permitting in unincorporated areas;
- The operator and manager of unincorporated area roadways and Metro Transit;
- A local, regional and statewide advocate for integrated transportation solutions and climate change actions; and
- A leading edge employer implementing progressive employee transportation programs.

T-245 **King County shall implement policies and programs that support transportation demand management, nonmotorized travel, transit service improvements, and expansion of high-occupancy-vehicle travel in order to increase the share of trips made by modes other than driving alone.**

T-246 **Where appropriate King County should support the use of Transportation Demand Management strategies including variable tolling on state highways to increase mobility options, promote travel efficiency, optimize the existing transportation system and reduce the adverse environmental impacts of the transportation system.**

T-247 **King County should consider Transportation Demand Management strategies, beyond those adopted as county regulation, among a menu of measures to mitigate for traffic impacts of proposed development or major highway construction projects. Transportation Demand Management, as well as other mitigation requirements, may be imposed on new development as mandatory mitigation measures as necessary to meet the requirements for mitigation of impacts pursuant to the State Environmental Policy Act and the State Subdivision Act.**

T-248 King County should promote employee transportation programs that encourage trip reduction, use of public transportation, walking, and bicycling. King County should demonstrate regional leadership by continuing to provide a model program for its own employees.

T-248a King County should actively participate in developing and implementing state-mandated Commute Trip Reduction programs.

T-249 King County should participate in local, regional, and statewide efforts to implement and measure the results of Transportation Demand Management strategies, technologies, and systems, including policies developed through regional consensus and adopted by the county. To this end, the county shall identify funds to research, plan, implement and measure the success of Transportation Demand Management strategies.

T-250 King County will work with the Washington State Department of Transportation, Washington State Transportation Commission, Puget Sound Regional Council, and cities to develop and implement applications of managed transportation facilities and congestion pricing strategies on new and existing transportation facilities.

T-251 King County supports congestion pricing strategies as a means to optimize transportation system performance, generate revenues, reduce vehicle miles traveled, and reduce greenhouse gas emissions.

T-252 Revenue from congestion pricing should be used to improve, preserve and operate the transportation system including transit and other multimodal investments, as well as to help fund improvements that address the diversionary impacts on non-tolled facilities.

T-253 King County should partner with the Washington State Department of Transportation, Puget Sound Regional Council, local jurisdictions, employers, major institutions and developers to implement programs to encourage alternatives to commuting by single-occupant-vehicles, and to improve travel options and awareness of those options.

T-253a King County shall provide culturally-appropriate opportunities for residents of low-income communities, people of color, people with limited English proficiency and immigrant and refugee populations to inform and participate in programs to increase access to effective alternatives to driving alone.

III. Ensuring Effective Management and Efficient Operations

This section contains policy direction to guide the ongoing design, maintenance, operation and management of the county transportation system to provide for safety, efficiency and sustainability. It is consistent with the King County Strategic Plan, which, as a component of the county's Performance Management and Accountability System, provides the foundation for managing the performance of county services. The Strategic Plan for Public Transportation and the Strategic Plan for Road Services, as transportation functional plans, provide the detailed guidance on operational issues and also address transportation performance measurement and reporting.

A. Public Transportation Policies and Service Guidelines

Metro is committed to using resources wisely and increasing the efficiency of its operations. Consistent with its Strategic Plan and Long Range Plan, Metro emphasizes planning and delivery of productive services and is committed to controlling costs. To help ensure efficiency, Metro uses service guidelines and performance measures to manage the transit system. Performance monitoring helps Metro evaluate its progress, plan and budget for the future, and improve agency practices. Metro is also committed to improving it transparency and so makes performance reports readily available to internal and external audiences.

T-301 **King County should provide reliable, safe, convenient public transportation services that are responsive to the needs of people, businesses and communities in King County.**

T-301a **The King County Marine Division should be a leader in regional mobility by providing passenger-only ferry service that benefits the community, helps reduce road congestion, can assist in emergency management needs and supports the economic development and growth management needs of King County.**

T-301b **King County's passenger-only ferry service should be efficient, safe, accessible and reliable, and provide excellent customer service while being responsive and accountable to the public.**

T-302 **The King County Marine Division should work with the Washington State Department of Transportation, Kitsap County, and other entities offering** passenger ferry services, to ensure that service and capital plans for ferries are **consistent with the King County Ferry District 2014 Strategic Plan, or successor plans.**

B. Road Services Policies and Priorities

Effective design, management, and operation of the road system are critical to mobility and quality of life. King County strives to make efficient use of the existing infrastructure, serve the broad needs of users, address safety issues, and design facilities that are appropriate for the surrounding communities. King County has a structural funding deficit that continues to severely impact the county's ability to provide basic preservation and maintenance of its aging and declining road system. Therefore, as revenue available to manage the road system fluctuates, so will the county's ability to maintain and preserve its roads and bridges. If sufficient revenue is not available to sustain the road system, then infrastructure may be downgraded or closed. The county's focus will remain on the priorities in the Strategic Plan for Road Services to guide these critical decisions. The Strategic Plan for Road Services also prioritizes funding of services and projects, including both the type of activities and the location of investments.

The Strategic Plan for Road Services lays out the priority for the Road Services Division funding decisions in the following order:

1. Prevent and respond to immediate operational life safety and property damage hazards.
2. Meet regulatory requirements and standards in cooperation with regulatory agencies.
3. Preserve the existing roadway facilities network.
4. Enhance mobility (movement of people and goods) by facilitating more efficient use of the existing road system.
5. Address roadway capacity when necessary to support growth targets in the urban area.

Based on the Strategic Plan for Road Services, King County has implemented a graduated service level framework. Priority will be given to keep the most vital components of the road system operational for users. This approach guides service provision under limited funding scenarios and also helps direct investments toward the most critical needs when additional resources are available. Performance measurement and reporting is also an important aspect of the Strategic Plan for Road Services and a critical tool in managing the county's road system.

To improve efficiency and productivity, King County has implemented and continues to enhance and refine a data driven asset management approach that, combined with the policy direction in this Comprehensive Plan and the Strategic Plan for Road Services, will guide investment choices over the next biennium and beyond.

Road Services Division's Capital Improvement Program and Financial Plan must be consistent with this Comprehensive Plan and consider the current performance of the transportation system, concurrency needs of planned developments, priority projects, phased implementation of improvements, and other related factors. Revenues from a range of sources, including grants and Mitigation Payment System fees, are programmed to appropriate projects.

Equity and Social Justice

Equity and Social Justice principles receive significant consideration in decision making processes. Road Services' approach to integrating equity and social justice into agency business operations and budgeting includes the following components:

- Prioritize emergency snow and ice response along Metro's highest priority transit snow routes, since these may be the only source of transportation available to lower-income residents.
- Promote equal access to, and availability of, information and services for all county residents by designing division communications and public engagement processes that are culturally relevant for diverse communities, including communities whose residents have limited English proficiency.
- Utilize partnerships with other King County or external agencies, community groups, and non-profit organizations to better understand community needs and obtain community input and involvement.
- When available, grant funded non-motorized improvements are directed to disadvantaged communities because they both help to support active, healthy lifestyles and also facilitate mobility for people with disabilities, those who cannot drive or are unable to afford a car.
- King County acknowledges that there are significant concentrations of people of color, low income populations, people with limited English proficiency, and immigrants and refugees populations in certain areas. The county also recognizes that these groups of people are disbursed across the county. Their mobility needs, as well as the mobility needs of students, youth, seniors, and people with disabilities, should be considered when evaluating division projects and programs.

General Priorities

T-303 **King County shall maintain and preserve the unincorporated area road system to keep it operating safely, protect mobility and infrastructure investments, and maximize the useful life of transportation assets to the extent feasible under available funding levels.**

T-304 **In order to keep the most vital components of the road system operational for users, King County should use a decision framework to both guide service provision and help direct investments towards the most critical needs when additional resources are available.**

T-305 **To ensure that the most vital components of the county's road system are kept operational, safety, essential regulatory compliance, and maintenance and preservation needs of the existing road system should be funded prior to mobility and capacity improvements.**

T-306 Maintenance and preservation of the unincorporated rural roadway system shall be emphasized in long-term planning and asset management in recognition of the fact that Rural Area and Natural Resource Land roads and bridges will remain the county's long-term responsibility after all annexations are complete.

T-306a Decisions on road closures and abandonments should be made based on public safety considerations, technical/engineering standards, and the policy guidance set forth in the Strategic Plan for Road Services. Impacts to residents, businesses, and other road users or stakeholders should be identified and communicated to them in a timely manner.

T-307 Roadway stormwater facilities are an integral component of a properly functioning transportation network and shall be maintained, preserved, and, when practicable upgraded in order to protect infrastructure, public health, and the natural environment, as well as meet federal, state, and local regulations.

T-308 Road projects and programs shall be implemented in ways that avoid or minimize negative impacts for people of color, low-income communities, people with limited English proficiency, immigrant and refugee populations and others who may have limited transportation options, such as students, youth, seniors, and people with disabilities. Projects and programs shall seek to provide tangible, positive benefits.

T-309 To facilitate the establishment of a safe and efficient traffic circulation network reflecting all transportation modes and to retain the availability of access to adjacent properties, the county shall review and comment on the appropriate placement of new or major modified facilities or physical barriers, such as buildings, utilities, and surface water management facilities in or adjacent to road rights-of-way.

T-310 State highway facilities and arterial roads are designed to accommodate higher traffic volumes, at higher speeds, than local roads. To protect residential neighborhoods from the impacts of pass through traffic, King County should design and operate roads to direct such traffic away from local roads and encourage such traffic to use highways or arterials whenever possible.

T-311 The King County Department of Transportation has responsibility for development and maintenance of transportation facilities in county-owned road rights-of-way. Other right-of-way users must obtain approval from the department regarding projects, maintenance and other activities impacting the right-of-way.

T-312 Arterial Functional Classification, established in Appendix C of this plan, should be implemented through the specifications provided in the King County Road Design and Construction Standards. The Comprehensive Plan's Urban Growth Area boundary provides the distinction between urban and rural arterials.

T-313 King County's road design and construction standards shall promote safe, cost-effective roads that encourage multimodal use, and reflect the different needs and service levels for the Urban Growth Area and Rural Area and Natural Resource Lands.

T-314 King County should provide road services in a manner that is sensitive to the natural environment, historical properties, and archaeological resources, and to design new facilities that fit within the context of the built or natural environments in which they are located.

T-315 King County should preserve its identified Heritage Corridors through context sensitive design, planning, and maintenance, as exemplars of historic and scenic character. The corridors include: Cedarhurst Road/Westside Highway (Vashon Island), Dockton Road (Vashon-Maury Islands), Green Valley Road (Auburn-Black Diamond), Issaquah-Fall City Road (Snoqualmie Valley), Old Cascade Scenic Highway (Stevens Pass), Osceola Loop (Enumclaw Plateau), Old Sunset Highway (Snoqualmie Pass), West Snoqualmie River Road (Snoqualmie Valley), and West Snoqualmie Valley Road/Carnation Farm Road (Snoqualmie Valley). In-kind replacement of road and roadside features and the use of materials that complement the character of each corridor should be utilized to the extent that is practicable and meets safety needs. King County should encourage adjacent property owners, through outreach efforts, to similarly support the preservation of these corridors.

T-316 **King County shall support and encourage the preservation and enhancement of scenic, historic, and recreational resources along the designated Washington Scenic and Recreational Highways located in the county, including I-90 (Mountains to Sound Greenway), US 2 (Stevens Pass Greenway), State Route 410 (Chinook Pass Scenic Byway), and State Route 202 (Cascade Valleys Scenic Byway). The corridor management plans established for these highways should be considered in the development and implementation of King County's plans, projects and programs.**

C. Air Transportation

T-317 **King County shall plan, design, and implement services, programs, and facilities for the King County International Airport in compliance with Federal Aviation Administration regulatory requirements to support a safe, secure, and efficient global aerospace system.**

T-317a **King County International Airport shall continue to provide and maintain safe and secure transportation services and facilities for the flying public and aviation community in support of a broad range of uses, including corporate general aviation, small general aviation, charter and commercial passenger services, military aircraft, air cargo, and aircraft manufacturing, maintenance, storage and service, while improving mobility for people and freight to meet growing and evolving demand.**

In 2005, the Federal Aviation Administration approved a Part 150 Noise and Land Use Compatibility Plan to reduce noise impacts in communities surrounding Boeing Field. This is a significant event and represents a positive step in making King County International Airport a "good neighbor" to affected residential areas. The Part 150 plan identifies many actions that are allowed to be taken by King County International Airport, pilots, tenants, the Federal Aviation Administration and others to reduce noise impacts on residential areas. The Part 150 noise mitigation program, including home insulation, was completed in 2015.

T-318 **Recognizing that certain noise reduction measures are contingent on ongoing and future Federal Aviation Administration funding, King County shall implement those actions, under its control and identified in the Part 150 Noise and Land Use Compatibility Plan. King County shall encourage other entities to implement those measures under their control and also identified in the Part 150 Noise and Land Use Compatibility Plan.**

T-319 **King County shall encourage all airports located in the county, whether owned by a public or private entities, to be responsible neighbors and make all reasonable efforts to minimize noise impacts on sensitive land uses such as residences, hospitals and schools.**

D. Climate Change, Air Quality, and the Environment

Clean air contributes to the health of people, the ecosystem and the economy. Transportation is the primary source of air pollutants regionally. In addition to complying with state and federal regulations described below, the county is working to reduce transportation-related emissions through the policies and actions contained in this Comprehensive Plan.

The Washington State Clean Air Conformity Act establishes guidelines and directives for implementing the federal Clean Air Act Amendments. It specifically links air quality conformity to growth management planning efforts at the local and regional level. The King County transportation system complies with the federal and state Clean Air Acts by maintaining conformity with the Puget Sound Regional Council *Transportation 2040* plan and by following the requirements of Chapter 173-420 of the Washington Administrative Code.

Climate change is of significant local, national and global concern. It is clear that greenhouse gas emissions from transportation sources are a significant contributing factor to climate change. In addition to meeting its regulatory requirements, King County is committed to addressing climate change through its decisions and actions and encouraging others to act to reduce greenhouse gas emissions as well.

Climate change is projected to increase the frequency of flood events in most of western Washington's river basins. Increased flood frequency and intensity will increase public investment needed to ensure public safety and mobility, particularly on the county road system. Climate change will affect the county's road and transit infrastructure. More storm events and increased temperatures will disrupt service, increase road maintenance requirements and adversely affect mobility. Changes in precipitation patterns and sea levels may cause greater damage to roads, bridges and seawalls from erosion, landslides, and flooding.

The goals and activities of the King County Department of Transportation are integrally linked to the county's strategies and activities for addressing climate change. This linkage was refined in the County's 2012 Strategic Climate Action Plan, with an entire chapter focused on the operational and service targets related to transportation and land use. The Strategic Climate Action Plan identifies clear performance targets (how much change is the County attempting to achieve) and strategies and priority activities that reduce greenhouse gas emissions. It allows for the reporting of strategies, program activities, and performance measures related to climate change in one location.

The updated 2015 Strategic Climate Action Plan provides a mechanism to evaluate progress since the 2012 Strategic Climate Action Plan and refines strategies and program activities to achieve the objectives of reducing greenhouse gas emissions and adapting to climate change impacts.

T-320 **Transportation improvements should be designed, built, and operated to minimize air, water and noise pollution, greenhouse gas emissions, and the disruption of natural surface water drainage in compliance with provisions and requirements of applicable federal, state and local environmental regulations. Natural and historic resource protection should also be considered. Particular care should be taken to minimize impacts where the location of such facilities could increase the pressure for development in critical areas or Rural Areas and Natural Resource Lands.**

T-321 **Within new developments, King County supports designing and building roads, bicycle facilities, pedestrian ways and trails in ways that minimize pollution, provide opportunities for physical activity, promote energy conservation, increase community cohesion, and preserve natural flora and wildlife habitat.**

T-322 **Through its own actions and through regional partnerships, King County will promote strategies to reduce emissions from the transportation sector. The county will promote new vehicle technologies, the use of low-carbon fuels, and strategies to reduce greenhouse gas emissions, including land use changes, provision of transit, promotion of nonmotorized travel, joint purchasing, pilot projects, and actions to reduce vehicle miles traveled.**

T-323 **King County will strive to become a world leader in the use of transportation fuels and technologies that reduce operational greenhouse gas emissions from its fleets and vessels. King County will achieve this goal by buying hybrid-electric, electric, zero-emission and other clean transportation technologies; using clean fuels in its fleets and vessels; implementing demonstration projects that use alternative fuels and technologies; purchasing locally-produced energy sources when practical; seeking local and federal support to expand the use of low-carbon fuels and alternative, zero emission technologies; and promoting best practices, innovations, trends and developments in transportation fuels and technologies. The county will also seek to deploy and use its vehicles in an energy-efficient manner through vehicle routing, idling-reduction, and operator practices.**

T-324	**King County will incorporate climate change impacts information into construction, operations, and maintenance of infrastructure projects. The department will incorporate climate change into its planning and design documents and also develop strategies to incorporate climate change response into the design and operations of its transportation structures and services.**
T-324a	**King County will reduce greenhouse gas emissions from its off-road vehicles and equipment by using low-carbon fuels and advanced technologies, and by partnering with other agencies to implement demonstration projects using these vehicle technologies.**
T-325	**King County will develop methods to evaluate the climate change impacts of its actions and transportation services and will implement climate sensitive strategies and practices consistent with the environmental sustainability goals and policies described in Chapter 5, Environment, as well as existing state, regional and local plans, laws, and regulations.**
T-326	**To the extent practicable, future expansion or redevelopment of the county's road stormwater infrastructure should minimize pollutant discharges and flow alterations by mimicking the natural drainage system or preserving the ability to create such a system in the future.**

IV. Financing Services and Facilities that Meet Local and Regional Goals

Fully achieving King County's transportation goals depends on adequate funding for transportation system and service needs. This section discusses the extent to which the transportation system and services can be funded within a reasonable revenue forecast and expenditure schedule. The Growth Management Act requires the county to include an analysis of funding capabilities, a multiyear financing plan based on needs, and a discussion of how to raise additional funds to build needed transportation projects, or to reassess growth and Level of Service standards to resolve potential funding shortfalls in a ten-year time frame. This analysis is provided in the Transportation Needs Report and summarized below.

A. Public Transportation Revenue Sources

Metro Transit

King County Metro Transit's budget provides for both the operating and capital needs of its public transportation system. The operating budget funds Metro's broad range of public transportation services. The capital budget

provides for transit facilities needed to operate Metro's services, such as maintenance and bus storage facilities, transit centers and park-and-rides, bus shelters and other passenger facilities, buses and non-revenue vehicles.

Metro's primary source of revenue, a 0.9% sales tax (the maximum authorized by the state), provides approximately 54% of Metro's revenues. This rate has been in effect since late 2006, when voters approved a 0.1% increase as part of the Transit Now initiative. Beginning in 2009, King County levied a 5.5 cent property tax to support transit. Fares paid by users of Metro system and transit advertising revenues provide about a quarter of Metro's operating revenues. Metro also receives federal and state grants that contribute primarily to capital expenses.

The Great Recession and a slower than normal recovery took a major toll on Metro's largest revenue source, sales taxes. After the 2008 recession caused a steep drop in sales tax revenue, Metro took action to preserve transit service by cutting costs, raising fares, and making a host of fiscal reforms. Metro's ongoing efficiency gains, projections of lower fuel costs, improved sales tax forecasts and other financial improvements enabled the County to adopt a 2015/2016 budget and six-year financial plan that does not envision future service cuts.

Beginning in 2011, sales tax revenues began to recover and by 2015, sales tax receipts have been restored to pre-recession levels in terms of purchasing power. The near term outlook is for continued growth; however this is tempered by the reality and need to plan for economic downturns. Over the last 50 years there has been, on average, a recession every eight years. The county's financial policies and reserve requirements help Metro plan for the eventuality of economic downturns.

In November 2014, Seattle voters approved funding for additional transit service. The City of Seattle subsequently entered into a contract with King County to purchase Metro service through the County's Community Mobility Contracts Program. Seattle will expand service on Metro routes that serve the city by about 10%. Additionally, Metro will leverage Seattle's Regional Partnership Fund created as part of the voter approved measure to improve transit service for suburban commuters through regional partnerships. This funding is scheduled to expire after 2020.

The need remains for long-term, sustainable funding that fully meets King County's current and future demand for bus service. Metro will continue striving for efficiency improvements to make the most of every available transit dollar, and county leaders have pledged to continue working for a statewide transportation funding solution. Over the coming years, Metro will continue to take actions to stabilize its finances and improve the efficiency and effectiveness of service delivered as state, county and local officials work on a long-term transit funding solutions.

King County Marine Division

The Marine Division provides passenger-only ferry service between downtown Seattle, Vashon Island, and West Seattle.

In 2015, as part of the adopted 2015-2016 County Budget, the Council instructed the Marine Division to develop a report on the potential for expansion of passenger ferry service in King County. This report was completed in 2015 and could be used to inform potential expansion of County passenger ferry service and associated future property tax levies.

B. Road-Related Funding Capabilities

King County is experiencing a roads funding crisis, largely due to municipal annexations, the 2008 recession, declines in gas tax revenues, the effects of voter initiatives, and an aging bridge and road system. The lack of revenue is significantly impacting the county's capacity to maintain and improve roads.

King County receives road revenues from a variety of sources, including a dedicated unincorporated King County property tax, federal and state grants, gas tax, local taxes and road mitigation payments from private developments. The dedicated property tax and gas tax provide the largest portion of funding for the Road Services Division (71% in 2014). The property tax is tied to the assessed value of properties in unincorporated King County.

During the recession, property values in unincorporated King County dropped sharply. While the economy has shown signs of recovery, future growth in revenues is significantly limited by state law and is not predicted to recover in real terms during the horizon of this plan. Gas tax revenues have been flat, in part because of vehicles that are more fuel efficient, lower sales of gas due to the economic conditions, driving patterns, and a decline in the allocation to King County due to reduction in road miles from recent annexations.

In August 2015, a panel of regional leaders and community members began meeting to explore solutions for maintaining and preserving the aging bridge and road system in unincorporated King County. The Bridges and Roads Task Force membership included neighbors, representatives from agriculture and recreation organizations, road experts and public policy leaders. In January 2016, the Task Force recommended a host of reforms and funding principles. The Task Force identified the range of the Roads funding gap as $250 to $400 million a year, and generated 152 recommendations to address that gap. Among the recommendations were the following:

- **Revenue**: Authority from the state Legislature for a fair, non-regressive countywide revenue tool that is tied to inflation, is sustainable over the long-term, and provides a benefit to both cities and the County. The Task Force recognized that the most successful approach may involve using multiple revenue tools and efficiencies with some additional resources dedicated to city transportation needs.

- **Infrastructure:** Authority from the state Legislature that provides for cities to annex orphan County roads that lie inside their boundaries, and supports annexation of Potential Annexation Areas within the growth boundaries of those cities.

Financial viability to support the operation of the road system and provide for capital construction and preservation needs is tested over two time frames for the Comprehensive Plan. The Transportation Needs Report, the county's 20-year transportation plan, identifies the road-related investments needed to support the land use vision of the County's Comprehensive Plan. The 20-year plan provides an assessment of revenues projected from currently available resources and identifies reasonable options for securing additional revenues over the life of the plan. Secondly, the biennial update of the roads Capital Improvement Program examines the specifics of how to implement the financing plan over the next six years.

C. Funding Priorities Consistent with Transit and Road Strategic Plans

T-401 **Financial investments in transportation should support a sustainable, transportation system, consistent with the priorities established in the King County Strategic Plan and each division's strategic plan or other functional plans.**

T-402 **King County should fund services, operations, and capital facilities that support local and regional transportation and land use goals and result in a balanced, multimodal transportation system.**

T-403 **The unincorporated county road system provides transportation connections for large numbers of users that travel through the Rural Area and Natural Resource Lands to reach adjoining cities, other counties or regional destinations. King County should seek and support regional funding sources that could be used to repair and maintain the arterial system.**

T-404 **When funding transportation projects in areas where annexations or incorporations are expected, the Department of Transportation should seek interlocal agreements with the affected cities and other service providers to provide opportunities for joint grant applications and cooperative funding of improvements.**

D. Revenue Shortfall

The state Growth Management Act provides guidance for managing a revenue shortfall. The following actions can be used to balance the funding shortfall of the plan:

1. Reduce transportation funding needs;
2. Develop new revenue options;
3. Change Level of Service; or
4. Change land use.

T-405 **During review of its Comprehensive Plan, King County should consider and address any potential shortfalls likely to occur between expected revenues and costs to maintain, preserve and improve transportation infrastructure and service levels. Such review could include a reassessment of land use, growth targets, Level of Service standards, and revenue availability.**

T-406 **King County shall continually work to improve the efficiency of its operations and delivery of projects and services in order to minimize the need for new revenue sources.**

T-407 **New funding sources should be identified and pursued that provide adequate and sustainable resources for transportation system investments. These funding sources should not be regressive, and whenever possible provide multi-jurisdictional benefits.**

T-408 **King County should leverage partnership opportunities, grants and other cooperative funding mechanisms to help finance transportation services, infrastructure and facility improvements.**

T-409 **King County shall maximize its efforts to obtain federal and state funding for its transportation services, infrastructure and facility improvements.**

V. Coordination and Public Outreach

All elements of the transportation system outlined in this comprehensive plan update are planned and operated in coordination with the cities in and abutting King County, the adjoining counties, the Puget Sound Regional Council, the Port of Seattle, the transit agencies providing service in and connecting to King County, and the Washington State Department of Transportation. Agencies and the public were invited to review and comment on this plan.

The following activities support the coordination process:

- Review by the transportation subarea boards;
- Review by residents and organizations within the county's Community Service Areas;
- The update of the Strategic Plan for Public Transportation and Service Guidelines;
- The development of the Long Range Plan for Public Transportation;
- The statewide and countywide grant application process;
- The Transportation Needs Report and Capital Improvement Program coordination process;
- Participation in the Puget Sound Regional Council, which enables King County to coordinate its transportation planning activities with other local and regional agencies for the four central Puget Sound counties;
- Internet sites and other public information provided in a variety of formats; and
- Public outreach and meetings.

As a countywide transportation service provider, King County provides Metro Transit's public transportation services and works with Sound Transit and other transit and transportation agencies to provide seamless, multimodal transit services. King County cooperates with other local governments and the Washington State Department of Transportation to improve freight mobility and carry out strategies to maintain the efficiency of freeways and arterials in the region. One such strategy would include active management, which is the ability to dynamically manage congestion based on prevailing traffic conditions. King County works with the PSRC and its members to ensure that the transportation needs of the region's residents and economy are addressed in a timely manner.

A. Regional Coordination

T-501 **King County should pursue regional coordination and partnership to address county-wide transportation challenges.**

T-502 **King County should promote a multi-jurisdictional, multimodal regional corridor approach to reducing congestion and improving efficiency on highways and arterial roads.**

T-503 **King County should lead, partner in, and promote regional technology initiatives that help to improve mobility.**

T-504 **King County should work with the Puget Sound Regional Council and its members to ensure that any regional projected aviation capacity problems, and the air transportation needs of the region's residents and economy are addressed in a timely manner.**

T-505 **King County shall support active management of state-owned freeways to optimize movement of people. High Occupancy Vehicle, High Occupancy Toll or Express Toll lanes should be managed to prioritize reliable speed advantage for transit and vanpools, and maintain a reliable speed advantage for the other high occupancy vehicles consistent with the State's High-Occupancy-Vehicle lane minimum performance standard.**

T-506 **King County shall advocate that transit should be exempt from paying tolls as it is an essential element of the transportation system, and is critical to maintaining and increasing the person-carrying capacity of the highway and arterial network. Transit provides an alternative travel mode and improves mobility for all users of the system. Transit also increases the efficiency of transportation infrastructure, thereby reducing investments needed in roadway expansion and additional parking.**

T-507 **King County should collaborate with the Puget Sound Regional Council, cities and other affected agencies to develop a regional parking strategy consistent with the parking pricing and management recommendations of Transportation 2040.**

T-507a **King County should collaborate with the Puget Sound Regional Council, cities and other agencies to improve interjurisdictional coordination on active transportation infrastructure including bicycle/pedestrian facilities. The County should support efforts to maintain comprehensive information about existing and planned facilities, model plans and best practices, and grant opportunities.**

The Eastside Rail Corridor provides a rare and unique opportunity to develop dual use (recreational trail and public transportation) facilities supporting: mobility through transit, nonmotorized and active transportation, including access to transit outside the corridor, consistent with its federal railbanked status. The owners share other multiple objectives for the corridor including accommodating utilities, parks, recreation and cultural amenities, and encouraging equitable access to these facilities, and housing and jobs, in support of economic opportunity for all King County residents. Development of the corridor will provide multimodal facilities and connections that link jobs and housing, and provide an opportunity to illustrate innovative ways of connecting growing communities.

T-507b **King County shall support and participate in collaborative planning efforts — both inter-departmentally and with other federal, state, and local agencies — to develop the Eastside Rail Corridor in ways that enhance multimodal mobility and connectivity, with a commitment to dual use (recreational trail and public transportation), consistent with federal railbanking.. Planning and development should consider opportunities for integration of multimodal facilities, including regional trails, into the greater transportation network.**

B. Freight Mobility

Freight mobility is critical to King County's economy and western Washington's role as a major national and international trading region. King County supports efforts to plan and create a fast, reliable freight transportation system in the region. To maintain the region's competitive edge, transportation infrastructure must provide for the efficient movement of goods and freight to and from ports, airports, and industrial areas balanced with the needs of general purpose and high occupancy vehicle traffic.

T-508 **The King County transportation system should support reliable and efficient movement of goods throughout the county, while minimizing the impacts of freight traffic on general purpose traffic and residential neighborhoods. The county should participate in regional efforts and partnerships to achieve these goals.**

T-509 **King County should support regional freight mobility by incorporating freight considerations into road planning, design, construction, and maintenance.**

T-510 **King County should coordinate with other jurisdictions, the public and the private sector to identify barriers to the effective and efficient movement of freight and goods and develop proposals to improve freight mobility on the arterial system.**

New or expanded truck parking along the I-5 corridor within the Seattle, Tacoma, and Federal Way areas is needed. Improved and expanded truck parking facilities are also needed at the chain-up locations on both sides of Snoqualmie Pass. The lack of truck parking capacity not only causes safety problems, it has a negative impact on communities in high demand areas. For example, the city of North Bend is inundated with trucks parking on local roads when Snoqualmie Pass is closed in the winter.

The Federal Hours of Service rule changed effective July 1, 2013, exacerbating the state's truck parking problem as it shortened the number of hours that truck drivers may work. This rule change means that drivers must stop for rest more frequently and need increased access to safe, secure, and legal truck parking facilities. The shortage

of truck parking can contribute to truck drivers driving while fatigued and parking illegally, creating a safety hazard on highways and greater community impacts.

Interstate commerce is a state and national priority and small communities located next to high-volume, long-haul truck corridors are not able to resolve multistate truck parking issues by themselves. Washington State Department of Transportation Truck Parking Studies show that the state's greatest need for additional truck parking is along I-5 and State Route 167 in central Puget Sound and on I-90 near North Bend.

T-510a **King County should work with partners and stakeholders to plan for and develop adequate truck parking in high-demand locations along King County's Truck Freight Economic Corridors to improve safety and reduce negative impacts on local communities. Development of truck parking should be supportive of technologies that reduce greenhouse gases, such as electric charging, energy efficiency and biodiesel.**

C. Public Involvement

T-511 **King County should provide culturally-appropriate, timely, accurate, and consistent public information about transportation services, infrastructure and funding issues, and ensure a wide range of opportunities for input and engagement with county residents, including low income communities, people of color, people with limited English proficiency, immigrant and refugee populations and other stakeholders.**

T-512 **King County should actively engage the public and other appropriate stakeholders, such as the community service areas constituencies, community groups, and subarea transportation forums, in transportation planning processes and plan updates.**



CHAPTER 9
SERVICES, FACILITIES AND UTILITIES

The Growth Management Act requires coordinated planning so that the services required by new residents and their homes and businesses are available as growth occurs. Needed services include many that are not provided by King County, such as water supply, local sanitary sewers, fire protection, schools, energy facilities, and telecommunications.

King County does provide services such as regional wastewater treatment, regional solid waste management, and local stormwater management. The County also has a regional human services role, which is described in Chapter 4: Housing and Human Services. This chapter contains policies that guide service provision.

I. Regional Services

King County government is a regional and local service provider. Types of regional services provided include transit, wastewater treatment, human services, and solid waste management. Local services provided to residents of unincorporated urban areas, the Rural Area and Natural Resource Lands in King County may include police, building permits, water, sewer, and health services. As annexations and incorporations of unincorporated urban areas continue, King County government will focus more on its role as the coordinator and provider of regional services and protector of the county's Rural Area and Natural Resource Lands. As annexations of unincorporated urban areas continue, King County will transition out of the role of coordinating with local service providers on how to best provide local services to those areas, and transition to lead for that coordination role to the cities, through collaboration with current service providers, as those former unincorporated areas become part of city limits. The following policies direct King County's evolving role as regional service provider. Provisions related to housing and human services are found in Chapter 4.

F-101 **King County, the cities, special purpose districts or local service providers shall plan as partners. King County's planning will focus on unclaimed urban unincorporated areas and cities' Potential Annexation Areas.**

F-101a **King County agencies will engage communities in a culturally- and audience-appropriate manner. King County agencies will also engage communities that are most affected by proposed projects.**

F-101b **King County shall adhere to the Executive Order on Written Language Translation Process and other applicable policies for those with limited English proficiency.**

F-102 **King County shall work with cities, special purpose districts, other local service providers and residents to identify and distinguish local, countywide and regional services. Over time, cities will assume primary responsibility for coordinating the provision of local services delivery in urban areas. In general, the county will continue to provide local services delivery within the Rural Area and Natural Resource Lands. Special purpose districts may still provide services, where appropriate. The county will also assume primary responsibility for coordinating the provision of countywide services, including countywide services that must be delivered within city boundaries. The county will also work with cities, special purpose districts, and other counties to identify regional service and facility needs and develop strategies to provide them.**

F-103 **King County will provide or manage countywide services which include but are not limited to:**

a. **Affordable housing;**
b. **Economic development;**
c. **Flood warning and flood hazard management;**
d. **Harborview Hospital;**
e. **Hazardous waste management;**
f. **Human services;**
g. **Protection and preservation of natural resource lands;**
h. **Public health;**
i. **Regional law and criminal justice services;**
j. **Regional park, trails and open space systems;**
k. **Regional wastewater collection and treatment, and reclamation;**
l. **Solid waste management, including recycling;**
m. **Stormwater management;**
n. **Transit; and**
o. **Water resource management.**

F-107 **King County will, in cooperation with special purpose districts or local service providers, continue to plan for and provide public services to the Rural Area and Natural Resource Lands, consistent with rural standards and needs.**

F-108 **To support the intent of the Growth Management Act, King County should work with cities and other service providers to establish priority areas for public funding of capital facilities, services and infrastructure.**

F-108a **King County should address historic inequities and disadvantaged communities both in rural and unincorporated urban areas in determining the priority areas for public funding of capital facilities, services and infrastructure.**

II. Facilities and Services

A. Providing a Spectrum of Services

King County and numerous service providers need to coordinate planning and funding activities to ensure that needed facilities and services are provided in the region.

F-201 All facilities and services should be provided in compliance with provisions and requirements of the Endangered Species Act, the Clean Water Act and the Growth Management Act.

F-202 King County should seek to create quality communities by defining the needs and proposing strategies for a full range of public facilities and services, including physical infrastructure and health, human and public safety services. King County should strive to provide an adequate and equitable supply and appropriate level of public facilities necessary to support all communities.

F-202a Results from the King County Equity Impact Review Tool will be used as an important consideration in evaluating funding and service delivery decisions.

F-203 When service providers are planning and designing facilities, King County should encourage them to use sustainable development practices to achieve net-zero greenhouse gas emissions in new buildings by 2030.

F-204 King County should work with the cities, special purpose districts and other service providers to define regional and local services and to determine the appropriate providers of those services.

F-205 King County shall work with its neighboring counties, the state, Puget Sound Regional Council, special purpose districts, ports and the cities to identify areas of shared need and adequate land supply for public facilities. The county's capital acquisition budget shall reflect the jointly agreed-upon priorities and time schedule.

F-206 Public and private community service providers should be encouraged, as appropriate, to share or reuse facilities when appropriate to reduce costs, conserve land and provide convenience, access and amenity for the public and to reduce the generation of greenhouse gasses. Joint siting and shared use of facilities should be encouraged for schools, community centers, health facilities, cultural facilities, libraries, swimming pools and other social and recreational facilities. Sharing of facilities may include providing meeting space that can be accessed by the community, as appropriate.

F-206a King County should make its public facilities and properties available for renewable energy production when such use is compatible with the primary use of the facility.

F-207 **King County should make its public facilities or properties available for use as a P-patch or community garden when such use is compatible with the primary public use of the facility.**

B. Urban and Rural Services

Although growth will be directed to Urban Areas, it is recognized that Rural Areas and Natural Resource Lands have facility and service needs also.

F-208 **Public spending to support growth should be directed to the Urban Growth Area and to maintain existing unincorporated infrastructure, and should be prioritized through the Capital Facility Plan to comply with the concurrency requirements of the Growth Management Act.**

F-209 **In the Rural Area and Natural Resource Lands, services provided by agencies should support a rural level of development and support service that meets the needs of the community and not facilitate urbanization.**

F-209a **King County will provide or manage local services for unincorporated areas, which include but are not limited to:**

- **a. Building permits;**
- **b. District Court;**
- **c. Economic Development;**
- **d. Land use regulation;**
- **e. Law enforcement;**
- **f. Local parks;**
- **g. Roads;**
- **h. Rural Area and Natural Resource Lands management assistance; and**
- **i. Surface water management.**

F-209b **King County's local economic development services are provided in Rural Areas and Natural Resource Lands through the Rural Economic Strategies Plan and in unincorporated urban areas through joint partnerships with cities, including annexation and governance transition services.**

C. Identifying Needs for Facilities and Services

Public facilities and services are vital to protect public health, safety and welfare and to protect and enhance community and environmental quality. Inadequate sewage disposal, for example, could directly threaten public health. Inadequate groundwater protection could result in unsafe drinking water and threaten stream flow. Deficiencies in other services, such as police protection or parks, might not raise severe obstacles to any single

new development, but over time could cause general threats to public health, safety and welfare and deterioration of community quality.

King County government is responsible for assuring that adequate facilities and services are available or can be made available to support planned growth. This responsibility is carried out by identifying needs for facilities and services based on the planned amount and location of growth. The mechanism for identifying needs is capital improvement programming.

The Growth Management Act requires the county to prepare a capital facility plan that includes an inventory of existing capital facilities owned by public entities, a forecast of the future needs for capital facilities, including the proposed locations and capacities of expanded or new facilities, and a six-year plan that will finance the expanded or new facilities.

The Capital Facility Plan Element for King County is comprised of the following four components:

1. Technical Appendix A is an executive summary of documents containing inventories of facilities and services provided by King County (health and human services and law, safety and justice, transportation, stormwater and regional wastewater treatment and reclamation) and those provided by other entities (drinking water supply, sanitary sewer collection and treatment, schools, fire protection, libraries, natural gas, telecommunications, and electricity).
2. Technical Appendix A is an executive summary of documents containing the forecast of future needs for capital facilities, including the proposed locations and capacities of expanded or new facilities:
3. Six-year plan that will finance the expanded or new facilities:
    a. Technical Appendix A is an executive summary of the finance plans for facilities and services provided by the county and other entities.
    b. Technical Appendix A references the Transportation Needs Report, which includes an analysis of funding capability to judge needs against probable funding resources, and a 20-year financial forecast report based on identified needs.

    Current adopted King County Capital Improvement Program for facilities other than transportation.
4. Requirement to reassess land use if funding is unavailable to meet existing and future needs:
    a. Policies of Chapter 9 Section II (Facilities and Services), subparts B through F.
    b. Chapter 8: Transportation, Section IV.

D. Capital Facility Planning

King County and other service providers are required to prepare six-year capital facility plans that describe needs for the six-year facility and propose funding to meet those needs.

F-210 **The capital facility plans and capital improvement programs prepared by all other agencies that provide services to unincorporated areas of the county should be consistent with the King County Comprehensive Plan.**

F-210a **King County shall engage in ongoing facilities planning to ensure that it has sufficient work space to meet its operational needs on a going-forward basis. Facilities planning shall include an assessment of current facilities and future needs and shall promote equity, economic and operational efficiencies and environmental sustainability. This facilities planning policy shall be implemented through the Real Property Asset Management Plan, which shall be updated at least every four years, but may also be updated, in whole or in part, when proposals with significant impacts on county facilities are made.**

F-210b **Consistent with K.C.C. 20.12.100, the Real Property Asset Management Plan shall consist of real property asset management policies, practices and strategies, including planning policies, locations of county agencies and implementation plans, planned moves and references to King County space standards. The Real Property Asset Management Plan shall guide facility planning processes, decisions and implementation.**

F-210c **King County shall take into account the equity and social justice opportunities for capital investments within a community when siting a facility or changing locations to improve service delivery.**

F-211 **To reduce overall public costs, noise, climate change impacts and disruption to the local area during construction, installation of new or maintenance of existing utility facilities should be timed and coordinated with other projects that utilize public rights-of-way and easements, where possible.**

F-212 **King County's capital facility plans should identify financing strategies to support its adopted 20-year growth target and land use plan.**

F-213	**King County's capital improvement program shall demonstrate that projected needs for facilities and services can be met within the Urban Growth Area and can be served in compliance with the concurrency requirements of the Growth Management Act or, if that is not possible, King County shall determine where and when deficits may occur and how needed facilities and services might be phased in and or financed to serve such deficit areas. Alternative phasing and financing strategies must be identified and determined to be infeasible prior to triggering a land use and zoning reassessment under Policy F-223.**
F-214	**School districts that choose to have the county collect impact fees for them, and water and sewer utilities that provide their services to unincorporated King County, shall prepare capital facility plans consistent with requirements of the Growth Management Act, the Countywide Planning Policies and King County Code.**
F-215	**Provision of an adequate supply of kindergarten through twelfth grade public schools and public school facilities is essential to avoid overcrowding and to enhance the educational opportunities for children. King County shall adopt regulations that are supportive of the permitting of kindergarten through twelfth grade public schools and facilities in a manner consistent with the goals of the Growth Management Act and as provided in policies R-326 and R-327.**
F-215a	**King County should plan to achieve net-zero greenhouse gas emissions associated with new residential and commercial buildings built in King County by 2030.**
F-215b	**King County shall strive to provide services and build and operate public buildings and infrastructure that are carbon neutral.**

It is the goal of King County to work toward a model sustainable community to balance growth with natural resource protection while addressing climate change. Sustainable development seeks to achieve this goal by addressing the impacts of the built environment in which people live and work.

Traditional development practices can contribute significantly to the adverse impacts that buildings and associated infrastructure have on the environment. These impacts include heavy consumption of material resources, energy and water, large-scale production of wastes, water pollution, degradation of habitats and other ecological resources, and contribution to greenhouse gas emissions. Implementing sustainable development includes incorporating green building practices into policies through education, incentives and regulations that help reduce negative impacts.

The elements of green building include:

- siting the project (to take advantage of existing services, to retain existing landscaping and natural features and to increase building energy performance);
- requiring energy efficiency (to reduce energy consumption, to increase occupants' comfort, and to reduce greenhouse gas emissions);
- managing building construction and demolition materials efficiently to reduce greenhouse gas emissions and to increase the life-cycle of the building);
- increasing water efficiency (to reduce water consumption and to reduce wastewater treatment);
- improving water management to reduce stormwater runoff and produce less pollution and damage to water bodies
- using sustainable materials to improve indoor air quality, minimize toxic materials, reduce material consumption and foster sustainable manufacturing
- addressing equity and social justice to ensure equitable access to sustainable development, services and community amenities; and
- implementing universal design to ensure potential for aging in place and to service diverse occupancy opportunities.

The incorporation of sustainable practices into the design, construction and operation of King County capital improvement projects can reduce greenhouse gas emissions, reduce pollution, reduce the use of natural resources, reduce energy and other operating costs, enhance asset value, optimize performance, promote cultural sustainability by preserving historic resources and create healthier and more appealing environments for the visiting public and for King County employees. The strategic energy management, efficiency and conservation program called for in F-312 will enable King County to monitor the effectiveness of sustainable development practices in improving energy efficiency. The Green Building and Sustainable Development Ordinance 17709, adopted in 2013, requires that new county capital projects set a goal to achieve a platinum level certification using the Leadership in Energy and Environmental Design (LEED) rating system of the Sustainable Infrastructure Scorecard, or the highest certification level using an approved alternative rating system, when the incremental costs do not exceed the maximums allowed by the King County Code. Minimum performance requirements include implementing energy and emission reduction targets as instructed by the King County Strategic Climate Action Plan; diverting 80% of demolition and construction materials by 2016 and 85% by 2025; and implementing the King County Stormwater Management Design Manual or more stringent guidelines required by jurisdiction.

The LEED rating system is a voluntary, consensus-based nationally standard for developing high-performance, sustainable buildings and to guide project design. The LEED rating system components include sustainable site design; water efficiency; energy and atmosphere; indoor environmental quality; materials and resources;

innovation in design and regional priorities. For those projects that are not eligible for LEED certification, the county's Green Building Team, comprised of representatives from the various county department that have capital projects, developed a Sustainable Infrastructure Scorecard and guidelines to help such projects achieve measurable green building goals.

F-216	**King County capital facilities and county-funded projects should be designed and constructed using sustainable development practices, with consideration for long-term environmental and economic sustainability.**
F-217	**All eligible King County new capital projects shall plan for and should achieve Leadership in Energy and Environmental Design (LEED) Platinum certification level using the LEED rating system or the Sustainable Infrastructure Scorecard, or achieve the highest certification level using an approved alternative rating system, and apply minimum performance standards when the incremental cost impacts do not exceed the maximums allowed by King County code.**
F-217a	**All eligible King County major remodels and renovations shall plan for and should achieve LEED Gold certification level using the LEED rating system or the Sustainable Infrastructure Scorecard, or achieve a similar certification level using an approved alternative rating system, and apply minimum performance standards when the incremental cost impacts do not exceed the maximums allowed by King County code.**
F-217b	**All King County owned new construction capital projects should achieve net-zero greenhouse emissions by 2030.**
F-217c	**All King County capital programs will evaluate their project portfolio for opportunities to achieve net-zero greenhouse gas emissions through programs such as the Living Building challenge, Living Communities Challenge, Net Zero Energy, Envision, or EcoDistrict.**
F-217d	**King County should build and operate public buildings and infrastructure that result in regenerative and net positive benefits related to energy, water, greenhouse gas emissions and other resources and, for private development, guide development practices to achieve these same benefits.**
F-217e	**King County will increase water efficiency and conservation, and reduce purchased water consumption through appropriate and economically feasible reuse of wastewater effluent, recycled water, stormwater, and harvested rainwater.**

F-219 **King County should leverage its purchasing power related to capital improvement projects to help expand the markets for green building products, including recycled-content materials and clean, renewable energy technologies, including zero-emission buses and particularly for products and services that are locally produced.**

E. Addressing Service Deficiencies

In the event that needed facilities and services are not available to support either existing development or growth, King County will work with other service providers, such as water, sewer or solid waste purveyors, to address the service deficiency.

F-221 **King County shall consider the initiation of a subarea study, or other corrective action, with any service provider that declares, through their capital facilities plan, an inability to accommodate projected service needs inside their service area.**

F-221a **Results from the King County Equity Impact Review Tool will be used as an important consideration in evaluation funding and service delivery decisions when needed to address service deficiencies.**

F-222 **King County and its cities should coordinate planning for health and human service facilities and services. County investments in health and human service facilities should be targeted primarily to the designated Urban Centers and secondarily to other locations in the Urban Growth Area and Rural Towns.**

F-223 **If a service deficiency is identified in a service provider's existing service area, King County and the applicable service provider shall remedy the deficiency through a joint planning process addressing capital improvement programs and long-term funding strategies. If financing and level of service remedies cannot solve the deficiency, King County shall not allow for expansion of the service provider's service area and shall consider regulations to mitigate the effect of the deficiency.**

F. Financing Strategies

King County, cities, and other service providers will work together to address the financing needs of facilities and services.

F-224 **King County shall work with the cities to create a financing partnership for areas of the Urban Growth Area that the cities will annex. This includes determining county/regional and city/municipal facilities and services and then committing to a shared financing strategy to build or provide these infrastructure improvements or services.**

F-225 **King County should, in cooperation with other jurisdictions, develop funding strategies for governmental infrastructure that take into account economic development goals and consider the costs to, and benefits for, the jurisdictions and the region.**

F-225a **King County should consider discount or low-rate service fees for low-income households.**

G. Essential Public Facilities

The region will work cooperatively to site essential public facilities in an equitable manner. Essential public facilities are defined in the Growth Management Act and include large, usually difficult to site facilities such as prisons, solid waste facilities, wastewater facilities, and airports.

F-226 **Proposed new or expansions to existing essential public facilities should be sited consistent with the King County Comprehensive Plan. Listed existing essential public facilities should be preserved and maintained until alternatives or replacements for such facilities can be provided.**

F-227 **King County and neighboring counties, if advantageous to both, should share essential public facilities to increase efficiency of operation. Efficiency of operation should take into account the overall value of the essential public facility to the region and the county and the extent to which, if properly mitigated, expansion of an existing essential public facility located in the county might be** more economical and environmentally sound.

F-228 King County should strive to site essential public facilities equitably so that no racial, cultural, or socio-economic group is unduly impacted by essential public facility siting or expansion decisions. No single community should absorb an inequitable share of these facilities and their impacts. An assessment of existing facilities should be conducted when siting new facilities. Siting will consider equity, environmental justice and environmental, economic, technical and service area factors. Communities with a disproportionate share of existing facilities should be actively engaged in the planning and siting process for new facilities. The net impact of siting new essential public facilities should be weighed against the net impact of expansion of existing essential public facilities, with appropriate buffering and mitigation. Essential public facilities that directly serve the public beyond their general vicinity shall be discouraged from locating in the Rural Area and Natural Resource Lands.

F-229 A facility shall be determined to be an essential public facility if it has one or more of the following characteristics:

a. The facility meets the Growth Management Act definition of an essential public facility;
b. The facility is on a state, county or local community list of essential public facilities;
c. The facility serves a significant portion of the county or metropolitan region or is part of a countywide service system; or
d. The facility is the sole existing facility in the county for providing that essential public service.

F-230 Siting analysis for proposed new or expansions to existing essential public facilities shall consist of the following:

a. An inventory of similar existing essential public facilities in King County and neighboring counties, including their locations and capacities;
b. A forecast of the future needs for the essential public facility;
c. An analysis of the potential social and economic impacts and benefits to jurisdictions and local communities receiving or surrounding the facilities;
d. An analysis of the proposal's consistency with policies F-226 through F-229;
e. An analysis of alternatives to the facility, including decentralization, conservation, demand management and other strategies;
f. An analysis of economic and environmental impacts, including mitigation, of any existing essential public facility, as well as of any new site(s) under consideration as an alternative to expansion of an existing facility;

g. **Extensive public involvement which strives to effectively engage a wide range of racial, ethnic, cultural, and socio-economic group, including communities that are the most impacted;**

h. **Consideration of any applicable prior review conducted by a public agency, local government, or stakeholder group; and**

i. **To the extent allowable under the Growth Management Act, the locational criteria in policies R-326 and R-327.**

F-231 **King County supports coordination of regional water supply planning, sales of excess water supplies among municipalities in the region, water quality programs and water conservation, reuse and recycled water programs. This regional planning should support King County's goals of focusing growth in the Urban Growth Area and ensuring water availability for resource lands.**

H. Water Supply

King County is not a water utility that provides potable water to residents and businesses in the region. However, it plays an important role in the coordination or linking of water resources and growth and regional protection and management of water resources. This regional protection and management includes protection of the quantity and quality of groundwater, stormwater management, flood hazard management, protection of fish and wildlife habitat, and commitment to regional water strategies through such efforts as the Puget Sound Partnership, regional water supply planning, salmon recovery planning, and multiple groups engaged on climate change mitigation and adaptation. It carries out this role through its responsibilities for planning, permit issuance, and regulatory oversight. The King County Comprehensive Plan must demonstrate that projected needs for facilities and service can be met within the Urban Growth Area and can be served in compliance with the concurrency requirements of the Growth Management Act. Within Rural Areas and Natural Resource Lands, the Comprehensive Plan must provide for rural services, including domestic water service, needed to serve permitted densities and uses. The Utilities Technical Review Committee, as authorized in King County Code chapter 13.24, assures that water system and water supply planning by water utilities in King County meet the requirements of the Growth Management Act and other applicable statutory requirements, as well as determining consistency with the King County Comprehensive Plan. The Utilities Technical Review Committee is responsible for identifying the elements and provisions of the Comprehensive Plan and development regulations, adopted by the county under the Growth Management Act, with which water system plans must be consistent, as prescribed in Revised Code of Washington 43.20.260. The Utilities Technical Review Committee is also responsible for ensuring that the purposes of chapter 13.24, as provided in King County Code 13.24.005, are carried out. Water system plans are ultimately approved by ordinance by the King County Council and King County Executive.

King County has been working with water utility representatives for the last several years on refinements to the Utilities Technical Review Committee review process. The intent of the refinements has been to clarify the

County's interests in reviewing water systems plans, create more transparency in the review process, provide clarity on what the County does with the information it gets from water purveyors and reduce overall processing time. King County will continue coordinating with water utilities to help ensure successful implementation of the Utilities Technical Review Committee review process refinements.

Water utility service areas in King County are described in Coordinated Water System Plans developed under the Public Water System Coordination Act (chapter 70.116 Revised Code of Washington) and individual water system plans developed under State Board of Health rules adopted under chapter 43.20 Revised Code of Washington. Coordinated Water System Plans describe future service areas for water utilities within which they are provided the exclusive right to serve future customers, and are to include the means for meeting those needs in the most efficient manner possible. Other service providers may serve within the future service area of a designated water utility if the designated water utility is unable to provide service in a timely and reasonable manner.

Individual water system plans must include the water utility's retail service area, which includes existing customers and areas where the utility plans future service. Under state law (Revised Code of Washington 43.20.260), the water utility is required to provide service within its retail service area, provided it can meet the conditions prescribed in state law, including the ability to deliver such service in a timely and reasonable manner. The planned provision of service must be consistent with local government comprehensive plans, land use plans, and development regulations.

Washington State laws encourage the development and use of recycled water, require consideration of recycled water in wastewater planning, and recognize the importance of recycled water as a strategy for water resource management statewide (Chapters 90.46, 90.48, and 90.82 Revised Code of Washington)). Recycled water is an important mechanism for improving water quality and reducing discharge of treated wastewater into Puget Sound and other sensitive areas. Recycled water is an important wastewater management tool that can also be used as a beneficial resource. King County has been producing and distributing recycled water since 1997. Recycled water is used for treatment process water and onsite landscaping at the County's wastewater treatment plants. In addition, some of the recycled water from the South Treatment Plant is used off-site for irrigation purposes and public works uses, such as street sweeping and sewer flushing. Recycled water from the Carnation Treatment Plant is sent to the wetlands at the Chinook Bend Natural Area in accordance with the County's commitment to use the wetlands as its primary discharge location rather than the Snoqualmie River. The Brightwater Treatment Plant started distributing recycled water to the Sammamish Valley for irrigating golf courses, nurseries, farms and for commercial and industrial uses.

1. Potable Water Systems

Potable water is provided by Group A public water systems having 15 or more connections, Group B public water systems having three to 15 connections, and individual private wells serving one connection. Exempt wells refer to wells that do not require obtaining a water right permit from the state for withdrawal of water. These exempt wells are subject to all other rules and regulations of the water code other than the requirement to get a permit from the state to withdraw water. Water withdrawn from an exempt well for individual or group domestic water supply cannot exceed 5,000 gallons per day, nor may the water be used to irrigate more than a half-acre of lawn or noncommercial garden. The type of water system required for new development will depend upon whether a proposed development is or is not located within the Urban Growth Area, is or is not within an approved service area of an existing public water system, and is or is not able to provide an adequate water supply as required under Revised Code of Washington 19.27.097 and 58.17.110.

F-232 **Water utilities that obtain water from, or distribute water in unincorporated King County, and water utilities formed as special purpose districts under Title 57 Revised Code of Washington are required to submit water system plans to the county for review and approval and shall describe in their plans how they intend to meet their duty to provide service within their retail service areas, and generally how they plan to meet water service needs in their future service.**

F-233 **In both the Urban Growth Area and Rural Areas of King County, all new construction and all new subdivisions shall be served by an existing Group A public water systems except in the circumstance when no Group A public water system can provide service in a timely and reasonable manner per Revised Code of Washington 70.116.060 and 43.20.260 or when no existing system is willing and able to provide safe and reliable potable water with reasonable economy and efficiency per Revised Code of Washington 19.27.097.**

F-234 **In the Urban Growth Area, individual private wells are not permitted unless application of Policy F-233 to a proposal for a single-family residence on an individual lot would deny all reasonable use of the property. In that case, the well would be allowed only as an interim facility until service by a public water system can be provided. The individual well must meet the criteria of the King County Board of Health Title 13.**

F-235 In the Urban Growth Area, if an existing Group A water provider cannot provide direct or indirect service to new development under Policy F-233, a new public water system may be established if it is owned or operated by the following, in order of preference:

a. By a satellite management agency approved by the State Department of Health under contract with the Group A system in whose service area the system is located, provided that the existing Group A water system remains responsible for meeting the duty to serve the new system under Revised Code of Washington 43.20.260; or

b. By a satellite management agency approved by both the State Department of Health and King County.

All new public water systems formed in the Urban Growth Area shall connect to the Group A water system in whose service area the new system is located when direct service becomes available. Such a connection shall be made by the homeowner or association in a timely and reasonable manner.

F-236 In the Rural Area, King County land use and water service decisions support the long-term integrity of Rural Area ecosystems. Within the Rural Area, individual private wells, rainwater catchment, Group B water systems, and Group A water systems are all allowed. If an existing Group A water provider cannot provide direct or indirect service to new development per the exceptions in Policy F-233, a new public water system or private well may be established if it is owned or operated by the following, in order of preference:

a. By a satellite management agency approved by the state Department of Health under contract with the Group A system in whose service area the system is located, provided that the existing Group A water system remains responsible for meeting the duty to serve the new system under Revised Code of Washington 43.20.260; and

b. By a satellite management agency or an existing Group B system approved by both the State Department of Health and King County.

If service cannot be obtained by means of the above stated options, then water service may be obtained by creation of a new system, use of private wells or rainwater catchment. All new public water systems formed in the Rural Area shall connect to the Group A water system in whose service area the new system is located when direct service becomes available.

F-237 **New public water systems established in the Rural Area shall be owned and operated by the following, in order of preference:**

a. By the Group A public water system in whose service area the system is located, by direct service or satellite management by the Group A system,

b. By a satellite management agency approved by the State Department of Health and providing service within the county and under contract with the Group A system if it is located in a Group A system service area; or

c. By the owners of the lots, which are provided water by a new Group A or B system if not within the service area of an existing Group A system or not within the area covered by a satellite management agency. Approval for any such system shall be conditioned for future ownership or management by a satellite management agency, when such service becomes available, and for periodic review of system operations, as required by Revised Code of Washington 70.119A.060(2).

The State Department of Ecology has determined that the rivers and streams in the major river basins in King County have no water available for further consumptive appropriation without harmfully impacting instream values. For that reason, it has by regulation closed those basins to issuance of new water rights, and has directed that the natural interrelationships between surface and ground waters should be considered in future water allocation decisions in order to avoid adverse impacts to instream flows. The installation and use of wells that are exempt from ecology's water rights permitting process may further harm those rivers and streams when the wells are withdrawing groundwater that is directly connected to the water in the stream. The installation of new exempt wells may also create health and safety problems by interfering with the water supplied by existing wells, and by creating more holes in the ground that can lead to contamination of entire aquifers.

Under King County Code chapter 9.14, the Department of Natural Resources and Parks is to act as lead agency in coordinating the activities of Department of Permitting and Environmental Review and Public Health – Seattle & King County in order to ensure that groundwater quality and quantity are protected, and facilitate implementation of the plans that have been developed to protect groundwater in five groundwater management areas within King County.

F-238 **New subdivisions with more than six single-family lots on Vashon-Maury Island and in basins with closed streams in the Rural Area (as defined in Washington Administrative Code 173-507,508, 509, 510, and 515) may not be served by a potable water system using an exempt well, or a combination of multiple exempt wells. Exempt wells are allowed only in the Rural Area and only under the following circumstances:**

a. **New subdivisions or short subdivisions with six or fewer lots;**

b. **Except as otherwise provided in subsection c. of this policy only one exempt well per subdivision or short subdivision will be permitted unless more than one exempt well is needed to meet the water flow requirements for the subdivision or short subdivision;**

c. **Individual private wells may be used in a subdivision or short subdivision when all lots in the subdivision or short subdivision are twenty acres in area or larger; and**

d. **New developments in the Rural Area served by one or more exempt wells shall not exceed one-half acre of irrigation.**

F-239 **King County shall work with water service providers, the State Department of Ecology and the State Department of Health to track and measure groundwater use and to meet the County's obligation to protect groundwater quality and quantity in Rural Areas, while supporting uses of groundwater that meet public health, resource protection, land use planning, and fish recovery objectives and obligations.**

F-240 **King County shall require any new or expanding Group B water system to have a totalizing source meter and make information from the meter available upon request of King County.**

F-241 **King County shall encourage the adoption of state or local laws and codes to limit the construction of new exempt wells within existing water utility service areas and promote the safe and timely decommissioning of wells no longer in service.**

2. Regional Water Supply Planning

In recent years King County worked cooperatively with many of the larger water utilities in the region to gather information about regional water demand and supply. As a result of potential impacts from climate change on water demand and supply, this effort will become increasing important in future years. King County would like to use this information to help develop a regional water supply plan.

F-242 King County supports initiation of a water planning process for the development of a regional water plan. The planning process should at a minimum cover all of King County, but may include a broader geographic area. The County will work in concert with water utilities and others that participate. Key components of this planning process should include:

a. Involvement, oversight and support of elected officials in the region;
b. Meaningful public participation including the involvement of the state and federally recognized tribes; and
c. Recognition of, and making appropriate linkages with, other state, regional, or local planning processes.

F-243 King County recognizes that a regional water planning process will be a collaborative process. King County's objectives for the process and a resulting plan are that it:

a. Be consistent with, and support, growth management objectives and decisions made by local and regional jurisdictions under the Growth Management Act;
b. Address the need for sufficient flows to achieve salmon recovery objectives of the approved regional recovery plan for species listed under the Endangered Species Act, and recognize tribal water rights;
c. Be consistent with and support the approved water quality and quantity strategies adopted by the region, local governments, and other responsible entities (such as water utilities) in compliance with federal requirements under the Clean Water Act, Safe Drinking Water Act, and other authorities relevant to water quantity and quality;
d. Include provisions for the efficient use of water, including recycled water;
e. Consider the impacts of climate change on water demand and supply;
f. Address the water needs of other specific sectors of the local economy, including agriculture and other industries with significant water uses;
g. Include, to the extent possible, assigned accountability for implementing conservation and developing new supplies and related infrastructure; and
h. Identify, and develop a strategy for, any legislative changes necessary or desirable to implement the plan.

F-243a Results from the King County Equity Impact Review Tool will be used as an important consideration to identify and assess the impacts of proposed service changes, and the county's Equity and Social Justice principles should be used to improve residents' access to the determinants of equity.

F-244 **King County shall participate in the development of a regional water supply plan or plans addressing potable water supply service by multiple water purveyors to ensure that uses of recycled water intended to augment or replace potable water supplies will be considered in the development of any such plans, and for such other purposes as are authorized in the underlying authority for such a plan. King County's participation in the development of such plans shall be carried out in accordance with Revised Code of Washington 90.46.120, and pursuant to processes provided in the underlying planning authority.**

F-245 **Prior to initiation of any process to develop a regional water plan as described in Policy F-243, King County shall work with utilities to conduct a joint assessment of the state of water planning and coordination in the region. Such an assessment should identify where current planning and coordination efforts by and among water utilities address County interests and where there are gaps. The assessment should be used to guide any efforts related to development of a regional water plan.**

3. Utility System Interties

Water utilities obtain water supplies from many varying sources. Some water utilities receive the vast majority of their water supply from wells. Others receive substantial portions from municipal watersheds and reservoirs. The varying water supply sources can differ substantially in terms of dependability of output, so that while one water utility may have excess capacity, a neighboring water utility could be experiencing severe shortages and be unable to adequately serve their customers.

F-246 **King County supports interties that allow the transfer of water resources among water utilities to meet the projected demands for growth where such interties meet the requirements of Revised Code of Washington 90.03.383 and are also consistent with any applicable locally adopted comprehensive plans, regional water supply plans, adopted groundwater management plans, watershed plans, approved Coordinated Water System Plans, Endangered Species Act response requirements and Clean Water Act requirements.**

F-247 **King County supports the development of appropriate regional water intertie capital projects, subject to approval from appropriate local, state, and federal agencies and consistent with Policy F-246.**

4. Water Use Efficiency, Planning, and Management

Water is becoming an increasingly scarce resource, which calls for commitments to improved planning, more efficient water use, and better water management. The impacts of climate change on water demand and supply adds to the need to make efficient use of this scarce resource. As part of its resource management and land use planning responsibilities, the King County Utilities Technical Review Committee reviews water utility plans for those water utilities serving unincorporated King County or otherwise subject to the planning requirements of King County Code chapter 13.24 and ensures the inclusion of elements related to recycled water, water use efficiency, and water conservation in the plans as may be called for under state law, the King County Code, or the King County Comprehensive Plan. As part of its evaluation process, the Utilities Technical Review Committee also encourages water purveyors to include conservation and reuse measures, where applicable, as well as development of new sources to support planned land use with reliable service at a reasonable cost.

The Reclaimed Water Act of Washington State (Revised Code of Washington 90.46) recognizes the value of recycled water in the process to better manage, protect, and conserve water resources. In addition, measures to increase water conservation and expand the use of recycled water for non-potable uses throughout the county are important elements in preparing for potential climate change impacts, and to address water as a recognized limiting factor for Puget Sound and salmon recovery efforts. The King County Code also directs county programs to act as a clearinghouse for data related to groundwater quality and quantity in order to facilitate implementation by King County and others of the groundwater management plans that have been developed for major portions of King County.

F-248 **King County shall partner with utilities to publicize water conservation and encourage best management practices that conserve potable water supply through measures that include use of alternative supplies such as recycled water.**

F-249 **Utilities with more than one thousand service connections required to submit water system plans for approval to King County shall include an evaluation of((-)) recycled water use opportunities by completing King County's Water Reclamation Evaluation Checklist.**

F-250 **King County shall encourage local developers with new projects in unincorporated King County to explore the possibility of using recycled water for nonpotable purposes when a plan for recycled water has been approved for the area.**

F-251 In its review of water system plans, the Utilities Technical Review Committee shall consider the criteria provided in King County Code 13.24.010, 13.24.060, and 13.24.070, and determine the plan's consistency with the following:

a. Applicable provisions of the King County Comprehensive Plan, land use plans, and development regulations adopted under the Growth Management Act;

b. Approved or adopted regional water resource plans, such as basin plans, groundwater plans, watershed-based conservation and recovery plans developed under Endangered Species Act, salmon recovery plans developed under chapter 77.85 Revised Code of Washington, water resource plans developed under chapter 90.54 Revised Code of Washington, watershed plans developed under chapter 90.82 Revised Code of Washington, and a regional water supply plan or water resource management plan;

c. The county's Regional Wastewater Services Plan; and

d. Other applicable provisions of countywide plans managed by King County, as specified in Utilities Technical Review Committee guidance or checklists.

The Utilities Technical Review Committee shall work with state agencies, water utilities, and other parties to develop any necessary rules, policies or checklists to provide clear information and guidance as to the county's expectations for its reviews. For each plan submitted to the county for review, the Utilities Technical Review Committee should have the goal of providing an initial response and comments to the water utility within the same timeframes as the state Department of Health under Revised Code of Washington 43.20.250.

F-252 In reviewing proposals for modified and expanded service area boundaries for municipal water suppliers, the Utilities Technical Review Committee shall consider, in addition to Policy F-251:

a. Compliance by the water system with its water system comprehensive plan, including water conservation elements;

b. Whether it can meet its duty to provide service within its service area, as required under chapter 43.20 Revised Code of Washington; and

c. Consistency with the service provisions of any applicable Coordinated Water System Plan, as adopted in King County Code Chapter 13.28.

The county shall not approve a water system plan with a proposed retail service area where the water system is unable to provide timely and reasonable service for one or more of the reasons identified in Revised Code of Washington 43.20.260. King County accepts and encourages timely and reasonable service by a water utility within its service area through the provision of satellite or remote

ownership or management of facilities that are not physically connected with the water utility's other facilities. This does not preclude a modified or expanded service area boundary for the water system in order to correct problems and provide reliable potable water service to existing water users within the proposed modified service area. The Utilities Technical Review Committee is responsible for making determinations of timely and reasonable service, as provided for under Revised Code of Washington 70.116, and K.C.C. 13.24 and 13.28.

5. Resource Management and Protection

Water system reservoirs and watersheds often serve a number of functions. These functions can include open space, recreation, forestry, and resource management. However, each function must be weighed against the primary purpose of such reservoirs and watershed, which is to provide and protect supplies of potable drinking water.

F-253 **Consistent with Countywide Planning Policies, public drinking water system surface water reservoirs and their watersheds should be managed primarily for the protection of drinking water, but should allow for multiple uses, including recreation, when such uses do not jeopardize drinking water quality standards. Public watersheds must be managed to protect downstream fish and agriculture resources.**

F-254 **Groundwater-based public water supplies should be protected by preventing land uses that may adversely affect groundwater quality or quantity to the extent that the supply might be jeopardized. The county shall protect the quality and quantity of groundwater used as water supplies through implementation of Policies E-493 through E-497 where applicable.**

I. Public Sewers and On-Site Wastewater Treatment and Disposal Systems

King County protects water quality and public health in the central Puget Sound region by providing high quality and effective treatment to wastewater collected from 34 local sewer utilities. The county's Wastewater Treatment Division serves about 1.6 million people within a 420-square-mile service area, which includes most urban areas of King County and parts of south Snohomish County and northeast Pierce County. In addition to treating wastewater, King County also creates resources such as energy, recycled water and biosolids from byproducts of the treatment process.

The County's wastewater system includes:

- three large regional wastewater treatment plants (the West Point Plant in the City of Seattle, the South Plant in the City of Renton, and the Brightwater Plant in unincorporated Snohomish County),
- two small wastewater treatment plants (one on Vashon Island and one in the City of Carnation),
- one community septic system (Beulah Park and Cove on Vashon Island),
- four combined sewer overflow treatment facilities (Alki, Carkeek, Mercer/Elliott West, and Henderson/Norfolk--all in the City of Seattle),
- more than 350 miles of pipes,
- 19 regulator stations,
- 42 pump stations, and
- 38 combined sewer overflow outfalls

King County adopted the Regional Wastewater Services Plan in 1999 to make sure the regional wastewater system keeps pace with growth and meets permitting standards. The Regional Wastewater Services Plan includes a number of planned projects through 2030 to protect public health, the environment and the economy for both present and future wastewater customers, such as:

- building the Brightwater Treatment System to accommodate growth in the northern portion of the wastewater service area;
- improvements to the county's regional conveyance system to meet the 20-year peak storm design standard and accommodate increased wastewater flows;
- improvements to reduce existing and future levels of infiltration and inflow into local collection systems; and
- improvements to control combined sewer overflows so that an average of no more than one untreated discharge occurs per year at each combined sewer overflow site by 2030.

The adopted policies that guide implementation of the Regional Wastewater Services Plan are in King County Code 28.86.010 through 28.86.180.

In addition to King County's role as the regional wastewater treatment provider, Public Health – Seattle & King County is the agency responsible for permitting on-site wastewater treatment and disposal systems (septic systems). In addition, the Utilities Technical Review Committee and the King County Council review and approve sewer utility comprehensive plans.

F-255 In the Urban Growth Area, all new development shall be served by public sewers unless:

a. Application of this policy to a proposal for a single- family residence on an individual lot would deny all reasonable use of the property; or

b. Sewer service is not available for a proposed short subdivision of urban property in a timely or reasonable manner as determined by the Utilities Technical Review Committee. These on-site systems shall be managed by one of the following entities, in order of preference:

1. The sewer utility whose service area encompasses the proposed short subdivision; or
2. The provider most likely to serve the area; or;
3. An Onsite Sewage System Maintainer certified by the Public Health – Seattle & King County.

The onsite system shall meet all state and county approval requirements. The approved short subdivision shall indicate how additional lots to satisfy the minimum density requirements of the zoning will be located on the subject property in case sewers become available in the future. There shall be no further subdivision of lots created under this policy unless served by public sewers.

F-256 In the Urban Growth Area, King County and sewer utilities should jointly prioritize the replacement of onsite systems that serve existing development with public sewers, based on the risk of potential failure. King County and sewer utilities should analyze public funding options for such conversion and should prepare conversion plans that will enable quick and cost-effective local response to health and pollution problems that may occur when many on-site systems fail in an area.

F-257 City-owned parks that are redesignated from Rural to Urban to allow future annexation by a city and that are subsequently served by public sewers shall be tightlined. This policy applies to parks that were redesignated from Rural to Urban on or after September 20, 2004.

F-258 The existing public sewer system in the Town of Vashon cannot be expanded to serve land beyond the boundaries of the town, except as provided in Policy F-264 and as consistent with Title 57 Revised Code of Washington. Onsite systems, community on-site systems or decentralized treatment systems may be used as appropriate for planned growth in other Rural Towns.

F-259 **Sewer facilities such as pump stations, force mains and trunk lines that do not provide connections to the Rural Area may be located in the Rural Area only when they are identified in a King County-approved comprehensive sewage system plan and upon a finding by King County that it is technically necessary in providing service to the Urban Growth Area.**

F-260 **Onsite wastewater treatment systems in the Rural Area and Natural Resource Lands that serve Rural Areas and Natural Resource Lands should be designed, built and operated as permanent methods of sewage disposal.**

F-261 **King County should monitor onsite wastewater systems that have shown evidence of failure or potential for failure. The data should be used to correct existing problems and prevent future problems. King County should analyze public funding options for correcting on-site wastewater system failures and only as a last resort in Rural and Natural Resource Lands, and as otherwise consistent with this plan, conversion to community sewage systems or installation of public sewers.**

F-262 **Collective on-site systems may be used only in the following circumstances in the Rural Area and Resource Lands:**

a. Existing on-site systems are failing within an area and the Seattle/King County Department of Public Health concurs that long-term individual on-site system repairs are not feasible or water quality is threatened by the presence of or potential for health hazards resulting from inadequate on-site wastewater disposal methods;

b. An authorized public agency will manage the community system; and

c. The community system is designed only to serve existing structures and lots and cannot be used as a basis to increase density or to expand permitted nonresidential uses. Substandard vacant lots must be combined to the extent feasible to meet rural density policies. Management of the community system must be by an authorized public agency.

Greywater is residential wastewater generated from bathtubs, showers, bathroom sinks, washing machines, dishwashers, and kitchen sinks. It includes sewage from any source in a residence or structure that has not come into contact with toilet wastes. Greywater comprises 50-80% of residential wastewater.

F-263 **King County supports innovative technologies to process greywater for safe use on-site in the Rural Area and on Natural Resource Lands.**

F-264 **Except as otherwise provided for in this policy, public sewer service shall be prohibited in the Rural Area or on Natural Resource Lands.**

a. Public sewer service may be expanded to the Rural Area or to Natural Resource Lands, only:

1. Where needed to address specific health and safety problems threatening the use of existing structures and the use of septic or other onsite wastewater systems has been determined by King County to be not feasible; or

2. To serve a new school authorized to be located in the Rural Area by R-327.

b. Public sewers may be extended, pursuant to this policy, only if they are tightlined and only after a finding is made by King County that no reasonable alternative technologies are feasible.

c. Public sewers that are allowed in the Rural Area or on Natural Resource Lands pursuant to this policy shall not be used to convert Rural Area land or Natural Resource Lands to urban uses and densities or to expand permitted nonresidential uses.

J. Solid Waste

King County's *Comprehensive Solid Waste Management Plan,* prepared by the Solid Waste Division of the Department of Natural Resources and Parks, guides the management of solid waste in the unincorporated county and for cities with which the county has interlocal agreements. The *Comprehensive Solid Waste Management Plan* presents policies, recommendations and goals for the following elements of solid waste management: system planning, waste prevention, recovery and recycling, solid waste collection and processing, the transfer system, landfill management and solid waste disposal, and system financing.

F-265 **Regional solid waste planning should integrate the principles of environmental stewardship and sustainable development into all aspects of solid waste management.**

F-266 **Solid waste should be collected, handled, processed, and disposed in ways that reduce waste, conserve resources, and protect public health and the environment.**

F-267 King County should achieve Zero Waste of Resources by 2030 by targeting areas **of the waste stream that have the greatest potential for diversion and recovery.**

F-268 **Solid waste management should be planned, and transfer and disposal capacity provided, on a regional basis.**

F-269	King County shall operate a transfer system that is dispersed throughout the county to ensure access to safe, reliable, efficient, and affordable solid waste services, and improves recycling opportunities for residents and businesses. King County should continue to provide facilities for self-haulers.
F-269a	King County should consider demand management strategies that maximize the efficiency of the transfer system and encourage use of solid waste curbside collection services.
F-269b	In order to support achieving a 70% recycling goals, King County should work with partners and jurisdictions to encourage implementation of frequency and separation policies for curbside collection of garbage, recyclables, and organics throughout the county, including in unincorporated areas.
F-270	King County should maximize the capacity and lifespan of the Cedar Hills Regional Landfill, subject to environmental constraints, relative costs to operate, stakeholder interests and overall solid waste system optimization.
F-271	King County shall encourage sustainable development and development of markets for recyclable materials, and provide consumer education in the public and private sectors regarding green building practices, product stewardship, recycling, purchasing, and consumption in order to reduce the amount of waste disposed.
F-271a	King County should consider whether opportunities to increase energy recovery from select solid waste materials including organics, mixed plastics, and the non-recyclable portion of the waste stream are beneficial in terms of cost, the natural environment, greenhouse gas emissions and community impacts, as well as whether any such energy recovery facilities might be more appropriately located outside King County.
F-271b	Results from the King County Equity Impact Review Tool will be used as an important consideration to identify and assess the impacts of proposed service changes, and the county's Equity and Social Justice principles should be used to improve residents' access to the determinants of equity.

K. Stormwater Management

Stormwater runoff occurs when precipitation runs off the landscape and picks up pollutants, including pesticides, fertilizers, pet wastes, oils, metals, and many other chemicals. These pollutants enter surface and ground waters,

disrupt ecosystems, and threaten public health. Runoff can also cause erosion, create higher peak flows in streams and rivers in winter and, because of reduced infiltration, create lower flows in summer.

Early King County stormwater management strategies primarily focused on reducing the risk of localized flooding, without concern for potential adverse impacts on receiving water bodies. Over time, experts recognized the harm stormwater runoff was having on receiving waters and regulations have been put into place to address those impacts. Current stormwater management programs and policies focus on protecting the quality and beneficial uses of surface and ground waters and are a requirement of the federal Clean Water Act.

Prevention or mitigation of flooding, erosion, sedimentation, and water quality and habitat degradation is important for both the built and natural environments. Stormwater water management activities address the quantity and quality of stormwater runoff entering the natural environment as well as its quality. As described in Chapter 5: Environment, the management of stormwater runoff is generally driven by the National Pollutant Discharge Elimination System Phase I Municipal Stormwater Permit and the County's Stormwater Management Program plan, which can be found online at: http://www.kingcounty.gov/services/environment/water-and-land/stormwater/pollution-discharge-permit/annual-reports.aspx

The lack of stormwater controls in older developed areas is one of the most significant problems impacting receiving water bodies in King County and preventing Puget Sound recovery. Although King County has been developing and applying best available stormwater controls to new development since the late 1970s, the application of water quality controls and more effective flow controls did not occur until the early 1990s.

Consequently, nearly all development occurring prior to 1990 has little or no flow control and no water quality control. In unincorporated King County, over two-thirds of the developed land was created prior to 1990. This amounts to about 150 square miles of land on which native forest was converted to impervious surfaces, lawn and landscape surfaces, and pasture and crop land surfaces without stormwater controls to mitigate the increased runoff and pollution generated by these surfaces.

The County is also working to promote site development that preserves natural hydrologic processes by protecting and enhancing native vegetation and soils, reducing impervious surfaces, and managing stormwater onsite. This approach, termed Low Impact Development, is used to reduce impacts on aquatic resources. In the King County Surface Water Design Manual, King County provides a menu of Low Impact Development options for individuals planning new or re-development projects. King County will continue to help minimize new impervious surfaces through code and incentive programs that keep lands in forest and agricultural uses. Implementing Low Impact Development satisfies requirements of the National Pollutant Discharge Elimination System Permit, while helping to protect the region's streams, rivers, lakes, and Puget Sound from harmful pollutants.

The County has identified watershed based management efforts as a strategy that simultaneously integrates floodplain connectivity, salmon recovery, habitat restoration, economic development, agricultural preservation, and principles of equity and social justice. The County will leverage alternative funding mechanisms, and engage in various partnerships with groups that include, but are not limited to, the existing National Pollutant Discharge Elimination System permitted jurisdictions, Water Resource Inventory Areas, the Puget Sound Partnership, and Local Integrating Organizations to undertake a collaborative watershed-based approach to restoring aquatic ecosystems.

King County has been and will continue to be a leader in developing and implementing state-of-the-art stormwater management strategies including education and outreach, source control programs, basin or sub-basin planning for retrofitting in built out areas with inadequate stormwater controls, and mapping and maintenance of stormwater infrastructure. Strategies for managing stormwater runoff are continuing to evolve. Development of regional, collaborative approaches, including the creation of watershed basin plans across multiple disciplines, will be the next evolution of stormwater management.

F-272 **To reduce flooding, erosion and sedimentation, prevent and mitigate habitat loss, enhance groundwater recharge and prevent groundwater and surface water quality degradation, consistent with the Growth Management Act, King County shall manage stormwater through plans, programs and regulations developed by King County in cooperation with affected jurisdictions and agencies whenever possible.**

F-273 **A watershed approach shall be taken for stormwater management, with responsibility shared between King County and affected jurisdictions. This approach should emphasize prevention of surface water and groundwater degradation through education programs, retrofits of existing stormwater controls or the placement of new controls, and implementation of best management practices to reduce pollution entering the region's groundwater and surface waters, including Puget Sound.**

F-274 **In the Rural Area and Natural Resource Lands, King County shall minimize the use of constructed facilities for stormwater management and, through Low Impact Development, maximize the use of natural systems, provided that the ecological functions of the natural systems are not harmed. The County should provide incentives to keep these natural systems intact. Low Impact Development is also preferred in the Urban Growth Area, but it is recognized that structural systems may be needed to realize urban growth and density goals in these areas.**

F-275 King County will plan and manage stormwater by basin or sub-basin consistent with Policies E-463 and E-464. To accomplish this goal, stormwater runoff should not be diverted from one basin or sub-basin into another, unless no other reasonable alternative is available for managing run-off within the same basin. Where such diversions are permitted, King County will require environmental analysis and mitigation adequate to protect surface water and groundwater resources from significant adverse impacts.

F-276 In the Urban Growth Area, regional and shared surface water management facilities should be encouraged to support infill development to preclude the need for individual on-site facilities, provide development incentives, encourage efficient use of land, and reduce overall facility maintenance costs. These facilities should be planned and financed through public and private partnerships.

F-277 Stormwater programs including public education, stormwater system mapping, construction of regional and shared stormwater facilities, retrofitting developed areas, and operation and maintenance programs should be funded through an adequate and equitable funding mechanism. Stormwater facilities required for new development, redevelopment and retrofitting should be designed and built for aesthetic value, as well as for low-cost, long-term maintenance.

F-278 King County shall continue to encourage, support and require the use of low impact development as a part of its strategy to mitigate stormwater impacts from new development to the maximum extent feasible.

F-279 King County should incorporate state-of-the art stormwater management techniques including Low Impact Development into the design, construction and operation of all county facilities and county-funded projects to the maximum extent feasible.

F-280 King County shall continue to promote the preservation of native vegetation and soils and the restoration of disturbed soils on rural residential zoned parcels to the maximum extent feasible. Minimized impervious areas and the dispersion of stormwater runoff from impervious surfaces into native vegetation in accordance with the Surface Water Design Manual are the preferred methods of stormwater management in the Rural Area.

F-281 **King County should work with residential and commercial developers to incorporate state-of-the art stormwater management techniques, such as Low Impact Development, that protect native vegetation and soils, restore disturbed soils by increasing the use of compost, facilitate reuse of resources such as recycled or harvested water, reduce the carbon footprint of the project, and minimize impervious surfaces.**

F-282 **When King County provides technical assistance and incentives for the use of state-of-the art stormwater management techniques, it shall be at no cost to any private sector development.**

F-282a **King County should work with landowners, other jurisdictions, the state Department of Health, sewer districts, and the Puget Sound Partnership to develop effective strategies and additional resources for working with landowners to provide technical assistance and requested support regarding managing onsite septic systems, and proactively addressing failing septic systems in environmentally sensitive areas.**

F-283 **King County shall identify and evaluate potential changes to land use development regulations and building codes to support and promote state-of-the art stormwater management techniques.**

F-284 **King County should work cooperatively with other jurisdictions to develop and implement plans and programs that address the appropriate recycling, reuse, reclamation and disposal of the materials generated from maintenance of stormwater infrastructure.**

F-285 **King County shall work with jurisdictions to ensure that storm and surface water management facilities are transferred from King County to the local jurisdiction that annexes or incorporates that portion of King County.**

L. Floodplain Management

Six major river systems flow through King County – the South Fork Skykomish, Snoqualmie, Sammamish, Cedar, Green and White. These rivers, and their major tributaries, pass through lands ranging in use from forested to agricultural to urbanized cities. Each of these major river systems are unique in their geology and geomorphology as well as the extent in which the hydraulics of the rivers have been altered by dams, levees and bank hardening. All of these rivers are used by federally listed endangered species of salmonid.

Within unincorporated King County over 61% of the mapped floodplain is within land zoned for agriculture, forest or mining. Another 32% is zoned as rural leaving just under seven percent within the urban area, mainly

contained within Potential Annexation Areas around the City of Carnation. Consequently much of the flood risk in unincorporated King County is to natural resource lands, primarily agriculture, and rural lands with a lower relative risk to residential and resource based commercial activities. Most of these rivers also pass through highly urbanized incorporated cities that are important economic centers for King County and the Puget Sound region. These river segments are often constrained by levee systems that provide varying level of flood risk reduction.

Both the Washington State Growth Management Act, Chapter 36.70A and Title 86 of the Revised Code of Washington, Flood Control require interlocal coordination for effective flood hazard management. Counties are directed to prepare comprehensive flood hazard management plans with participation of the cities. Once King County adopts the plan it is binding on all jurisdictions within the county. Flooding is a countywide issue impacting public safety, regional economic centers, Agricultural Production Districts, transportation corridors, and public and private properties. As such, King County is a regional service provider for floodplain management.

F-286 **King County shall participate with cities to prepare, update and implement comprehensive flood hazard management plans that meet or exceed standards established by the National Flood Insurance Program and Washington State Flood Control statutes.**

F-287 **King County shall include equity and social justice principles in planning and implementing the King County Flood Hazard Management Plan to assure floodplain property owners and residents are given equitable access to flood risk reduction services. Outreach should consider vulnerable populations that may face barriers to accessing services and programs based on age, income, disability, English language proficiency, race and ethnicity, or other factors.**

In 2011 King County celebrated the 50th anniversary of the King County Flood Warning Program, which is responsible for the collection, analysis and dissemination of flood data and forecasts to individuals and organizations and for coordinating the response to flooding.

F-288 **King County shall maintain a regional flood warning program in King County.**

There is now evidence that climate change is resulting in significant changes in temperatures; sea level rise; and timing and magnitude of stream and river flows, resulting in impacts on plant and animal species, water supply and humans. King County's ability to adapt to these changing conditions will likely depend on the policy decisions made today. King County can expect to see more frequent and severe flooding and a shifting of when storm events occur during the winter months.

F-289 **King County should continue to assess and revise current flood warning phases based on the most current data on hydrology and climate change predictions and modify the King County Flood Warning Program, as needed, to reflect these revised flood phases.**

F-290 **King County should assess the most appropriate level of service for flood risk reduction along river segments based on existing and predicted development density, land use, and hydrologic conditions.**

F-291 **King County will review available information on the potential impacts of climate change on winter floods, and consider those potential impacts when updating the flood risk reduction policies and capital improvement projects for the King County Flood Hazard Management Plan.**

King County has prepared a climate change scenario map for Vashon-Maury Island based on studies from the University of Washington's Climate Impacts Group as well as the most current data on storm-induced velocity wave action. This map estimates an increase in total water level ranging from 0.5 to 6.0 feet based on an assumed two-foot sea level rise over the next 100 years.

F-292 **King County should encourage property owners on Vashon-Maury Island to consider the estimated increase in water level reflected on the best available sea level mapping and information when constructing new structures or making substantial improvements to existing structures.**

King County works with the U.S. Army Corps of Engineers to construct and maintain flood levees along the Lower Green River. Under Public Law 84-99, the U.S. Army Corps of Engineers is authorized to provide emergency assistance to cost-share and construct levee repairs following a flood disaster. However eligibility for this cost-sharing program requires that levee sponsors (often local jurisdictions) comply with the U.S. Army Corps of Engineers Public Law 84-99 program standards as outlined in the Rehabilitation and Inspection Program.

An *Interim Policy for Determining Eligibility Status of Flood Risk Management Projects* was issued in 2014 and its primary effect was that vegetation no longer served as a criterion for determining a levee's eligibility for the Public Law 84-99 program. So long as vegetation in the vicinity of Public Law 84-99 levees is maintained by local sponsors to support levee inspections, the national levee vegetation standards for risk reduction no longer affect the eligibility of King County's levees.

The Green River System Wide Improvement Framework Vegetation Plan provides recommendations for vegetation planting and maintenance practices, in the vicinity of levees and floodwalls enrolled within the Public Law 84-99 program. These recommendations acknowledge that, while vegetation may pose a risk in some

situations, King County has found through many years of experience that vegetation can be incorporated into levee designs and when properly maintained, contribute to the resiliency of the levee system. King County believes that bioengineered techniques provide a stronger, more sustainable levee and revetment system that will reduce long-term maintenance and repair and contribute toward the recovery of endangered species.

F-293 **King County shall continue to work with the U.S. Army Corps of Engineers, the Puget Sound Partnership, and other regional partners to develop a science-based vegetation management framework that provides for safe and effective levees, functional riparian habitat, and cost-effective use of limited resources.**

The September 2008 National Marine Fisheries Service Biological Opinion on the Federal Emergency Management Agency's National Flood Insurance Program raises specific concerns about the application of the Corps vegetation management standards in the Puget Sound region. The Biological Opinion directs the Federal Emergency Management Agency to recognize only those vegetation standards that "enable the riparian vegetation to function in support of salmon habitat forming processes."

F-294 **King County will assess participation in the U.S. Army Corps of Engineers Public Law 84-99 Program to ensure compliance with the National Marine Fisheries Services Biological Opinion on the Federal Emergency Management Agency National Flood Insurance Program standards for levee vegetation, as well as cost-effective maintenance and repair of levees.**

The Biological Opinion for the National Flood Insurance Program established 'reasonable and prudent alternatives" that may be taken to reduce the adverse effects of development with the 100-year floodplain. Compliance with the Biological Opinion is required in order to participate in the National Flood Insurance Program.

F-295 **King County will maintain compliance with the National Flood Insurance Program by:**

a. Assessing the projects and programmatic actions recommended in the King County Flood Hazard Management Plan for compliance with the Biological Opinion prepared for the Program; and

b. Making necessary amendments to the Plan and its implementing development regulations.

In 2007 King County established the King County Flood Control District to protect public health and safety, regional economic centers, public and private properties and transportation corridors. The Flood Control District adopted the 2006 King County Flood Hazard Management Plan as its comprehensive plan. A private firm, ECONorthwest, was hired to study the economic benefits of implementing the plan. This report, the "Economic

Connections Between the King County Floodplains and the Greater King County Economy," estimated that a one-day shutdown of economic activity in the King County floodplain areas would result in at least $49 million in forgone economic output in the region (2007 dollars). The study also found that, 52,000 people in King County commute into or out of the 100-year floodplain for work.

Implementation of the 2006 King County Flood Hazard Management Plan has played a significant role in protecting King County's economic base. The 2006 Flood Hazard Management Plan is now being updated.

F-296 **King County will work cooperatively with the King County Flood Control District, cities and other stakeholders to implement the Flood Hazard Management Plan to protect public safety, prevent property damage and help protect the greater King County economy, consistent with the Growth Management Act.**

F-297 **Consistent with guidance from Federal Emergency Management Agency and the U.S. Army Corps of Engineers, King County's risk reduction strategies should focus first on risk avoidance, followed by actions intended to reduce vulnerability in at risk areas. New levees and other flood facilities should be the last rather than the first line-of-defense.**

F-298 **King County shall continue to promote the purchase of flood insurance to businesses located within the floodplain, including those businesses located behind accredited levees, to protect the economic value of the business and reduce the vulnerability to the region's economic activity from a larger but less frequent flood event.**

F-299 **King County should continue to discourage new, at-risk development in mapped flood hazard areas.**

F-299a **King County should seek to site new critical public facilities outside of the 500-year floodplain.**

Levee setbacks (moving levees away from the river channel) can provide a higher level of risk reduction, reduce future maintenance costs, enhance habitat, and provide open space benefits. However, levee setbacks require purchase of additional right-of-way and, in some cases, relocation of homes and businesses. The county has relocated homes from high hazard residential areas along the Tolt, Raging, Snoqualmie, Middle Green, and Cedar Rivers. Levee setbacks can be more challenging in urban areas with higher land costs, well established businesses, and more extensive relocation needs.

F-299b **King County should work with cities, businesses, and landowners to evaluate the alternatives for levee setbacks that would provide a higher level of risk reduction, reduce long-term maintenance costs, and enhance habitat while promoting long-term economic resilience and vitality.**

III. Energy and Telecommunications

King County's economy and quality of life depend on readily available, affordable and clean energy and telecommunications resources. Energy and electronic communications systems provide important public services and their implementation must be coordinated with land use planning. The sustainable development and efficient use of energy resources can ensure their continued availability while minimizing long-term costs and impacts to the individual, society, and the shared environment.

In order to help mitigate global climate impacts resulting from human energy use, King County is planning its energy uses in ways that will reduce the release of greenhouse gases.

Toward that goal, King County implemented the 2010 King County Energy Plan and the Strategic Climate Action Plan, which includes the following objectives for reducing energy use and greenhouse gas emissions in King County:

1. Reduce energy use through continuous improvements in facility and equipment efficiency, procurement, construction practices, and resource conservation;
2. Increase transit use and provide transportation choices that reduce overall energy use and emissions in the county, while improving the efficiency of King County's fleet;
3. Be a leader in early adoption and promotion of innovative technology for buildings and vehicles with a focus on electric vehicles;
4. Increase the production and procurement of renewable energy and the development of waste-to energy applications; and
5. Pursue sustainable funding strategies for energy efficiency, renewable energy projects, waste-to-energy projects and greenhouse-gas-reduction efforts.

The Strategic Climate Action Plan provides targets for reducing energy usage in operations and increasing the amount of renewable energy that the county produces or uses. These targets are measured for the county government as a whole; divisions are directed to make policies and plans consistent with the King County Strategic Climate Action Plan and implement those as practical, considering the Plan and their other service priorities. Some divisions may exceed the targets, while others may not meet them in given years – but all divisions will use the Strategic Climate Action Plan as the basis for strategic energy planning and direction.

King County divisions are taking steps to translate countywide energy targets into agency specific plans and action. Agency specific plans are important steps that support progress towards countywide targets.

The Strategic Climate Action Plan sets the county's long term goal of reducing its greenhouse gas emissions from government operations, compared to a 2007 baseline, by at least at least 80% by 2050. In order to accomplish this goal, the county is dedicated to reducing its energy use, which most heavily contributes to its greenhouse gas emissions. Energy reduction goals are included in the Strategic Climate Action Plan. In its government operations, the county set buildings and facilities normalized energy use reduction goals of five percent reduction by 2020 and 10% by 2025, as measured against a 2014 baseline. In its vehicle operations, the county set a reduction goal of at least 10% of its normalized net energy use by 2020, again measured against a 2014 baseline.

Various local, state, and federal agencies regulate retail energy providers in King County. Gas and electric utility resource and conservation plans are approved by the utilities and other agencies through a public process. The Washington Utilities and Transportation Commission reviews and accepts plans of investor-owned electric and gas utilities, the Seattle City Council approves the plans of Seattle City Light and Snohomish Public Utility District is governed by a utility board. Electric and gas utilities operate in King County under franchises with the county for use of the public right-of-way. The Utilities and Transportation Commission also defines the costs that investor-owned utilities can recover, approves rates, sets service standards and resolves customer complaints.

Telecommunications services are regulated by several entities, including the Federal Communications Commission and the Washington Utilities and Transportation Commission. King County has some regulatory authority over telecommunications services through franchises and the development approval process.

A. Energy

1. Consistency with Land Use Plans

State law mandates that electric and gas public service companies provide the same level of service on a uniform basis, regardless of location. (Revised Code of Washington 80.28.110). Policies in this chapter encourage the utilities to prioritize capital improvements in a manner consistent with land use.

F-301 **Energy providers' resource and facility plans should be consistent with the King County Comprehensive Plan and should provide for a reliable source of energy in the event of natural disaster or other potential threats of disruption to service.**

Disruption of traffic due to public and private road projects frequently occurs in King County. Policies in this chapter support existing programs to notify utilities of upcoming projects to build, expand, or maintain county roads so utility and road construction can be coordinated. Distribution systems for gas, electric and telecommunications installation in new construction now have separate permits. Permit consolidation is desirable as a means to expedite review while protecting the environment.

F-302 **King County should coordinate public road construction and maintenance projects with utility construction and maintenance.**

Appropriate planning, such as increased housing density, transit-oriented development and walk-to-work housing can significantly reduce regional energy use over time. Similarly, land use regulation can support increased availability and use of renewable energy. For example, consideration of solar access in land use codes and building siting can increase the potential for solar energy use. Policies in this chapter encourage such energy-conscious development.

F-303 **King County should encourage land uses and development that will improve energy efficiency, and should support the expansion of renewable energy resources through development regulations, prudent variances and active incentive programs when the benefits of doing so outweigh the costs.**

2. Energy Efficiency, Conservation and Alternative Energy Sources

King County Countywide Planning Policy CO-6 states that "aggressive conservation efforts shall be implemented to address the need for adequate supply for electrical energy and water resources, protect natural resources, and achieve improved air quality." King County has a continued commitment to energy efficiency, conservation, use and production of renewable resources and quality enforcement of the energy code. Recent recognition of climate change and other negative impacts of energy infrastructure have brought the need to improve the county's energy use patterns and supplies into the forefront of policy discussions. King County's current energy use patterns and energy supplies could be modified and improved to reduce air pollution (including greenhouse gas emissions), conserve non-renewable resources important to future generations, and help to limit the growth in energy costs.

F-304 **All King County departments and divisions shall use the Strategic Climate Action Plan as the basis for strategic energy planning and direction.**

The Strategic Climate Action Plan sets the county's long term goal of reducing its greenhouse gas emissions from government operations, compared to a 2007 baseline, by at least at least 80% by 2050. In order to accomplish this goal, the county is dedicated to reducing its energy use, which most heavily contributes to its greenhouse gas emissions. Included in the Strategic Climate Action Plan were short term goals for energy reduction. For 2015, in its government operations for buildings and facilities, the county set a reduction goal of 15% normalized net energy use as measured against the 2015 baseline. In its vehicle operations, the county set a reduction goal of at least 10% of its normalized net energy use, again measured against a 2007 baseline.

To measure its progress in reducing energy consumption, the county uses the process of "normalizing" energy use, which provides a measure of the energy use per unit of service value delivered (units of energy / units of service delivered). Application of this methodology is typically adjusted for weather, with the Wastewater

Treatment Division making adjustments according to weather and wastewater flow. Normalization is intended to reflect actual energy use reductions given varying weather conditions compared to the baseline.

Reaching the specified energy reduction targets directly reduces the county's greenhouse gas emissions.

F-305 **King County shall plan for further reduction in its energy use from government operations by setting near and long term energy use reductions, consistent with its long term goals of working to continuously reduce operating costs and environmental impacts, maximizing energy efficiency and minimizing waste.**

F-306 **King County shall maximize the production, use and marketing of renewable energy at its wastewater treatment plants and Cedar Hills Landfill, and pursue other renewable energy generation projects where cost-effective.**

F-307 **King County should foster the development and increased use of clean, renewable and alternative fuel and energy technologies**

F-308 **King County shall:**

a. **Continue to increase the energy efficiency of county buses and vehicles, through adoption and promotion of innovative technology vehicles and greenhouse gas reducing fuels with a focus on electric vehicles, all-electric battery buses and associated infrastructure, where appropriate; and**

b. **Consistent with policy E-203, collaborate with other local governments regionally, nationally and internationally to develop a common approach to accounting for the greenhouse gas emissions resulting from the operation of its public transportation system, for offering carbon offsets or other environmental attributes for purchase and for claiming rights to any greenhouse gas emissions reduction attributes associated with its operation.**

F-308a **Consistent with Ordinance 17971, King County Metro Transit should implement a strategy to sell transit carbon offsets and other environmental attributes to individuals, public entities and private entities. To reduce their greenhouse gas emissions, the King County wastewater treatment division and solid waste division should consider purchasing transit carbon offsets from King County Metro Transit.**

In support of its environmental, long-term sustainability and energy security goals, King County will provide leadership by shifting to the use of renewable resources. Renewable resources include those sources listed in Revised Code of Washington 19.285.030(20), now and as may be amended, as well as "service by-products",

such as including methane gas generated from the operation of the county's landfill and wastewater treatment plants. Although renewable energy sources can be more expensive than traditional power sources on a per unit basis, careful choices of technology and expanded economic considerations including "triple bottom line" life-cycle cost analyses show that in proper applications the benefits of some renewable energy technologies already exceed their costs.

Additionally, subsidies and grants are available for some renewable power systems. For example, solar electric power is cost effective in some applications at county facilities and rapid cost changes in this technology will require regular reconsideration of its use as an addition or alternative to traditionally produced electricity.

F-309 **King County shall maximize practical applications of electricity and heat production from renewable resources.**

F-310 **King County shall support the conversion of renewable resources and service by-products to energy for beneficial use consistent with E-208. King County shall claim and/or generate economic benefit for any and all renewable energy and greenhouse gas reduction attributes resulting from renewable energy generation.**

King County, working with its utility partners, has a long and successful history of energy efficiency and conservation projects. The combination of generally increasing energy costs and climate change mitigation goals will require that the county continuously increase its energy efficiency for many years to come.

F-311 **King County should encourage its energy utilities to provide energy efficiency services and renewable energy options to all their customers. Additionally, the County should encourage the state and energy utilities to mitigate the environmental and greenhouse gas emissions impacts of energy and, as conservation and alternative energy sources demonstrate capacity to address energy needs, phase out existing coal and other fossil fuel based power plants, and replace such facilities with resource efficiency and renewable generation sources.**

To achieve energy goals already set and more aggressive goals expected in the future, a coordinated, strategic approach to energy management and investment in energy efficiency is being implemented in the county.

F-312 **King County shall develop and adopt strategic energy management, efficiency and conservation programs in its own operations, including:**

a. **Consolidated energy accounting of county facilities to establish baseline energy performance for the county, benchmarking of facilities against comparable best practices where possible, setting goals for facility efficiency improvements, and measuring and reporting progress toward county energy goals;**

b. **Energy efficiency audits of all county facilities over 20,000 square feet and the creation of action plans for reducing energy use at such facilities;**

c. **Energy management plans for energy-intensive or special-purpose county facilities such as wastewater treatment plants, correctional facilities and transit bases that focus on least-cost management and that include specific approaches for each facility's use, as well as the production and sale of energy where appropriate;**

d. **Mandatory energy efficiency and resource use guidelines for operation and maintenance of all county-occupied facilities, while recognizing the unique operating requirements of specialty facilities;**

e. **Programs to encourage employees to implement energy conserving measures at work; and**

f. **Incentives, including retaining a portion of energy cost savings, to county agencies and departments for achieving energy efficiency.**

F-313 **King County should benchmark all applicable county buildings as a basis for measuring energy efficiency improvements, using the Environmental Protection Agency Portfolio Manager Tool, where applicable.**

F-314 **King County should purchase only certified energy efficient appliances and office equipment (such as ENERGY-STAR labeled equipment) when available for specific equipment and shall require consideration of energy efficiency and life-cycle costs in all procurement decisions as an element of determining the lowest responsive bids.**

Meeting the County's energy goals will require a commitment to pursuing multiple funding strategies. Grants, loans, and utility rebates provide essential seed money for up-front investments in energy efficiency projects, and the County should seek them aggressively. County departments should use the county's Fund to Reduce Energy Demand loan program to fund cost effective energy and water efficiency projects that cannot otherwise be funded.

F-315 **King County shall use its Resource Life Cycle Cost Assessment calculator to evaluate energy projects to determine if the operations and maintenance cost savings over the life of an energy project's assets exceed the implementation costs, taking into account all identified costs associated with energy efficiency and renewable energy projects.**

F-316 **Efficient energy consumption, conservation, the use of renewable technologies, and energy responsible land use decisions should be a priority in King County. King County promotes the maximum use of energy conservation and renewable energy resources now, while leaving options for increasing conservation and renewable technologies in the future.**

District energy systems provide space and water heating and/or cooling to multiple buildings, through pipes originating from a central heating or cooling source – generally a central energy plant. King County government is unique in that it also has the ability to serve as a district heat supplier through the potential for buildings to utilize the energy value of the warmer-than-ambient water in the County's almost 400 miles of wastewater conveyance. Centralizing the generation of heat and/or cooling through a district plant and/or delivering energy content to multiple facilities through a distribution network can eliminate the need for equipment in each individual building.

District heating and cooling plants can be constructed with energy efficiency in mind. Central plants that provide combined heat and power can offer increases in energy efficiency compared to on-site heat generation in individual buildings, and can be an effective method of cutting carbon emissions. The technologies used to generate energy from wastewater are emerging, and offer the potential to achieve environmental and economic benefits through the recovery of resources from wastewater.

F-317 **King County should pursue district energy opportunities to maximize resource recovery efforts, in ways that can offer economic and environmental benefits to the county and community at large. This will be done by pursuing opportunities such as encouraging the use of wastewater for heat extraction and other forms of energy generation in the county's wastewater conveyance system.**

F-318 **King County should pursue combined heat and power district energy opportunities in its own facilities, as well as in partnership with other public and private entities, that result in reduced energy consumption, greenhouse gas reductions and financial savings to the county.**

F-319 **To implement the Countywide Planning Policy of aggressive conservation and promotion of regional air quality, King County should:**

- **a. Effectively enforce the energy code as part of the general permit process;**
- **b. Provide density incentives through the zoning code for energy-efficient developments;**
- **c. Continue to improve the fuel efficiency and emissions of the county-owned fleet of motor vehicles;**
- **d. Work with utilities to become a model of energy efficiency in facilities owned or operated by Metropolitan King County; and**
- **e. Seek cost-effective ways to capture energy from county operations which other-wise would be lost, such as methane gas from landfills and sewage treatment.**

Methane generated from sewage treatment plants and landfills is a potential source of energy. In addition, methane is a potent greenhouse gas emissions. As a result, capturing methane from these facilities and putting it to a productive use provides a dual benefit.

The moderate climate of the Puget Sound region provides an opportunity for significant use of solar energy. Relatively low heating and cooling needs in much of the county allow for the potential for passive and active solar technologies to meet heating and cooling needs with proper building design. Similarly, the mild climate and available solar energy allows growing some food year round, potentially decreasing the use of fossil fuels for a portion of residents' food needs. This opportunity for local investments in passive and active solar design and in local food production can only be realized if building and neighborhood site design provides for solar orientation and through the development of regulations to protect solar access.

Although permit staff attempt to accommodate solar design, current regulations do not typically take into account solar orientation or solar access protection from development on neighboring properties. In addition, regulations, such as building height and building setback allowances, road access requirements, and protections for critical areas, stormwater, and native vegetation, may limit suitable locations for providing solar access. Requirements to create and maintain view corridors may or may not provide solar gain. In order to protect solar access, landowners or developers enter into voluntary solar easements. As an alternative, some municipalities have incorporated measures to protect solar access in their comprehensive plans and development regulations. King County should study these measures and implement best practices in this area in support of the county's larger sustainability goals.

F-321 **King County encourages:**

a. **the use of solar energy;**

b. **the siting of roads, lots, landscaping and buildings for improved solar orientation;**

c. **the use of passive solar design and active solar technologies; and**

d. **the protection of solar access.**

F-322 **King County should consider passive and active solar energy collection systems in all new facility designs and major rehabilitations. Solar electric generation systems interconnected with local utilities should be employed where cost-benefit analysis shows net benefits, considering emergency power potential and capitalizing on utility net-metering and power production credit programs.**

Gas and electric utilities offer low-income energy assistance programs. All feasible actions to increase the availability of conservation measures to low-income residents should be pursued, such as public-private cooperation and combining existing rehabilitation efforts with installation of energy efficiency measures.

F-323 **King County should expand the availability of energy efficiency measures to low-income residents.**

3. Electric Utilities

The four-state Seventh Northwest Electric Power and Conservation Plan (also called the 6th Power Plan) produced in 2016 by the Northwest Power and Conservation Council provides a blueprint for the development of electricity resources in the region. Bonneville Power Administration and other federal agencies, the region's utilities, state and local government, private businesses and the people of the Northwest all participate in implementing the council's goals. Electric utilities serving King County include Bonneville Power Administration, Seattle City Light, Snohomish Public Utility District and Tanner Electric Cooperative. Puget Sound Energy provides both electricity and natural gas service.

A number of significant events in the past years have influenced the electric power business in King County's power markets. These include:

1) Ongoing very large expenditures by hydropower utilities (notably Bonneville Power Administration) to mitigate salmon habitat losses caused by dams;
2) The recognition of human-caused climate change, driven mostly by carbon dioxide release—a significant portion of which can be attributed to electric power generation; and
3) The passage of State Initiative 937 codified at Revised Code of Washington chapter 19.285, requiring utilities to acquire an increasing portion of their electric supplies from qualified renewable resources (a so-called renewable resource portfolio standard).

Hydropower is the largest single source of the existing electrical power, with the county's major electric resources located outside King County. These include the Grand Coulee, North Bonneville and Ross Dams. No new large dam sites are available in the region, making hydropower a very small part of projected new regional power-generating resources.

Existing hydropower facilities in King County include Snoqualmie Falls, Cedar Falls, Twin Falls, Weeks Falls, and Black Creek. Proposed projects include new facilities at Hancock Creek and Calligan Creek (both are tributaries of the North Fork Snoqualmie), Martin Creek near Stevens Pass, and Black Canyon on the North Fork Snoqualmie. Few if any additional projects beyond these listed are expected to be built in King County, and some of those listed above, although licensed, may not be built.

The Federal Energy Regulatory Commission licenses such projects, but in doing so must consider existing plans and policies of public and private jurisdictions. While power generation benefits the public, care must be taken to ensure that small hydroelectric projects are constructed in an environmentally sound manner, directing new, small hydropower facilities, for example, to streams that do not have anadromous fish. Construction and operation must also be consistent with the intended functions and uses of forestlands, where most small hydroelectric projects are located.

The Northwest Power and Conservation Council's seventh plan indicates no significant addition of hydropower resources is projected. The Northwest Power and Conservation Council plan also identifies Protected Areas to protect some streams and wildlife habitats from hydroelectric development where such development would have major negative impacts that could not be reversed. In these areas, the Northwest Power and Conservation Council finds that mitigation techniques cannot assure that all adverse impacts of hydroelectric development on these fish and wildlife populations will be mitigated; that even small hydroelectric projects may have unacceptable individual and cumulative impacts on these resources; and protecting these resources and habitats from hydroelectric development is consistent with an adequate, efficient, economical, and reliable power supply.

Electrical utilities supplying King County are required by Washington State law to plan for their electric power resources in an integrated resource planning process very similar to the process that the Northwest Power and Conservation Council used for its 6th Power Plan. County suppliers Puget Sound Energy, Seattle City Light and Snohomish County Public Utility District are required by state law to regularly assess their power needs, supply strategies and impacts using Integrated Resource Plans.

The passage of the I-937 renewable resource portfolio standard has increased the demand (and attendant value of) qualified renewable resources. I-937, codified as the Energy Independence Act under 19.285 Revised Code of Washington, specifically excludes new freshwater hydroelectric projects from the definition of renewable for purposes of qualifying energy credits, with the exception of incremental efficiency improvements to certain existing facilities.

F-324 To address the cumulative effects of multiple energy facilities, King County should continue to participate in the state and federal processes for licensing, authorizing or certifying, and any such renewals, of existing and proposed power generation projects within King County. King County's review of individual projects in the state and federal processes should consider consistency with designated land uses and environmental protection goals. Specifically, power generation projects should:

a. Have climate change impacts considered and mitigated to the greatest extent practical;
b. Be consistent with, and preferably directly incorporated in, utility integrated Resource Plans;
c. Use renewable resources to the greatest extent practical;
d. Include public engagement;
e. Not significantly interfere with commercial forestry operations;
f. Be located and operated in a manner such that impacts to salmonid fish and wildlife are minimized;
g. Avoid unstable and erosion-prone areas;
h. Include performance bonding to fund erosion control;
i. Provide full mitigation for construction and operation impacts;
j. Avoid, to the extent practicable, diminishing scenic values;
k. Incorporate adequate public safety measures; and
l. In the case of hydropower, not be located within a Protected Area as designated by the Northwest Power and Conservation Council.

F-325 King County and the utilities should identify and preserve corridors, consistent with the Growth Management Act goal of focusing growth within the Urban Growth Area, to accommodate future electric power transmission and distribution lines. Corridor designation should include:

a. Identification of appropriate shared uses and recognition of the values provided by nonutility uses, such as recreation;
b. Recognition of county roads as utility corridors; and
c. Evaluation of proposed facility plans on a system-wide basis, rather than project-by-project.

F-325a Results from the King County Equity Impact Review Tool will be used as an important consideration to identify and assess impacts and opportunities of adding, expanding or upgrading transmission and distribution lines and the county's Equity and Social Justice principles should be used to improve residents' access to the determinants of equity.

F-326 **When new, expanded or upgraded transmission is required, use of existing corridors that have above-ground utilities should be evaluated first. King County should facilitate appropriate corridor sharing among different utility types and owners.**

F-327 **New electrical distribution lines should be installed underground where reasonably feasible and not a health or safety concern. The county should encourage underground placement of existing distribution lines through such tools as local improvement districts.**

Public concern exists over the potential health effects of electrical power lines. The concern focuses on the effects of extremely low level electromagnetic fields. Seattle-King County Department of Public Health currently responds to inquiries from residents about extremely low level electromagnetic fields and keeps abreast of current research. The following policy recognizes the inconclusive nature of the data concerning extremely low level electromagnetic fields and the need to have an informed citizenry through public disclosure of available research about the potential health risks. Scientific evidence to-date does not support firm conclusions about the existence of adverse health effects related to extremely low level electromagnetic fields.

F-328 **King County will monitor scientific research on potential human health effects of extremely low frequency electric and magnetic fields. If federal or state agencies promulgate rules to reduce exposure to extremely low level electric and magnetic fields — through changes in the use of appliances, construction practices, the location of electrical infrastructure or other activities — the county shall inform its residents, in adherence with the Executive Order and other applicable policies on written language and translation processes, and take appropriate actions.**

4. Natural Gas

Generally, the most thermally efficient use of natural gas is in "direct applications." The choice of fuel shall be based on market conditions and the prudently weighted greenhouse gas emissions impacts of using natural gas as compared with alternatives, with the customer comparing various fuels. Many homes and businesses in King County do not have the choice of natural gas, however, even within the Urban Growth Area.

King County has by far the largest resource of biologically produced methane in the region, from its wastewater treatment facilities and its solid waste landfills. King County should continue to develop and promote the development of biologically-derived sources of fuel gas (i.e., renewable natural gas) and support the efficient marketing and use of such gas.

F-329 **King County should work to remove barriers to the availability and efficient use of renewable natural gas.**

F-330 **King County will provide leadership in and promotion of the use of renewable natural gas to minimize climate change impacts, including that from its own sources, as a substitute for fossil-sourced natural gas where practical.**

5. Hazardous Liquid and Gas Transmission Pipelines

Hazardous liquid and gas transmission pipelines, as defined by Revised Code of Washington 81.88.040 and Washington Administrative Code 480-93-005, consecutively, provide a vital service of transporting hazardous materials from one location to another. Long-distance transmission pipelines move a variety of hazardous materials, including crude oil, petroleum products, natural gas and hazardous liquids, such as anhydrous ammonia. Pipeline rupture or failure can result in release of these materials, which are highly flammable, explosive or toxic. The policies in this chapter identify public values and goals to assure that the transmission of hazardous materials by pipeline address public health and safety.

The Federal Energy Regulatory Commission regulates the location, construction and operational conditions of interstate natural gas pipelines through its certification process. The state and federal government regulate the location, construction and operational conditions of hazardous liquid and intrastate gas pipelines through the Energy Facility Site Evaluation Council. In its review of pipeline applications, however, the Energy Facility Site Evaluation Council must determine whether the pipelines are consistent with county land use plans and zoning codes. Thus, King County's authority to regulate the location of pipelines is through the comprehensive plan and development regulations.

F-331 **King County recognizes that federal and state regulatory programs govern the design, construction, and operation of hazardous liquid and gas transmission pipelines. To preserve the safety and reliability of the hazardous liquid and gas transmission pipeline system, land use, zoning and regulations shall be consistent with state and federal requirements.**

F-332 **Any new hazardous liquid and gas transmission pipelines proposed for construction in King County shall meet the county's development regulations, including but not limited to, King County's zoning code, building code, grading code, and shoreline management code.**

King County anticipates that few new hazardous liquid or gas transmission pipelines will be constructed in the near future. However, as existing pipelines age and the relationship between resources, refineries and markets changes over time, new pipelines will need to be constructed. Hazardous liquid and gas transmission pipelines are best constructed away from locations where large numbers of people assemble. King County recognizes however, that under some circumstances, new gas transmission pipelines may need to locate in densely populated areas as the only practical alternative to meet the demand for service.

F-332a **Results from the King County Equity Impact Review Tool will be used as an important consideration to identify impacts and opportunities of siting new gas or hazardous liquid transmission pipelines and the county's Equity and Social Justice principles should be used to improve residents' access to the determinants of equity.**

F-333 **New hazardous liquid and gas transmission pipelines should be located away from high-density residential zones, Urban Activity and Business Centers, Office Parks, sports fields, schools and day care centers or other land uses where large numbers of people would assemble.**

F-334 **When new, expanded or upgraded hazardous liquid or gas transmission pipelines are required, use of existing corridors should be evaluated first. King County should facilitate appropriate corridor sharing among different utility types and owners.**

F-335 **Hazardous liquid and gas transmission pipelines should not be located in areas susceptible to soil disturbance or liquefaction or in aquifer recharge areas. When it is impractical to avoid such areas, special engineering precautions should be taken to protect public health, safety and welfare.**

It is essential to map the location of existing hazardous liquid and gas transmission pipelines within King County so that developers know where they are and who to call for information before construction begins. Accurate maps will assist King County in reviewing land use applications for land uses located near pipelines.

F-336 **King County should map the location of existing and new hazardous liquid and gas transmission pipelines. Maps shall not substitute the one-call locating system and shall not be used for any construction or maintenance activity.**

Risks to life and property can be minimized by keeping land uses a safe distance from hazardous liquid and gas transmission pipelines. Pipelines transport a variety of materials, some of which flow under the force of gravity. While standard setbacks do not assure protection from materials that have the ability to migrate, setbacks may protect life and property from hazardous materials that are highly flammable, explosive or toxic. Limiting the allowable uses within pipeline rights-of-way can further reduce risks to life and property.

F-337 **Structures designed for human occupancy shall not be located within hazardous liquid or gas transmission pipeline rights-of-way and should be set back from the pipeline to protect public health, safety and property. No structures shall be located over the pipeline.**

F-338 **Land uses shall be restricted within hazardous liquid and gas transmission pipeline rights-of-way. Passive recreational uses, such as hiking trails, may be allowed if the risk to life and property is assessed and determined to be minimal.**

Pipeline failure can result from damage caused by excavation near existing pipelines. Many existing pipelines initially were constructed in less-populated areas with little development. As demand for land grows, the risk of conflict between existing pipelines and land development increases.

F-339 **King County should promote the safety and reliability of the hazardous liquid and natural gas transmission pipeline systems by requiring developers, contractors, and excavators to notify the state, pipeline operators and utilities through the one-number locator service, before beginning excavation or construction.**

F-340 **In the interest of safety and reliability of the hazardous liquid and natural gas interstate transmission pipeline systems, the county should take steps to protect and preserve the signs that mark pipelines.**

6. Natural Gas Distribution Systems

Natural gas pipelines fall into two major categories: gas transmission lines that transport natural gas from production fields to local distribution companies and distribution systems that deliver natural gas from transmission pipelines to retail customers. The federal government may define certain parts of the natural gas distribution system that serve large volume gas users as part of the transmission system. Distribution systems for transporting natural gas are fundamentally different from transmission gas pipelines and should be regulated based on their design, use and location.

Gas distribution systems are owned and operated by local distribution utilities. Such systems consist of the pipelines that deliver natural gas to end users together with intermediate supply lines. The distribution system is constructed incrementally, with addition of new segments and upgrading of existing lines in numerous small projects. The distribution system is a network that is primarily located in road rights-of-way, where service is available. Local distribution companies are subject to the comprehensive safety regulations administered by the Washington Utilities and Transportation Commission under state law and regulations and by the federal Office of Pipeline Safety under federal law and regulations. The rates and services of investor-owned utilities also are subject to comprehensive regulation by the Utilities and Transportation Commission under state law and regulations.

F-341 **King County recognizes that the gas distribution system is primarily located in road rights-of-way.**

F-342 **In the interest of safety and reliability of the natural gas distribution pipeline systems, the county should take steps to protect and preserve the signs that mark pipelines.**

F-343 **Structures designed for human occupancy shall not be located within gas distribution pipeline rights-of-way and should be set back from the pipeline to protect public health, safety and property. No structures shall be located over the pipeline.**

F-344 **Permit requirements shall require excavators to ensure adequate protection of any facilities that are encountered during their work. This shall include but not be limited to adhering to the foreign facility owners requirements for separation and backfill, developing joint plans when drilling or boring parallel to foreign facilities, and potholing all facilities that will be crossed by drilling or boring.**

7. Crude Oil Transport by Rail

King County and local governments across the United States are facing rapid and significant increases in train traffic carrying crude oil. According to the Washington State Department of Ecology's 2014 Marine and Rail Oil Transportation Study, the volume of crude oil transported by rail across the US increased 42-fold from 2008 to 2013.

In Washington State, shipments increased from zero in 2011 to approximately 19 unit trains a week in 2014, each carrying as much as 3 million gallons of Bakken crude, mostly destined to refineries in Washington and California. If the proposed facilities and refinery expansions to accommodate rail imports are permitted and fully built over the next few years, the weekly unit train number could jump to 137 or more. Congress's repeal of the export ban on U.S.-produced oil in 2015 has the potential to further increase transportation of Bakken crude through our state.

Oil trains travel through densely populated areas of King County and pass through a century-old tunnel under downtown Seattle. Many of the trains carry highly volatile Bakken Crude oil, creating risks for catastrophic explosions and loss of life and property in the event of a derailment. The passage of mile-long unit trains delay traffic and emergency vehicle access at numerous at-grade crossing.

Oil train routes cross numerous rivers, streams, and aquifers and trace the Puget Sound shoreline, putting aquatic resources and Endangered Species Act-listed salmon at risk. Despite facing impacts and risks from oil transport by rail, and burdens for emergency planning and response, local governments like King County have almost no authority to require disclosure of hazards, establish safety standards for trains passing through their jurisdiction, or require railroads and shipper to pay for mitigation of impacts.

King County Office of Emergency Management acts as a regional convener of public and private emergency management entities to plan for, mitigate and respond to oil train spills and explosions.((-)) Additionally, King County ((~~has~~))convenes and leads a coalition of more than 160 elected leaders known as the Safe Energy Leadership Alliance to advocate for assessment of the full costs and risks of oil transport and coal export on our regional, local and tribal economies, environment, health, and cultural resources.

F-344a **King County Office of Emergency Management shall convene local emergency managers, first responders, railroads and others to prepare for and mitigate the increasing risk of oil spills, fire and explosions posed by oil-by-rail transport.**

F-344b **King County should advocate for environmental reviews of proposed oil terminals in Washington State to assess and mitigate for area-wide, cumulative risks and impacts to public safety, infrastructure, traffic, health, water supplies and aquatic resources from increased oil train traffic.**

F-344c **King County should collaborate with local and tribal governments to jointly advocate for stronger federal and state disclosure requirements for hazardous materials being transported by rail, safety requirements and speed limits for tank cars, minimum liability coverage for railroads and oil shippers, and financial support for increased local emergency planning and response to oil spills, fires, and explosions.**

B. Telecommunications

1. Telecommunications

Telecommunication technologies are changing rapidly and will continue to change during the horizon of this plan. The future telecommunication system may make little distinction between cable, telephone and cellular. Telecommunication services include voice, data, video and other communication services on various mediums including, but not limited to, wire, fiber optic or radio wave. Effective telecommunications services are critical to residents in several ways. They promote and enhance individual information exchange, contribute to a robust regional economy, and afford numerous public services, including delivery of emergency services, education and opportunities for community involvement.

F-345 **Telecommunication services are to be encouraged as a means to mitigate the transportation impact of development and growth, including Greenhouse Gas Emissions.**

F-346 **King County encourages the telecommunication service providers to engage in long-term planning for telecommunications construction, reconstruction and facility upgrades, including provisions to ensure that the system's capacity, design and equipment will allow users to take advantage of innovative uses, services and technology.**

F-347 **Telecommunication companies and the county should coordinate activities when facilities are being installed or road construction projects are scheduled.**

F-348 **Long-term planning for telecommunications systems by the telecommunication service providers should allow uninterrupted service during natural disasters.**

F-349 **Co-location of telecommunication facilities is encouraged to reduce the unnecessary proliferation of individual, single-user towers. Co-location shall be required unless an applicant can demonstrate to the satisfaction of the county that collocation on an existing tower is not feasible and not consistent with service quality and access.**

F-350 **Although visual impacts are always an important consideration in the decision to approve or deny a proposal, King County shall give greater weight to the visual impacts of telecommunication facilities proposed to be located on residentially-zoned lands or in the Rural Area or Natural Resource Lands. In addition, the visual impacts of proposals for an individual tower with a single user shall be given greater weight than proposals to collocate facilities.**

F-351 **King County considers the placement of telecommunication facilities within street rights-of-way as the preferred alternative to the construction of facilities on private property. Regulatory standards shall require placement in street rights-of-way, especially within residential neighborhoods and Rural Areas, unless such a location is not feasible or not consistent with service quality and access.**

2. Cable Services

King County Ordinance 10159 dictates current policy for cable services. It states in part: "it is the County's policy to promote the widespread availability of cable service and diverse information to County residents and to encourage the development of cable systems and cable technology as a means of communication between and among members of the public and public institutions." The county's cable-related needs are expressed in the following policies:

F-352 **Long-term planning for cable systems should include service to all areas of the county which meet the minimum density established in the cable company's franchise agreement and the county's Cable Television Ordinance.**

F-353 **Cable companies should provide services that meet the cable-related needs and interests of all segments of the community, taking into account the cost of meeting such needs and interests.**

F-354 **Cable companies should take proactive steps to ensure that there is widespread availability of and equitable access to cable service. Cable companies should ensure information is culturally-appropriate and made available to residents of the county, especially low-income and limited-English proficient communities.**

F-355 **The goal of long-term cable planning should be a high-capacity, state-of-the-art system. Two-way capacity should be installed and activated. Cable systems should be interconnected to other communications systems. They should be designed to be "open"; that is, the systems should be usable by many, for a variety of purposes.**

F-356 **Public uses of the cable system should be expanded as the system is upgraded.**

3. Internet Access

Rapidly changing technologies are providing opportunities for alternative work environments and lifestyles as more people transmit and receive information through the internet. Although there is a growing interest in the use of computer technologies, few new developments are including high-speed internet access lines or home cabling. King County encourages private partnering between developers, builders and communication providers to expand the opportunities for access to the internet.

F-357 **Developers should collaborate with major employers to create developments that facilitate and encourage telecommuting by installing high-speed internet lines during construction of the project.**

F-358 **Builders and architects should work with the telecommunication industry to design and retrofit state-of-the art cable-ready homes and offices and community centers, social service agencies, community health clinics, and other buildings that serve low-income residents.**

Wireless internet connections, also referred to as "hotspots," first conceived in 1993, now number over 300,000 nationally. A hotspot is a location (park, coffee shop, airport, office building. etc.) that offers Wi-Fi access. Hotspots allow the public to use laptop computers, Wi-Fi phones or other suitable portable devices to access the

Internet. Ninety percent of the hotspots in the nation are free. Of the estimated 150 million laptops and 14 million personal digital assistants sold annually, most include Wi-Fi capability.

F-359 **King County encourages public and private organizations to create wireless internet connections where the public can access the Internet, including in community centers, social service agencies, community health clinics, libraries, schools and other buildings that serve low-income residents.**



CHAPTER 10
ECONOMIC DEVELOPMENT

The foundation for a vibrant and sustainable economy starts with providing livable communities and a high quality of life; these are among the principles that guide the Comprehensive Plan. Other elements of that foundation include, but are not limited to a favorable business climate with consistent and predictable regulations, an educated and trained workforce, adequate public infrastructure, land supply, research and advancing technology, affordable housing, available capital, recreational and cultural opportunities, a healthy natural environment and greater equity and opportunity for all.

The policies in this chapter are designed to continue King County's long-term commitment to a prosperous, diverse, and sustainable economy. They do so by promoting public programs and actions that support a successful economy, one in which the private, nonprofit, and public sectors can thrive and create jobs, is compatible with the environment, and contributes to a strong and stable tax base and a high quality of life for all residents. The policies also recognize businesses and the workforce as customers of an economic development system; and they support actions and programs that promote the strength and health of both groups.

I. Overview

A. The State of the Economy

King County's economy is the largest, most diverse, and most significant economy in Washington State. In 2014, King County's economic base included:

- 1,285,000 nonagricultural jobs. This represents 67% of the Central Puget Sound Region's (King, Kitsap, Pierce, and Snohomish Counties) 1,923,000 nonagricultural jobs and 42% of the state's 3,070,400 nonagricultural jobs;
- An $87.4 billion payroll. This represents 74% of the region's $118.5 billion payroll and 52% of the state's $167.4 billion payroll; and
- 79,500 business firms, excluding sole proprietorships. This represents 63% of the region's 125,000 firms and 36.4% of the state's 219,000 firms.

The last fifteen years have been characterized by two major recessions and three periods of recovery and growth. Nonagricultural employment in King County peaked in 2000 at 1,187,000 jobs, but as the dot-com recession took hold, declined 7% to 1,109,000 jobs in 2003. Employment began to rise again in 2004, and by the job peak in 2008, employment had exceeded 2000 levels, growing to a total of 1,216,000 jobs. During the Great Recession, employment decreased by 7% again to 1,134,000 jobs in 2010, 4% *below* levels of a decade before. However, as the Great Recession ended employment began to grow again reaching more than 1,285,000 in 2014, a 13% increase over 2010 levels.

King County employment in 2014 was comprised of the following sectors:

- Trade, Transportation and Utilities was the largest sector, with 238,000 employees primarily in retail trade, wholesale trade, and transportation services.
- Professional and Business Services was the second-largest sector with 211,000 jobs. This sector includes legal services, engineering services, computer software design, company management and administration.
- Two sectors each had about 166,000 employees: Government at all levels including public education, and Health Services/Private Educational Services. Another sector, Leisure and Hospitality, which includes hotels and restaurants, had 129,000 employees.
- Four other sectors are smaller but vital in terms of bolstering the county's economic base with substantial payroll. They include Manufacturing (108,000 jobs); Information (software publishing and tele-communications, 88,000 jobs); Financial Activities (banks, insurance, real estate, 71,000 jobs); and Construction with 62,000 jobs.
- Other Services had the remaining 47,000 jobs, in repair and maintenance, personal services, religious, professional and civic organizations.

In 2014, unincorporated King County had 252,000 residents and about 38,000 jobs. Within the unincorporated jurisdiction are two broad geographic types, designated by King County under the Growth Management Act and the Comprehensive Plan:

- Urban unincorporated King County, within the Urban Growth Area;
- Rural Areas and Natural Resource Lands outside the Urban Growth Area.

Covering only 45 square miles, urban unincorporated King County contains a number of residential communities and business centers with about half of the unincorporated population, 127,000 people. Major communities within this urban jurisdiction include North Highline, West Hill/Skyway, Fairwood, East Renton, and Lakeland/East Federal Way. The urban unincorporated communities together had about 17,600 jobs in 2014. The largest job sector is services, with about 6,000 jobs throughout urban unincorporated King County. Education and government is the second largest sector with 5,000 jobs.[1]

Other large sectors include construction and resources, wholesale-transportation, retail and manufacturing. In addition to its jobs – i.e., people working in urban unincorporated job centers – much of the urban unincorporated area is residential, and includes a skilled labor force. About 70,000 urban unincorporated residents are in King County's labor force, and approximately 63,000 were employed in 2014, contributing significantly to the county's economy.

The Rural Area and Natural Resource Lands portions of the county's economic base plays a significant role in helping the county maintain a diversity of economic sectors, thus contributing to the county's overall economic health. Evaluation and discussion of the rural economy includes the Rural Area, Natural Resource Lands, and the Cities in the Rural Area which include Black Diamond, Carnation, Duvall, Enumclaw, North Bend, Snoqualmie, and Skykomish.

Information on the rural economy is as follows:

- In 2014, about 8.3% (168,000) of the county's total population of 2,017,300 lived in the Rural Area, Resource Lands, and Cities in the Rural Area.
- However, only 2.7% (34,200) of the total 1.2 million jobs in the county are located within the Rural Area, Resource Lands, and Cities in the Rural Area (2014 data).
- About sixty percent of the rural jobs (20,400) are located in the rural unincorporated area, with the remainder located in the Cities in the Rural Area, especially in Enumclaw, North Bend and Snoqualmie.
- The Service Sector, which caters to both rural households and businesses, comprises 34% of rural employment.

[1] This 2014 data does not reflect that Klahanie was annexed to Sammamish in 2016. Updated figures are not currently available.

- The Construction and Resources sector, including agriculture, forestry, fishing, hunting, and mining, accounts for 16% of rural jobs.
- Farming in King County is changing in response to increased demand by urban residents to purchase locally grown foods. Farms are becoming smaller with increased crop diversity. In 2012 there were 1,837 farms in the county, with an average farm size of 25 acres. According to the 2012 United States Agricultural Census, farm acreage decreased slightly from 49,000 acres in 2007 to 48,000 acres in 2012. Farm product sales totaled nearly $120 million in 2012.
- Sales at county farmers markets in 2014 generated over $35 million in direct sales for Washington farmers.
- The timber industry experienced wide fluctuations in timber harvest volumes between 2004 and 2014 in response to economic conditions. During that period King County saw an overall 23% decline in timber harvest volume on private and public lands from 138 million board feet to 106 million board feet, while the value of that timber rose 11% from $34 million in 2004 to $37.8 million in 2014, according to the Washington State Department of Revenue.
- The equestrian industry plays a role in the rural economy. In 2005, there were about 3,200 persons directly employed in the equestrian industry and 945 persons employed in jobs related to the industry countywide. Additionally, equestrian industry sales totaled $227 million based on 2005 numbers, which included direct, indirect, and induced sales.

B. General Economic Development Policies

King County partners with businesses, economic development organizations, and other jurisdictions in efforts to grow the economy to ensure the elements for a prosperous and successful economy are provided. The county also provides infrastructure, business, and workforce development products and services as part of its regional responsibilities; and it makes many other contributions to sustain the quality of life that makes the region a desirable place to live and work. General King County economic development policies include:

ED-101 **King County has a long-term commitment to sustainable and equitable economic development throughout the county.**

ED-101a **King County is committed to promoting equity and equality of opportunity in all economic development policies and programs, and to integrating these as factors into decision and policy-making efforts.**

ED-102 **The focus for significant economic growth will remain within the Urban Growth Area, while within the Rural Area and Natural Resource Lands, the focus will be on sustaining and enhancing prosperous and successful rural businesses as well as encouraging new businesses that support and are compatible with the rural economic clusters.**

ED-103 **King County policies, programs, and strategies shall recognize the importance of, and place special emphasis on, start-up companies as well as retaining and expanding homegrown firms in basic industries that bring income into the county and increase the standard of living of the County's residents.**

ED-104 **King County policies, programs, and strategies shall recognize the importance of a diversified economic base to provide a continuum of skill training opportunities to meet the skill level needs of industry.**

ED-105 **King County recognizes the natural environment as a key economic value that must be protected.**

ED-106 **King County shall protect cultural resources and promote expanded cultural opportunities for its residents and visitors in order to enhance the region's quality of life and economic vitality.**

King County's role in economic development is implemented at several levels. At all levels, King County seeks to coordinate, partner, and engage with private and public organizations to pursue mutually beneficial outcomes.

ED-107 **At the multicounty level, King County should partner with other counties, regional entities and the state, as appropriate, to devise and implement economic development policies, programs, and strategies to provide for sustainable and equitable growth throughout the Puget Sound region.**

ED-108 **At the countywide level, King County should partner with other jurisdictions, economic development organizations, chambers of commerce, the Port of Seattle, and others, as appropriate, to develop and implement policies, programs, and strategies that set the general framework for economic development within the county.**

ED-109 **Within the unincorporated areas, King County should partner and engage with local businesses, the Agriculture and Rural Forest Commissions, community service areas, adjacent cities, other organizations and residents, as appropriate, to develop and implement policies, programs, and strategies that promote** compatible local economic development.

II. Business Development

King County has long supported a growing and diversified economy, one that provides business development opportunities throughout the county. To support business development, King County's policies, plans, and programs should support a positive and healthy business climate that enables all local firms to stay globally competitive, quality-oriented, technologically advanced, and able to pay good wages.

Homegrown businesses are those that started in the region. Local and national research over the last 25 years has concluded that homegrown, small to medium-size businesses create the majority of new jobs in a local economy. Industries and firms that export their products and services outside King County bring income into the county and are considered basic, in economic terms. Jobs in basic industry generally pay better than non-basic jobs and support the non-basic or secondary part of the county's economy. As of 2012, 37% of the jobs in King County are basic and support the 63% non-basic jobs, such as retail and personal services. Roughly one of every four jobs in the Puget Sound region is dependent on international trade.

The county's leading export sectors are:

- Information Services, with 16.4% of all export jobs. Software Publishing is the principal factor in this sector, accounting for over 50% of the sector's basic jobs and 9.3% of total basic employment.
- Manufacturing, with 14% of all basic employment, led by aerospace, with 9% of total basic jobs.
- Business Services, such as banking, insurance, accounting, legal, architectural, engineering, research and development, and computer services, with 13.8% of export jobs.

Working Collaboratively in the Region

Central Puget Sound Economic Development District (serving King, Kitsap, Pierce, and Snohomish Counties) adopted a "Regional Economic Strategy for the Central Puget Sound Region" in 2005 and updated it in 2012. The Regional Economic Strategy was developed by the Puget Sound Regional Council's Prosperity Partnership—a coalition of more than 200 government, business, labor, nonprofit and community leaders from the four counties—to ensure long-term regional prosperity.

In order to accomplish this, the Regional Economic Strategy identifies ten industrial clusters that, based on regional economic analysis, offer the best opportunities for business growth and job creation in the Central Puget Sound region for the next several years.

Clusters are concentrations of industries that export goods and services that drive job creation and import wealth into the region. An industry cluster differs from the classic definition of an industry sector because it represents the entire horizontal and vertical value-added linkages from suppliers to end producers, including support services, specialized infrastructure, regional universities' research and development, and other resources.

Clusters are supported by the economic foundations such as workforce training, infrastructure, quality education, a stable and progressive business climate, and more. The clusters are Aerospace, Business Services, Clean Technology, Information Technology, Life Sciences and Global Health, Maritime, Military, Philanthropies, Tourism and Visitors, and Transportation and Logistics. The Regional Economic Strategy identifies specific strategies and actions to help support the growth of each cluster.

The County is also working with several other regional business development efforts such as the Trade Development Alliance, Workforce Councils, Chambers of Commerce, and other partners to create opportunities for new business development, help retain and expand existing companies, and recruit new firms into the county.

ED-201 **King County shall partner with federal, state, and local governments, economic development organizations, schools, educational and research institutions and the private sector to foster an innovative and entrepreneurial environment and support programs and strategies that promote sustainable business development and job creation. Programs that provide technical and financial assistance to businesses include, but are not limited to:**

- **a. Financial, marketing, expansion, and general operations assistance for small businesses to help them become competitive in the private sector;**
- **b. Technological, efficiency, and managerial assessments to help manufacturers reduce costs and use smaller footprints for existing or expanded production; and**
- **c. Assessment and/or remediation of contaminated property (Brownfields) in order to continue or expand operations to help individual small businesses or jurisdictions impacted by Brownfields.**

ED-202 **King County shall emphasize continued support for the aerospace and information technology industrial clusters as well as industrial clusters offering the best opportunities for business development, job creation, and economic growth including those identified in the Puget Sound Regional Council's Regional Economic Strategy, the Local Food Initiative and the King County Rural Economic Strategies Plan.**

ED-203 **King County shall support and participate in programs and strategies that help create, retain, expand, and attract businesses that export their products and services. Exports bring income into the county that increases the standard of living of residents.**

ED-204 King County shall encourage redevelopment of and reinvestment in industrial and manufacturing properties by collaborating with other jurisdictions and the private sector to remove, revise, or streamline regulatory or other redevelopment barriers without compromising environmental standards or quality. This includes assessment and/or remediation of contaminated properties.

ED-205 King County shall support programs and strategies to promote and market Foreign Direct Investment opportunities in the county.

ED-206 King County shall promote and help position small and mid-size businesses to gain greater participation in the supply chains of large companies and the military located in the region.

ED-207 King County shall provide opportunities for small businesses to compete for and obtain contracts on county-funded construction, consulting, and goods and services projects. King County shall also collaborate with other jurisdictions to promote public-contracting opportunities for small businesses and to develop and maintain common standards, a common application, and a common directory for small contractors and suppliers seeking contracts on publicly-funded projects.

ED-208 King County shall assist businesses, property owners, and other jurisdictions in preserving and enhancing historic properties, including historic business districts, through incentives and economic development measures. County programs and incentives for land and resource preservation and economic development shall support and be coordinated with preservation of historic properties.

ED-209 King County shall foster the development and use of public/private partnerships to implement economic development projects and programs. At a minimum, these projects must demonstrate that they:

a. Cannot be accomplished solely by either sector;
b. Have an experienced and proven private partner(s);
c. Do not unduly enrich the private partner(s);
d. Provide tangible and measurable public benefits in terms of tax and other revenue, construction and permanent jobs, livable wages with benefits and a wage-progression strategy, and public amenities; and
e. Will use the King County Jobs Initiative, or other entities with similar programs, as their first source of referral for training and employing low-income, low-skill residents in entry-level and semi-skilled jobs.

ED-210 King County should support programs and strategies to expand international trade, including those that:

a. Promote, market, and position the county for increased export, import, and foreign investment opportunities;

b. Promote the health and viability of the region's export and import gateways through active collaboration with the Northwest Seaport Alliance and the Port of Seattle;

c. Provide technical assistance, training, and opportunities for local firms wishing to export; and

d. Partner with regional trade groups to promote assistance, opportunities and partnerships to connect current and potential exporters with international markets.

ED-211 King County should support programs and strategies to preserve and plan for an adequate supply of industrial and commercial land, including but not limited to:

a. Complying with the State of Washington Buildable Lands Program – RCW 36.70A.215 – and, in cooperation with the cities, inventorying and monitoring the use of industrial, commercial, and residential lands every five years;

b. Partnering with other jurisdictions and the private sector, to advocate for development and maintenance of a regional Geographic Information System to track the supply of land;

c. Actively applying for federal, state, and other resources to help defray the costs of assessment, remediation, and redevelopment of private and/or public Brownfields;

d. Selling county-owned surplus industrial and commercial lands for development by the private sector;

e. Promoting the redevelopment and infill of industrial and commercial areas and exploring the feasibility of using incentives to achieve this goal; and

f. Preventing the encroachment of non-industrial uses on industrially-zoned land and the rezoning of industrial land to other uses.

ED-212 King County shall encourage and support community based and community led efforts to support and retain existing small businesses.

ED-213 King County shall coordinate with a broad range of partners, organizations, businesses and public sector agencies to support the development of business innovation districts and related initiatives in lower income communities, with an emphasis on food innovation districts, in particular.

III. Workforce Development

King County provides programs and participates in partnerships to address the ongoing workforce challenges of the Puget Sound region and within the county. The current economic climate has created more opportunity, and yet there is an ever greater divide between those who are benefitting from a strong economy and those who are not. For this reason King County has an even greater need to ensure access by all residents to information about local workforce development programs and opportunities, especially for those residents of the County who are not benefitting equitably from the strong economy.

While many low-income people in isolated communities may have difficulties gaining access to quality education, training, and support services to help them secure living wage jobs, many displaced workers also need access to re-training opportunities to obtain employment. Meeting these challenges successfully will require the county to continue and to strengthen strategies and working relationships across sectors and between business, government, labor, communities, advocacy organizations, education and training institutions, and human service providers.

Jobs that pay wages sufficient to support families are vital to the quality of life. However, training, education, skill levels, and abilities vary from person to person. As such, it is important for King County to support job training and job opportunities for all residents at a range of entry levels so that all people have the opportunity to be self-reliant.

ED-301 **King County should support workforce development programs that are integrated with the county's overall economic strategies, including but not limited to:**

- **a. Apprenticeship opportunities on county public works projects to ensure a continual pipeline of skilled, local construction trades workers and to encourage family-wage job opportunities.**
- **b. Development and growth of clean technology "green" jobs linked to the preservation and sustainability of the natural environment, including jobs in pollution prevention, Brownfields cleanup, energy efficiency, renewable energy industries, natural resource management, and other technologies that address climate change.**
- **c. Training in skills (job clusters) that apply to and are in demand across multiple industry clusters.**

ED-302 King County should support the Workforce Development Council of Seattle-King County, authorized by the federal Workforce Innovation and Opportunity Act of 2014, and composed of high-level representatives from business, local government, labor, education and training institutions, advocacy organizations, and human service providers. The purpose of the Workforce Development Council is to coordinate and improve employment, training, literacy, and vocational rehabilitation programs to meet the needs of workers and employers. King County will work with the Workforce Development Council to emphasize the needs in and highlight opportunities for communities that have the highest unemployment rates in the region, including the potential for development of training opportunities in these areas.

ED-303 King County policies, programs, strategies, and partnerships shall recognize the importance of worker training and retraining, especially for low-income and low-skilled residents, and communities with the highest unemployment rates, to provide the skilled workers needed by local businesses and industry. King County shall support and partner with other jurisdictions, educational institutions and industry to promote programs such as:

a. Programs that retrain dislocated workers for jobs in growing industries;
b. Training for jobs in growing industries that require post-technical or post-secondary training and credentials and provide a career pathway to self-sufficiency;
c. Programs that facilitate employer involvement in hiring workers with limited experience and skills and provide successful strategies for skills training, job placement, and worker retention;
d. Programs that reduce recidivism by helping residents exiting the criminal justice system gain access to training and employment services;
e. Alignment of homeless housing and employment systems to assure people who are experiencing homelessness have access to both housing and employment opportunities;
f. Food-related workforce development activities and opportunities;
g. School-to-work programs and effective alternatives for out-of-school youth to provide a clear pathway to self-sufficiency through career options and applied learning opportunities;
h. Summer youth employment programs for at-risk youth;
i. Access to alternative modes of transportation by providing transportation information, financial assistance programs such as ORCA LIFT, and services to jobseekers and workers; and
j. Access to childcare by increasing the availability and affordability of quality childcare for low-income families.

ED-304 King County shall continue to increase equity in jobs and career opportunities for youth through programs such as the Education Engagement Strategy launched by Public Health in 2013, and others. These efforts may include:

a. Partnering with private businesses, community organizations and educational institutions to provide job shadowing, internship and summer job opportunities for King County youth; and

b. Partnering with Maritime and Manufacturing industry businesses, and other business sectors, to engage high school students in vocational programs that offer training for living wage industry jobs, and working with these businesses to engage schools in promoting regional opportunities for apprenticeships and internships for high school students.

ED-305 King County shall help promote and develop opportunities for limited English proficiency populations, including:

a. Partnering and investing in community organizations that represent limited English proficiency populations;

b. Improving translation and interpretation services;

c. Partnering with private business to promote the hiring of limited English proficiency populations; and

d. Partnering with regional educational institutions to develop methods for recertification for limited English proficiency professionals with credentials from other countries, and partnering with community organizations to promote and increase access to recertification programs.

ED-306 King County shall work with regional workforce development organizations and regional educational institutions, especially community colleges, to promote greater alignment between educational programs and workforce needs.

IV. Infrastructure Development

Adequate and well-maintained public infrastructure is crucial to a strong economy. Basic public services that maintain a high quality of life in an area support employment growth and increased productivity, and influence business location decisions.

ED-401 **King County recognizes that adequate infrastructure is essential to support existing economic activity and to attract new industry and development. The county therefore supports and partners on programs and strategies to maintain existing infrastructure and construct new facilities (transportation, utilities, schools, information, communications, including an adequate supply of housing) necessary to accommodate current and future economic demand, in locations and at a size and scale that is consistent with other policies in the Comprehensive Plan.**

ED-402 **King County will support programs and partnerships to facilitate the efficient movement of freight to promote global competitiveness for business and industry.**

ED-403 **King County shall partner, where feasible, with jurisdictions and other stakeholders to develop subarea economic development strategies to promote development and redevelopment in areas that can accommodate growth.**

ED-404 **Through local subarea planning and partnerships with other agencies and organizations, King County should use zoning, incentives, or other measures to capitalize on the economic benefit of infrastructure projects in locations and at a size and scale that is consistent with other policies in the Comprehensive Plan.**

ED-405 **King County should support programs and partnerships to facilitate the development of adequate technology infrastructure, to meet growing technological demand and to ensure high quality infrastructure for the regional economy.**

V. Sustainable Development in the Private Sector

It is the goal of King County to work toward becoming a model sustainable community where both the public and private sectors seek to balance urban growth with natural resource protection while addressing climate change. Sustainable development seeks to achieve this goal by addressing the impacts of the built environment in which people live and work. Sustainable development is implemented through planning, design and construction methods, including green building and Low Impact Development that promote environmental quality, economic vitality and healthy communities.

King County also works to increase the sustainability awareness of its residents. The county offers a Localize Sustainability tool, which help residents track and develop strategies for increasing their own sustainability profile. Transportation is also key element of sustainability. Public transportation will play an important role in protecting the environment by reducing emissions and supporting more compact land use patterns. King County

seeks to foster innovative design and development techniques in the private sector that reduce the negative impacts of site development and building construction while maintaining affordability and economic development.

ED-501 **King County should encourage, support and promote the application of sustainable development practices in all private sector development within the county. This may be accomplished through working with residential and commercial developers to use Low Impact Development principles and practices, including minimized impervious surface areas, protect ground and surface water within a watershed, ensure that habitat protection needs are incorporated into development proposals to the extent possible, incorporate greater use of green building materials, eliminate, to the extent possible, the use of materials that pose health hazards, and utilize systems that conserve or reuse resources, including those that use energy more efficiently. When King County provides technical assistance and incentives for the use of sustainable development practices, it shall be at no cost to any private sector development. King County shall collaborate with the private sector on potential future regulatory tools.**

ED-501a **King County shall strive to promote green building and smart building practices throughout private, public and residential uses and support programs that foster this type of development through collaboration with jurisdictions and other sectors.**

ED-502 **In the Rural Area and Natural Resource Lands, King County shall provide assistance through development of customized stewardship plans for individual properties, to help property owners understand their properties' characteristics and the potential impacts of their actions, and to make sustainable land management choices that protect natural resources.**

ED-503 **King County shall identify and evaluate potential changes to land use development regulations and building codes to support and promote sustainable development.**

ED-504 **King County should participate in the development and use of national standards for measuring sustainability at the community scale and the breadth and effectiveness of county policies and practices that improve community-scale sustainability.**

VI. The Rural Economy

King County values its entire Rural Area and the Natural Resources Lands and recognizes the traditional economic activities that support rural communities and a rural lifestyle. A healthy and sustainable rural economy is necessary to ensure rural residents can continue to both live and work throughout the Rural Area and Natural Resource Lands. The farm, livestock, and forestry operations, the many entrepreneurial home-based businesses, the Rural Towns, Rural Neighborhood Commercial Centers, and the Cities in the Rural Area all provide rural residents with goods, services, and employment.

Within unincorporated rural King County, economic activities include farming, livestock raising, equestrian uses, forestry, resource value-added businesses, and home-based businesses. The Rural Neighborhood Commercial Centers are designed to provide a limited array of goods and services to local rural residents on a small scale. The Rural Towns provide a wider range of goods, services, and jobs for rural residents, including retail, restaurants, and services. The designated Natural Resource Lands support the long-term commercial aspects of agriculture and forestry and potential resource valued-added products.

The county also recognizes that the land areas, economies, and natural beauty of the Rural Area and Natural Resource Lands classifications benefit all county residents. The agriculture sector provides a safe and reliable local food source—keeping costs low and quality high—to restaurants and households, the majority of which are in urban areas, and regionally to farmers markets and specialty stores. Rural King County provides many diverse recreation and tourism opportunities, including scenic vistas; trails for hiking, bicycling, off-road, and equestrian use; harvest festivals; open space and wildlife habitat; and working farms and forest lands, all within a short distance from the urban centers.

A vibrant and sustainable rural economy depends on several factors, including, but not limited to, preserving and enhancing the businesses within traditional rural economic clusters, ensuring that new commercial enterprises are of a size and scale that is consistent with and retains the rural character of the surrounding area, and changes in regulations to reflect and respond to the differing needs and emerging trends of rural economic activity while protecting the natural environment.

In 2004, the King County Comprehensive Plan was amended to include a policy that directed the county to develop and implement a rural economic development strategy. To comply with this policy, the county developed an annual Rural Economic Strategies Report in 2005 and began implementing the identified strategies and actions in 2006. Annual reporting occurred through 2008. Ordinance 17485, which adopted the 2012 Comprehensive Plan, called for an update to the Rural Economic Strategies to build upon the work done previously. In response to this, a Rural Economic Strategies Plan was adopted in 2014 via Ordinance 17956.

The mission of the Rural Economic Strategies Plan is to advance the long-term economic viability of the Rural Area and Natural Resource Lands, with an emphasis on farming, forestry, and other rural businesses consistent

with the unique character of rural King County. The mission is accomplished by initiating and implementing specific strategies and actions to support and enhance rural economic viability. Rural businesses generally fall into six rural economic clusters and each cluster is supported by specific strategies and actions to strengthen and/or enhance it. The clusters are: Agriculture, Forestry, Equestrian, Home-Based Businesses (i.e., those home occupations that are allowed on lands designated Agriculture, Forestry and Rural Area), Recreation and Tourism, Commercial and Industrial Rural Neighborhood Commercial Centers, Rural Towns, and Cities in the Rural Area. Consistent with CP-942, found in Chapter 11, Community Service Area Planning, no expansion of industrial land use or zoning is allowed within the Rural Town of Fall City.

The specific strategies and actions are intended to be flexible in order to respond to evolving rural business needs and changes within any of the economic clusters. Periodically, the county evaluates the actions accomplished to date, introduces new actions to be initiated, and discusses proposed actions for the following year. This ensures the process stays flexible and is current with evolving trends in the rural economy. It is anticipated that this procedure will become part of the Annual Work Plans developed for each of the Community Service Areas.

The rural economic policies are designed to establish and maintain a long-term commitment to a sustainable and vibrant rural economy. They support implementation of the Rural Economic Strategies Plan; continued evaluation of county codes to support the evolving agriculture, forestry, and other rural economic clusters; and support for programs and strategies that foster a diversified rural economy, compatible with existing rural character, while maintaining the natural environment.

ED-601 **King County is committed to a sustainable and vibrant rural economy that allows rural residents to live and work throughout the Rural Area and Natural Resource Lands. County policy, regulations, and programs should be reviewed and developed in partnership with rural businesses, the Agriculture and Rural Forest Commissions, the Community Service Area community groups, and others to support the preservation and enhancement of traditional rural economic activities and lifestyles, while supporting evolving compatible commercial uses and job opportunities.**

ED-602 **King County should implement the Rural Economic Strategies Plan to guide future rural economic development and will modify and add strategies as needed to reflect the evolving nature of the rural economy, while protecting the traditional rural economic clusters.**

a. King County recognizes the value of the agriculture and forestry clusters for both their economic contribution and for their natural, educational, and recreational benefits to the county as a whole. The county will work with the Agriculture Commission, Rural Forest Commission, and other related organizations on strategies and programs to strengthen and enhance the economic viability of these clusters and the evolving

value-added industry that helps sustain the county's legacy of raising crops and livestock and managing and harvesting forestlands.

b. King County recognizes the value of home-based business, recreation and tourism, and commercial and industrial clusters for their ability to provide job opportunities in the Rural Area and Natural Resource Lands, and help sustain the rural economic base. The county will continue to work with chambers of commerce and other organizations that support these rural businesses to help ensure the continued viability and economic health of new and existing businesses in these clusters.

c King County recognizes the importance of the equestrian cluster for its diversity of business and recreation related operations which combine to provide jobs and income opportunities within the rural economy. The county will continue to work with equestrian related organizations on business and recreation aspects of the equestrian cluster and with organizations that represent the various trail user groups to help ensure the continued viability and economic health of equestrian and related recreation businesses.

d. As a means and in support of protecting rural character and Natural Resource Lands, King County recognizes the value of the partnership with Cities in the Rural Area to act as local urban centers for employment and centers of commerce that provides goods and services for the Rural Area and Natural Resource Lands. The county will work with the cities and other organizations to support economic development for Cities in the Rural Area, at a size and scale consistent with the Growth Management Act.

e. King County is committed to ensuring that all economic development, including the provision of infrastructure, within the Rural Area and Natural Resource Lands shall be compatible with the surrounding rural character, be of an appropriate size and scale, and protect the natural environment.

f. King County will continue to support and partner on programs and incentives to ensure the economic vitality of rural historic resources to help maintain the character of the Rural Area and Natural Resource Lands.

g. King County will explore opportunities to support agricultural tourism and value-added program(s) related to the production of food, flowers and specialty beverages (including beer, distilled beverages, and wine) in the county. Partnership venues should be educational and include information on the diversity of products available in the county and the importance of buying local, should seek to unify regional tourism efforts, and should encourage development of new markets for agricultural products and value-added goods.

h. **King County will continue to review existing and proposed regulations to ensure they are relevant and effective in accommodating the differing needs and emerging trends of the compatible businesses that comprise the rural economy.**

i. **King County should continue to identify the infrastructure needs of the rural economic clusters, including transportation, drainage, and information technology needs, and provide support for these needs, including identification of other funding sources.**

j. **King County should continue to identify and encourage businesses to take advantage of incentives and technical assistance programs that promote economic viability of existing and new businesses in the Rural Area and Natural Resources Lands, particularly in the Agricultural and Forest Production Districts.**

ED-603 **King County should partner with other Puget Sound counties and businesses to analyze the need and possible sites for regional agricultural (such as beef and poultry) and forest product processing. King County recognizes the importance of food and forest processing for the regional economy and should partner with regional communities, governments and residents to ensure that the challenges and opportunities within this industry are analyzed and addressed as needed.**

The ability to bring rural, agricultural, forestry, and value-added products into the urban area and the ability of urban residents to utilize the Rural Areas and Natural Resource Lands for education, open space, scenic vistas, and a diversity of out-door recreation options encourages the urban/rural interdependence and linkage, thus enhancing the county's economic base.

ED-604 **King County will continue to partner with organizations that support programs and strategies that strengthen the interdependence and linkage between the rural, resource and urban economies, such as the Regional Food Policy Council and Puget Sound Fresh.**

ED-605 **King County recognizes the value of open and green space in promoting social and economic health and wellness throughout the county. The county will continue to invest in public lands and partner with organizations that support and strengthen the linkages between rural, resource and urban communities' use and maintenance of these open spaces.**

ED-606 **King County will encourage economic analysis and economic development of the local food system as called for in the Local Food Initiative.**



CHAPTER 11
COMMUNITY SERVICE AREA PLANNING

King County had a robust community planning program that occurred in two distinct periods—1973 through 1984 to implement the 1964 Comprehensive Plan, and 1985 through 1994 to implement the 1984 Comprehensive Plan. Since then, there have only been minor updates to community plans that were processed through updates to the Comprehensive Plan.

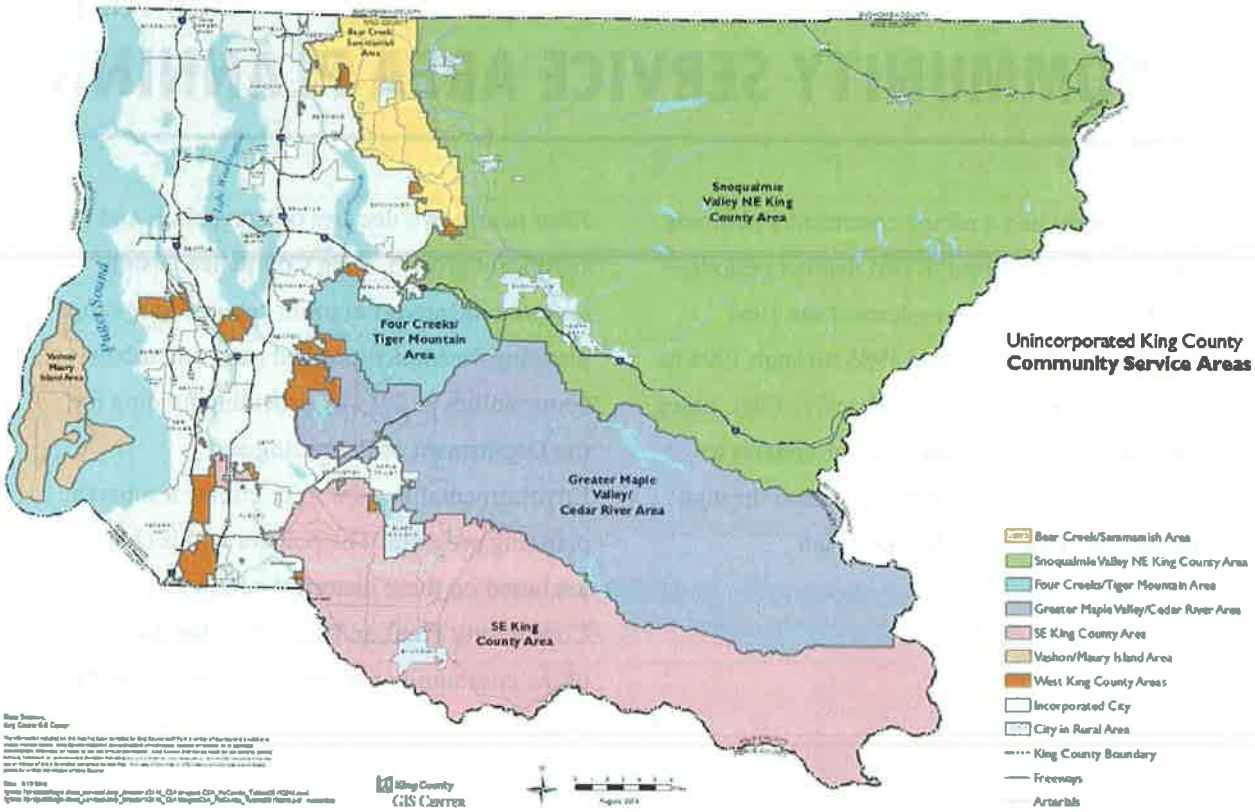
After nearly two decades of aging plans and significant growth, King County leadership renewed its interest in more detailed long-range planning for unincorporated rural and urban communities in 2014 by providing funding for the Department of Permitting and Environmental Review to re-initiate a subarea planning program. The policies in this chapter are based on these historical adopted Community Plans and will be updated as part of the community planning process in coming years.

A. Planning Framework and Geography

Beginning with the 2016 Comprehensive Plan the geographical boundaries of the County's seven Community Service Areas will be used as the framework for subarea plans created and amended from that point forward.

There are a number of key benefits to defining subarea planning boundaries to be coterminous with the Community Service Area boundaries. This structure organizes the County's unincorporated planning area into fewer and more manageable territories so that updates of the plans can occur within a shorter time horizon. Using the Community Service Area boundaries also aligns land use planning with other county services and programs thereby increasing consistency between planning and public service delivery. Finally, since the last round of subarea planning in 1994 there have been numerous major annexations and incorporations which mean some subareas are now largely within the jurisdiction of cities and thus the County now has just a regional, rather than local, planning role in those areas.

Figure: Community Service Areas Map



The following table illustrates how the Community Service Area geography aligns with the former Community Planning Area geography; this is provided to identify how the existing policies are re-assigned into the new geographic structure.

Community Service Area	*Includes parts of the following former* **Community Planning Areas**
Bear Creek / Sammamish Area	Bear Creek, Northshore, East Sammamish
Four Creeks / Tiger Mountain Area	Tahoma Raven Heights, Snoqualmie
Greater Maple Valley / Cedar River Area	Tahoma Raven Heights, Soos Creek, East King County, Snoqualmie
SE King County Area	Enumclaw, Tahoma Raven Heights, East King County, Soos Creek
Snoqualmie Valley / NE King County Area	Snoqualmie, East King County, East Sammamish
Vashon / Maury Island	Vashon
West King County Areas *(unincorp. urban)*	Portions of 10 Community Planning Areas

While there are differences among the Community Service Areas in terms of their boundaries, range of land uses, annexation issues, and more, using this accepted geography will ensure the entire county receives some level of planning on a regular cycle. This includes a regular assessment of the Community Service Area's goals, population changes, new development, employment targets and similar demographic and socioeconomic indicators. These assessments are called Community Service Area Plan Profiles. To address the unique issues in each geography, Community Service Area plans will also have more refined, cross-discipline, and localized planning documents called CSA Subarea Plans. Examples of such plans include rural town centers, urban neighborhoods, and corridor plans.

The high level review along with more detailed land use planning will be guided by a series of criteria such as community interest, social equity, funding, and new development. Equity and social justice principles will play a particularly key role during subarea plan public engagement activities. People of color, low-income residents, and populations with limited English proficiency will be informed and offered equitable and culturally-appropriate opportunities to participate in its planning process. The anticipated length of each detailed subarea plan will be based on the extent and complexity of the work described in each scope.

B. Planning Schedule

Below is the schedule for subarea planning using the Community Service Area geography. Reviewing all seven subareas over the course of an eight year period at both the broad, policy level and at the local, community level with detailed planning will facilitate a more equitable planning process. The plan sequencing was determined by subarea plans already underway, the ability to partner with other jurisdictions, anticipated land use changes within a Community Service Area, and striving for a countywide geographic balance in alternating years.

Year	Community Service Area	Other Planning
2016	West King County CSA – Vashon-Maury Island CSA	Major Comp. Plan Update
2017	West King County CSA – Skyway-West Hill, and North Highline	
2018	Snoqualmie Valley/Northeast King County CSA	
2019	Greater Maple Valley/Cedar River CSA	
2020	West King County CSA - Fairwood	Major Comp. Plan Update
2021	Bear Creek/ Sammamish CSA	
2022	Southeast King County CSA	
2023	Four Creeks/Tiger Mountain CSA	

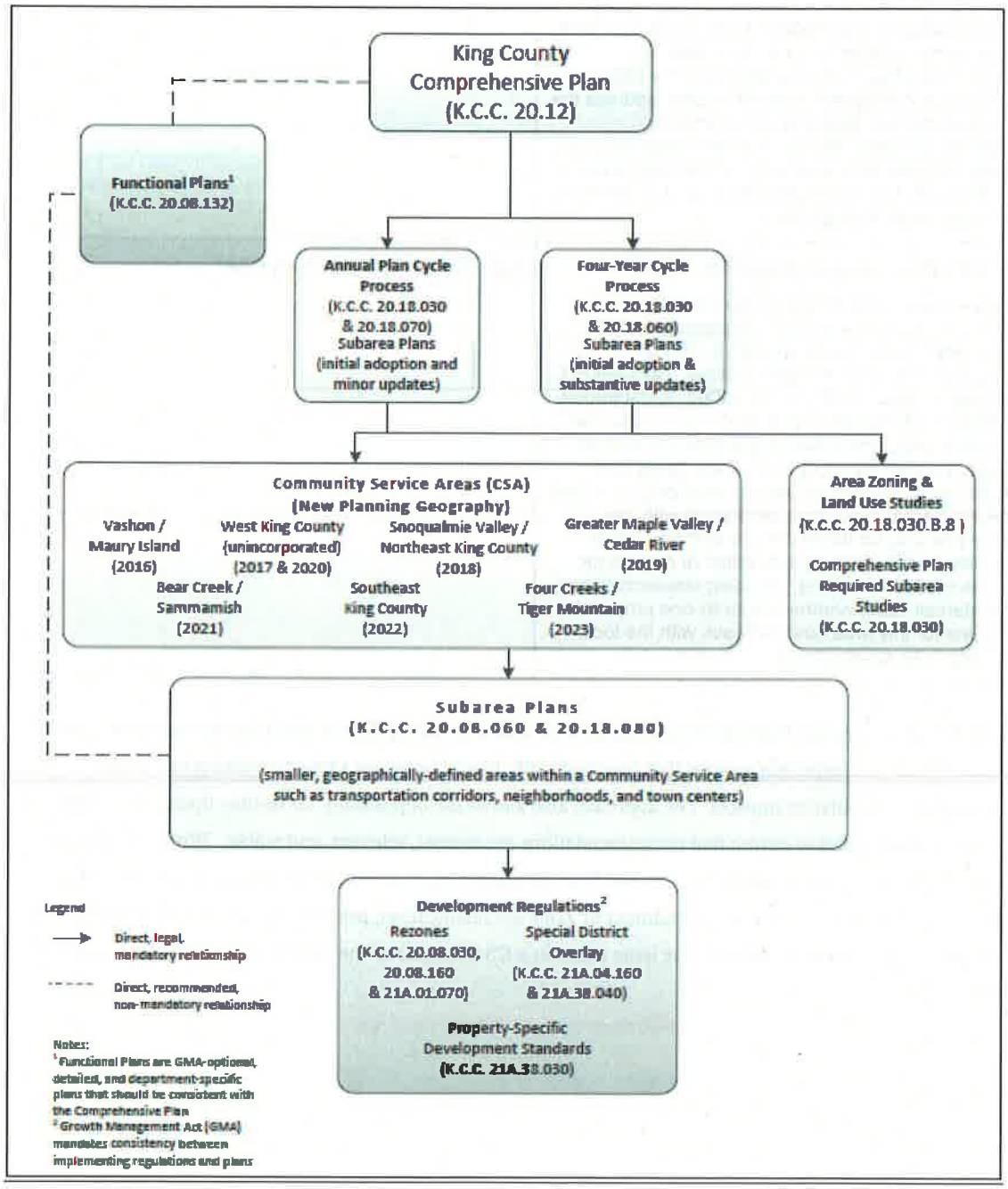
For each of the Community Service Area subarea planning processes, the subarea plans included in Motion 14351, which adopted the scope of work for the 2016 King County Comprehensive Plan, shall be included. This includes the following adopted scopes of work:

Study in Motion 14351	Community Service Area
Snoqualmie Pass Subarea Plan: Initiate a subarea plan for Snoqualmie Pass rural town and ski area. The subarea plan should be developed in collaboration with Kittitas County, evaluate and address the current and future housing and economic development needs of this growing community, and include outreach with the local community in its development.	Snoqualmie Valley/Northeast King County CSA
Vashon Subarea Plan: Initiate an update to the Vashon Town Plan, and incorporate the updated subarea plan into the Comprehensive plan. The updated subarea plan should include zoning and regulations that: address community and business needs, improve economic vitality and quality of life of its residents, and have included the outreach with the local community in their development.	West King County CSA – Vashon-Maury Island CSA

Highline Subarea Plan: Initiate an update to the Highline Community Plan, and incorporate the updated subarea plan into the Comprehensive Plan. The updated subarea plan should include zoning and regulations that: address the historic wide gaps in equity of infrastructure investments and services; facilitate the revitalization of its neighborhoods, local economy, and quality of life of its residents; and have included outreach with the local community in their development.	West King County CSA – North Highline
Cedar Hills/Maple Valley Subarea Plan: Initiate a subarea plan for the "Cedar Hills/Maple Valley" area. Review land use designations and implementing zoning on parcels 2823069009, 2923069019, 2923069080, 2923069082, 2923069083, 2923069084, 3223069001, 3223069003, 3223069068, 3323069027, 3323069030, and 3323069042 and the surrounding area, which has long-standing industrial and resource material processing uses. Study and make recommendations on the potential long-term land uses for this area, including coordination with the County's planning on future closure of the adjacent Cedar Hills landfill. Include evaluation of options for land uses other than mining, including residential uses, non-residential uses; whether a four-to-one proposal is appropriate for this area; and outreach with the local community in its development.	Four Creeks/Tiger Mountain CSA

The schedule above ensures that subarea plan goals and objectives are up-to-date and relevant based on current and future needs. The approach ensures that geographically logical areas are studied, resulting in a better understanding of cumulative impacts. The approach also allows the opportunity for routine updates of subarea trends and demographics to ensure that recommendations are current, relevant, and viable. Within this larger structure, if a property owner has an interest in a land use change outside of this planning cycle, they are able to submit for a Site Specific Land Use Amendment or Zone Reclassification, per King County Code 20.18.050 and 20.20 respectively. If a significant land use issue arises in a CSA outside of the planning cycle, the cycle may be adjusted.

Figure: Relationship of Subarea Plans to the Comprehensive Plan and Development Regulations



C. Background

Between 1973 and 1994 King County prepared community plans for 12 subareas of unincorporated King County. The first generation of community plans, substantially completed by 1984, were used to implement the county's 1964 Comprehensive Plan, and consisted of detailed land use policies, area zoning, and lists of capital projects (primarily roads and parks) for each planning area. The second generation of community plans, from 1985 to 1994, implemented many concepts of the 1985 King County Comprehensive Plan (for example low-density zoning for Rural Areas, Natural Resource Lands and environmentally sensitive areas, higher urban residential densities, and development guidelines for major urban activity centers such as Kenmore) that were carried over to the 1994 King County Comprehensive Plan.

Under King County's pre-Growth Management Act planning system, if a community plan conflicted with the comprehensive plan, the community plan governed. Under the Growth Management Act, the comprehensive plan prevails over "subarea" plans (RCW 36.70A.080(2)). The 1994 King County Comprehensive Plan spelled out the relationship between the comprehensive plan and community plans and directed the county to review community plans and repeal or revise them to eliminate conflicts. The county has reviewed the community plans adopted between 1973 and 1994 and determined that, while most community plans' policies are redundant (or, in a few cases, in conflict with the 1994 Comprehensive Plan), some are area-specific or issue-specific and should be readopted as part of the comprehensive plan.

Although the community plans (except for the Vashon Town Plan, West Hill, and White Center) are no longer in effect as separately adopted plans, in many cases the published plan documents contain valuable historical information about King County's communities and other information that provides background for the policies listed below and for the portions of the local pre-Growth Management Act area zoning that remain in effect.

I. Bear Creek / Sammamish Area

The Bear Creek/Sammamish Community Service Area consists of portions of the following former Community Planning Areas: Bear Creek, Northshore and East Sammamish. Large sections of this area have been annexed into the cities of Bothell and Redmond and have incorporated into the cities of Kenmore, Sammamish and Woodinville. The Urban Planned Developments east of the City of Redmond are controlled through detailed development agreements and built-out for all practical purposes. King County will not permit additional similar urban-scale development outside the Urban Growth Area. The policies listed below pertain to areas within the Community Service Area that are still within unincorporated King County.

In 2014, the estimated population in the Bear Creek/Sammamish CSA was 44,000. Of this total, 9,000 people were estimated to live in the Redmond Ridge Urban Planned Development and 34,900 people were estimated to live in the CSA rural portion. In 2010, there were a total of 15,850 housing units in the CSA. Of this total, 3,540 were in the Redmond Ridge Urban Planned Development and 12,300 were in the CSA rural portion.

Background

Bear Creek. The Bear Creek Community Plan became effective in February 1989, and directed most forecast growth into a concentrated area near the City of Redmond Watershed, first referred to as the "Novelty Hill Master Planned Developments." The rest of the Bear Creek Plateau was designated for a mixture of suburban and rural residential development. The 1994 King County Comprehensive Plan redesignated most of the planning area as Rural Area. In 1995, some of the Bear Creek Community Plan's policies relating to the Novelty Hill Master Planned Developments (MPDs) were amended by Ordinance 11954. Also, the 1994 Comprehensive Plan refers to MPDs as Urban Planned Developments.

After the 1994 Comprehensive Plan's urban designation of the Urban Planned Developments sites was appealed and remanded to the county, the sites in question were redesignated for Fully Contained Communities as defined in the Growth Management Act, as well as Urban Planned Developments (See policy U-178). The readopted policies for the most part address Novelty Hill and some area-specific transportation and trail issues.

East Sammamish. The East Sammamish Community Plan was adopted in December 1992. The East Sammamish Community Plan Update became effective in June 1993. Most of the planning area was designated for urban development, but important Rural Areas included Happy Valley, Grand Ridge and the eastern edge of the Sammamish Plateau. For the most part, the 1994 King County Comprehensive Plan reaffirmed the land use designations of the East Sammamish Community Plan Update. The major changes from the community plan occasioned by the 1994 Comprehensive Plan were replacement of the "urban reserve" approach to growth phasing with the service and finance strategy outlined in the 1994 Comprehensive Plan and the designation of a portion of Grand Ridge for urban growth.

Northshore. The first "Northshore Communities Development Plan" began in 1972-1973 and was adopted in August 1977. Almost immediately the Northshore Community Plan Revision Committee was established, and the "Revised Northshore Community Plan" was adopted in 1981.

The latest Northshore Community Plan Update began in July 1988 and was adopted in February 1993. During 1993, the newly incorporated City of Woodinville assumed jurisdiction within its territory. Portions of the planning area have been annexed by Bothell, Kirkland and Redmond. Kenmore, a significant unincorporated activity center, became a city in August 1998.

Bear Creek Policies

CP-101 **To provide a range of housing opportunities and accommodate a fair share of growth in Bear Creek, the Novelty Hill subarea should be designated an urban planned development (UPD) and fully contained community (FCC). This designation will be implemented by urban planned development. (BC-3)**

CP-102 **Urban planned development will be permitted in the Novelty Hill subarea only when the following planning policies are met:**

a. **To protect existing wetlands, streams and wildlife habitat, urban planned development shall be consistent with the intent of King County ordinances, King County Comprehensive Plan policies, and sensitive areas regulations. The design of the proposed development shall protect and preserve existing wetlands, streams and wildlife habitat by several methods including (but not limited to) minimizing alterations to the natural drainage features, maintaining water quality, preserving storage capacity, providing undisturbed unique/outstanding wetlands and undisturbed or enhanced buffers, restricting the number of stream crossings, and minimizing erosion and sedimentation. To achieve the intent of this policy it may be necessary to exceed the requirements of the King County wetland guidelines.**

b. **A master drainage plan for the Novelty Hill subarea shall be approved by King County.**

c. **New development adjacent to a unique/outstanding or significant wetland should preserve or enhance the wetland and provide an undisturbed buffer around the wetland adequate to protect its natural functions. Encroachments into significant wetlands may be allowed when no feasible alternative exists and enhancements are provided to replace the lost wetland functions; and**

d. Groundwater recharge areas should be identified and protected to ensure that groundwater resources are protected from potential pollution.

e. To ensure that the existing road system in both King County and Redmond is not adversely affected, on-site and off-site traffic impacts shall be mitigated consistent with the Integrated Transportation Program (K.C.C. chapter 14.65).

f. A project environmental impact statement (EIS) shall be required for all property proposed for urban planned development within the Urban Planned Development area. The project EIS shall address the full range of public services necessary to serve urban development on Novelty Hill. The EIS shall include the cost of these services, the financial responsibility of the developer(s) and affected jurisdictions, and the method of phasing development to coincide with availability of these public services.

g. Since the remainder of residential land in Bear Creek will either be recognized as existing one-acre neighborhoods or designated as Rural Areas, all improvements to public facilities, including but not limited to road construction and sewers, shall be financed by the Urban Planned Development developers provided the impacts are the result of UPD developments or according to a fair-share formula agreed to by affected parties.

h. A full range of housing densities, types and prices including housing for low-, moderate-, and medium-income groups shall be included in the Urban Planned Development((-)). The mix of single-family and multifamily housing in the Urban Planned Developments shall approximate the existing county housing stock mix.

i. Urban planned development shall maintain and keep open for public use identified major equestrian and hiking trails.

j. Urban planned development shall provide active recreation facilities that adequately serve the needs of future residents and employees.

k. Urban planned development shall provide a minimum of 25% open space in addition to the preservation of all surveyed wetlands.

l. The Novelty Hill urban planned development area shall contain an urban activity center, which includes a commercial center to provide for the everyday shopping needs of the planned Urban Planned Development population.

m. The activity center shall also contain a business park of sufficient size to provide a diversity of employment opportunities and a balance of jobs and households for the Urban Planned Development area.

n. In order to preserve opportunities for a variety of employment types in the business park areas, retail development in freestanding buildings

should be excluded. Up to 10% of gross floor area in business park buildings may be planned for retail uses, such as restaurants and business services, to serve business park employees.

o. Development conditions for the shopping and business park areas should encourage high quality development and site design.

The area will revert to rural if UPD development is denied or not pursued. If the UPD area reverts to rural, the zoning shall be RA-5. (BC-4)

CP-103 Sewer facilities necessary to serve urban planned development on Novelty Hill are planned, designed and constructed to serve only such development and are prohibited from serving nearby surrounding low-density urban and Rural Areas. Proposals to extend sewer service or expand urban development outside the Novelty Hill subarea are not appropriate and are inconsistent with the purpose of the King County Comprehensive Plan. (BC-5)

CP-104 The Novelty Hill urban planned development or fully contained community shall contain a commercial area of sufficient size to serve the future residents and employees. (BC-17)

CP-105 The natural drainage systems of Bear, Evans, and Patterson Creeks should be restored, maintained, and enhanced to protect water quality, preserve existing aquatic habitat, reduce public costs, and prevent environmental degradation. Public improvements and private developments should not alter natural drainage systems without mitigating measures which eliminate increased risk of flooding and erosion, negative impacts on water quality, and loss on aquatic or riparian habitat. (BC-32)

CP-106 An undisturbed corridor wide enough to maintain the natural biological and hydrological functions of streams should be preserved in all new development in the Bear Creek Planning Area. (BC-34)

CP-107 Bear, Evans, and Patterson Creeks and their tributaries should be protected from grazing animal access in order to: 1) reduce water quality degradation from animal wastes, 2) reduce bank collapse due to trampling, and 3) allow shading vegetation to reestablish along stream banks. (BC-35)

CP-108 Streams channeled in the Bear, Evans, and Patterson Creek drainages should not be placed in culverts unless absolutely necessary for property access. To reduce disruption to streams and their banks, bridges should be used for stream crossings, and crossings should serve several properties. When culverts are required, oversized culverts with gravel bottoms that maintain the channels' width and grade should be used. (BC-38)

CP-109 New development should rehabilitate degraded stream channels and banks in the Bear, Evans, and Patterson Creek drainages to prevent further erosion and water quality problems. Where conditions permit, the banks and channels should be restored to a natural state. (BC-39)

CP-110 Unique or significant wildlife should be identified and preserved. Development plans should identify significant wildlife habitat and should locate buildings, roads, and other features on less sensitive portions of the site. These considerations may result in a reduction in density from that otherwise allowed by zoning. (BC-40)

CP-111 The Bear and Evans Creeks' watersheds have been designated as critical areas for protection of the aquatic resources and human health. The following surface water management activities should be promoted.

a. Appropriate and reasoned changes in land use policies and regulations may be evaluated during the preparation of the Bear/Evans Creeks Basin Plan.
b. Ensure adequate field inspection of land development activities.
c. Implement a public information program to promote water resources and stream channel protection.
d. The Bear and Evans Creeks Basin Plan shall develop recommendations for water quality monitoring and recommended methods for citizen input and evaluation to assess the success of the county's policies and regulations pertaining to this planning area. (BC-41)

CP-112 Mitigation of traffic impacts to the City of Redmond arterial system will be accomplished through the interlocal agreement process. The Avondale arterial corridor study recommendations shall be used as a basis for traffic mitigation requirements for both city and county development affecting the corridor.

a. Mitigation shall preserve the operational integrity of the corridor and maintain existing local access. The primary arterial corridor between the Novelty Hill urban area and SR-520 should be located and designed to encourage transit and ride-sharing alternatives to single-occupant vehicle travel.

b. Transportation planning of new facilities and management of the transportation system should be coordinated with current and forecast needs of the East Sammamish and Northshore planning areas, adjacent areas of Snohomish County, and with the cities of Redmond and Kirkland, and should be a cooperative effort of the affected jurisdictions. Phasing of Bear Creek and Redmond development should be strongly linked to the provision of adequate transportation facilities and travel demand management programs. (BC-45A)

CP-113 Establishment of new rights-of-way and acquisition of additional right-of-way in existing corridors should emphasize protection of natural systems and adequate buffering of existing and potential residential development. (BC-47)

CP-114 Road improvements in Cottage Lake, Ring Hill, Ames Lake, Union Hill, and the Rural Areas should incorporate design features such as grass-lined swales to minimize surface water disruption and to protect and enhance water quality. (BC-49)

CP-115 196th Avenue Northeast ("Red Brick Road") between Union Hill Road and Redmond-Fall City Road (SR-202) is a historic road and should be preserved by restoring its brick surface, limiting vehicular loads and speeds, and prohibiting access to commercially-zoned properties to the west. Access to these properties should be provided by other existing roads and by a new north-south road connecting Union Hill Road and 185th/187th Avenues Northeast. (BC-50)

CP-116 Park-and-ride and park-and-pool lots should be developed in Redmond, Cottage Lake, Ring Hill, Ames Lake, and Union Hill to provide focal points for transit and ride sharing. Park-and-pool lots should be located in Rural Areas along major commuting corridors such as SR-202, Redmond-Fall City Road, Novelty Hill Road, and Woodinville-Duvall Road. (BC-52)

CP-117 The Northwest Gas Pipeline and Puget Sound Power Line should be established as regional trails in Bear Creek to tie in with other planning areas and to connect with the King County Tolt Pipeline Trail and the Snoqualmie Valley Trail. (BC-61)

CP-118 When the development of property occurs in Bear Creek, adequate rights-of-way should be provided for trail use. Trails should connect to existing and proposed schools, parks, riding stables, and recreation areas. (BC-62)

East Sammamish Policies

CP-119 For all new development, increased standards for retention/detention, water quality facilities, and monitoring shall be considered, adopted and implemented as appropriate within the areas identified in surface water management basin planning and reconnaissance study areas. (NE-1)

CP-120 As new roads are built and existing roads widened, special consideration shall be taken to create or retain the aesthetic character of the area through the use of vegetated buffers that utilize native vegetation. (NE-3)

CP-121 Control mechanisms equal to or more effective than those adopted by Ordinance 9365 limiting or removing phosphorus and other non-point source pollutants from water bodies should be established and implemented as special requirements in area-specific basins plans to provide added protection to streams, lakes, wetlands. The Lake Sammamish Water Quality Management Project Report and, upon their adoption, the Issaquah Creek and East Lake Sammamish Basin and Non-point Source Control Plan, the Pine Lake Management Plan and the Beaver Lake Management Plan recommendations should be implemented to protect water bodies from non-point source pollution. (NE-7)

CP-122 Development shall protect wildlife through site design and landscaping. New development within or adjacent to the wildlife habitat network should incorporate design techniques that protect and enhance wildlife habitat values. (NE-10)

CP-123 All golf course proposals shall be carefully evaluated for their impacts on surface and groundwater quality, sensitive areas, and fish and wildlife resources and habitat. (NE-11)

CP-124 Water used for irrigating golf courses should come from nonpotable water sources wherever possible. Use of natural surface water sources, such as streams, should be avoided due to impacts on fish and other wildlife habitat. A water conservation plan shall be submitted with golf course applications which should address measures such as the use of drought-tolerant plant species. (NE-12)

CP-125 The Patterson Creek Basin currently provides highly-productive aquatic habitat. Urban development within this basin should be conditioned to protect this resource by minimizing site disturbance, impervious surfaces and disturbances of wetlands and streams. (No Community Plan Policy Number)

CP-126 The Northwest Pipeline office and maintenance shop is an existing use and is recognized by this plan as providing a needed service to the area. This 6.5 acre site may redevelop for pipeline utility and/or school bus base uses exclusive of major maintenance functions that are compatible with the surrounding rural development and agricultural uses. Redesignation of additional properties in the immediate vicinity of Northwest Pipeline for manufacturing park uses or other urban uses shall not be permitted. (CI-13)

CP-127 New developments should be designed and constructed with an internal road system which includes a Neighborhood Collector linking with existing or planned adjacent developments, creating a complete Neighborhood Collector circulation system and such linkage should be designed to ensure safety of local streets. Through traffic on local access streets should be discouraged. (T-9)

CP-128 Metropolitan King County Government should establish park-and-ride facilities in the East Sammamish Community Planning area. Park-and-ride facilities should be built along 228th Avenue and/or adjacent to I-90 and SR-202. The park-and-ride lots should be sited adjacent to and connect with existing or proposed community or neighborhood centers or within the employment center located around the intersection of E. Lake Sammamish Parkway and SE 56th Street. Establishment of a site near, but to the north of, I-90 should be high priority response to current and anticipated I-90 access problems. (T-13)

CP-129 Consistent with the King County Open Space Plan, the county shall encourage establishment of an open space system in East Sammamish and give priority to protecting recreational, cultural and natural and sensitive areas such as shorelines, aquifer recharge areas, wildlife habitat, historic properties, archaeological sites, scenic vistas and community separators or greenbelts. The county may require lot clustering within or adjacent to open space areas; linkages between open spaces and may provide density bonuses or incentives to developers who preserve significant open space or establish trails beyond usually applied mitigation. (P-11)

CP-130 Urban separators should be established to provide visual relief from continuous development, provide important linkages for wildlife habitat, and maintain a visual separation between distinct communities. (P-17)

CP-131 There are areas within the urban separators that are especially suitable for trail connections for recreational use by present and anticipated population. King County should develop a trail and/or parks system utilizing the preserved open space within the urban separators. (P-18)

CP-132 When the development of properties occurs in the East Sammamish planning area, public access or easements should be required to complete the development of a local trail system for those areas where existing trails have historically been used by the public, or where the King County Open Space Plan identifies proposed trail alignment for regional and local trails. The Parks Division shall review the application during the development review process. (P-23)

Northshore Policies

CP-133 The north and east slopes of Norway Hill have an established neighborhood character and limited future development potential. They are, therefore, designated low density urban, 1 home per acre. King County recognizes that extensive steep slopes and erosive soils at the top of Norway Hill (above the 300-foot elevation mark) warrant lower residential densities. (E-10)

CP-134 The undeveloped area to the south of Metro's Brickyard Park and Ride lot should retain its office-only designation in recognition of its proximity to a major transportation corridor and the need for increased employment opportunity in proximity to planned high-density residential areas. (E-13)

CP-135 King County, Snohomish County, the City of Bothell, and the City of Woodinville should work on specific areas of mutual concern, such as the Swamp Creek and Daniels Creek drainage basins, the SR-527 transportation corridor, the proposed regional facilities of the University of Washington, and the future expansion of the City of Bothell. (E-25)

CP-136 Significant vegetation is a diminishing resource in the Northshore community. Significant vegetation contributes significantly to environmental quality, neighborhood character, and the quality of life in Northshore. All new residential development shall retain significant existing vegetation. Native vegetation should be utilized wherever possible. (R-17)

CP-137 New development must provide pedestrian connections to off-site facilities such as existing trails, walkways, community facilities and services, transit, schools and surrounding residential neighborhoods. Pedestrian links should be provided internally in all new residential development. Bicycle and equestrian links should be provided where possible. (R-19)

CP-138 King County recognizes the importance of existing mobile home parks in providing affordable housing options. Mobile home parks outside of the Woodinville and Kenmore commercial core areas are designated for mobile home park uses, and shall be zoned appropriately.

a. King County shall continue to examine the feasibility of funding and developing a replacement mobile home park in north King County for displaced mobile homes on county-owned or privately owned sites.

b. King County should develop interlocal agreements with the cities of Bothell, Redmond, Kirkland, Woodinville and Kenmore for joint development of replacement parks to accommodate mobile home owners if they are displaced from mobile home parks within cities. (R-21)

CP-139 Roadway improvements addressing the transportation needs in the Sammamish Valley from the South Woodinville bypass to Northeast 124th Street should carefully preserve the rural character of the valley as indicated by this and other adopted land use plans. Incorporating roadway design characteristics, such as tree windbreaks and shoulders instead of curb and gutter, will enhance this rural atmosphere. Access from adjacent properties to the proposed Willows Road extension shall be discouraged. Where access is necessary from adjacent properties, access shall be consolidated. (T-11)

CP-140 Transportation projects in Northshore should incorporate bicycle friendly design, utilizing a variety of design techniques appropriate to the particular project and right-of-way characteristics, including, but not limited to, bicycle lanes, wide outside travel lanes, paved shoulders, bicycle sensitive signal detectors, and appropriate signing. Existing bicycle facilities should be preserved or enhanced when general road improvements are made. Secure parking for bicycles should be provided at activity centers throughout Northshore. (T-33)

CP-141 Pedestrian and bicycle linkages are encouraged and should be planned. There should also be a link for equestrian uses from Hollywood Hill and NE 171st Street to the Sammamish River trail in the vicinity of the South Woodinville CBD bypass. (W-14)

CP-142 Protection of natural vegetation coverage at levels sufficient to moderate surface water runoff and erosion and to protect the integrity of stream channels should be required through special zoning requirements, critical drainage basin requirements, or countywide ordinance. When revegetation is required, appropriate native vegetation should be used. (NR-4)

CP-143 Unique geologic conditions in Northshore have resulted in hillsides that have a high risk of large scale erosion. Increased on-site retention/detention requirements in areas drainage over steep and erosive slopes should be adopted and implemented as special zoning requirements. (NR-9)

CP-144 A community-wide trail system for pedestrians, equestrians, and bicyclists should be developed. This trail system should connect regional trails with local trails and walkways. (P-6)

CP-145 When the development of properties occurs in the Northshore Planning Area, public access or easements should be required to complete the development of a local trail system. Adequate right-of-way should be provided for trail use. To ensure that the provision of trail corridor right-of-way does not result in a reduction in the number of permitted building lots, the area within the trail right-of-way, not otherwise credited as part of a road right-of-way dedication, should also be credited toward the lot area of any proposed development. Trails should connect to existing and proposed schools, parks, riding stables, recreation areas and neighborhoods. (P-9)

CP-146 **King County should work closely with other jurisdictions and public agencies to seek appropriate trail links between elements of the open space system including, but not limited to the Burke-Gilman trail, Sammamish River trail, and the Tolt Pipeline Trail. (P-10)**

CP-147 **Existing public access points to the Sammamish River should be maintained and additional access points acquired and developed to ensure the use of this river as trail corridor and fishing area. (P-11)**

II. Four Creeks / Tiger Mountain Area

Background

The Four Creeks/Tiger Mountain Community Service Area consists of portions of the following former Community Planning Areas: Newcastle, Tahoma Raven Heights, East Sammamish and Snoqualmie. A large portion of the area incorporated as the City of Newcastle and annexed in to the City of Issaquah. The Klahanie Annexation expanded the City of Sammamish in 2016.

In 2014, the estimated population in the Four Creeks/Tiger Mountain CSA was approximately 13,000. In 2010, there were 4,870 housing units in the CSA.

The Newcastle Community Plan commenced in 1978 and was adopted in May 1983. The final adopted plan designated three sites for Master Planned Developments (MPDs), but stipulated that only two MPDs could occur without an update of the community plan. One MPD was approved by the county in the late 1980s. Bellevue annexed Factoria and Newport Hills in 1993 and the City of Newcastle was incorporated in 1994, so the noncity portion of the planning area's population fell 13 percent between 1990 and 1994 even though the whole planning area was forecasted to grow almost 18 percent between 1994 and 2010. The planning area also included some areas designated Rural Area by either the 1985 or 1994 King County Comprehensive Plans.

Newcastle Policies

CP-201 **King County supports the nomination of the Odd Fellows Cemetery and counterbalance right-of-way to the National and State Registers of Historic Places. (N-33)**

CP-202 **Limit grazing animal access to May Creek and its tributaries in order to 1) reduce water quality degradation from animal wastes, 2) reduce bank collapse due to animals' hooves, and 3) allow shading vegetation to reestablish along stream banks. (N-41)**

CP-203 **May Creek is acknowledged as a regional asset and should be protected. Thus, King County shall not increase zoning density on lands that drain into May Creek (i.e. the May Valley Basin) without first determining and implementing stormwater runoff mitigation necessary to control flooding and siltation in May Creek.**

III. Greater Maple Valley / Cedar River Area

The Greater Maple Valley/Cedar River Community Service Area encompasses portions of the following former Community Planning Areas: Soos Creek, Tahoma Raven Heights, Snoqualmie and East King County.

In 2014, the estimated population in the Greater Maple Valley/Cedar River CSA was approximately 17,000. In 2010, there were 6,700 housing units in the CSA.

Background

The first Soos Creek Plateau Communities Plan (SCCP) commenced during the fall of 1975, and was adopted in November 1979. The process was controversial, partly because Soos Creek served as a laboratory for several emerging planning concepts, including a Rural Area land use designation implemented with zoning limiting residential density to one home per five acres.

The Soos Creek Community Plan Update commenced in March 1988 and was adopted in December 1991. In 1995 the City of Kent initiated annexation of a very large area between it and Lake Meridian, intended to encompass most of its Potential Annexation Area (PAA) within the planning area. The cities of Maple Valley and Covington have commenced operating and assumed jurisdiction within their territories. The Panther Lake annexation to the City of Kent occurred in 2010.

The Tahoma/Raven Heights Communities Plan (T/RH) commenced in August 1979 and was adopted in October 1984. T/RH continued to apply the Growth Reserve and Rural Area designations and zoning that emerged during the Soos Creek planning process. The planning area is mostly unincorporated Rural Area or Forest Production District. In the years prior to the Growth Management Act (GMA) the City of Black Diamond completed one large annexation. A final Urban Growth Area for Black Diamond was adopted as part of amendments following the 1994 King County Comprehensive Plan.

The planning area was affected by the incorporation of the City of Maple Valley in 1997. The city includes most of the Urban Growth Area in the planning area.

In response to data and recommendations emerging while the Soos Creek Basin Plan was being prepared, interim five acre zoning was applied to portions of the Jenkins and Covington Creek watersheds in July 1989. An update to the plan covering about one-fifth of the planning area was initiated in March 1991, and adopted in December 1991. The area zoning was changed in some cases, but this action was based on the 1985 King County Comprehensive Plan and applicable basin plan policies, and did not result in any changes to the 1984 plan's policies.

Soos Creek Policies

CP-301 **The continued viability and health of the Soos Creek planning area's stream systems and the fisheries resources dependent upon them should be assured through zoning, special zoning conditions and development regulations. The intent of this policy is to control densities along stream corridors identified by the Soos Creek Basin Plan. This policy will be implemented through the Area Zoning by placing rural and urban densities within 1/4-mile of significant stream systems identified as Types 1, 2, and 3 waters according to the Sensitive Areas Ordinance. (NR-1)**

CP-302 **Lot coverage limitations for building shall be applied in all stream corridors in urban designated areas of the Soos Creek basin and classified R-1, urban stream protection special district overlay. Total impervious surface should not exceed 8%, and total clearing of forested vegetation should not exceed 30%. Reforestation to achieve sites that are 70% forested should be required. (NR-1A)**

CP-303 **New development should rehabilitate degraded wetlands and stream channels and banks in the Soos Creek planning area's drainage's to prevent further erosion and water quality problems. These areas include, but are not limited to, May Creek, Garrison Creek, Molasses Creek and Olsen Creek. Where conditions permit, the banks and channels should be restored to a natural state. Where it has been determined that additional standards may be appropriate to control volume, these should be required for new development. (NR-3)**

CP-304 Within the Soos Creek basin, bare ground associated with clearing, grading, utility installation, building construction, and other development activity should be covered or revegetated between October 1 and March 31 each year. Earth-moving and land-clearing activity should not occur during this period within the Soos Creek basin except for regular maintenance of public facilities and public agency response to emergencies that threaten the public health, safety and welfare. Landscaping of single-family residences, existing permitted commercial forestry and mining activities and development sites with approved and constructed drainage facilities that infiltrate 100 percent of stormwater runoff should be exempt from these restrictions. (NR-8)

CP-305 For new subdivisions in the Soos Creek basin Rural Area, a minimum of 20% of the property should be retained as a separate tract of undisturbed indigenous vegetation. (NR-9)

CP-306 All development within 660 feet of the top of the Cedar River Valley and the Green River Valley walls, particularly along the bluffs south and west of the Lea Hill plateau and within the Lake Heights area, should be conditioned to avoid adverse impacts on the environment and risks to life and property. (NR-14)

CP-307 The Soos Creek Community Plan recognizes the importance of existing mobile home parks in providing affordable housing options. Mobile home parks in the urban areas of Soos Creek are designated for mobile home park uses, and should be zoned appropriately. King County should continue to examine the feasibility of funding and developing a replacement mobile home park in south King County for displaced mobile homes on county-owned or privately-owned sites. King County should develop intergovernmental agreements with the cities of Renton, Kent and Auburn for joint development of replacement parks to accommodate mobile home owners if they are displaced from mobile home parks within cities. (R-23)

CP-308 Significant vegetation is a diminishing resource in the Soos Creek community. Significant vegetation contributes significantly to environmental quality, neighborhood character, and the quality of life in Soos Creek. All new residential development shall retain significant existing vegetation. Native vegetation should be utilized wherever possible. (R-33)

CP-309 Multifamily zoned land should not be converted to institutional and commercial/office uses within the Soos Creek Planning Area. (C-5)

CP-310 Equestrian crossings of arterials should be permitted only where they do not greatly disrupt traffic. Where possible, these crossings should be combined with pedestrian and bicycle crossings. There should be no at grade equestrian crossings of SR-516, except at Lake Meridian. (T-29)

CP-311 Crest Airpark is an important local facility and should continue operation at current levels of use. (F-15)

CP-312 Because of noise and public safety concerns, low-density, single-family development should be the primary land use allowed within Crest Airpark's north flight path within 1/2-mile of the airport runway. (F-16)

CP-313 All new subdivisions within 1/4-mile of Crest Airpark should include a covenant. The covenant should state that the property owner and/or resident recognize the existence of Crest Airpark, its value to the community, and the noise and public safety aspects of living in proximity to the airpark. (F-17)

CP-314 The operation of Pacific Raceway is expected to continue indefinitely. The area authorized for racetrack use shall be confined to maximize protection of Soosette Creek and its riparian area. Any future consideration of permits for its operation should be consistent with the spirit and intent of the 1991 rules and conditions which regulate operation of the facility. (F-18)

CP-315 King County should give high priority to expanding the Big Soos Creek trail by linking the City of Covington to the south and Fairwood Center to the north to the existing trail system. (P-15)

CP-316 King County should give high priority to linking the Green River and Cedar River corridors. (P-16)

CP-317 King County should coordinate with the City of Seattle, WSDOT, and other jurisdictions to link major elements of the open space system including the Cedar River, Lake Desire, Big Soos Creek, SR-18 and the Green River trail systems. (P-18a)

Tahoma/Raven Heights Policies

CP-318 Resource activities should be encouraged in areas where such activities are not inconsistent with a rural atmosphere. In order to ensure continued development of natural resources prior to the development of the land for other purposes, extractive industries should be allowed to locate in areas known to have deposits of minerals. Premature urban/ suburban development should not be approved which forecloses the opportunity to use the resources. (T/RH-28)

CP-319 The demand from surrounding land uses and densities should not exceed the capacity of the area's groundwater resources nor otherwise cause deterioration of its quality. (T/RH-45)

CP-320 Existing businesses which qualify as legal uses located at Highway 169 and Cedar Grove Road should be given the same land use map designation as surrounding Rural Area or Natural Resource Land properties, but recognized as Rural Businesses with neighborhood-scale business zoning. Any such development should not be expanded beyond the limits of the existing zoning of the specific parcel on which it is currently located, and if the use is abandoned the zoning should be redesignated to a Rural Area zone consistent with that applied to surrounding properties.

CP-321 King County supports annexation of the lands within the City of Black Diamond's Urban Growth Area subject to the requirements of the Black Diamond Urban Growth Area Agreement as adopted by Ordinance 12534. If the agreement is terminated, the affected lands under King County jurisdiction shall be treated as follows:

a. Land within the designated Urban Growth Area shall be redesignated to Rural and reclassified to the rural zoning in place prior to the effective date of Ordinance 12534. This zoning shall continue for a period of at least five years from the date of reclassification.

b. The areas identified in the agreement as county open space shall be maintained at the rural zoning in place prior to the effective date of Ordinance 12534. This zoning shall continue for a period of at least five years after the date of termination of the agreement.

CP-322 King County supports expansion of the network of regional trails and conservation of natural resource lands and environmentally sensitive areas through community efforts such as the Rock Creek Valley Conservation Plan and the Friends of Rock Creek.

CP-323 **King County supports efforts to protect and enhance open space and ensure long-term habitat health and passive recreation opportunities in the Middle Green River through community efforts such as the Middle Green River Coalition.**

IV. Southeast King County Area

Background

The SE King County Community Service Area consists of the former Enumclaw Community Planning Area and portions of the former Tahoma Raven Heights, East King County and Soos Creek Community Planning Areas. The City of Enumclaw is located within this CSA and the City of Black Diamond is surrounded by it on three sides. The majority of this CSA is Rural Area and forested resource lands.

In 2014, the estimated population in the SE King County CSA was approximately 29.000. Of this total, 300 people were estimated to live in the Lower Green River area and 28,000 people were estimated to live in the main CSA area. In 2010, there were a total of 11,020 housing units in the CSA. Of this total, 102 were in the Lower Green River area and 10,918 were in the main CSA area.

The Enumclaw Community Plan and Area Zoning were commenced in 1986-87 and adopted in June 1990. The community plan refined boundaries between the Enumclaw Plateau's Agricultural Production District and abutting Rural Areas and Forest Production District, and designated the Urban Growth Area agreed to by King County and the City of Enumclaw. The 1994 King County Comprehensive Plan reaffirmed the Enumclaw Community Plan's land use designations.

Enumclaw Policies

CP-401 **All development within 660 feet of the top of the Green River valley walls should be conditioned to avoid adverse impacts on the environment and risks to life and property. (EN-12)**

CP-402 **King County should work with landowners on either side of SR-410 east of the City of Enumclaw to protect the scenic qualities of this highway corridor. (EN-22)**

CP-403 King County should work with Washington State Parks and Recreation **Commission and landowners on either side of the Green River Gorge to protect the scenic qualities of the Green River Gorge conservation area. (EN-23)**

Enumclaw's expansion area, like that of other Cities in the Rural Area, is shown on the King County Comprehensive Plan Land Use Map.

CP-404 King County should work with the City of Enumclaw to establish an agreement guiding future annexations, including but not limited to the following elements:

a. Commitment from the city to extend and maintain public services to the area, including police, fire, transportation, sewer, water, storm water management and general government services.

b. Commitment from the city to provide a variety of residential development at an overall density for unconstrained land of at least four to eight units per acre.

c. Commitment from the city that the extension of public services to meet the needs of future residents will maintain service levels to existing city residents.

d. Commitment that the city will continue environmental protection for sensitive areas, (including but not limited to flood plains, steep slopes, wetlands, seismic and landslide hazard areas) at or above King County standards.

e. Commitment from the city to use measures to buffer or protect abutting forest or agriculture resource lands.

f. Commitment that the city will provide protection of historic sites and areas equal to the county's Historic Preservation Ordinance.

g. Commitment by King County to consult with the city on public improvement standards, such as local road standards, drainage control requirements and transportation standards that will apply to development in expansion areas.

h. Commitment by King County to notify the city of development proposals in the expansion area and to consult with the city to condition development approvals to mitigate adverse impacts on city services and to implement city plans, policies and standards.

i. Commitment by King County to notify the city of development proposals in an impact area, which includes all lands within a one-mile radius of the expansion area, and to consult with the city where applicable to condition development approvals to mitigate adverse impacts on city services.

j. Agreement on which jurisdiction will have responsibility for parks, roads, storm water or other public facilities after annexation. (EN-40)

CP-405 Access to state park lands should be designed to minimize adverse traffic impacts on the Southeast Green Valley Road. (EN-56)

CP-406 **Any expansion of aircraft runway or hangar capacity in the Enumclaw planning area should be concentrated on or near the existing Enumclaw airport. Existing legally approved landing strips associated with low-density residential developments, such as Evergreen Sky Ranch, shall not be expanded. (EN-60)**

CP-407 **Redevelopment of the Enumclaw landfill site should be subject to studies to assure public health and safety. If these studies determine that there is no threat to public health and safety the site's Rural Area designation may be changed to accommodate a public use such as a park or other facility without an amendment to the King County Comprehensive Plan. (EN-71)**

V. Snoqualmie Valley / Northeast King County Area

The Snoqualmie Valley/NE King County Community Service Area includes the Snoqualmie Community Planning Area as well as portions of the East Sammamish, Tahoma Raven Heights and East King County Community Planning Areas. It surrounds the Cities of Snoqualmie, North Bend, Carnation, Duvall and Skykomish and their Potential Annexation Areas. These cities are within Urban Growth Boundaries while the vast majority of the CSA is Rural Area, Natural Resource Lands and unincorporated areas. Fall City is a Rural Town within this CSA.

In 2014, the estimated population in the Snoqualmie Valley/NE King County CSA was approximately 26,000. In 2010, there were 11,050 housing units in the CSA. East Sammamish policies are included in Section I. Bear Creek/Sammamish Area in this chapter.

Background

The Snoqualmie Valley Community Plan was initiated in April 1984, and adopted in August 1989. The process resulted in designation of the Snoqualmie Ridge Urban Growth Area for the City of Snoqualmie. The area was annexed by the City of Snoqualmie, and development is proceeding under an interlocal agreement as directed by the community plan. The 1994 King County Comprehensive Plan largely reaffirmed the Rural Area and Natural Resource Lands land use map designations of the community plan. Additionally, in this area, the Fall City Town Plan was updated in 2012 through a planning process that involved members of the Fall City community.

Snoqualmie Policies

CP-501 King County, in cooperation with the Valley cities, and state and federal agencies, should conduct a study of baseline conditions and cumulative impacts of development on the Snoqualmie River's water quality, and identify methods of equitably controlling these impacts. (SQP-1 through SQP-6)

CP-502 Wildlife populations in the Snoqualmie Valley planning area are recognized as a regionally important resource and an important characteristic of the area's rural character. Special studies should be undertaken, in cooperation with the Washington State Department of Wildlife, to identify wildlife populations at risk due to the land uses allowed by the King County Comprehensive Plan and to develop mitigation measures to protect the continued viability of the area's wildlife populations. Should these studies indicate unmitigatable impact affecting wildlife populations due to the land uses allowed by the plan, a comprehensive plan amendment study will be undertaken to provide for the continued existence of this valuable resource. (SQP-17)

CP-503 Properties in erosion-prone drainage basins are subject to special development conditions applied to protect the safety and property of county residents through reducing or eliminating the occurrence of gully formation and sever erosion. These conditions may include:

a. A drainage control plan;
b. Installation of drainage control features prior to any land clearing, vegetation removal, site grading, road construction, or utility installation; and
c. Runoff control requirements. (SQP-21)

CP-504 King County will oppose annexations to Snoqualmie Valley cities that currently contain designated floodplain lands until interlocal agreements have been enacted to advance the policies and standards set forth in the comprehensive plan. (SQP-27)

CP-505 The Shoreline Environment designations of the King County Shoreline Management Program should be consistent with comprehensive plan land use map designations and zoning. King County should initiate the shoreline redesignation process consistent with K.C.C. 25.32.130. (SQP-32)

CP-506 **Until expansion areas are annexed, zoning for the expansion areas shall be urban reserve at five acre densities with the exception of the existing commercial/industrial area in the SE North Bend Way expansion area, and the existing industrial area in the Snoqualmie expansion area. (SQP-57)**

Community plan policies SQP 58 to 61 referred to "expansion areas one and two," reflecting the Snoqualmie Community Plan's attempt to phase growth of the valley cities. These phasing approaches were embodied in the interlocal agreement the county signed with the City of Snoqualmie; they may be reflected in the cities' comprehensive plans. The King County Comprehensive Plan simplifies the designations into one expansion area for each city.

CP-507 **King County will support development within the Snoqualmie Valley cities of Duvall, Carnation, Snoqualmie and North Bend and annexation and development of lands within their expansion areas, when each city demonstrates that its wastewater and storm water treatment systems for the existing and proposed city jurisdiction will not degrade the water quality of the Snoqualmie River and its tributaries. (SQP-58)**

CP-508 **King County will not support Snoqualmie Valley cities' annexations into expansion areas until each city has adopted mechanisms to reduce flood and channel migration hazards within its jurisdiction. (SQP-59)**

CP-509 **King County shall initiate an amendment to the King County Comprehensive Plan if the cumulative impact of development of the cities' expansion areas will reduce the quality of the Snoqualmie River and its tributaries below the current "A and AA" standards. (SQP-61)**

CP-510 **King County shall support annexation of the expansion area only when Carnation implements a long-term, nonstructural program to reduce flood damages on floodplains land within its jurisdiction. (SQP-68)**

CP-511 **Achieving a long-term solution to flood damages within the City of Snoqualmie is one of King County's highest priorities for this planning area. (SQP-70)**

CP-512 **King County intends to assist the City of Snoqualmie to develop a long-term solution and an implementation program which will reduce the risk from flooding and channel migration in the city. (SQP-73)**

CP-513 **If the long-term solution to reducing the risk from flooding in the City of Snoqualmie is determined to have basin-wide impacts, these impacts shall be reviewed by the King County River and Floodplain Management Program or its equivalent to identify any additional mitigations that may be required. If the long-term solution to reducing the risk from flooding is demonstrated to not have basin-wide impacts, it should be implemented as soon as possible and would not require a second, basin-wide, review of impacts and mitigations. (SQP-74)**

CP-514 **King County urges a public/private resource commitment to implement a long-term solution to flooding in the City of Snoqualmie. (SQP-75)**

Policies SQP 76 through 78 have been and continue to be implemented through an interlocal agreement. Most of the annexations referenced have taken place and are reflected in the expansion area boundaries for the City of Snoqualmie adopted in the King County Comprehensive Plan's Land Use Map.

CP-515 **Until a long-term solution to preventing flood damages in the City of Snoqualmie is agreed to by King County and the City of Snoqualmie, King County will support annexations in expansion areas when consistent with all appropriate policies herein and when higher residential densities can be achieved, municipal services can be provided, and river water quality will not be degraded. (SQP-77)**

CP-516 **Annexations of lands within the Phase 1 and Phase 2 additions to the City of Snoqualmie's Urban Growth Area shall not occur until completion of detailed planning, preparation and review of project-level Environmental Impact Statement(s), and a determination of required mitigations and amenities. The range of land uses to be allowed and the mitigations and amenities to be required shall be embodied in a binding Development Agreement between the City of Snoqualmie and the owners of proposed annexation lands.**

CP-517 **The project-level Environmental Impact Statement(s) for lands within the Phase 1 and Phase 2 additions to the City of Snoqualmie's Urban Growth Area shall address aquifer recharge issues, and potential impacts to the water quality and quantity of Lake Alice, private wells in the Lake Alice and Snoqualmie Hills neighborhoods, and all streams that flow off-site.**

CP-518 Based on the findings of the Environmental Impact Statement(s), the Development Agreement between the City of Snoqualmie and the owners of proposed annexation lands in the Phase 1 and Phase 2 additions to the City of Snoqualmie's Urban Growth Area shall establish a program for long-term monitoring of the water quality and quantity of Lake Alice and the private wells in the Lake Alice and Snoqualmie Hills neighborhoods, and of all streams flowing off-site.

CP-519 The Development Agreement shall also outline the remedies necessary if the monitoring program leads to findings that development activities on the annexation lands are the cause for adverse impacts to the water quality and/or quantity of Lake Alice and the private wells in the Lake Alice and Snoqualmie Hills neighborhoods, and of streams flowing off-site. The owners of the annexation lands shall be responsible for the monitoring program and correction of any impacts determined to have been caused by their development activities. Remedies may include connection to the public water system, or construction of alternative wells.

CP-520 The project-level Environmental Impact Statement(s) for lands within the Phase 1 and Phase 2 additions to the City of Snoqualmie's Urban Growth Area shall address traffic safety issues, with a focus on safety concerns for rural homeowners dependent upon the southern stretch of the Snoqualmie Parkway for access to their homes. A range of alternatives to improve safety at the intersection of the Snoqualmie Parkway and SE 96th Street, including signalization, road widening and turn lanes shall be explored.

CP-521 Annexations of lands within the Phase 1 and Phase 2 additions to the City of Snoqualmie's Urban Growth Area shall be subject to updated Comprehensive Water and Sanitary Sewer Plans to determine the full range of improvements landowners within the annexation will be required to provide.

CP-522 A Drainage Master Plan shall be required for any new development of lands within the Phase 1 and Phase 2 additions to the City of Snoqualmie's Urban Growth Area. Stormwater facility design shall adhere to the standards in the most recent update of the King County Design Manual, or of the Snoqualmie Storm Drainage Plan, whichever is the most stringent.

CP-523 **There shall be no road connections between the Phase 1 addition to the City of Snoqualmie's Urban Growth Area and 356th SE in the Snoqualmie Hills Planning Area, unless future analysis determines a restricted emergency access is necessary for safety purposes.**

CP-524 **There shall be no road connections between the Phase 2 addition to the City of Snoqualmie's Urban Growth Area and Lake Alice Road, unless future analysis determines a restricted emergency access for Lake Alice residents is necessary for safety purposes.**

CP-525 **To protect the rural character of the neighborhoods surrounding the Phase 1 and Phase 2 additions to the City of Snoqualmie's Urban Growth Area, the Phase 1 and Phase 2 areas shall include buffers to all rural lands along their perimeter. The size and structure of each buffer area shall be determined based on the characteristics of the land and existing vegetation, and its ability to perform the following functions: visual screening; noise reduction; and minimization of blow down. Buffers may include constructed berms and new plantings if deemed necessary and appropriate to perform the required functions.**

CP-526 **King County supports the continued industrial use of Weyerhaeuser's Snoqualmie Mill site and its annexation to the City of Snoqualmie. (SQP-79)**

CP-527 **King County will support annexations of land in North Bend's expansion area when higher residential densities can be achieved, municipal services can be provided, and river water quality will not be degraded. (SQP-81)**

CP-528 **Commercial and light industrial land uses are appropriate along SE North Bend Way subject to special development conditions to mitigate impacts. (SQP-82)**

A map is included in Appendix A to Ordinance 12824 (p-suffix conversion ordinance) showing the application of p-suffix conditions to commercial and industrial properties on SE North Bend Way.

CP-529 **Commercial and industrial zoned land (including potential-commercial or potential-industrial zoned land) within the City of North Bend's Urban Growth Area (UGA) are planned for nonretail, resource-based and highway-oriented uses. These uses shall be served by public sewers.**

CP-530 **The area between Tanner and the Edgewick Interchange, south of SE 140th and north of I-90, is appropriate for nonretail commercial and light industrial land uses. Commercial and light industrial uses shall be limited to uses that do not impact ground water and are related to resource-based shipping, distributing and trucking-related industrial development. (SQP-84)**

CP-531 **Land uses adjacent to the Edgewick Interchange shall be limited to highway-oriented commercial uses that do not impact ground water, and serve the traveling public. (SQP-85)**

CP-532 **The area north of the Edgewick Interchange is appropriate for resource-based, shipping, distributing and trucking related industrial uses that do not impact ground water. (SQP-86)**

The Fall City policies in this section were revised through a subarea planning process involving members of the Fall City community in 1998 and 1999. Through this planning process, the Citizens Advisory Committee identified the following elements that local residents value about their town:

- It is surrounded by agricultural and forest lands that are entirely rural;
- It has a pattern of development that has evolved over more than a century, which includes historic buildings and landmarks, an open spacing of streets and buildings, and locally owned businesses in a small-scale downtown;
- It is located in a unique geographic area formed by the confluence of two important salmon-bearing rivers, the Raging River and the Snoqualmie River, in an agricultural valley containing a number of other salmonid streams that are also important to the ecology of King County;
- It includes compatible home occupations and small-scale animal husbandry in harmony with residential neighborhoods;
- It provides rural-level street improvement (e.g., no traffic lights, no sidewalks outside the business district, and no street lights except as needed for public safety);
- It offers scenic vistas, open space, and rural and resource uses surrounding Fall City; and
- It has a small rural town identity.

CP-533 **Fall City is an unincorporated rural town which shall have overall residential densities of one to four dwelling units per acre.**

CP-534 All property within the downtown Fall City business district is zoned Community Business (CB) and is included within a designated Special District Overlay (SDO). Development within the SDO is permitted using an on-site septic system approved by the Seattle-King County Health Department. Development is also permitted using either an alternative wastewater disposal system approved by the Seattle-King County Health Department (such as a community drainfield) or a self-contained sewage conveyance and treatment system approved by the Department of Ecology, provided that:

a. The selected system shall be designed and constructed to serve only properties located within the designated SDO;

b. The business and commercial property owners in the SDO are responsible for the operation and maintenance of the selected system;

c. The County's role should be to provide technical assistance in the development and implementation of the selected system;

d. If the selected system fails, and to prevent a potential health hazard, requires connection to the King County regional wastewater system, any such sewer conveyance shall be tight-lined and shall under no circumstance be used to provide sewage disposal service to residential properties in Fall City, except as provided by policy R-508; and

e. No costs to implement the selected system or to connect to the County's regional wastewater system shall be borne by properties outside the SDO. Funding from grants, loans and other outside sources may be used to help fund the system, and the County may assist in the pursuit of this additional funding.

CP-535 The zoning for Fall City adopted in the 1999 Fall City Subarea Plan reflects the community's strong commitment to its rural character, recognizes existing uses, provides for limited future commercial development, and respects natural features. Additionally, it recognizes the current and long-term foreseeable rural level of utilities and other public services for the area. The land use implications of a major change in the water supply or a public health requirement for community-wide wastewater collection and treatment may be evaluated in a new community-based planning process; however this does not mean that zoning will change to allow more intense development beyond that adopted in the 1999 Fall City Subarea Plan. The rural character of Fall City should be preserved.

CP-536 Within the residential area of Fall City, compatible home occupations and small-scale agricultural pursuits or similar rural land uses can continue.

CP-537 King County should work with the State of Washington and the Fall City community to continue to make transportation improvements in Fall City that will favor safe and pleasant pedestrian and other nonmotorized links between downtown businesses, the residential areas, and nearby King County Parks, and safe walkways to schools, rather than rapid through traffic.

CP-538 King County should expand the soft surface pedestrian, equestrian and bicycle trail opportunities serving the Fall City area. Trail route options serving the community shall be reviewed to include a route along the left bank levee easement directly adjacent to the Raging River, historically used by the public as a pedestrian, equestrian and bicycle trail. This historically used trail generally follows the "wildlife corridor" along the bank of the Raging River from 328th Way SE approximately NE to the Preston Fall City Road. The selected trail system for the Fall City area shall be identified in the King County Parks and Recreation trail system plan.

CP-539 Zoning for the existing industrial and office areas adopted in the 1999 Fall City Subarea Plan should be maintained but not expanded.

CP-540 Land uses at freeway interchanges without existing commercial or industrial development, and outside rural neighborhoods and Cities in the Rural Area, are designated rural residential to support development in rural neighborhoods and Cities in the Rural Area, and to preserve the scenic nature of the corridor. (SQP-98)

CP-541 New development at the Exit 22 Interchange shall not expand beyond the area designated in this plan and shall not adversely impact surrounding rural residential areas. All uses should be planned and sited to use long-term onsite waste disposal systems. (SQP-99)

CP-542 The existing two acres of land currently zoned for commercial use at Preston (Exit 22) is recognized, but no additional land for commercial uses is designated. (SQP-100)

CP-543 The presence of the Snoqualmie Tribe in the planning area has important historic and cultural significance for the Puget Sound region. The following places, recognized by the tribe as historically, culturally and archeologically important, should be considered for inclusion in the King County historic sites survey, and designation to local and/or national register of historic places. The tribe recognizes the following areas as culturally significant:

a. Snoqualmie Falls;
b. The banks of the Snoqualmie River between the falls and the three forks confluence area;
c. Fall City Indian Cemetery;
d. Banks at the confluence of Snoqualmie and Raging Rivers;
e. Banks at the confluence of Snoqualmie and Tolt Rivers;
f. Fall City Park (site of John Sanawa's Council House and the first white school);
g. Mt. Si; and
h. Granite outcropping used as a quarry between North Bend and the City of Snoqualmie on SR-202. (SQP-122)

CP-544 King County recognizes the spiritual, historic, cultural and recreational value of the Snoqualmie Falls. Any development adjacent to Snoqualmie Falls shall be designed and sited to protect these values. (SQP-123)

CP-545 Because of the spiritual significance of the area at the base of the falls to the various tribes in the Puget Sound region, this area of the falls should remain free of development and open for public access. (SQP-124)

CP-546 The community of Preston is a significant cultural and historic reminder of the planning area's roots in the logging industry. The existing land use designation shall be maintained, and new development should respect the existing character of the community. (SQP-125)

CP-547 The industrial area adjacent to the Rural Neighborhood of Preston shall be recognized with appropriate zoning for industrial uses. This area is designated for industrial uses to recognize existing industrial use and vested applications for new industrial development.

The boundaries of this industrial area are permanent. No expansion of the designated industrial area will be permitted, and any effort to expand its boundaries is recognized as contrary to the Growth Management Act, including the 1997 amendments.

Any industrial development or redevelopment in the designated industrial area (excluding reconstruction in the event of accidental damage or destruction, or tenant improvements entirely within the building structures) shall be conditioned and scaled to maintain and protect the rural character of the area as defined in RCW 36.70A.030(14) and to protect sensitive natural features.

New industrial development or redevelopment (excluding structures and site improvements that existed or are vested by applications as of May 24, 1996, or tenant improvements entirely within building structures), on lots not subject to restrictions and conditions consistent with those reflected in Recording No. 9708190805 must be dependent upon being in the Rural Area and must be compatible with the functional and visual character of rural uses in the immediate vicinity and must not encourage or facilitate conversion or redesignation of nearby Rural and Rural Neighborhood lands to commercial, industrial or urban uses.

The boundaries of this industrial area shall be those properties within the Preston Industrial Water System, as set by King County Ordinance 5948, with the exception of parcel #2924079054.

CP-548 King County supports efforts of the community of Preston to achieve recognition of its historical and cultural significance. Its historic character should be maintained through designation as an historic area. (SQP-126)

CP-549 The King County Historic Sites Survey should be updated to include additional sites identified by the Preston Heritage Committee. (SQP-127)

CP-550 The development of a regional railroad museum in the Snoqualmie area is encouraged to promote understanding of the regional significance of railroads in the settlement and development pattern of Washington State. (SQP-128)

CP-551 **King County shall put high priority on the acquisition and development of a regional trail system linking the Snoqualmie Valley planning area to other parts of the county. (SQP-143)**

CP-552 **King County supports designation of the Middle Fork of the Snoqualmie River under either the national or state Wild and Scenic River program. (SQP-151)**

CP-553 **King County supports evaluation of the North Fork of the Snoqualmie River and the main stem of the Tolt River under either the national or state Wild and Scenic River program. (SQP-152)**

CP-554 **King County shall assist the City of North Bend, when requested, to develop a long-term solution and an implementation program which will reduce the risk from flooding and channel migration in the city.**

VI. Vashon / Maury Island Area

The Vashon/Maury Island Community Service Area has identical boundaries to the original Vashon Community Planning Area. The name is updated to include the Maury Island section of Vashon Island. The "Vashon Town Center Plan" is a separately adopted subarea plan (1996) that covers only the Rural Town of Vashon. The 1986 Vashon Community Plan includes policies that address the remainder of the islands.

In 2014 the population in the Vashon/Maury Island CSA was approximately 11,000. In 2010, the CSA had an estimated 5,550 housing units.

Background

The Vashon Community Plan commenced in the spring of 1977 and was adopted in June 1981. Due to concerns about Vashon-Maury Island's water supply, which consists of local rain-fed aquifers, a revision to the plan was set for 1986 after completion of the Vashon/Maury Island Water Resources Study. The revision process began in April 1984, and the updated Vashon Community Plan was adopted in October 1986. In addition to responding to the Water Resources Study, the plan update also implemented the 1985 King County Comprehensive Plan's designation of the entire planning area as rural.

In 1996 the Vashon Town Plan repealed or modified several of the 1986 plan's policies, and adopted new policies and area zoning to guide development in the unincorporated Rural Town of Vashon. The Vashon Town Plan was adopted as a subarea plan and therefore is part of the King County Comprehensive Plan, as provided by the Growth Management Act. The policies below are the issue- or area-specific policies retained from the 1986 plan.

Vashon Policies

CP-601	**All of Vashon-Maury Island is recognized for its unique ecological functions as a Puget Sound island, and is designated in this plan as rural. Development activities should protect the entire ecological system, including the Puget Sound shoreline, island habitat areas, and ground and surface water resources. (V-1)**
CP-602	**All land use policies and regulations for Vashon shall reflect the overriding importance of the fact that the whole Island is the recharge area for a single-source aquifer. All of Vashon Island shall therefore be considered a groundwater recharge area. Within the Island, based largely on soil types, there are areas of relatively high, medium, and low susceptibility to groundwater contamination. Areas deemed highly susceptible to contamination in the KCCP should receive extra protection. (V-3)**
CP-603	**Home occupations should continue to be allowed in residential areas on Vashon Island. (V-27)**
CP-604	**Development should be minimized and carefully managed in sensitive areas. The most fragile, hazardous or valuable areas, including areas highly susceptible to contamination, landslide hazard areas and wetlands, should remain largely undeveloped through application of a low density designation. (V-31)**
CP-605	**Protect and preserve the Island's wildlife habitats. (V-33)**
CP-606	**Where fish or wildlife habitat occur within a proposed short plat or subdivision, the proposal should be reviewed to ensure that the ingredients necessary for the habitat's preservation are not destroyed. Special conditions should be attached to protect the habitat, if necessary. (V-34)**
CP-607	**Fish and wildlife habitats identified on Vashon Island and considered to be especially unique and valuable or of potential countywide significance should receive special attention. Where these occur within a proposed plat or subdivision, Department of Permitting and Environmental Review, or its successor, may require the developer to submit a special report to assess more closely the impacts of the proposal on the habitat and to recommend specific measures to protect them. (V-35)**

Most fisheries in King County are regulated by agencies other than the county. Policies throughout this plan address fish habitat and the response to Endangered Species Act listings. A harvestable fisheries habitat not otherwise addressed is the intertidal shellfish habitat on Vashon Island. The King County Department of

Natural Resources and Parks owns some of this habitat. While the State of Washington governs the harvest of some species in this habitat, the county should take affirmative action to assure long-term productivity and to protect public health. The 1997 report of the Beach Assessment Program documents the degradation of this resource from over-harvesting, increased beach use and other causes.

CP-608 **Intertidal shellfish habitat on Vashon Island shall be protected for its key role in the marine food chain, to protect public health, and to assure long-term productivity. King County shall explore effective means to protect this fisheries resource.**

CP-609 **Island water resources should continue to be the sole water-supply source in the future. The plan discourages importing water for domestic uses from off the Island. (V-52)**

CP-610 **Land uses and development densities should be planned so that demands on the Island's groundwater resources do not exceed its capacity to provide adequate supplies without deterioration of quality. In order to achieve this, ongoing research and monitoring as recommended in the Vashon Maury Island Water Resources Study should be conducted. (V-53)**

CP-611 **Protection of the groundwater aquifer is of primary importance to Vashon Island. Further water quality degradation which would interfere with or become injurious to existing or planned uses should not be allowed. (V-54)**

CP-612 **To protect domestic water resource, areas deemed highly susceptible to groundwater contamination and watersheds should be maintained in residential or similarly nonintensive uses at low densities. (V-57)**

CP-613 **As an additional requirement for the comprehensive plans of public water systems on Vashon Island, the county shall ask that information be included assessing the ability of existing and potential water sources to meet anticipated population growth. Planned expansion of the water system should be prohibited if the analysis reveals a risk to the adequacy of service including quality of water being provided to current users. (V-59)**

CP-614 Special consideration should be given to the impacts of new development on the **Island's groundwater resources. This should apply to major developments, development in areas highly susceptible to contamination, or development near public water supplies. (V-61)**

CP-615	Park-and-Ride lot development both on the Island and at or near the ferry terminals which serve Vashon Island (Fauntleroy, Southworth, Pt. Defiance) should be encouraged. (V-67)
CP-616	Provide a safe and efficient system of commuter and recreational routes for bicyclists, pedestrians, and equestrians. (V-69)
CP-617	Street and highway improvements should be low-cost safety and maintenance projects wherever possible. (V-71)
CP-618	Additional water-related parks and beaches should be acquired along the saltwater shorelines of Vashon-Maury Islands. These parks should be retained as passive, natural areas. (V-83)
CP-619	Additional park sites should be acquired in the island's most environmentally sensitive natural areas. These sites should be retained as passive, open space areas allowing only those uses that would be compatible with sensitive areas. (V-84)
CP-620	A public trail system should be identified and encouraged for preservation on Vashon Island. (V-85)
CP-621	Trails on Vashon Island should serve bicyclists, equestrian and pedestrian uses. (V-85a)
CP-622	Trail systems at parks and on other public land should be encouraged on Vashon Island. Trails on public lands should be officially recognized and preserved. (V-85b)
CP-623	If and when county- and state-owned land on Vashon is logged, trails should be preserved for equestrian and pedestrian use. If possible, an unlogged buffer zone should be left when logging occurs. (V-85c)
CP-624	Voluntary dedication of trails should be encouraged when land is developed for more intensive uses. (V-85d)
CP-625	Trails should provide multiple uses where possible, serving both recreational and commuter needs. (V-85e)

CP-626 **Trail corridors on Vashon Island should be established and designed based upon the following criteria:**

- **a. Connect park and open space areas;**
- **b. Provide access to shoreline areas, particularly public parks;**
- **c. Incorporate views and other special features of scenic, historic, or archaeological interest;**
- **d. Traverse development limitation areas where not incompatible with hazard or fragile natural areas;**
- **e. Follow streambanks and ravines;**
- **f. Follow undeveloped rights-of-way or alongside existing roads; and**
- **g. Provide access to and connect schools. (V-85f)**

CP-627 **The quantity and quality of Vashon-Maury Islands' groundwater supply should be monitored, along with building permit and subdivision data, to determine if planned densities can be achieved. If new information indicates the groundwater supply is endangered, the County shall take immediate steps to ensure new development does not impair the groundwater supply.**

Groundwater Management

Vashon-Maury Island is unique within King County in that it is an island community dependent upon a designated sole-source aquifer for its water supply. A Groundwater Management Plan was completed for the Island and approved by both King County and Ecology in 1998. Given that the only source of drinking water is ground water, a higher level of protection of groundwater recharge is warranted on Vashon-Maury Island than in the rest of King County. Land clearing and building activities can reduce groundwater recharge. Low-impact development (LID) practices involve protecting and enhancing native vegetation and soils, reducing impervious surface and managing storm water at the source. These techniques are well suited to development in Rural Area zone and can be an effective way to protect groundwater quality and recharge, particularly on Vashon-Maury Island.

CP-628 **King County should work with residential builders and developers on Vashon-Maury Island to encourage the use of low impact development practices that protect and enhance native vegetation and soils and reduce impervious surface. King County should promote preservation of at least 65% forest cover on rural-residential zoned parcels. The 65% forest cover goal may be adjusted for parcels less than 2 ½ acres in size. Dispersion of runoff from impervious surfaces into native vegetation in accordance with the Surface Water Design Manual shall be the preferred method of stormwater management in the Rural Area.**

CP-629 **King County should include water quality monitoring and reporting in the scope of work for new low impact development projects on public properties to the maximum extent practical.**

In June 2011 the Vashon Maury Island Groundwater Protection Planning Committee recommended new policies to be incorporated into the Comprehensive Plan to further the objectives of the Vashon-Maury Island Watershed Plan and Vashon-Maury Island Groundwater Protection Plan concerning sustainability of the islands groundwater, streams and marine waters.

CP-630 **The Vashon-Maury Island Groundwater Protection Committee, with King County support should:**

- **a. Complete and implement measures for the sustainability of water quality, water quantity and ecosystem health on Vashon-Maury Island;**
- **b. Report the findings to the community; and**
- **c. Evaluate the results to help guide ongoing watershed management activities.**

Seasonal dissolved oxygen levels within inner Quartermaster Harbor have fallen well below the Washington State marine water quality standard of seven mg per liter over the last four years of monthly monitoring by King County. Quartermaster Harbor is a regionally significant natural resource area that provides rearing and spawning habitat for herring, surf smelt, sand lance, salmon (i.e., Chinook, Coho, chum, and cutthroat) plus shellfish resources, including geoduck clams. Based on the value of the harbor's natural resources and to protect and restore shellfish harvest opportunities, Quartermaster Harbor was included in the Maury Island Marine Reserve designated by the Department of Natural Resources and the Marine Recovery Area designated by Public Health – Seattle & King County.

Excess nutrients, nitrogen compounds in particular, can lead to excessive phytoplankton and algae growth that can then deplete oxygen concentrations when the algae die. Nitrogen and phosphorus are essential nutrients for marine plants and phytoplankton, particularly nitrate, as phytoplankton preferentially take up nitrate and other nitrogen compounds. Potential sources of nitrogen loading include on-site sewage systems, animal manure, fertilizer and other less direct sources like nitrogen-fixing vegetation including alder trees and atmospheric deposition.

In 2009, King County in cooperation with the Washington State Department of Ecology and University of Washington-Tacoma, started a four year study to identify and quantify the sources of nitrogen loading in Quartermaster Harbor. The draft 2010 Washington Water Quality Assessment under review by Ecology proposes to upgrade the Quartermaster Harbor dissolved oxygen listing to "Category 5" based on Ecology ambient monitoring station QMH002 (#10178). Designation as a Category 5 polluted water body means that Ecology has data showing that the water quality standards have been violated for one or more pollutants and

there is no Total Maximum Daily Load (TMDL) pollution control plan. TMDLs are required for the water bodies in Category 5 to bring water quality up to standards.

Education and incentives to implement best management practices to reduce nutrient and bacteria loading can improve water quality. Routine on-site sewage system inspection and maintenance can help to control nutrient loading from existing on-site sewage systems. When new on-site sewage systems are installed, using a system rated to provide nitrogen reduction could limit total nitrogen loading on average by approximately 50% or more depending on system loading and site conditions.

CP-631 **King County should focus outreach education and incentives to implement best management practices designed to reduce excessive nutrient and bacterial contaminate loading within the Quartermaster Harbor drainage area. The Vashon-Maury Island Groundwater Protection Committee, with King County support, should seek grants to enhance existing outreach education and incentives when funding opportunities occur.**

CP-632 **King County should revise regulations to require new on-site sewage systems within the Quartermaster Harbor drainage area to meet the nitrogen reduction treatment standard established by the Washington State Department of Health, where feasible, if the final Quartermaster Harbor Nitrogen loading study demonstrates it would significantly reduce future nitrogen loading in the harbor.**

CP-633 **King County should request Ecology assistance to develop a Total Maximum Daily Load water quality improvement plan to reduce point and nonpoint pollution sources to Quartermaster Harbor if the harbor water quality is listed as a Category 5 polluted water body on the 2010 Washington State Water Quality Assessment.**

Island wide there are approximately 5,000 on-site sewage systems used to treat the wastewater for residences, businesses and public facilities not served by the Vashon Sewer District. Failing on-site sewage systems can contaminate surface, ground and marine waters with hazardous bacteria and excessive nutrient loading (nitrogen and phosphorus). Regular inspection and maintenance of on-site sewage systems can ensure system performance, extend system life and identify failing systems so they can be repaired when needed.

CP-634 **The Vashon-Maury Island Groundwater Protection Committee, with King County support, should evaluate need and potential sources of funding for an enhanced management program for existing on-site sewage systems on Vashon-Maury Island to ensure they receive routine inspection, maintenance and repair if necessary to protect water quality.**

Water use on Vashon is supplied by rainfall and typically reaches a seasonal peak in the late summer long after the early winter peak in rainfall. Water conservation is the best strategy to reduce peak water use and reduce the need to develop new water supply capacity. Conservation efforts should consider use of appropriate technology to further conservation strategies including supply supplement alternatives like grey water reuse and rainwater harvest. Incentives, such as providing access to water use efficiency audits or developing model conservation plans for Group A, Group B and individual systems similar to the LEED model, can be useful in encouraging implementation of water conservation.

CP-635 **The Vashon-Maury Island Groundwater Protection Committee, with King County support, should evaluate setting specific goals for water conservation starting with public facilities under the Vashon-Maury Island Groundwater Protection Committee auspices and promote and partner with public agencies, special districts and non-profit organizations to implement water conservation demonstration projects in new and renovated public facilities.**

CP-636 **The Vashon-Maury Island Groundwater Protection Committee, with King County, support should evaluate ways to provide or enhance incentives to implement water conservation.**

CP-637 **King County should evaluate the use of greywater as a supplemental source of water supply for non-potable uses both interior and exterior on Vashon-Maury Island.**

Public Health – Seattle & King County (PHSKC) is considering rule changes to permit use of harvested rainwater for potable supply. This evaluation should consider both the potential benefits, and possible land use and environmental impacts associated with such changes pertaining to Vashon-Maury Island. Islander views should be considered by PHSKC and any water supply policy revisions in the comprehensive plan should address use of rainwater harvest in a manner that is takes into account conditions on Vashon-Maury Island, specifically including the potential for nitrate contamination from increased septic use, consistent with the interests of Group A and Group B water systems.

CP-638 **The Vashon-Maury Island Groundwater Protection Committee, with King County support, should evaluate allowing use of harvested rainwater as both a supplemental and sole source of potable water supply for individual water supply on Vashon-Maury Island under the following conditions:**

a. Any location outside of the designated service area for an existing Group A or Group B water system; and

b. Within the service area of an existing Group A or Group B water system when the system cannot provide potable water in a "timely and reasonable manner." Where an existing Group A or Group B water system can provide fire flow if necessary, allow separate services for "potable" water and fire flow, ensuring effective cross-connection control.

There are approximately 1,200 known wells on Vashon-Maury Island and approximately 50 of those wells supply water for Group A water systems. Water produced by Group A water systems is tested routinely for compliance with drinking water standards and the results are reported to the State Department of Health. All Group A water systems will also report the annual quantity of water they produce from their supply source wells. The monitoring performed for Group A water systems protects the public health of their water users and will provide the data necessary for water resource sustainability monitoring.

Of the remaining 1,150 wells, approximately 150 supply Group B water systems (2-15 connections) and the remainder are individual water supplies, most for potable use. Public Health Seattle King County requires that Group B and individual water supply wells (and springs) be tested for nitrate, fecal coliform and arsenic at the time the water system is approved for construction but ongoing monitoring is not required for individual wells and ongoing testing, while required per code for Group B systems is not enforced. The lack of periodic monitoring and metering for Group B water systems and individual water supplies leaves the public health of their water users at risk and creates a significant gap in the data needed for comprehensive monitoring of water resource sustainability.

CP-639 **The Vashon-Maury Island Groundwater Protection Committee, with King Count support, should evaluate the need and potential sources of funding to establish management programs for individual water systems and Group B water systems on Vashon-Maury Island to periodically monitor water quality and promote water conservation in conjunction with water system and well owners.**

Vashon Maury Island is part of Water Resource Inventory Area 15. The Vashon-Maury Island Watershed Plan was completed in 2005 and accepted for implementation by King County Water and Land Resources. The broader Kitsap County WRIA 15 planning group also completed a draft watershed plan for Kitsap County in June 2005, but was unable to reach consensus due in part to objections of the Squaxin Island Tribe on the Kitsap portion of the overall WRIA 15 plan (including both Kitsap and VMI).

As a result King County is unable to get formal Ecology approval and implementation funding for the Vashon-Maury Island Watershed Plan. Vashon Island should develop a pathway to secure Ecology assistance on watershed plan implementation funding.

CP-640 **The Vashon-Maury Island Groundwater Protection Committee, with King County support, should evaluate options to develop a pathway to secure Ecology assistance on watershed plan implementation funding and seek formal Ecology and King County recognition or adoption of the Vashon-Maury Island Watershed Plan.**

Watershed Planning

For the past 25 years, through several community planning processes, the Island community has been proactive in protecting its water supply. There is broad recognition of the shared responsibility for this common resource, and recognition that each water use can affect the quantity and quality of the water supply of others. Although in many areas of the Island there is not a current problem with water quality and quantity, planning and preparation to secure and protect Island water resources is warranted.

The principal reasons for preparing a watershed plan in 2005 was that there is uncertainty about the amount and availability of groundwater, a local trend showing increasing nitrates in some wells, potential for degradation of Island streams and potential for contamination of the Island sole source aquifer. The Vashon Maury Island Watershed Plan completed on June 6, 2005 intends to protect and assure the water supply by making and implementing specific recommendations on water quantity and quality issues affecting the Island.

In April 2007 the Vashon Maury Island Groundwater Protection Planning Committee recommended the following priority action items in the Vashon-Maury Island Watershed Plan be incorporated into the 2008 King County Comprehensive Plan as follows:

CP-641 **King County should develop an on-going island-wide education program to inform Islanders about groundwater resources, drinking water supplies, water availability, and water quality issues. The education program should include alternative water supply choices such as water retention, rain water harvesting, use of gray water, deepening of wells, groundwater recharge, water rationing in emergencies, recycled water and desalinization.**

CP-642 **King County shall seek funding and work with state agencies to encourage removal of old or failing residential fuel storage tanks on Vashon-Maury Island.**

CP-643 King County should encourage the use of demonstrated new and alternative on-site septic treatment technologies on Vashon-Maury Island with priority on Marine Recovery Areas.

CP-644 King County should seek funding to expand the Public Health – Seattle & King County septic education program to inform property owners about septic system failures and steps they may take to ensure effective maintenance and operation of their system.

CP-645 King County and the Vashon-Maury Island Groundwater Protection Committee should continue to collaborate to develop an education program on pesticide and fertilizer use.

CP-646 King County should work with the Vashon Community to define specific actions to implement the stormwater recommendations in the 2005 Vashon-Maury Island Watershed Plan within available resources.

CP-647 New roads or road improvements required for new development in the town of Vashon should use a rural road section when possible, consistent with the King County Road Standards. Although the roadway section within the Vashon Town Center typically includes curb, gutter, and sidewalk, the residential roadway section throughout the Island should generally be rural in character with shoulders and an open ditch/swale on both sides of the roadway. When a roadway project exceeds the thresholds identified in Section 1.1.1 of the County's Surface Water Design Manual, flow control and treatment facilities should mitigate the impacts generated by surface and stormwater runoff. Swales should be used when ecologically appropriate to treat runoff.

CP-648 King County should adopt a "business district design guideline" for the Vashon Town Center calling for installation of a rural type road section with either a road/sidewalk/bio-swale configuration, or a road/swale/trail configuration, where there is sufficient right of way, unless an alternate design that can protect groundwater recharge can be constructed.

CP-649 King County should protect the quality and quantity of groundwater on Vashon/Maury Island by measuring, monitoring, and reporting information on groundwater quality and quantity to provide the information needed to manage groundwater resources.

VII. West King County Area

As noted on the Community Service Areas map at the beginning of this chapter, the West King County Area is comprised of approximately twelve separate major unincorporated areas within the Urban Growth Boundary; these are all Potential Annexation Areas for several cities, including Federal Way, Seattle, Renton, Kent, Redmond and Sammamish. In addition, there are over *one hundred* other smaller areas that are affiliated with or adjacent to Auburn, Issaquah, Sammamish, Redmond, Kenmore and others.

King County's approach is that these areas annex into the affiliated cities or, for those areas not affiliated, the most logical adjacent city. Policies guiding these areas are found both in Chapter 2: Urban Communities in the Potential Annexation Area section as well as in other annexation policies found in chapters throughout the Comprehensive Plan. For the areas at the edge of the urban growth boundary, policies in other parts of this chapter may be relevant since the historical Community Plans often included these edge communities. This is further described below.

Background

The estimated population in this CSA in 2014 was approximately 113,000. The West King County CSA consists of separate unincorporated areas that were once part of larger areas with their own community plans. Today's fragmented pattern of unincorporated urban areas is the result of incorporations and piecemeal annexations since the community planning process began in the mid-1980s.

The West Hill Community Plan and White Center Community Plan, applying to portions of the original Highline Community Plan, were the last plans adopted by King County (West Hill in 1993, White Center in 1994). They were prepared in conformance with the Growth Management Act (GMA) and are already incorporated as part of the 1994 King County Comprehensive Plan.

A. East Federal Way Potential Annexation Area

Work on the Federal Way Community Plan and/or amendments occurred from 1972 to 1975, 1977 to 1980, and 1984 to 1986. Federal Way was part of the first generation of community plans in the county that were adopted separately from their implementing area zoning. After these experiences, the county decided to adopt both together to avoid going through essentially the same decisions twice for each community. The City of Federal Way incorporated in 1990, removing most of the planning area from the county's jurisdiction. None of the Federal Way Community Plan or its amendments are readopted.

B. Fairwood and East Renton Potential Annexation Areas

Fairwood and East Renton are adjacent to the City of Renton and are within the city's potential annexation area. Over the past decade, small portions (typically at the subdivision scale) have annexed to the city in a piecemeal fashion. The Fairwood area has approximately 23,000 residents. The Fairwood area was completely within the historical Soos Creek Planning Area, which is now part of both the Greater Maple Valley/Cedar River and the West King County Community Service Areas. This means that the general annexation policies in the comprehensive plan, as well as the Greater Maple Valley/Cedar River area policies are relevant to this area.

The East Renton area has approximately 6,500 residents. The East Renton area was completely part of the historical Newcastle Planning Area, which is now part of both the Four Creeks/Tiger Mountain and West King County Community Service areas. This means that the general annexation policies in the comprehensive plan, as well as the Four Creeks/Tiger Mountain area policies are relevant to this area.

C. North Highline and White Center Potential Annexation Areas

Highline has one of the longest histories of any community planning area. Between its original adoption in 1976 as the "SeaTac Communities Plan" and adoption of the 1994 King County Comprehensive Plan, the Highline Community Plan has been updated or amended 13 times, and has been partially or wholly replaced by plans for smaller areas within Highline (e.g., West Hill, Burien Activity Center, White Center Community Action Plan, and SeaTac). The City of SeaTac incorporated in 1990, the City of Burien incorporated in 1993, and numerous portions of the planning area have been annexed by Tukwila and Des Moines. Although the planning area as a whole has grown slowly since 1970, the incorporations and annexations have resulted in a significant decrease in the unincorporated area population. Because the majority of the area has now transitioned into cities, none of the Highline Community Plan is readopted with the exception of West Hill and White Center, which were adopted in 1994 as part of the comprehensive plan but published separately.

The White Center Plan was adopted by King County in 1994, and as such was prepared in conformance with the Growth Management Act and incorporated as part of the 1994 King County Comprehensive Plan.

D. West Hill – Skyway Potential Annexation Area

The West Hill Plan was adopted by King County in 1993, and as such was prepared in conformance with the Growth Management Act and incorporated as part of the 1994 King County Comprehensive Plan.

In 2014, the County adopted Motion 14221, which called for a comprehensive update to the West Hill Community Plan. Around this same time, the County was also providing technical assistance to a community-led effort to update some elements of the Community Plan. This community-led effort resulted in the development of a local Action Plan, which was proposed to be an addendum to the existing Community Plan. Since then, the County reinitiated its Subarea Planning Program – and, as a result, the County now has resources

available to comprehensively review the Community Plan, consistent with Motion 14221. The County will work with the community to review the proposed Action Plan and to update the Community Plan within the context of the new Subarea Planning Program. An update to the Community Plan will be transmitted by the Executive to the Council by September 1, 2017 and will be considered by the Council as part of the 2017 Comprehensive Plan update.



CHAPTER 12
IMPLEMENTATION, AMENDMENTS AND EVALUATION

The Comprehensive Plan policies, development regulations and countywide policy framework have been adopted to achieve the county and region's growth management objectives. This chapter describes the tools, processes and procedures used to implement, amend and review the Comprehensive Plan.

The chapter explains the relationship between planning and zoning, lists the incentives programs, identifies actions that will be undertaken between major updates to implement or refine provisions within the Comprehensive Plan, and outlines and distinguishes between annual update cycles and four year cycle amendments.

I. Regulations

The Comprehensive Plan guides land use over the long term by applying specific land use designations throughout the unincorporated portion of King County and by providing guidelines for implementing regulations used to evaluate specific development proposals. To ensure that these implementing regulations are effective and warrant a high degree of public trust and confidence, the regulations must be equitable, reasonable, and responsibly administered.

I-101 **King County's regulation of land use should:**

- **a. Protect public health, safety and general welfare, and property rights;**
- **b. Protect consumers from fraudulent practices in land use, land sales and development;**
- **c. Implement and be consistent with the Comprehensive Plan and other adopted land use goals, policies and plans;**
- **d. Be expeditious, predictable, clear, straightforward and internally consistent;**
- **e. Provide clear direction for resolution of regulatory conflict;**
- **f. Be enforceable, efficiently administered and provide appropriate incentives and penalties;**
- **g. Be consistently and effectively enforced;**
- **h. Create public and private benefits worth their cost;**
- **i. Be coordinated with timely provision of necessary public facilities and services;**
- **j. Encourage creativity and diversity in meeting county goals and policies;**
- **k. Be coordinated with cities, special purpose districts and other public agencies to promote compatible development standards throughout King County;**
- **l. Be responsive, understandable and accessible to the public;**
- **m. Provide effective public notice and reasonable opportunities for the public (especially those directly affected) to be heard and to influence decisions;**
- **n. Avoid intruding on activities involving constitutionally protected freedoms of speech, petition, expression, assembly, association and economic competition, except when essential to protect public health, safety and welfare (and then the restriction should be no broader than** necessary);
- **o. Treat all members of the public equitably. Base regulatory decisions wholly on the applicable criteria and code requirements, including application of the county's Equity and Social Justice goals;**

p. **Make development requirements readily accessible to the public through up-to-date codes, technical assistance materials and other relevant documents; and**

q. **Provide for relief from existing regulations when they would deprive a property of uses allowed to similar properties with the same zoning or environmental or other constraints, and when such relief would neither endanger public health and safety nor conflict with adopted use policies. This policy is not intended for relief from rules governing the subdividing of land.**

Siting public and private uses in communities can at times lead to concerns and objections from neighbors resulting from the real or perceived impacts of proposed uses. These is also a risk that objections to these "locally unwanted land uses" (LULUs) can lead to some uses becoming overly-concentrated in some communities, particularly in historically disadvantaged areas. In response, governments should evaluate the potential equity and social justice implications, including the beneficial and/or adverse impacts, of policies and regulations involving such uses.

I-101a **Equity and social justice principles will be used by King County as an important consideration in developing zoning and development regulations governing public and private uses, in siting public facilities, and in evaluating land use decisions. Results from the Equity Impact Review Tool will be used where appropriate.**

King County wishes to create an equitable relationship with all its residents who own or control potential development or redevelopment of property with critical or significant resource areas. King County provides options that offer property-specific technical assistance and tailored applications of critical areas regulations through Rural Stewardship, Forest Stewardship, and Farm Management Plans. By participating in these programs, property owners may qualify for state tax programs that will reduce the assessed value of their property. However, it is the property owner's choice to participate in these programs.

I-102 **King County property owners are entitled to have their property assessed at the true and fair value of real property for taxation purposes so that those portions of the property that are not developed or redeveloped due to physical or environmental constraints shall be assessed to reflect the presence of such constraints. Property appraisals shall be consistent with the King County Comprehensive Plan, development regulations, zoning, and any other governmental policies or practices in effect at the time of appraisal that affect the use of property, as well as physical and environmental influences as required by RCW 84.40.030.**

II. Comprehensive Plan Amendments

In the process of implementing the Comprehensive Plan, there may be a need for amendments to address emerging land use and regulatory issues. The county has established the Comprehensive Plan amendment process to enable individual residents, businesses, community groups, cities, county departments and others to propose changes to existing Comprehensive Plan policies and development regulations. This process provides for continuous and systematic review of Comprehensive Plan policies and development regulations in response to changing conditions and circumstances that could affect growth and development throughout King County.

The Comprehensive Plan amendment process includes an annual cycle and a four-year cycle. The annual cycle generally is limited to those amendments that propose technical changes. The four-year cycle is designed to address amendments that propose substantive changes. This amendment process, based on a defined cycle, provides the measure of certainty and predictability necessary to allow for new land use initiatives to work. By allowing annual amendments, the process provides sufficient flexibility to account for technical adjustments or changed circumstances. The process requires early and continuous public involvement and necessitates meaningful public dialogue.

King County has established a docket process to facilitate public involvement and participation in the Comprehensive Plan amendment process in accordance with RCW 36.70A.470. Parties interested in proposing changes to existing Comprehensive Plan policies, development regulations, land use designations, zoning, or other components of the Comprehensive Plan can obtain and complete a docket form outlining the proposed amendment. Docket forms are available via the King County website.

I-201	**The amendment process shall provide continuing review and evaluation of Comprehensive Plan policies and development regulations.**
I-202	**Through the amendment process, King County Comprehensive Plan policies and supporting development regulations shall be subject to review, evaluation, and amendment according to an annual cycle and a four-year cycle in accordance with RCW 36.70A.130 (1) and (2).**

I-203 **Except as otherwise provided in this policy, the annual cycle shall not consider proposed amendments to the King County Comprehensive Plan that require substantive changes to Comprehensive Plan policies and development regulations or that alter the Urban Growth Area Boundary. Substantive amendments and changes to the Urban Growth Area Boundary may be considered in the annual amendment cycle only if the proposed amendments are necessary for the protection and recovery of threatened and endangered species, or to implement:**

a. **A proposal for a Four-to-One project; or**

b. **An amendment regarding the provision of wastewater services to a Rural Town. Such amendments shall be limited to policy amendments and adjustments to the boundaries of the Rural Town as needed to implement a preferred option identified in a Rural Town wastewater treatment study.**

I-204 **The four-year cycle shall consider proposed amendments that could be considered in the annual cycle and also those outside the scope of the annual cycle, proposed amendments relating to substantive changes to Comprehensive Plan policies and development regulations, and proposals to alter the Urban Growth Area Boundary in accordance with applicable provisions of Countywide Planning Policies.**

I-205 **In accordance with RCW 36.70A.140 and the State Environmental Policy Act, as applicable, King County shall ensure public participation in the amendment process for Comprehensive Plan policies and development regulations. King County shall disseminate information regarding public involvement in the Comprehensive Plan amendment process, including, but not limited to, the following: description of procedures and schedules for proposing amendments to Comprehensive Plan policies and development regulations; guidelines for participating in the docket process; public meetings to obtain comments from the public or other agencies; provision of public review documents; and dissemination of information relating to the Comprehensive Plan amendment process on the Internet or through other methods.**

The following policies guide the preparation of amendments and their review by King County.

I-207 **Proposed amendments to the King County Comprehensive Plan, including the Land Use Map, shall be considered by the King County Council only once each calendar year in accordance with the State Growth Management Act and so that the cumulative effect of the proposals can be determined. All proposed Comprehensive Plan amendments should include the following analysis:**

- **a. Rationale: a detailed statement of what is proposed to be changed and why;**
- **b. Effect: a statement detailing the anticipated outcome of the change on the: geographic area affected, populations affected, and environment;**
- **c. Compliance: a statement confirming compliance with the:**
  1. **Growth Management Act, including statutory references where applicable;**
  2. **Countywide Planning Policies, including policy references where applicable;**
  3. **King County Strategic Plan, including policy, objective or strategy references where applicable; and**
- **d. Public Review: an indication that the proposed policy amendment was included in the executive's public review draft or a statement of the public review process used to solicit comments on the proposal.**

I-208 **Proposed amendments to the Comprehensive Plan policies should be accompanied by any changes to development regulations, as well as modifications to capital improvement programs, subarea, neighborhood, and functional plans required for implementation so that regulations will be consistent with the Comprehensive Plan.**

III. Review and Evaluation

In accordance with the Growth Management Act, King County and its cities will work together to employ an established review and evaluation program through the King County Benchmark Program, as provided by the King County Countywide Planning Policies. The purpose of the program is to determine whether the county and its cities are achieving urban densities within urban growth areas by comparing growth and development assumptions, targets, and objectives contained in the Countywide Planning Policies and the county and city comprehensive plans with actual growth and development in the county and cities.

In partnership with the King County Growth Report, the King County Buildable Lands Report and supplementary monitoring of the King County Comprehensive Plan, the King County Benchmark Program collects and reviews information relating to and including, but not limited to, the following:

- Urban densities;
- Remaining land capacity;
- Growth and development assumptions, targets, and objectives;
- Residential, commercial, and industrial development;
- Transportation;
- Affordable housing;
- Economic development; and
- Environmental quality.

As outlined in the Workplan section of this chapter, in preparation for the 2020 Comprehensive Plan update, King County intends to develop a new performance measures program to replace the current Benchmark Program.

Buildable Lands Program

Section 36.70A.215 of the Growth Management Act, commonly called Buildable Lands, requires six western Washington counties including King, and their cities, to evaluate their capacity to accommodate forecasted growth of housing units and jobs. The purpose of the program is to determine whether the county and its cities are achieving urban densities within urban growth areas by comparing growth and development assumptions, targets, and objectives contained in the Countywide Planning Policies and the county and city comprehensive plans with actual growth and development in the county and cities.

Objectives relating to this review and evaluation include:

- Determining whether a county and its cities are achieving urban densities within urban growth areas by comparing growth and development assumptions, targets, and objectives contained in the Countywide Planning Policies and the county and city comprehensive plans with actual growth and development in the county and cities;
- Determining whether there is sufficient suitable land to accommodate applicable countywide population projections, including evaluation of impacts of approved actions to amend the Urban Growth Area;
- Determining the actual density of housing constructed within the Urban Growth Area since the adoption of, or since the most recent evaluation of, the Comprehensive Plan;

- Determining the actual amount of land developed for commercial and industrial uses within the Urban Growth Area since the adoption of, or since the most recent evaluation of, the Comprehensive Plan;
- Reviewing commercial, industrial, and housing needs by type and density range to determine the amount of land needed for commercial, industrial, and housing for the remaining portion of the 20-year planning period used in the 2012 adopted Comprehensive Plan; and
- Adopting and implementing measures intended to promote consistency between estimates of available land capacity, measures of actual development by type, and goals and objectives of city and county comprehensive plan policies, development regulations, and Countywide Planning Policies. Such measures include, but are not limited to, possible amendments to Countywide Planning Policies as determined necessary by the county and the cities.

In collaboration with its cities, King County prepared Buildable Lands Reports in 2002, 2007 and 2014, to implement this portion of the Growth Management Act.

Conclusions of 2014 King County Buildable Lands Report

The *King County Buildable Lands Report – 2014* reported on development densities and capacity as required by the Growth Management Act. The report concluded that King County does have sufficient capacity to accommodate forecasted housing-unit and job growth through 2031 and beyond. Under existing Comprehensive Plans and zoning, the county's Urban Growth Area has a generous surplus of planned capacity: more than double the housing target through 2031 and 160% of the jobs target. Almost all of this development capacity is contained within the county's 39 cities. Unincorporated King County within the Urban Growth Area has sufficient capacity for its residential target, but technically has a slight shortfall of capacity for job growth.

Under the Growth Management Act, *VISION 2040* and the Countywide Planning Policies, cities are designated and intended to accommodate almost all employment growth. Prior to planning under the Growth Management Act, unincorporated King County absorbed a large share of the county's residential and job growth. Since beginning to plan under the Growth Management Act, the county's growth has shifted almost entirely into the cities. However, a commensurate share of urban unincorporated growth targets did not shift into cities. Annexations transferred more capacity than target into the annexing cities, leaving residual unincorporated targets that are out of balance with actual capacity. Bearing in mind that the Urban Growth Area as a whole does have sufficient capacity for commercial and industrial growth, the small shortfall in urban unincorporated King County is a technical issue that will be addressed as further annexations occur. No action need be taken now, as urban unincorporated areas undergo transition into cities.

I-301 **Monitor and benchmark the progress of the Countywide Planning Policies and King County Comprehensive Plan toward achieving their objectives, inclusive of those relating to the environment, development patterns, housing, the economy, transportation, and the provision of public services. Use results of such monitoring to encourage implementation actions and inform policy revisions as appropriate to achieve the planning objectives found within the Countywide Planning Policies and King County Comprehensive Plan.**

IV. Land Use Designations and Zoning Classifications and Codes

The application of zoning classifications on specific properties is the first step towards implementing the land use designations of the Comprehensive Plan. Boundaries between different zone classifications may follow property lines, natural features or other dividing lines such as roads. A land use designation is implemented by one or more specific zone classification, as indicated on the table below:

Comprehensive Plan Land Uses	Zoning*
Unincorporated Activity Center : White Center	R-12, R-18, R-24, R-48, NB, CB, O, I
Community Business Center	NB, CB, O
Neighborhood Business Center	NB, O
Commercial Outside of Centers	NB, CB, RB, O, I - this is the range of existing zoning in place when the Comprehensive Plan was adopted
Urban Planned Development	R-1, R-4, R-6, R-8, R-12, R-18, R-24, R-48, NB, CB, RB, O, I
Urban Residential, High	R-18, R-24, R-48
Urban Residential, Medium	R-4, R-6, R-8, R-12
Urban Residential, Low	R-1
Urban Growth Areas for Cities in Rural Area	UR The following two zones were in place in the North Bend Urban Growth Area when the comprehensive plan was adopted in 1994: I, RB
Rural Town	R-1, R-4, R-6, R-8, R-12, R-18, R-24, R-48, NB, CB, RB, O, I
Rural Neighborhood Commercial Center	NB
Rural Area	RA-2.5, RA-5, RA-10, RA-20
Industrial	I
Forestry	F, M
Agriculture	A
Mining	M
Greenbelt/Urban Separator	R-1
King County Open Space System	All zones
Other Parks/Wilderness	All zones

* This is the range of zoning that may be allowed within each comprehensive plan land use designations subject to comprehensive plan and subarea plan policies. Actual zoning on a specific property is determined through the area-wide zoning process or through a quasi-judicial rezone application.

	Zoning Designations
A	Agricultural (10 or 35 acre minimum lot area)
F	Forest (80 acre minimum lot area)
M	Mineral
RA	Rural Area (2.5-acre, 5-acre, 10-acre or 20-acre minimum density)
UR	Urban Reserve
R	Urban Residential (base density in dwelling units per acre)
NB	Neighborhood Business
CB	Community Business
RB	Regional Business
O	Office
I	Industrial

The Zoning Code (Title 21A) establishes precise rules for each zoning classification such as permitted residential densities and activities or allowed commercial and industrial development activities, and striving for separation between incompatible uses. This code includes standards relative to bulk (i.e. lot size and coverage, building heights and setbacks, landscape standards).

I-401 **The King County Zoning Code's zone classifications and development standards and the official zoning maps shall be consistent with the Comprehensive Plan and functional plans.**

V. Other Implementing King County Codes

In addition to the Zoning Code, King County regulates land development and construction based on the Comprehensive Plan through a variety of technical code standards resulting in permits and approvals for specific projects.

In terms of land use regulation, the most important of these other implementing codes are Land Segregation (K.C.C. Title 19A) and Shoreline Management (K.C.C. Title 25). The Land Segregation code regulates division of a parcel of land into smaller lots for transfer of ownership. The Shoreline Management code regulates the issuance of substantial development permits for lands abutting waters governed by the Washington State Shoreline Management Act.

Other development approvals include commercial or industrial construction permits. Review of land segregation, substantial development permits and other development proposals are key parts of the development process for making sure facilities and services to support potential development are adequate and for evaluating environmental impacts.

I-501 **When needed infrastructure and facilities are not available in a timely manner, development approvals shall either be denied or divided into phases, or the project proponents should provide the needed facilities and infrastructure to address impacts directly attributable to their project, or as may be provided by the proponent on a voluntary basis.**

I-502 **King County's permitting systems should provide for expeditious review of** projects consistent with zoning and adopted policies.

I-503 **Subdivision, short subdivision and other development approvals, including those requiring detailed environmental review under the State Environmental Policy Act shall be reviewed for consistency with the Comprehensive Plan, zoning, community, subarea plans, functional plans and capital improvement programs.**

I-504 **King County shall enforce its land use and environmental regulations by pursuing code enforcement complaints and by providing oversight during the process of site development on all sites for which it issues permits.**

I-505 **King County shall develop, as a part of the buildable lands analysis, a zoning yield and housing production monitoring program to determine whether housing capacity is being lost in the context of compliance with the Endangered Species Act, and shall propose revisions to the Countywide Planning Policies to implement such a program.**

VI. 2016 Comprehensive Plan Workplan

A new feature of the 2016 Comprehensive Plan is this Workplan section. While Workplan tasks have accompanied the Comprehensive Plan as part of the adoption process by the County Council, these tasks were historically included with the Ordinance rather than inside of the Comprehensive Plan. In the 2016 Comprehensive Plan, these tasks will be included in the body of the document. Workplan tasks work in conjunction with the other tools discussed in this chapter, such as regulations, incentive programs, and other core regional planning and implementation activities. Each Workplan item includes a summary description, general timeline and anticipated outcomes. When transmitting to the Council the required report, study, ordinance, and/or motion in any of the items outlined below, the transmittal shall be in the form of a paper original and an electronic copy filed with the clerk of the Council, who shall retain the original and provide an electronic copy to all Councilmembers, the Council chief of staff, the policy staff director and the lead staff for the transportation, economy and environment committee, or its successor.

Action 1: Initiation of the Community Service Area Subarea Planning Program. Under the direction of the Department of Permitting and Environmental Review, King County is launching a new regular subarea planning program. While this is described in greater detail in Chapter 11: Community Service Area Planning, launching and implementing this effort will be a major activity following the adoption of the Comprehensive Plan.

- *Timeline:* Ongoing; the Executive will propose a subarea plan for each area approximately once every seven years based on planning schedule in Chapter 11.
- *Outcomes:* A proposed subarea plan for each Community Service Area for Council consideration and possible adoption. Each subarea plan shall be transmitted by the Executive to the Council in the form of an ordinance that adopts the subarea plan, no later than March 1 of the year following the Community Service Area's planning period.
- *Lead:* Department of Permitting and Environmental Review. Executive staff shall update and

coordinate with the Councilmember office(s) representing the applicable study area throughout the community planning process.

Action 2: Develop a Performance Measures Program for the Comprehensive Plan. The purpose of the program is to develop longer-term indicators to provide insight into whether the goals of the Comprehensive Plan are being achieved or if revisions are needed. Given the longer-term nature of the issues addressed in the Comprehensive Plan, this program will be implemented on a four-year cycle. Reports are to be released in the year prior to the initiation of the four-year update in order to guide the scoping process for the update. Additionally, to the extent practicable for each dataset, indicators will be reported at the level most consistent with the major geographies in the Growth Management Act and Comprehensive Plan – incorporated cities, unincorporated urban areas, Rural Areas, and Natural Resource Lands.

- *Timeline:* The motion adopting the program framework shall be transmitted by June 1, 2017. A 2018 Comprehensive Plan Performance Measures Report released by December 1, 2018, will inform the 2019 Scope of Work for the 2020 Comprehensive Plan update.
- *Outcomes:* The 2017 framework for the program shall be transmitted by the Executive to the Council by June 1, 2017, in the form of a motion that adopts the framework. The 2018 Comprehensive Plan Performance Measures Report shall be completed as directed by the 2017 framework motion adopted by the Council. The Executive shall file with the Council the 2018 Comprehensive Plan Performance Measures Report. The 2019 Scope of Work for the 2020 Comprehensive Plan Update shall be informed by the 2018 Performance Measures Report. The Executive's transmitted 2020 Comprehensive Plan shall include updated references to the new Performance Measures Program.
- *Lead:* Office of Performance Strategy and Budget. Executive staff shall work with the Council's Comprehensive Plan lead staff in development of the 2017 framework for the program.

Action 3: Implement a Transfer of Development Rights Unincorporated Urban Receiving Area Amenity Funding Pilot Project. The County's Transfer of Development Rights Program has been very effective in implementing Growth Management Act goals to reduce sprawl and permanently protect open space. This Workplan item is to conduct a pilot project to determine the process for providing amenities to unincorporated urban Transfer of Development Rights receiving area communities. The focus of the pilot project will be the East Renton Plateau – an area of urban unincorporated King County that has received a substantial number of Transferrable of Development Rights. The East Renton Plateau Transfer of Development Rights Receiving Area Pilot Project will: develop a process for engaging the community to determine the type of amenities the community desires; assess the type and amounts of funding available for providing amenities; and establish an amount of amenity funding to be provided for each Transferrable of Development Rights (both past and future Transferrable of Development Rights).

- *Timeline:* 2017-2018; (18-month process). The Transfer of Development Rights Amenity Funding Pilot Project Report on the results of the pilot project shall be transmitted to the Council by June 1, 2018, so

as to inform the King County 2019-2020 Biennial Budget.

- *Outcomes:* The Executive shall file with the Council the Transfer of Development Rights Amenity Funding Pilot Project Report recommending process and funding levels relative to Transferrable of Development Rights used in development projects. The report shall include identification of any necessary recommended amendments to the Comprehensive Plan and King County Code. The Executive shall transmit to the Council any recommended amendments to the Comprehensive Plan and King County Code as part of the 2020 Comprehensive Plan update.
- *Leads:* Department of Natural Resources and Parks. Executive staff shall update and coordinate with the Councilmember office(s) representing the pilot project community throughout the process.

Action 4: Transfer of Development Rights Program Review. The County's Transfer of Development Rights Program has been very successful in protecting Rural Area and Natural Resource Lands by transferring development potential into cities and unincorporated urban areas. Typically the Transfer of Development Rights Program advances two primary policy objectives: conserving Rural Area and Natural Resource Lands, as well as focusing new growth in urban areas.

This Workplan item will do the following:

A. Prepare a Transfer of Development Rights Program Review Study that addresses:

1) Tax revenue impacts of the Transfer of Development Rights Program for both sending and receiving sites.

2) Analysis of potential Transfer of Development Rights Program changes that build on existing program objectives while considering other policy objectives, such as making investments in economically disadvantaged areas, promoting housing affordability, incentivizing green building, and providing for Transit Oriented Development. The analysis should take into consideration the economic feasibility of and market interest in these other policy objectives, as well as opportunities for providing amenities to communities that receive Transfer of Development Rights. This analysis will be achieved through implementation of a pilot project that utilizes such incentives and provides amenities to the community receiving increased density associated with the Transfer of Development Rights. If possible, the pilot project should be undertaken in Skyway-West Hill and help implement the Skyway-West Hill Action Plan.

3) Consider possible performance criteria.

B. Produce an annual report to the Council on the Transfer of Development Rights Program and associated bank activity.

- *Timeline:* The annual report to the Council shall commence with a report due on December 1, 2017. The Transfer of Development Rights Program Review Study, and an ordinance making Comprehensive Plan and/or King County Code changes if applicable, shall be filed with the Council by December 1, 2018.

- *Outcomes:* The Executive shall file with the Council the Transfer of Development Rights Program Review Study and the annual report. The Study shall outline policy and implementation options, if applicable. If Comprehensive Plan and/or King County Code changes are recommended, an ordinance implementing those changes shall also be transmitted to the Council with the Study.
- *Leads:* Department of Natural Resources and Parks, Office of Performance Strategy and Budget. Executive staff shall update and coordinate with the Councilmember office(s) representing the pilot project community throughout the process.

Action 5: Review 2016 King County Comprehensive Plan Implementation Needs. The 2016 Comprehensive Plan includes new policy direction that may need updates in the King County Code in order to be implemented before the 2020 Comprehensive Plan update. The County will utilize an interbranch team to review the 2016 Comprehensive Plan and any necessary code updates. This analysis will result in a report that identifies the areas of the code in need of updating and subsequent legislation to address the areas of inconsistencies. The legislation will also include code changes to K.C.C. 16.82.150 and 16.82.152, and associated references, to reflect court rulings and current case law.

- *Timeline:* An Implementation Report shall be filed with the Council by July 31, 2017. The Report will inform a code update ordinance(s), which shall be transmitted to the Council no later than December 31, 2019.
- *Outcomes:* The interbranch team shall prepare, and the Executive shall file with the Council, the 2016 Comprehensive Plan Implementation Report and the code update ordinance(s).
- *Leads:* Interbranch team comprised of staff from at least the: King County Council, Office of Performance Strategy and Budget, Department of Permitting and Environmental Review, and Prosecuting Attorney's Office.

Action 6: Alternative Housing Demonstration Project. There is considerable interest to explore temporary and permanent alternative housing models to address the issues of homelessness and affordable housing in the Puget Sound region. King County is currently exploring microhousing pilot projects across the region that can inform a larger demonstration project under King County Code on alternative housing models in unincorporated King County. Based on what the County learns from the experience of pilots across the region, the County should pursue a larger demonstration project that looks at a broader range of temporary and permanent alternative housing models under its land use authority.

This work plan item will utilize an interbranch team to analyze the potential for a demonstration project under K.C.C. chapter 21A.55 for one or more temporary or permanent alternative housing projects, such as single and/or multi-family microhousing (i.e., very small units clustered around a shared kitchen and other similar models) or tiny houses, modular construction, live/work units, and co-housing projects. A demonstration project will allow the County to test development regulations and other regulatory barriers related to alternative

housing models before adopting or amending permanent regulations. Such regulations could include amendments to or establishment of regulations related to permitted uses or temporary uses, building and fire codes, water and sewer supply requirements, setbacks, landscaping screening, location requirements, light and glare requirements, public notice, and mitigation of impacts to the surrounding area. This work plan item should also analyze potential funding sources and funding barriers for projects that may or may not require public funding, including funds managed by the King County Housing and Community Development Division of the Department of Community and Human Services.

- *Timeline:* Two phases. Phase One – Issuance of a request for proposals to identify a project or projects in unincorporated King County that will participate in an Alternative Housing Demonstration Project. While a project or projects are being chosen, a Demonstration Project ordinance package that pilots necessary regulatory flexibilities will be developed for approval by the Council. Such a Demonstration Project shall be transmitted to Council by December 31, 2018. Phase II – An Alternative Housing Demonstration Project Report, including proposed regulations and/or amendments to implement the recommendations of the report shall be transmitted to the Council for consideration by December 31, 2020.
- *Outcomes:* The interbranch team shall prepare, and the Executive shall file with the Council, the Alternative Housing Demonstration Project Report, which shall include analysis of the issues learned in the Demonstration Project(s), and identification of recommended amendments to the Comprehensive Plan and King County Code. The Executive shall also file with the Council an ordinance adopting updates to the Comprehensive Plan and/or King County Code as recommended in the Report.
- *Leads*: The King County Council will convene an interbranch team comprised of staff from at least: King County Council, Department of Community and Human Services, Department of Permitting and Environmental Review, Public Health, and Office of Performance Strategy and Budget.

Action 7: Agricultural Related Uses Zoning Code Updates. As part of the transmitted 2016 Comprehensive Plan, the Executive included recommended code changes related to agricultural uses in unincorporated King County. In order to give the Council additional time to consider these proposed changes and to address the identified policy issues, the transmitted code changes will not be adopted in 2016. Instead, the code changes will be further developed through this work plan item.

The Council identified several policy issues through review of the code changes as part of the 2016 Comprehensive Plan update. Through use of an interbranch team, this work plan item aims to resolve these policy issues, draft a new ordinance, and complete outreach to affected stakeholders such as the King County Agriculture Commission, ag-related business owners, and/or Community Service Areas. If the results of the winery study, currently being reviewed by the Executive, are not complete in time to incorporate into the 2016 Comprehensive Plan, then this work plan item should also address the recommendations of that study.

- *Timeline:* Six to nine month process. An Agricultural Related Uses Zoning Code Updates Report and

proposed regulations to implement the recommendations in report shall be transmitted to the Council for consideration by September 30, 2017.

- *Outcomes:* The interbranch team shall prepare, and the Executive shall file with the Council, the Agricultural Related Uses Zoning Code Updates Report, which shall include identification of recommended amendments to the King County Code. The Executive shall also file with the Council an ordinance adopting updates to the King County Code as recommended in the Report.
- *Leads*: The King County Council will convene an interbranch team comprised of at least King County Council staff, the Department of Permitting and Environmental Review, the Department of Natural Resources and Parks, and the Office of Performance Strategy and Budget.

Action 8: Cottage Housing Regulations Review. Cottage housing is a method of development that allows for multiple detached single-family dwelling units to be located on a commonly owned parcel. In unincorporated King County, cottage housing is currently only permitted in the R-4 through R-8 urban residential zones, subject to certain conditions in the King County Code, such as in K.C.C. 21A.08.030 and 21A.12.030, which includes being only allowed on lots one acre in size or smaller. This work plan item will review Comprehensive Plan policies and development code regulations for the potential for expanded allowances for cottage housing in unincorporated King County, including in Rural Areas, and recommend policy and code changes as appropriate.

- *Timeline:* A Cottage Housing Regulations Report and any proposed policy or code changes to implement the recommendations in the report shall be transmitted to the Council for consideration by December 31, 2018.
- *Outcomes:* The Executive shall file with the Council the Cottage Housing Regulations Report, which shall include identification of any recommended amendments to the King County Code and/or Comprehensive Plan. The Executive shall also file with the Council an ordinance adopting updates to the King County Code and/or the Comprehensive Plan, if recommended in the Report.
- *Leads*: The Department of Permitting and Environmental Review and the Office of Performance Strategy and Budget.

Action 9: Carbon Neutral King County Plan. The 2016 Comprehensive Plan includes a new policy F-215b which directs the County to "strive to provide services and build and operate public buildings and infrastructure that are carbon neutral." To support implementation of this policy, this work plan item directs the Executive to develop an Implementation Plan for making King County government carbon neutral. The Implementation Plan shall address existing and new County buildings, as well as all County operations and services, and shall identify the actions, costs and schedule for achieving carbon neutral status. This Implementation Plan will help inform the 2020 update of the Strategic Climate Action Plan, through which existing county targets for carbon neutrality and greenhouse gas emissions reduction will be updated consistent with the F-215b and the Implementation Plan.

- *Timeline:* A Carbon Neutral King County Implementation Plan and a motion adopting the Implementation Plan shall be transmitted to the Council for consideration by February 28, 2019. A Progress Report on development of the Implementation Plan shall be transmitted to the Council by December 31, 2017.
- *Outcomes:* The Executive shall file with the Council for review and potential approval the Carbon Neutral King County Implementation Plan and a motion adopting the Implementation Plan.
- *Leads*: Department of Natural Resources and Parks.

Action 10: Green Building Handbook Review. The 2016 Comprehensive Plan includes policy direction in Policies U-133, R-336a, F-215a, and ED-501a that encourages green building practices in private development. To support these implementation of these policies, and consistent with direction in the 2015 Strategic Climate Action Plan, the County will soon be in the process of reviewing potential green building code requirements and/or encouraged standards for private development for possible adoption. In the meantime, the County intends to continue to use the Department of Permitting and Environmental Review's existing "Green Building Handbook" to help encourage private green building development, which is referenced in the 2016 Comprehensive Plan. This work plan item directs the Executive to transmit to the Council the Green Building Handbook for review and potential approval.

- *Timeline:* The Green Building Handbook and a motion approving the Handbook shall be transmitted to the Council for consideration by March 1, 2017.
- *Outcomes:* The Executive shall file with the Council for review and potential approval the Green Building Handbook and a motion adopting the Handbook.
- *Leads*: The Department of Permitting and Environmental Review.

Action 11: Bicycle Network Planning Report. The Puget Sound Regional Council has identified a regional bicycle network, for both the existing network and the associated gaps and needs, in its Active Transportation Plan, which is an element of *Transportation 2040*. King County also identifies local bicycle network needs throughout its planning, such as in the Transportation Needs Report and the Regional Trail Needs Report.

This Workplan item directs the King County Department of Transportation, in coordination with the Department of Natural Resources and Parks and the Department of Permitting and Environmental Review, to evaluate and report on how to enhance the bicycle network within unincorporated King County and address identified regional and local bicycle infrastructure needs (such as standards for bicycle lanes, tracks and trails; plans and financing for capital improvements; bicycle racks and parking; air filling stations; etc). This report will include:

a. Evaluation of existing King County planning efforts and possible areas for improvement, such as addressing bicycle facility provisions in:
    - roadway designs and standards, including lighting standards,

- plat approvals,
- commercial developments,
- parks & trails planning, and
- transit planning and access to transit.

b. Evaluation of bicycle and/or active transportation plan elements of other jurisdictions, including the City of Seattle, for opportunities to connect to King County planning and active transportation facilities.

c. Working with stakeholders for identification of needs and areas for possible improvements.

- *Timeline:* The Bicycle Network Planning Report and a motion approving the report shall be transmitted to the Council for consideration by December 31, 2017.

- *Outcomes:* The Executive shall file with the Council for review and potential approval the Bicycle Network Planning Report and a motion adopting the Report.

- *Lead*: Department of Transportation.

Action 12: Update Plat Ingress/Egress Requirements. State law gives King County the responsibility to adopt regulations and procedures for approval of subdivisions and plats. The Department of Permitting and Environmental Review reviews ingress and egress to subdivisions and plats during the preliminary subdivision approval process using the Department of Transportation Roads Division's "King County Road Design and Construction Standards – 2007" (Roads Standards). In recent years, subdivision layouts have included one entry/exit (or ingress/egress) point and a looped road network within the subdivision.

Utilizing one entry/exit point can cause access issues if the roadway were to be physically impeded (such as due to: a fire, debris, flooding, ice, snow, etc.). This configuration may also cause traffic backups while waiting for the ability to turn in to or out of the development. Sometimes, this one access point may also be located too close to other intersecting roadways to the roadway that the development intersects; this can contribute to traffic back-ups.

This Workplan item directs the Executive to transmit legislation to update the code, (such as K.C.C. Title 21A), and the King County Department of Transportation Roads Standards to address these access issues. This code update will include requiring two entry/exit points for plats and subdivisions over a certain size and increasing the distance between adjacent intersecting streets. The transmittal letter for the ordinance(s) shall indicate the rational for the chosen size threshold for when the County will require two entry/exit points.

- *Timeline:* The proposed amendments to the King County Code and the King County Roads Standards shall be transmitted to the Council for consideration by December 31, 2018.

- *Outcomes:* The Executive shall file with the Council an ordinance(s) adopting updates to the King County Code and the King County Roads Standards.

- *Lead*: Department of Transportation and Department of Permitting and Environmental Review.

Action 13: Water Availability and Permitting Study. The recent Washington State Supreme Court decision in *Whatcom County v. Western Washington Growth Management Hearings Board (aka, Hirst)* held that counties have a responsibility under the Growth Management Act to make determinations of water availability through the Comprehensive Plan and facilitate establishing water adequacy by permit applicants before issuance of development permits. *Hirst* also ruled that counties cannot defer to the State to make these determinations. This case overruled a court of appeals decision which supported deference to the State. The Supreme Court ruling will require the County to develop a system for review of water availability in King County, with a particular focus on future development that would use permit exempt wells as their source of potable water. This system will be implemented through amendments to the King County Comprehensive Plan and development regulations. The County will engage in a Water Availability and Permitting Study to address these and related issues. This study will analyze methods to accommodate current zoning given possible water availability issues and will look at innovative ways to accommodate future development in any areas with insufficient water by using mitigation measures (e.g. water banks). This study will not include analysis of current water availability.

- *Timeline:* Eighteen month process. Initial report will be transmitted to the Council by December 1, 2017; final report, with necessary amendments, will be transmitted to the Council by July 1, 2018. This report may inform the scope of work for the next major Comprehensive Plan update.

- *Outcomes:* Modifications, as needed, to the Comprehensive Plan, King County Code and County practices related to ensuring availability of water within the Comprehensive Plan and determining the adequacy of water during the development permit process.

- *Leads:* Performance, Strategy and Budget. Work with the Department of Permitting and Environmental Review, Department of Natural Resources and Parks, Department of Public Health, Prosecuting Attorney's Office, and King County Council. Involvement of state agencies, public and non-governmental organizations.

Actions Related to the Growth Management Planning Council

The Growth Management Planning Council (GMPC) is a separate formal body consisting of elected officials from King County, Seattle, Bellevue, other cities and towns in King County, special purpose districts, and the Port of Seattle. The GMPC developed the Countywide Planning Policies, providing a countywide vision and serving as a framework for each jurisdiction to develop its own comprehensive plan, which must be consistent with the overall vision for the future of King County. The GMPC is chaired by the King County Executive; five King County Councilmembers serve as members. Recommendations from the GMPC are transmitted to the full King County Council for review and consideration.

The GMPC develops its own independent work program every year; this section of the 2016 Comprehensive Plan Workplan identifies issues the County will bring forward to the GMPC for review, consideration and recommendations. King County will submit these Workplan items to the GMPC for consideration at its first meeting of 2017, with a goal of completing the GMPC review and recommendations by December 31, 2018.

Action 14: Develop a Countywide Plan to Move Remaining Unincorporated Urban Potential Annexation Areas Toward Annexation. The GMPC has authority to propose amendments to the Countywide Planning Policies, and a unique defined role related to recommending approval or denial of Urban Growth Area expansions. In order to move remaining unincorporated areas, which vary in size and complexity, towards annexation, the GMPC would reconsider the Potential Annexation Areas map and the "Joint Planning and Annexation" section of the Countywide Planning Policies. This effort would include an evaluation of how to address Potential Annexation Areas that have been previously unsuccessful in annexation and/or where annexation does not appear feasible in the near future.

Action 15: Review the Four-to-One Program. The County's Four-to-One Program has been very effective in implementing Growth Management Act goals to reduce sprawl and encourage retention of open space. This is done through discretionary actions by the County Council, following a proposal being submitted by a landowner(s) to the County. Over time, there have been proposals that vary from the existing parameters of the program; these have included possible conversion of urban zoning for lands not contiguous to the original 1994 Urban Growth Area, allowing the open space to be non-contiguous to the urban extension, use of transfer of development rights, providing increased open space credit for preserved lands with high ecological value (such as lands that could provide for high value floodplain restoration, riparian habitat, or working resource lands), and consideration of smaller parcels or parcels with multiple ownerships. Allowing these changes have the potential for increasing the use of the tool, with attendant risks and benefits. The Growth Management Planning Council would review the Four-to-One program and determine whether changes to the existing program should be implemented that will strengthen the program and improve implementation of the Comprehensive Plan, including evaluation of the proposals listed above.

Action 16: Buildable Lands Program Methodology Review. As required by the Growth Management Act, King County and the 39 cities participate in the Buildable Lands Program to evaluate their capacity to accommodate forecasted growth of housing units and jobs. The program, administered by the Washington State Department of Commerce, requires certain counties to determine whether the county and its cities are achieving urban densities within urban growth areas by comparing assumptions and targets regarding growth and development with actual growth and development in the county and cities. Since issuance of the first Buildable Lands Report in 2002, jurisdictions and stakeholders have expressed the potential for possible refinements of the methodology used by King County and the cities. The Growth Management Planning Council would work with stakeholders to review the methodology, including testing the accuracy of the Buildable Lands Report model and results, for potential refinements.

VII. Incentives

To ensure that the vision, goals, objectives, and policies of this Comprehensive Plan become a reality, it will require adjusting policy and budget priorities by King County government. It will require individuals to reconsider their daily decisions and choices relating to the management or development of their lands. The decisions and choices of large scale public/private partnerships during the development of major projects will be critical factors contributing to the effective implementation of this Comprehensive Plan. Incentives, like the Transfer of Development Rights Program, must encourage the types of growth and development patterns desired by King County and its residents.

I-601 **King County should develop incentives for the Urban Growth Area that encourage the development industry to provide a broad range of housing and business space, including areas of the county with the most disparate outcomes in health, economic prosperity and housing conditions, where residents may be at high risk of displacement. Incentives could include:**

- **a. Identification of geographic areas with infill opportunities, granting budget priority status and allowing more flexible development standards;**
- **b. Density bonuses for site designs which provide public benefits (for example, grid roads that connect with other developments and limit impacts on arterials);**
- **c. Incentives which lower financial development risk;**
- **d. Joint development opportunities at county-owned or operated facilities, utilization of air rights on county-owned or operated facilities, and the establishment of transit-supportive design guidelines; and**
- **e. County capital improvement funding for public urban amenities including transportation, parks, open space, cultural and other facilities for cities participating in the King County Transfer of Development Rights Program.**



GLOSSARY
& FREQUENTLY USED ACRONYMS

Active Recreation Site

Active recreation sites recognize a higher level of public use and will require developed areas for organized or intense recreation. An active recreation site includes both the active recreation uses and all necessary support services and facilities.

Adaptive management

Adaptive management is a systematic approach for continually improving management policies and practices by learning from the outcomes of operational programs.

Agricultural activities

Agricultural activities means agricultural uses and practices including, but not limited to: producing, breeding, or increasing agricultural products; rotating and changing agricultural crops; allowing land used for agricultural activities to lie fallow in which it is plowed and tilled but left unseeded; allowing land used for agricultural activities to lie dormant as a result of adverse agricultural market conditions; allowing land used for agricultural activities to lie dormant because the land is enrolled in a local, state, or federal conservation program, or the land is subject to a conservation easement; conducting agricultural operations; maintaining, repairing, and replacing

agricultural equipment; maintaining, repairing, and replacing agricultural facilities, provided that the replacement facility is no closer to the shoreline than the original facility; and maintaining agricultural lands under production or cultivation.

Agricultural Production Districts (APD)

The Growth Management Act requires cities and counties to designate, where appropriate, agricultural lands that are not characterized by urban growth and that have long-term significance for the commercial production of food or other agricultural products. The comprehensive plan designates Agricultural Production Districts where the principal land use should be agriculture. Lands within Agricultural Production Districts should remain in parcels large enough for commercial agriculture. (See Chapter 3: Rural Areas and Natural Resource Lands.)

Agricultural products

Agricultural products include, but are not limited to: horticultural, viticultural, floricultural, vegetable, fruit, berry, grain, hops, hay, straw, turf, sod, seed, and apiary products; feed or forage for livestock; Christmas trees; hybrid cottonwood and similar hardwood trees grown as crops and harvested within twenty years of planting; and livestock, including both the animals themselves and animal products including, but not limited to, meat, upland finfish, poultry and poultry products, and dairy products.

Annexation

Annexation is the process of adding or incorporating an area into a city's jurisdiction.

Applicant

An applicant is a property owner, a public agency or a public or private utility that owns a right-of-way or other easement or has been adjudicated the right to such an easement under RCW 8.08.040, or any person or entity designated or named in writing by the property or easement owner to be the applicant, in an application for a development proposal, permit or approval.

Arterial Functional Classification

Arterial functional classification is the division of a road system into a number of categories according to the function of each road. The degree to which the road serves movement of traffic or access to adjacent properties is the basis for its classification. Principal arterials provide for movement across large areas, serving predominantly "through traffic." Minor arterials provide movement to abutting properties and to arterials within large areas bound by principal arterials. Collector arterials serve smaller areas by "collecting" traffic to or from abutting properties and funneling it to and from the transportation system.

Biodiversity

Biodiversity, or biological diversity, is the variety of living organisms considered at all levels, from genetic diversity through species, to higher taxonomic levels, and includes the variety of habitats, ecosystems, and landscapes in which the species are found.

Brownfields

Brownfields are defined as vacant or underdeveloped industrial/commercial sites with real or perceived contamination.

Buffer

A buffer is a designated area contiguous to a steep slope or landslide hazard area intended to protect slope stability, attenuation of surface water flows and landslide hazards, or a designated area contiguous to and intended to protect and be an integral part of an aquatic area or wetland.

Capital Improvement Program (CIP)

The Adopted Capital Improvement Program budget allocates funds from various revenue sources to improve cultural and recreational opportunities for King County residents, build needed transportation facilities, protect the County's investment in existing buildings, protect the health of residents, enhance the management of natural resources, and provide necessary capital resources for the law, safety, and justice system.

Channel migration hazard area, moderate

A portion of the channel migration zone, as shown on King County's Channel Migration Zone maps, which lies between the severe channel migration hazard area and the outer boundaries of the channel migration zone.

Channel migration hazard area, severe

A portion of the channel migration zone, as shown on King County's Channel Migration Zone maps, which includes the present channel. The total width of the severe channel migration hazard area equals one hundred years times the average annual channel migration rate, plus the present channel width. The average annual channel migration rate as determined in the technical report is the basis for each Channel Migration Zone map.

Channel Migration Zone

Channel migration zones are those areas along a river channel within which the channel(s) can be reasonably predicted, based on best available science, to migrate over time as a result of natural and normally occurring hydrological and related processes when considered with the characteristics of the river and its surroundings.

Cities in the Rural Area

King County's Cities in the Rural Area are incorporated areas within the Rural Area whose local governments are involved in the region's planning processes on an equal legal basis with the suburban cities and Seattle. The incorporated Cities in the Rural Area are Black Diamond, Carnation, Duvall, Enumclaw, North Bend, Skykomish and Snoqualmie. (See Chapter 3: Rural Areas and Natural Resource Lands)

Clearing

Clearing includes cutting, killing, grubbing or removing vegetation or other organic plant material by physical, mechanical, chemical or any other similar means. For the purpose of this definition of clearing, cutting means the severing of the main trunk or stem of woody vegetation at any point.

Clustering

Clustering means developing a subdivision that reduces the individual lot areas to create permanent open space or a reserve for future development while it maintains the zoned residential density.

Community Business Centers

These are primarily retail developments designed to serve a nearby market area of 15,000 to 40,000 people. (See Chapter 2: Urban Communities.)

Community Service Areas (CSA)

The CSA Program is housed in the Department of Natural Resources and Parks. This program promotes robust public engagement that informs, involves, and empowers people and communities in unincorporated urban areas and in the Rural Area and Natural Resource Lands of King County.

Community Service Area Plan

With King County's initiation of the subarea planning program, the new plans will be called Community Service Area Plan. These will be a long-range, multi-discipline, integrated tools that apply the countywide goals of the Comprehensive Plan to a smaller geographic area. Each one of King County's seven CSAs has or is scheduled to have its own CSA Plan. CSA Plans are comprised of two primary components: a CSA Plan Profile and a CSA Subarea Plan. A CSA Plan Profile applies to an entire CSA geography and includes broad goals and policies, CSA demographics, major land uses and trends, and socioeconomic indicators. A CSA Subarea Plan is typically prepared for a targeted area of a CSA such as a rural town center, urban neighborhood or corridor. They contain a more detailed plan or analysis than a CSA Plan Profile and often address the intersection of land use, transportation, housing, and/or the environment. These plans implement and are consistent with the Comprehensive Plan's policies, development regulations, and Land Use Map.

Comprehensive Plan

The state of Washington's Growth Management Act requires certain cities and counties of the state to adopt comprehensive land use plans. A comprehensive plan is a generalized, coordinated land use policy statement of the governing body of a county or city that is adopted pursuant to the Growth Management Act. A comprehensive plan consists of a map or maps; descriptive text covering objectives, principles, and standards used to develop the comprehensive plan; and a plan, scheme or design for land use, housing, capital facilities, utilities, rural areas, natural resource lands, and transportation. Optional components include elements relating to conservation, solar energy, recreation, and subarea plans.

Concurrency Management System

The Growth Management Act requires jurisdictions to adopt and enforce ordinances that prohibit development approval if the development causes the level of service on a transportation facility to decline below the standards adopted in the comprehensive plan, unless transportation improvements or strategies to accommodate the impacts of development are made "concurrent" with the development. Concurrent with development means that transportation improvements or strategies are in place at the time of development or that financial commitment is made to complete the improvements or strategies within six years. The Concurrency Management System of King County establishes a process to manage new development based on transportation impacts on levels of service and the concurrency of needed improvements or actions. (See Chapter 8: Transportation).

Coordinated Water System Plans

Four Critical Water Supply Service Areas have been designated in King County in accordance with the Public Water System Coordinated Act of 1977 (chapter 70.116 RCW): East King County, Skyway, South King County, and Vashon Island. The Coordinated Water System Plan for each area provides an assessment of water supply and a program to meet future demand. Planning areas, within which a water purveyor is obligated to provide service consistent with county land use plans and regulations, were assigned for major purveyors.

Countywide Planning Policies (CPP)

The Growth Management Act requires that counties, as regional governments within their boundaries, prepare countywide planning policies which establish a countywide framework from which county and city comprehensive plans are to be developed and adopted. This framework is to ensure that city and county comprehensive plans are consistent. The King County Countywide Planning Policies were developed and recommended by the Growth Management Planning Council and are to serve as a blueprint for how King County and its cities should grow over the next 20 years. The Metropolitan King County Council adopted these policies in 1992. Since this time, amendments called "Phase II Countywide Planning Policies" have been made to the sections pertaining to affordable housing, economic development and rural character. The County Council has adopted these Phase II amendments. (See Chapter 1: Regional Growth Management Planning.)

Critical Areas

The Growth Management Act requires cities and counties to designate, where appropriate, critical areas which include: 1) wetlands, 2) areas with a critical recharging effect on aquifers used for potable water, 3) fish and wildlife habitat conservation areas, 4) frequently flooded areas, and 5) geologically hazardous areas. (See Chapter 5: Environment, for King County's designation of critical areas.)

Critical Habitat

Critical habitat includes specific areas that possess physical or biological features, which are essential to the conservation of a listed species.

Cultural Resources

Cultural resources include performing and visual arts events, programs and facilities; public art; heritage events, programs and facilities; and historic properties.

Cumulative impacts

Cumulative impacts are the sum total of the current, plus any reasonably foreseeable future disturbances to ecological functions, which can be impacted by both development subject to shoreline permits and by development that is not subject to permits.

Deficiency

Deficiency in a comprehensive plan or development regulation refers to the absence of required or potentially desirable contents of a comprehensive plan or development regulation.

Density

Density is the quantity of structures or buildings per unit area. Density is typically expressed as housing units per acre or square mile.

Density Incentives/Bonuses

Density incentives, or density bonuses, are programs that allow more dwelling units than the number permitted on a site by zoning (sometimes referred to as "base density") in exchange for public benefits provided by the developer. King County has incorporated use of density incentives with standard urban subdivision, mobile home park, and multifamily development projects. (King County Code, Title 21A)

Development

For purposes of the shoreline master program, development means a use consisting of the construction or exterior alteration of structures; dredging; drilling; dumping; filling; removing sand, gravel, or minerals; bulkheading; driving of piling; placing of obstructions; or any project of a permanent or temporary nature which interferes with the normal public use of the surface of the waters overlying lands subject to any state of water level.

Development regulations

Development regulations means the controls placed on development or land uses by a county or city, including, but not limited to: zoning ordinances, critical areas ordinances, all portions of a shoreline master program other than goals and policies approved or adopted under chapter 90.58 RCW, planned unit development ordinances, subdivision ordinances, and binding site plan ordinances together with any amendments thereto.

Docket

A list of suggested changes to a comprehensive plan or development regulations maintained by the department.

Docket Process, The

The docket process specifies that dockets are not just to note deficiencies, but also to suggest changes and make written comments. These suggested changes are reviewed by the county and made available for review by the public. Information provided to the public will include the county's response. An Internet docket process is available and can be found at: http://www.kingcounty.gov/depts/executive/performance-strategy-budget/regional-planning/king-county-comprehensive-plan/amend/docket.aspx.

Docketing

Docketing means compiling and maintaining a list of suggested changes to the comprehensive plan or development regulations in a manner that will ensure such suggested changes will be considered by the county and will be available for review by the public.

Drainage Basin

A drainage basin, like a watershed, is an area that drains to a common outlet or an identifiable water body such as a river, stream, lake or wetland. In King County, 72 drainage basins are contained within six major watersheds. These drainage basins in turn contain numerous individual water bodies with small drainages.

Dredging

Dredging is the removal, displacement, or disposal of unconsolidated earth material such as sand, silt, gravel, or other submerged materials, from the bottom of water bodies, ditches, or natural wetlands. Maintenance dredging and/or support activities are included in this definition.

Dwelling unit

A dwelling unit consists of one or more rooms designed for occupancy by a person or household for living and sleeping purposes, containing kitchen facilities and rooms with internal accessibility, for use solely by the dwelling's occupants. Dwelling units include but are not limited to efficiency and studio apartments, factory-built housing and mobile homes.

Ecological Function

An ecological function refers to physical, chemical, and biological processes or attributes at some level of biological organization. For example, the ecological functions of wetlands include food chain support, water quality maintenance, flood storage, and wildlife habitat.

Ecoregions

Ecoregions are land areas that contain a geographically unique set of species, communities, and environmental conditions.

Ecosystem

Ecosystem means the complex of a community of organisms and its environment functioning as an ecological unit.

Ecosystem-wide processes

Ecosystem-wide processes means the suite of naturally occurring physical and geologic processes of erosion, transport, and deposition; and specific chemical processes that shape landforms within a specific shoreline ecosystem and determine both the types of habitat and the associated ecological functions.

Emissions Trading

Emissions trading means the transfer in ownership of emission reductions. Emission trading occurs when a source of air pollution reduces its emissions and then transfers ownership of the emission reduction to another party. Markets for emission reductions can be created by regulation (the market for sulfur dioxide allowances for example) or voluntarily (the current market for greenhouse gases).

Endangered Species

Endangered species means any species which is in danger of extinction throughout all or a significant portion of its range and which has been designated as such in regulations issued by the U.S. Fish and Wildlife Service or the state of Washington Department of Fish and Wildlife.

Endangered Species Act (ESA)

The Endangered Species Act is an act that was adopted by the U.S. Congress in 1973 to provide a means to conserve ecosystems upon which endangered and threatened species depend and to provide a program for the conservation for such endangered and threatened species.

Endemic Species

Endemic species (or habitats or ecosystems) are those that are native to, and occur only in, a particular area or locale. Endemic species generally have very specific adaptive requirements that are linked to particular habitat or ecosystems that are rare (e.g., Townsend's big-eared bats and caves). Even small changes in the ecosystem are likely to cause localized extinctions of these species.

Enhance

Enhance means to increase or improve one or more of the functions, attributes, or values that an ecosystem or environmental feature possesses. (See Chapter 5: Environment).

Environmentally Sensitive Areas

Environmentally sensitive areas include: coal mines; areas that are prone to erosion, floods, landslides, or seismic activity; steep slopes; volcanic hazard areas; and streams, wetlands and protection buffers.

Fair Housing Ordinance

King County's Fair Housing Ordinance prohibits housing discrimination on the basis of race, color, religion, national origin, age, sex, marital status, parental status, use of Section 8 subsidy, sexual orientation, disability or the use of a trained guide dog.

Family-Wage Jobs

Family-wage jobs are jobs that pay more than the average annual wage for King County in a given year and therefore enable a worker to support a family.

Feasible

Feasible means, for the purpose of this program, that an action, such as a development project, mitigation, or preservation requirement, meets all of the following conditions:

(a) The action can be accomplished with technologies and methods that have been used in the past in similar circumstances, or studies or tests have demonstrated in similar circumstances that such approaches are currently available and likely to achieve the intended results;

(b) The action provides a reasonable likelihood of achieving its intended purpose; and

(c) The action does not physically preclude achieving the project's primary intended legal use.

In cases where these guidelines require certain actions unless they are infeasible, the burden of proving infeasibility is on the applicant. In determining an action's infeasibility, the reviewing agency may weigh the action's relative public costs and public benefits, considered in the short- and long-term time frames.

FEMA floodway

A FEMA (Federal Emergency Management Agency) floodway is the channel of the stream and that portion of the adjoining floodplain that is necessary to contain and discharge the 100-year flood flow without increasing the base flood elevation more than one foot.

Fill

Fill means the addition of soil, sand, rock, gravel, sediment, earth retaining structure, or other material to an area waterward of the ordinary high water mark (OHWM), in wetlands, or on shorelands in a manner that raises the elevation or creates dry land.

Flood Hazard Management Plan

The King County Flood Hazard Management Plan contains policies and program and project recommendations that guide floodplain use and development throughout King County.

Floodplain

Floodplain is the total area subject to inundation by the 100-year flood.

Floodway, zero-rise

Floodway zero-rise is the channel of a stream and that portion of the adjoining floodplain that is necessary to contain and discharge the base flood flow without any measurable increase in base flood elevation.

A. For the purpose of this definition, measurable increase in base flood elevation means a calculated upward rise in the base flood elevation, equal to or greater than 0.01 foot, resulting from a comparison of existing conditions and changed conditions directly attributable to alterations of the topography or any other flow obstructions in the floodplain. Zero-rise floodway is broader than that of the FEMA floodway but always includes the FEMA floodway.
B. Zero-rise floodway includes the entire floodplain unless a critical areas report demonstrates otherwise.

Food Innovation District

A district of food-related activities supportive of healthy, affordable local food. Food innovation districts may encompass food retail, anchor food businesses, small food business incubation, food industry education and training, markets and food hubs, urban agriculture, food programs and partnerships with urban and rural food growers and cooperatives, and food aggregation and processing.

Forest practice

Forest practice is any forest practice as defined in RCW 76.09.020.

Forest Production Districts (FPD)

The Growth Management Act requires cities and counties to designate, where appropriate, forest lands that are not characterized by urban growth and that have long-term significance for the commercial production of timber. The Comprehensive Plan designates Forest Production Districts where the primary use should be commercial forestry. Lands within the Forest Production District shall remain in large parcels and in ownership conducive to forestry. (See Chapter 3: Rural Areas and Natural Resource Lands).

Fully Contained Community (FCC)

A fully contained community is a site-specific development project consisting of conceptual site plan(s), development standards, processing and other elements. It is also consistent with the criteria provided in RCW 36.70A.350 which states that Fully Contained Communities should be located outside of the initially designated Urban Growth Area.

Functional Classification

See "Arterial Functional Classification"

Functional Planning

Functional plans are detailed plans for facilities and services and action plans and programs for other governmental activities. Some functional plans are operational or programmatic, which means they guide daily management decisions. Others include specific details of facility design and location and must be consistent with the Comprehensive Plan and development regulations. Functional plans are prepared by King County, independent special purpose districts or other public and private agencies. (See Chapter 12: Implementation, Amendments and Evaluation)

Geotechnical report or geotechnical analysis

Geotechnical report or geotechnical analysis means a scientific study or evaluation conducted by a qualified expert that includes: a description of the ground and surface hydrology and geology; the affected land form and its susceptibility to mass wasting, erosion, and other geologic hazards or processes; conclusions and recommendations regarding the effect of the proposed development on geologic conditions; the adequacy of the site to be developed; the impacts of the proposed development; alternative approaches to the proposed development; and measures to mitigate potential site-specific and cumulative geological and hydrological impacts of the proposed development, including the potential adverse impacts to adjacent and down-current properties. Geotechnical reports shall conform to accepted technical standards and must be prepared by qualified professional engineers or geologists who have professional expertise about the regional and local shoreline geology and processes.

Global Warming

Global warming is an increase in worldwide atmospheric temperature and resulting alterations in climate.

Grading

Grading is any excavation, filling, or removal of the duff layer or any combination thereof.

Groundwater Management Plans

King County has five Groundwater Management Areas (GWMA) for which residents and technical experts are addressing groundwater issues. For each GWMA, a Groundwater Management Plan (GWMP) has been developed per chapter 173-100 WAC (chapter 90.44 RCW). Each GWMP describes the area's groundwater resource, contains a detailed exploration of groundwater protection issues, and proposes solutions to perceived threats. These plans identify Sensitive Aquifer Areas to receive a special level of protection.

Growth Management Act (GMA)

In 1990 and 1991, the Washington State Legislature passed the Growth Management Act. The Growth Management Act calls for urban counties and cities in the state to develop comprehensive plans to guide growth management decisions. Amendments to the Act in 1991 require that counties, working with the cities within their boundaries, develop Countywide Planning Policies to provide a common vision of the future to serve as the framework for all comprehensive plans throughout the county. (See Chapter 1: Regional Growth Management Planning)

Growth Management Planning Council (GMPC)

The Growth Management Planning Council, which was established by an interlocal agreement, is a council of elected officials from Seattle, Bellevue, suburban cities, special purpose districts, the Port of Seattle, and King County. The Growth Management Planning Council is responsible for the preparation and recommendation of the Countywide Planning Policies to the Metropolitan King County Council, which then adopts the policies and sends them to the cities for ratification.

Habitat

Habitat is the area where wildlife normally lives and grows. Habitat components include food, water, cover (security, breeding, thermal) and space.

Habitat Network

Habitat network is a system of fish and wildlife habitat where connections between large habitat blocks and open spaces are necessary for the support of fish and wildlife through their life cycles.

Healthy Community

Healthy community (communities) means a community that makes it easier for people to live healthy lives by: encouraging mixed land use and greater land density to shorten distances between housing, workplaces, schools and recreation so people can walk or bike more easily to them; incorporating good pedestrian and bicycle infrastructure, including sidewalks and bike paths that are safely removed from automobile traffic; providing opportunities for people to be physically active and socially engaged as part of their daily routine; including access to open space and parks; allowing people, if they choose, to age in place and remain in their community as their lifestyle changes or they face changing physical capabilities; and ensuring access to affordable and healthy food, especially fruits and vegetables.

Healthy Housing

Healthy housing means housing that protects all residents from exposure to harmful substances and environments, reduces the risk of injury, provides opportunities for safe and convenient daily physical activity, and assures access to healthy food and social connectivity.

High Capacity Transit Facilities

These include all of the elements of a system, including the rails, stations, vehicle infrastructure and associated supportive facilities.

Historic Properties

Historic properties include historic buildings, sites, objects, districts and landscapes, prehistoric and historic archaeological resources, and traditional cultural places.

Historic Property, Significant

Significant historic properties are those properties that meet the criteria for designation as County landmarks and/or listing in the National Register of Historic Places.

Impervious surface

An impervious surface is a surface that prevents, retards, or otherwise alters the entry of water into the soil mantle as compared to natural conditions prior to development; and/or a hard surface area that causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots and gravel roads.

Incorporated Areas

Incorporated areas are those areas within a city or a city's jurisdiction. King County contains the entirety of 39 incorporated cities and parts of two others.

Infill

Infill means development or redevelopment on small properties or groups of properties within existing built-up areas.

Initial Project Needs

Initial project needs are road improvement projects needed to address the impacts of a specific development. The projects must be concurrent with the development.

Keystone Species

Keystone species are those that exert a significant effect on the structure of the biological community of which they are a part. These species often prevent dominance by a single species and thereby maintain diversity in the community.

Landfill

Landfill is a disposal site or part of a site at which refuse is deposited.

Landslide Hazard Areas

An area subject to severe risk of landslide, such as:

A. An area with a combination of:

1. Slopes steeper than fifteen percent of inclination;

2. Impermeable soils, such as silt and clay, frequently interbedded with granular soils, such as sand and gravel; and

3. Springs or ground water seepage;

B. An area that has shown movement during the Holocene epoch, which is from ten thousand years ago to the present, or that is underlain by mass wastage debris from that epoch;

C. Any area potentially unstable as a result of rapid stream incision, stream bank erosion or undercutting by wave action;

D. An area that shows evidence of or is at risk from snow avalanches; or

E. An area located on an alluvial fan, presently or potentially subject to inundation by debris flows or deposition of stream-transported sediments.

Land Use Map

The land use map for the Comprehensive Plan designates the general location and extent of the uses of land for agriculture, timber production, housing, commerce, industry, recreation, open spaces, public utilities, public facilities, and other land uses as required by the Growth Management Act. The Land Use Map is not included in the Plan because it is very large; however a smaller representation of it is reproduced at the end of Chapter 1: Regional Growth Management Planning. The full size map is available for review at the Department of Permitting and Environmental Review and at the Clerk of the King County Council.

Level of Service – Transportation (LOS)

Transportation LOS is a qualitative measure describing the operational conditions of the transportation system as experienced by travelers.

Locally Significant Resource Areas (LSRAs)

LSRAs contribute to the aquatic resources within a specific basin, when compared to aquatic and terrestrial systems of similar size and structure elsewhere in the basin. They also provide wetland and stream habitat that is important for wildlife and salmonid diversity and abundance within the basin. (See Chapter 5: Environment)

Long term commercial significance

Long-term commercial significance is defined in WAC 365-190-030(11) to include the growing capacity, productivity, and soil composition of the land for long-term commercial production, in consideration with the land's proximity to population areas, and the possibility of more intense uses of land. Long-term commercial significance means the land is capable of producing the specified natural resources at commercially sustainable levels for at least a twenty-year planning period, if adequately conserved. Designated mineral resource lands of

long-term commercial significance may have alternative post-mining land uses, as provided by the Surface Mining Reclamation Act, comprehensive plan and development regulations, or other laws.

Low Impact Development (LID)

LID is an approach to land development that works to match a site's natural hydrologic function by protecting native vegetation and soils, reducing impervious surface and managing stormwater at the source.

Master Planned Resorts

RCW 36.70A.360 defines a Master Planned Resort as a self-contained and fully integrated planned unit development, in a setting of significant natural amenities, with primary focus on destination resort facilities consisting of short-term visitor accommodations associated with a range of developed on-site indoor or outdoor recreation facilities. A master planned resort may include other residential uses within its boundaries, but only if the residential uses are integrated into and support the on-site recreational nature of the resort.

May

See definition for "shall"

Median Household Income

The median household income is the income level at which half of all households has higher income and the other half has lower income.

Mineral Resource Sites

The Growth Management Act requires cities and counties to designate, where appropriate, mineral resource lands that are not already characterized by urban growth and that have long-term significance for the extraction of minerals. The comprehensive plan designates as Mineral Resource Sites existing, approved mining sites, and also designates as Potential Mineral Resource Sites properties on which King County expects some future mines may be located. (See Chapter 3: Rural Areas and Natural Resource Lands)

Mitigation Bank

A mitigation bank is a property approved by the appropriate county, state and federal agencies for restoration, creation, or enhancement to compensate for adverse impacts to wetlands caused by the development of public agency facilities and utility facilities.

Mitigation Payment System

This impact fee system establishes a requirement that new growth and development pay a proportionate share of the cost of needed transportation improvements. The mitigation payment system is authorized by state growth management legislation. (See Chapter 8: Transportation)

Mixed Use

Mixed use refers to a development with combined commercial and residential uses.

Mode Split

Mode split is the percentage of a specific mode's use from among all modes of travel. For example, if 25 trips out of 100 total trips are made by bus, the bus mode split is 25 percent. Modes of travel include single-occupant vehicles, transit, carpooling, bicycling, walking, and other modes.

Multifamily Housing

Multifamily housing structures are those with more than one unit. Multifamily housing includes duplexes, apartments and condominiums.

Must

See definition for "shall"

Natural Area

Natural areas are those properties in the county's natural lands inventory whose primary purpose is to conserve and restore ecological value. They may not be completely natural and undisturbed but may be important in preserving rare or vanishing flora, fauna, geological sites or features of scientific, traditional, cultural, or educational value. These sites may allow public use that does not harm the ecological resources of the site. Also referred to as Ecological Lands or Ecological sites.

Neighborhood Business Centers

Neighborhood Business Centers are shopping areas that offer convenience goods and services to local residents. They primarily contain retail stores and offices. (See Chapter 2: Urban Communities)

New Growth

New growth is growth that occurs subsequent to pipeline development for which no application is currently pending review/approval in the King County permitting process, but which is forecasted to occur over the next 20 years in this comprehensive plan.

Nondegradation

Nondegradation means to prevent the decline to a lower state, to keep from reducing the complexity, functions, or integrity of ecological processes or values.

Nonmotorized Transportation

Nonmotorized transportation refers to pedestrian, bicycle, and equestrian travel, and the facilities needed to support such travel. For purposes of this Comprehensive Plan, wheelchairs, personal assistive mobility devices or scooters powered by electricity and used by physically impaired persons shall be considered nonmotorized transportation. Any motorized foot scooter, motor-driven cycle, moped, motor-powered bicycle, a motorcycle or, except as provided above, personal assistive mobility device shall be considered motorized transportation.

Non-point Pollution

Non-point pollution is pollution that enters any waters of the state from any dispersed land-based or water-based activities, including but not limited to atmosphere disposition, surface water runoff from agricultural lands, urban areas, or forest lands, subsurface or underground sources, or discharges from boats or marine vessels.

Open Space System, King County

King County's Open Space System is a regional system of *county-owned* parks, trails, natural areas, working agricultural and forest resource lands, and flood hazard management lands. This regional network of open spaces provides benefits to county residents including recreation, conservation of natural and working lands, flood hazard management, wildlife habitat, and connection of critical areas. (See Chapter 7: Parks, Open Space and Cultural Resources)

Opportunity Mapping

Opportunity mapping assesses the conditions present in neighborhoods across a region by examining indicators of opportunity in areas such as education, economy, transportation, housing, environment, and health. Opportunity mapping provides a comprehensive analytical framework to measure opportunity in the region and to determine who has access to opportunity-rich areas. Analysis of opportunity mapping can provide valuable information about where more affordable housing needs to be located, and what needs to be remedied in areas where these types of opportunities are currently very limited.

Particulate Matter

Particulate matter is solid or aerosol particles dispersed in the air including dust, soot, and oil. The major sources are industrial activities, fugitive road dust, motor vehicle emissions, and wood smoke.

Passive Recreation Site

Passive recreation sites require a lower level of development and provide areas for informal, self-directed activities for individuals and groups.

Pervious surface

A pervious surface is an area that allows the entry of water into the soil mantle, as under natural conditions prior to development.

Pipeline Development

Pipeline Development is comprised of land use development applications, whether vested or unvested, that were submitted prior to adoption of the King County Comprehensive Plan and are pending review/approval in the permitting process.

Pipeline transportation needs

Pipeline transportation needs are associated with growth that is pending through the county's development review process.

Point Pollution

Point pollution is pollution that enters any waters of the state from an identifiable source such as a pipe.

Potential Annexation Area (PAA)

A Potential Annexation Area is an area in unincorporated King County adjacent to a city that is expected to annex to the city and to which that city will be expected to provide services and utilities within the next two decades. (See Chapter 2: Urban Communities)

Precautionary Action

Precautionary action, also referred to as the "no risk approach," means in such instances where an absence of valid scientific information or incomplete scientific information relating to the county's critical areas, leading to uncertainty about whether development and land uses could lead to harm of critical areas or uncertainty about the risk to critical area function, such development and land use activities are strictly limited until the uncertainty is sufficiently resolved.

Preserve/Preservation

Preserve/preservation, as used in Chapter 2: Urban Communities, and Chapter 9: Services, Facilities and Utilities, regarding affordable housing, means the process of protecting the availability of affordable housing, especially publicly-assisted affordable housing, for low and moderate income households when transitions from current assistance programs or affordable housing uses are planned. Preservation may occur through acquisition of the housing by a non-profit or public agency or through funding mechanisms that include a covenant or similar legal agreement requiring that the units in the property remain affordable to a designated household income-level for an extended period of time, such as 15 years, 30 years or 50 years. (See "Rehabilitate")

Priority habitat

Priority habitat means a habitat type with unique or significant value to one or more species. An area classified and mapped as priority habitat must have one or more of the following attributes:

- Comparatively high fish or wildlife density;
- Comparatively high fish or wildlife species diversity;
- Fish spawning habitat;

- Important wildlife habitat;
- Important fish or wildlife seasonal range;
- Important fish or wildlife movement corridor;
- Rearing and foraging habitat;
- Important marine mammal haul-out;
- Refugia habitat;
- Limited availability;
- High vulnerability to habitat alteration;
- Unique or dependent species; or
- Shellfish bed.

A priority habitat may be described by a unique vegetation type or by a dominant plant species that is of primary importance to fish and wildlife (such as oak woodlands or eelgrass meadows). A priority habitat may also be described by a successional stage (such as old growth and mature forests). Alternatively, a priority habitat may consist of a specific habitat element (such as a consolidated marine/estuarine shoreline, talus slopes, caves, snags) of key value to fish and wildlife. A priority habitat may contain priority and/or nonpriority fish and wildlife. [WAC 173-26-020 (24)]

Priority Species

Priority species means species requiring protective measures and/or management guidelines to ensure their persistence at genetically viable population levels. Priority species are those that meet any of the criteria listed below.

(a) Criterion 1. State-listed or state proposed species. State-listed species are those native fish and wildlife species legally designated as endangered (WAC 232-12-014), threatened (WAC 232-12-011), or sensitive (WAC 232-12-011). State proposed species are those fish and wildlife species that will be reviewed by the department of fish and wildlife (POL-M-6001) for possible listing as endangered, threatened, or sensitive according to the process and criteria defined in WAC 232-12-297.

(b) Criterion 2. Vulnerable aggregations. Vulnerable aggregations include those species or groups of animals susceptible to significant population declines, within a specific area or statewide, by virtue of their inclination to congregate. Examples include heron colonies, seabird concentrations, and marine mammal congregations.

(c) Criterion 3. Species of recreational, commercial, and/or tribal importance. Native and nonnative fish, shellfish, and wildlife species of recreational or commercial importance and recognized species used for tribal ceremonial and subsistence purposes that are vulnerable to habitat loss or degradation.

(d) Criterion 4. Species listed under the federal Endangered Species Act as either proposed, threatened, or endangered.

Protect

Protect means to keep from harm, attack, injury, or destruction; to maintain the integrity of, especially through environmental care.

Public Benefit Rating System (PBRS)

The Public Benefit Rating System (PBRS) is a current use taxation program whereby property taxes are reduced by an amount determined by a scoring system related to the numbers and quality of open space resources located on all or portions of the property.

Puget Sound

Puget Sound is an estuary—a semi-enclosed, glacial fjord where salt water from the ocean is mixed with fresh water. Puget Sound is bordered by about 1,300 miles of shoreline with a mix of beaches, bluffs, deltas, mudflats, kelp forests and eelgrass meadows. Approximately 100 miles of this saltwater shoreline lie within King County. King County's immediate responsibilities include those portions of Puget Sound which lie within the county, roughly between Point Wells to the north and Dumas Bay to the south. King County shares responsibility for the health of the main basin of Puget Sound with its neighbors—Pierce County, Kitsap County, and Snohomish County.

Puget Sound Regional Council (PSRC)

The PSRC is the designated metropolitan planning organization for the four-county region that includes King, Pierce, Snohomish and Kitsap counties, and is responsible for regional growth management and transportation planning. The PSRC's General Assembly includes mayors, county executives, and council commission members from the four counties, as well as representatives from local tribes, ports, transit agencies, the State Department of Transportation and Transportation Commission. The PSRC prepared Multi-county Planning Policies for the four-county region.

Rare Species

Rare species, habitats, and ecosystems are those that are few in number or are poorly represented in an area. Rare species often lack the capability to resist changes in environmental conditions or lack the resilience to recover after a change. Species, habitats, and ecosystems may be rare because of the following reasons: changing natural conditions have reduced their range, abundance, or distribution; they depend on specific environmental conditions that are not commonly represented in this area (species or habitats at the edge of their range or occurring as relicts); and anthropogenic (human-related) actions have caused habitat loss or severe decreases in range or abundance.

Recycled Water (also, referred to as Reclaimed Water)

Recycled water means effluent from a wastewater treatment system that has been adequately and reliably treated, so that as a result of that treatment it is suitable for a beneficial use or a controlled use that would not otherwise occur, and is no longer considered wastewater. Recycled is also referred to as Reclaimed Water under Washington State law. Recycled water may be used for beneficial purposes such as landscape and agricultural irrigation, heating and cooling, industrial processing, and environmental enhancement or restoration of streams, wetlands, and aquifers.

Regionally Significant Resource Area (RSRA)

RSRAs are those portions of watersheds that contribute to the resource base of the entire Puget Sound region by virtue of exceptional species and habitat diversity and abundance when compared to aquatic and terrestrial systems of similar size and structure elsewhere in the region. RSRAs may also support rare, threatened or endangered species or communities. (See Chapter 5: Environment)

Regional Wastewater Services Plan (RWSP)

King County adopted the Regional Wastewater Service Plan (RWSP) in 1999. The RWSP outlines a number of important projects, programs, and policies for King County to implement through 2030 to continue to protect public health and water quality and ensure sufficient wastewater capacity to meet future growth needs. RWSP policies guide the phasing and size of treatment facilities and improvements to the conveyance system, as well as improvements to control combined sewer overflows. The RWSP also includes policies that guide the production and use of biosolids and recycled water.

Rehabilitate/Rehabilitation

Rehabilitate or rehabilitation, as used in Chapter 2: Urban Communities, and Chapter 9: Services, Facilities and Utilities, regarding affordable housing, means as repairs, improvements, replacements, alterations, and additions to existing properties that bring them into full compliance with existing building and health codes. Rehabilitation may be minor, moderate, or substantial; or it may involve adaptive reuse from nonresidential to residential uses. Rehabilitation of housing is undertaken to improve and revitalize housing stock that is aging or in poor condition. When public funding is used for rehabilitation it is usual to require a covenant or other legal mechanism to preserve the affordability of the rehabilitated property. (See "Preserve")

Resource Lands, designated

The Growth Management Act requires cities and counties to designate natural resource lands which include the following: 1) agricultural lands that have long-term significance for the commercial production of food or other agricultural products; 2) forest lands that have long-term significance for the commercial production of timber; and 3) mineral resource lands that have long-term significance for the extraction of minerals. The Comprehensive Plan designates Agricultural Production Districts, Forest Production Districts, and Mineral Resource Sites. (See Chapter 3: Rural Areas and Natural Resource Lands)

Restore

Restore means to return land and water resources from a disturbed or altered condition to an approximation of their condition prior to disturbance or alteration. Restoration projects are conducted by public agencies through capital improvement projects and by developers as a means to mitigate adverse impacts of their proposals. (Restoration of land is not required of developers when they protect land and water resources according to King County regulation.) (See Chapter 5: Environment)

Rezones

Rezoning is the term that refers to the process of individual requests and applications to change the zoning classification of land.

Riparian

Pertains to the banks of rivers and streams, and also sometimes wetlands, tidewater and lakes.

Rural Area geography (See also Rural Area Zoning)

The Growth Management Act requires that counties designate a Rural Area in order to conserve the rural character and quality of the existing rural lands in Washington. King County's Rural Area refers collectively to the geography that primarily contains the following land use categories – Rural Towns, Rural Neighborhood Commercial Centers, and Rural Area (RA-2.5, RA-5, RA-10 and RA-20) in unincorporated King County. The Rural Area geography also includes a limited amount of acreage with land use categories such as Industrial, Commercial Outside of Center, etc. The Rural Area geography does not include designated Natural Resource Lands, although resource activities occur on them. The Rural Area contains very low-density residential development, commercial and industrial development, farms, forests, watersheds crucial for both fisheries and flood hazard management, mining areas and towns, historic sites and buildings, archaeological sites and regionally important recreation areas. (See Chapter 3: Rural Areas and Natural Resource Lands)

Rural Area zoning

The Rural Area zone refers to the Rural Area 2.5, Rural Area 5, Rural Area 10 and Rural Area 20 zoning categories. This zoning is meant to provide an area-wide, long-term, rural character and to minimize land use conflicts with nearby agricultural, forest or mineral extraction production districts. These purposes are accomplished by: 1) limiting residential densities and permitted uses to those that are compatible with rural character and nearby resource production districts and are able to be adequately supported by rural service levels; 2) allowing small scale farming and forestry activities and tourism and recreation uses which can be supported by rural service levels and which are compatible with rural character; and 3) increasing required setbacks to minimize conflicts with adjacent agriculture, forest or mineral zones.

Rural Character

Rural character refers to the pattern of land use and development established by a county in the rural element of its comprehensive plan:

(a) In which open space, the natural landscape, and vegetation predominate over the built environment;
(b) That foster traditional rural lifestyles, rural-based economies, and opportunities to both live and work in Rural Areas;
(c) That provide visual landscapes that are traditionally found in Rural Areas and communities;
(d) That are compatible with the use of the land by wildlife and for fish and wildlife habitat;
(e) That reduce the inappropriate conversion of undeveloped land into sprawling, low-density development;
(f) That generally do not require the extension of urban governmental services; and
(g) That are consistent with the protection of natural surface water flows and groundwater and surface water recharge and discharge areas

Rural Growth

Rural Growth refers to residential, commercial, and industrial growth that is scaled to be compatible with, and maintains the traditional character of the Rural Area. Rural growth typically does not require urban governmental services except in the case of some Rural Towns to protect the environment as provided in this Comprehensive Plan. The basic elements of "Rural Character," as defined by the King County Countywide Planning Policies, are natural features, resource-based industries, rural towns, rural neighborhoods, rural infrastructure and services, open space system, rural housing, rural economy, and Cities in the Rural Area.

Rural Neighborhood Commercial Centers

Rural Neighborhood Commercial Centers (a specific land use category within the larger geography of Rural Areas) are small commercial developments, or in some cases, historic towns or buildings, that are too small to provide more than convenience shopping and services to surrounding residents. They generally do not have services such as water supply or sewage disposal systems any different from those serving surrounding rural residential development. (See Chapter 3: Rural Areas and Natural Resource Lands)

Rural Towns

Rural towns (a specific land use category within the larger geography of Rural Areas) are unincorporated towns governed directly by King County. They provide a focal point for community groups such as chambers of commerce or community councils to participate in public affairs. The purposes of Rural Town designations within the Comprehensive Plan are to recognize existing concentrations of higher density and economic activity in Rural Areas and to allow modest growth of residential and economic uses to keep them economically viable into the future. (See Chapter 3: Rural Areas and Natural Resource Lands)

Salmonid

A member of the fish family Salmonidae. In King County, salmonid species include Chinook, Coho, chum, sockeye, and pink salmon; cutthroat, rainbow, and brown trout and steelhead; Dolly Varden, brook trout, char, kokanee, and whitefish.

Satellite System Management

When large water utilities oversee the operations of smaller water systems, not connected to their own system, it is called satellite system management. The satellite system manager is hired by the smaller system to operate and maintain the system in accordance with local, state and federal health regulations.

Sediment Transport

Sediment transport is the process of taking soil from one place and depositing it in another via the flow of water. Deposition of the soil occurs when sediment in the water flow is more than the flow can transport.

Sensitive Areas Map Folio

The folio displays the location of environmentally sensitive areas in unincorporated King County. It identifies sensitive areas for wetlands, streams, flood hazards, erosion hazards, landslide hazards, seismic hazards, and coal mine hazards.

Sensitive Species

Sensitive species means any species that is likely to become an endangered species within the foreseeable future throughout all or significant portion of its range and which has been designated as such in regulations issued by the U.S. Fish and Wildlife Service or the Washington State Department of Fish and Wildlife.

Sewer Availability

Sewer availability means the presence of sewers now or within six years through extensions included in adopted sewer comprehensive plans. In the case of Urban Planned Development, 1) the capacity to intercept and treat waste water as evidenced by a King County approved sewer system plan or a Metro utility plans, 2) a firm commitment to serve an area with sewer as evidenced by either a sewer availability certificate, utility extension agreement, or an approved sewer system plan and 3) a firm financial commitment to provide sewer, as evidenced by either a capital improvement program or utility extension agreement.

Sewer Tightline

Tightlining of sewers means that a sewer line is designed and sized to only serve a particular structure.

Shall

To guide King County, the use of the terms "shall," "will," "should," and "may" in policies determine the level of discretion the county can exercise in making future and specific land use, budget, development regulation and other decisions. "Shall" and "will" in a policy mean that it is mandatory for the county to carry out the policy, even if a timeframe is not included. "Shall" and "will" are imperative and nondiscretionary--the county must make decisions based on what the policy says to do. "May" in a policy means that it is in the county's interest to carry out the policy, but the county has total discretion in making decisions. "Must" in a policy means a mandate; the action is required. "Should" in a policy means: noncompulsory guidance, in which cost, availability of funding, and public benefit associated with the policy's purpose are considered as part of the implementation decision; establishes that the county has discretion in making decisions.

Shoreline Environment

Shoreline environment or master program environment means the categories of shorelines of the state established by the King County shoreline management master program to differentiate between areas whose features imply differing objectives regarding their use and future development.

Shoreline Master Program

The Shoreline Master Program is the comprehensive use plan for a described area, and the use regulations together with maps, diagrams, charts, or other descriptive material and text, a statement of desired goals, and standards developed in accordance with the policies enunciated in RCW 90.58.020.

Should

See definition for "shall".

Significant Adverse Environmental Impact

Significant as used in State Environmental Policy Act means a reasonable likelihood of more than a moderate adverse impact on the environment. Significance involves context and intensity and does not lend itself to a formula or quantifiable text. The context may vary with the physical setting. Intensity depends on the magnitude and duration of an impact. The severity of an impact should be weighed along with the likelihood of its occurrence. An impact may be significant if its chance of occurrence is not great, but the resulting environmental impact would be severe if it occurred.

Significant vegetation removal

Significant vegetation removal means the removal or alteration of trees, shrubs, and/or ground cover by clearing, grading, cutting, burning, chemical means, or other activity that causes significant ecological impacts to functions provided by such vegetation. The removal of invasive or noxious weeds does not constitute significant vegetation removal. Tree pruning, not including tree topping, where it does not affect ecological functions, does not constitute significant vegetation removal.

Single-Family Housing

Single-family housing units are individual structures including conventional houses and mobile homes.

Species of Local Importance

Species of local importance include priority species as identified by the state of Washington Department of Fish and Wildlife; bird species whose populations in King County are known to have declined significantly over the past 150 years; anadromous salmonids; and aquatic species whose populations are particularly vulnerable to changes in water quality and water quantity.

Subarea Planning

This level of planning brings the policy direction of the comprehensive plan to a smaller geographic area. Subarea plans are meant to provide detailed land use plans for local geographic areas. These plans are meant to implement the King County Comprehensive Plan and be consistent with the County's Comprehensive Plan's policies, development regulations, and Land Use Map.

Subdivision

A subdivision is land that has been divided into legal lots, or is the process of dividing land into lots.

Sustainable economic development

Sustainable economic development means economic development that does not exceed the ability of the natural or built environments to remain healthy while sustaining growth over the long term.

Substantially degrade

Substantially degrade means to cause significant ecological impact.

Totalizing source meter

A totalizing source meter is a device that will measure the volume of water withdrawn from a well over time and provide a sum total of the water extracted. This type of meter is different than a meter that would measure just the instantaneous volume of water being withdrawn.

Traditional Rural Development

In King County, traditional rural land uses could include, but are not limited to: low density residential uses; small scale farming, forestry and mineral extraction; small, neighborhood churches; feed and grain stores; the keeping of horses and livestock; cottage industries, crafts and trades that support the residents of the Rural Area and Natural Resource Lands and/or the needs of natural resource production; and public and private facilities necessary to serve rural homes such as utility installations or public schools. In general, the rural development pattern in King County has historically been comprised of houses, barns, fences and cultivated fields, but natural features and open spaces are the predominant visual image.

Transfer of Development Rights (TDR)

Transfer of development rights means the ability to transfer allowable density, in the form of permitted building lots or structures, from one property (the "sending site") to another (the "receiving site") in conjunction with conservation of all or part of the sending site as open space or working farm or forest. King County allows transfers of development rights as part of standard subdivision, mobile home park and multifamily project review processes through its TDR Program. (King County Code, Title 21A)

Transit Oriented Development (TOD)

A private or public/private real estate development project that creates, expands, maintains or preserves a mixed-use community or neighborhood within walking distance of a transit center, or stop, that is designed to encourage transit use and pedestrian activity. Transit Oriented Development projects support transit by increasing the density of residents, shoppers, visitors or employees per acre. New Transit Oriented Development projects are often coupled with an increase in transit service to the area.

Transportation Demand Management (TDM)

Transportation Demand Management is a strategy to reduce the number of automobile trips, particularly trips taken in single-occupant vehicles. Transportation Demand Management encourages public transportation over automobile use and specifically refers to policies, programs and actions implemented to increase the use of high-occupancy vehicles (public transit, car-pooling and van-pooling) and spread travel to less congested time periods through alternative work hour programs (See Chapter 8: Transportation).

Transportation Facilities and Services

Transportation facilities and services are the physical assets of the transportation system that are used to provide mobility. They include roads, sidewalks, bike lanes and other facilities supporting nonmotorized travel, transit, bridges, traffic signals, ramps, buses, bus garages, park and ride lots and passenger shelters.

Transportation needs for new growth

Transportation needs for new growth are associated with growth that has been planned for 2012 in this comprehensive plan.

Transportation Needs Report (TNR)

The TNR is a comprehensive list of recommended county transportation needs through the year 2022 needed to implement the land use element. It includes transportation needs for unincorporated King County, and some city, state, and adjacent county projects. It does not include transit service or capital needs. (See Chapter 8: Transportation)

Unemployment Rate

The unemployment rate is the percentage of the civilian labor force that is unemployed and actively seeking work.

Unincorporated Activity Centers

Unincorporated Activity Centers are the primary locations for commercial and industrial development in urban unincorporated King County. Currently, White Center is the only designated Unincorporated Activity Center, as other such centers are now parts of cities. (See Chapter 2: Urban Communities)

Unincorporated Areas

Unincorporated areas are those areas outside any city and under King County's jurisdiction.

Unique Wetland

The term unique wetland refers to bogs and fens, which have unusual and sensitive water chemistries.

Universal Design

Universal design as used in Chapter 2: Urban Communities, means the design of products, buildings, and environments to be usable by all people, to the greatest extent possible, and which allows people to age in place in their home without the need for adaptation or specialized design.

Urban Centers

Urban Centers are centers of concentrated employment and housing located within the Urban Growth Area designated by the Phase II Countywide Planning Policies. Urban Centers are to be serviced directly by high-capacity transit and are to contain a wide variety of land uses, including retail, recreational, cultural and public facilities, parks and open spaces. Unincorporated Urban Centers are represented on Urban Centers Map included at the end of Chapter 2: Urban Communities.

Urban Growth

Urban growth refers to residential, commercial and industrial growth that makes intensive use of land for the location of buildings, structures and impermeable surfaces to such a degree as to be incompatible with the primary use of such land for the production of food, other agricultural products, or fiber, or the extraction of mineral resources. Urban growth typically requires urban governmental services. "Characterized by urban growth" refers to land having urban growth located on it, or to land located in relationship to an area with urban growth.

Urban Growth Area

The Growth Management Act requires King County's Comprehensive Plan to designate an Urban Growth Area, where most future urban growth and development is to occur to limit urban sprawl, enhance open space, protect Rural Areas and Natural Resource Lands, and more efficiently use human services, transportation and utilities. The Comprehensive Plan designates an Urban Growth Area which includes areas and densities sufficient to permit the urban growth that is projected to occur in the county for the succeeding 20-year period. (See Chapter 1: Regional Growth Management Planning, and Chapter 2: Urban Communities)

Urban Growth Target

The Growth Management Act and the Countywide Planning Policies require King County and its cities to plan for a 20-year population and employment growth target for each jurisdiction, based on designation of the Urban Growth Area, Urban Centers and the criteria of the Countywide Planning Policies. (See Chapter 2: Urban Communities)

Urban Planned Developments (UPD)

Urban Plan Developments are site specific projects consisting of conceptual site plans, development stands, processing and other elements.

Urban Separator

Urban separators are areas planned for permanent low-residential density within the Urban Growth Area. Urban separators protect adjacent resource land, environmentally sensitive areas, or Rural Areas and create open space corridors within and between urban areas which provide environmental, visual, recreations and wildlife benefits.

Utilities Technical Review Committee (UTRC)

The Utilities Technical Review Committee (UTRC) is an interdepartmental committee with responsibility for ensuring that water and sewer plans comply with county and state health requirements and county land use policies. The committee reviews the plans of all water and sewer utilities that operate in unincorporated King County and then recommends the plans to King County Executive and the Metropolitan King County Council for approval.

Variable Tolling

Variable tolling or pricing is any form of collecting a direct user fee on a roadway.

Water Availability

Water availability means the presence of a water source of sufficient quantity and quality with applicable water rights that can serve the projected demand for the planning horizon, as shown in water comprehensive plans approved by King County. In the case of Urban Planned Developments, water availability is defined as: 1) presence of a water source with water rights that can serve the projected average daily demand; 2) a firm commitment to serve an area with water, as evidenced by either a water availability certificate, utility extension agreement or a King County approved water system plan; and 3) a firm financial commitment to provide water, as evidenced by either a capital improvement plan or utility extension agreement.

Water Quality

Water quality means the physical characteristics of water within shoreline jurisdiction, including water quantity, hydrological, physical, chemical, aesthetic, recreation-related and biological characteristics. Where used in this plan, the term water quantity refers only to development and uses regulated under this plan and affecting water quantity, such as pollution generating surfaces and storm water handling practices. Water quantity, for purposes of this comprehensive plan, does not mean the withdrawal of ground water or diversion of surface water pursuant to RCW 90.03.250 through 90.03.340.

Water Reuse

Water reuse refers to the use of recycled water or the reuse of other non-potable water, such as greywater, stormwater, or collected rainwater, as allowed under relevant state or local standards.

Water Supply Availability

Water supply availability is the presence of a water source of sufficient quantity and quality with applicable water rights that can serve the projected demand through the planning horizon shown in adopted water comprehensive plans.

Water System Classifications

Water System Classifications define the level of service for different water systems. A public water system is defined as any system that has more than one connection. A well serving one house is a private system. Group A water systems have fifteen or more service connections. Group B water systems have two through fourteen service connections.

Water System Plan

Water system plans are planning documents that include water system plans as referred to in Chapter 43.20 RCW, comprehensive plans of water supply systems (including combined water and sewer plans) as referred to in RCW 57.16.010, water system plans and coordinated water system plans as referred to in RCW 70.116.050, and all other water system plans, comprehensive plans and plan elements that may be required under KCC 13.24 and this King County Comprehensive Plan for any special district or any other public or private entities that distribute or obtain water in unincorporated King County.

Watershed

A watershed, like a drainage basin, is an area that drains to a common outlet or an identifiable water body such as a river, stream, lake or wetland. The six major watersheds in King County are Cedar River, Green River, Skykomish River, Snoqualmie River and White River and the Puget Sound. These watersheds contain a total of 72 individual drainage basins. (See Chapter 5: Environment)

Well Head Protection

Well head protection is another way that King County can protect its groundwater resource. This program directs purveyors to identify 1, 5, and 10-year time of travel to their well(s) to identify contamination sources, and to propose methods to reduce or eliminate contamination sources.

Wetland

The term wetland means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas. Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, landscape amenities, or those wetlands created after July 1, 1990 that were unintentionally created as a result of the construction of a road, street or highway. Wetlands shall include those artificial wetlands intentionally created from nonwetland areas to mitigate conversion of wetlands.

Wetland Banking

Wetland banking is a process that allows certain wetlands to be developed if the development is accompanied by the restoration or creation of wetlands in other areas. (See Chapter 5: Environment)

Wetland Functions

Functions refer to the ecological (physical, chemical and biological) workings or attributes of a wetland regardless of their importance to society. Food chain support or the transport and transformation of chemicals in ecosystems are examples of wetland functions. Water quality maintenance, flood storage, and wildlife habitat are examples of ecological functions to which society attributes a value. (See Chapter 5: Environment)

Wetland Values

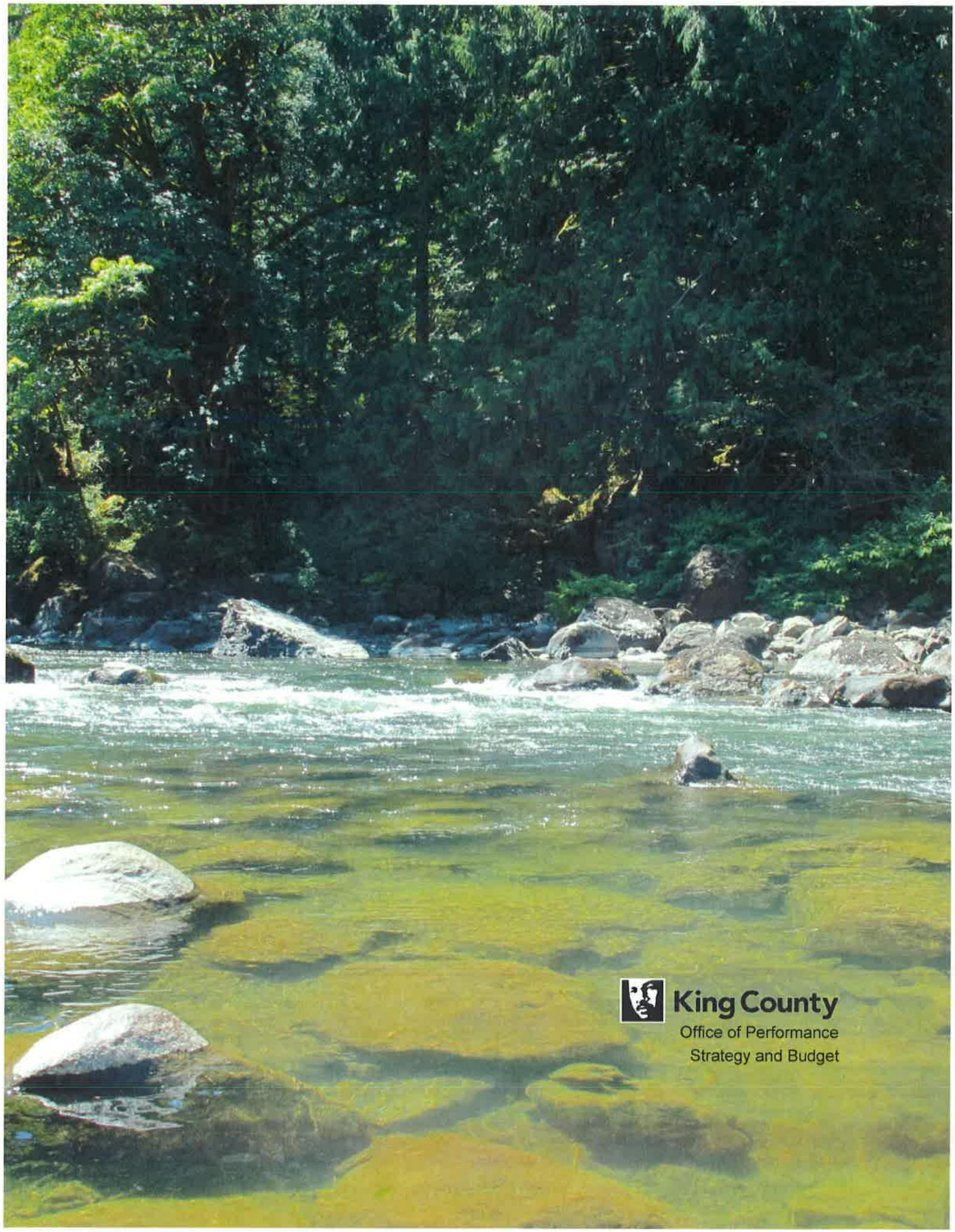
Values are estimates, usually subjective, of the worth, merit, quality, or importance of wetland attributes that are valuable and beneficial to society. Values vary by watershed or human community. Education, research, aesthetics, and recreation are examples of other wetland attributes that may be considered values in that they are beneficial to society.

Will

See definition for "shall".

Frequently Used Acronyms

APD	Agricultural Production District
CIP	Capital Improvement Program
CPP	Countywide Planning Policy
CSA	Community Service Area
ESA	Endangered Species Act
FCC	Fully Contained Community
FPD	Forest Production District
GMA	Growth Management Act
GMPC	Growth Management Planning Council
HOT	High Occupancy Toll
HOV	High Occupancy Vehicle
ITS	Intelligent Transportation Systems
KCCP	King County Comprehensive Plan
KCSP	King County Strategic Plan
LID	Low Impact Development
LOS	Level of Service
LSRA	Locally Significant Resource Area
MPP	Multi-county Planning Policies
MPS	Mitigation Payment System
PAA	Potential Annexation Area
PBRS	Public Benefit Rating System
PSRC	Puget Sound Regional Council
RSRA	Regionally Significant Resource Area
RWSP	Regional Wastewater Services Plan
SCAP	Strategic Climate Action Plan
SPPT	Strategic Plan for Public Transportation
SPRS	Strategic Plan for Road Services
SEPA	State Environmental Policy Act
TAM	Transportation Adequacy Measure
TDR	Transfer of Development Rights
TDM	Transportation Demand Management
TNR	Transportation Needs Report
TOD	Transit Oriented Development
UGA	Urban Growth Area
UGB	Urban Growth Boundary
UPD	Urban Planned Development
UTRC	Utilities Technical Review Committee



King County

Office of Performance
Strategy and Budget

Attachment B to Ordinance 18427
December 5, 2016

King County

2016
King County Comprehensive Plan Update

LAND USE AND ZONING AMENDMENTS

Land Use and Zoning Amendments

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Map Amendment # 1

134th Avenue SE and 140th Avenue SE, Near Petrovitsky Road

(Fairwood A Area Zoning and Land Use Study)

AMENDMENT TO THE KING COUNTY COMPREHENSIVE PLAN – LAND USE MAP and KING COUNTY ZONING ATLAS

Amend Map Section 34 Township 23, Range 05 as follows:

LAND USE

Change land use designation on parcels 3423059035, 3423059061, 3423059031, and 3423059034 to "uh" (Urban High; Urban Residential >12 du/ac)

ZONING

1. Change zoning on parcels 3423059035, 3423059061, and 3423059031 to R-18-P.

2. Add P-suffix development condition SC-Pxx to parcels 3423059035, 3423059061, and 3423059031:
   - "Development shall be subject to applicable development regulations and limited to some combination of the following uses as defined in K.C.C. 21A.08: single family dwelling units for seniors, senior citizen assisted housing, day care facilities and nursing and personal care facilities.
   - The height of any new construction shall be no greater than 65 feet.
   - Permits shall not be applied for until a permanent conservation easement is recorded on the western-portion of each parcel, including the required critical area buffer(s) and any remaining land west of that buffer(s), so as to provide separation between the current lower-density residential homes and the new proposed higher-density senior housing development on this site.
   - In the event that the applicant has not submitted a complete application for the first necessary permit with the Department of Permitting and Environmental Review by December 31, 2023,

the land use and zoning map amendment approved under Ordinance 18427 shall expire and the land use designation and zoning revert to its prior designation and zoning."

3. Change zoning on parcel 3423059034 to R-18-P.

4. Add P-suffix development condition SC-Pxx to parcel 3423059034:
    - "Development shall be limited to residential development, and at least 20% of the residential units shall be affordable for moderate-income residents as defined in the King County Consolidated Housing and Community Development Plan (Ordinance 18070), or successor plans.
    - Permits shall not be applied for until a permanent conservation easement is recorded on the western-portion of the parcel, including the required critical area buffer(s) and any remaining land west of that buffer(s), so as to provide separation between the current lower-density residential homes and the new proposed higher-density residential development on this site.
    - In a manner consistent with achieving R-18 level density, development shall be subject to a conditional use permit and in addition to the standard requirements for a conditional use permit:
        - After issuance of the Notice of Application, and prior to issuance of the SEPA Determination or Notice of Decision, the Department of Permitting and Environmental Review shall hold one or more public meeting(s) in the vicinity of the project regarding the proposed development; and
        - The Department of Permitting and Environmental Review, as part of their review of the conditional use permit, shall consider the criteria in K.C.C. 21A.44.040, and additionally shall consider appropriate development standards, conditions and/or mitigation measures to address impacts of the development and integrate the development with the surrounding neighborhood while being consistent with achieving an R-18 level of density, including but not limited to: building height; parking requirements; traffic impacts; lighting impacts; design elements of the building, including landscaping; and setback requirements.
        - The Department of Permitting and Environmental Review shall also require the applicant to make a reasonable effort to integrate ingress/egress with the development of the property to the north.

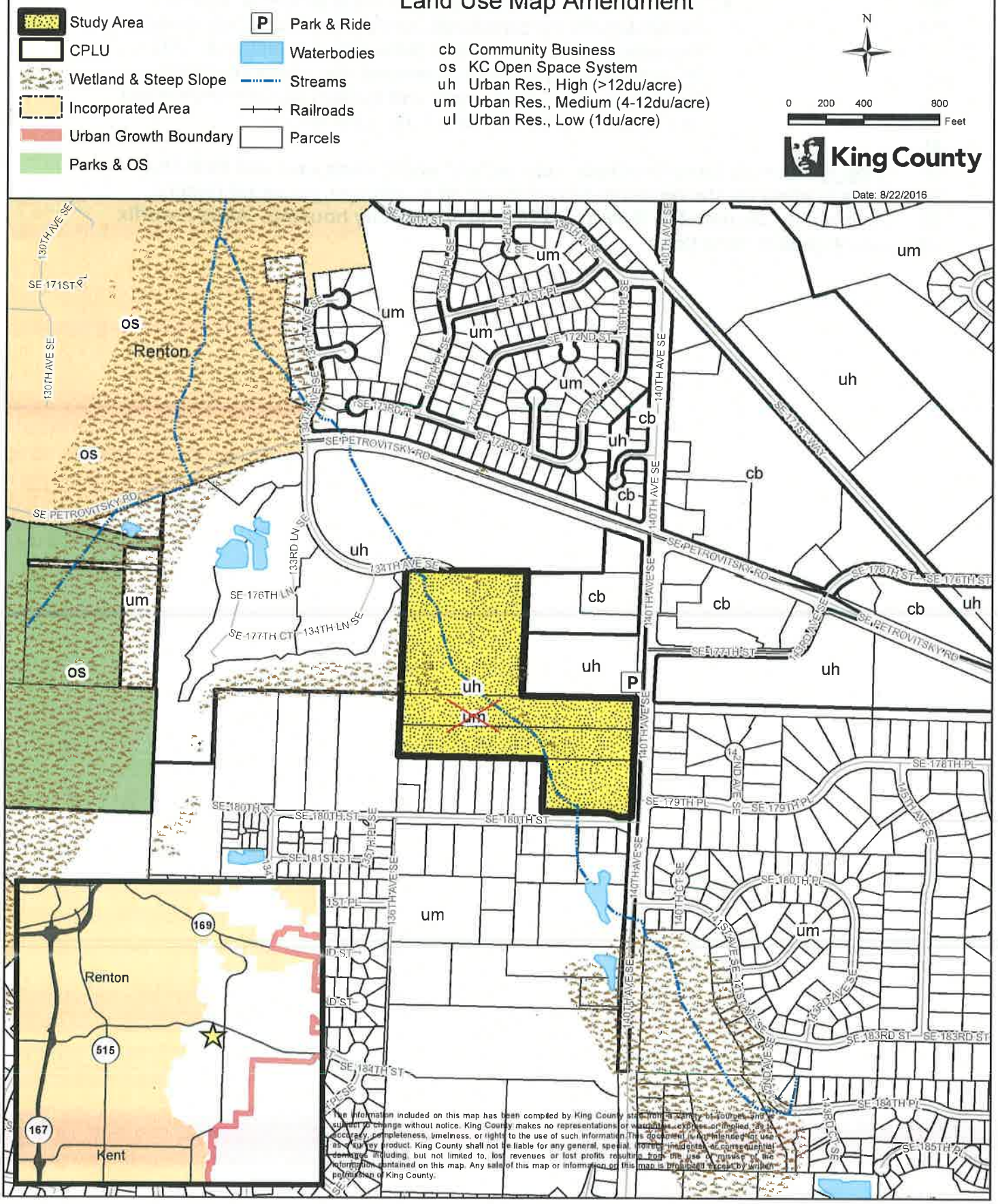
- In the event that the applicant has not submitted a complete application for the conditional use permit with the Department of Permitting and Environmental Review by December 31, 2023, the land use and zoning map amendment approved under Ordinance 18427 shall expire and the land use designation and zoning revert to its prior designation and zoning."

Effect: Amends Land Use from "um" to "uh" and Zoning from R-6 to R-18-P in area to allow for the potential development of a continuing care retirement community, as noted in Motion 14276, and multifamily housing. Adds P-suffix development conditions

Map Amendment #1 - Fairwood A

2016 King County Comprehensive Plan

Land Use Map Amendment

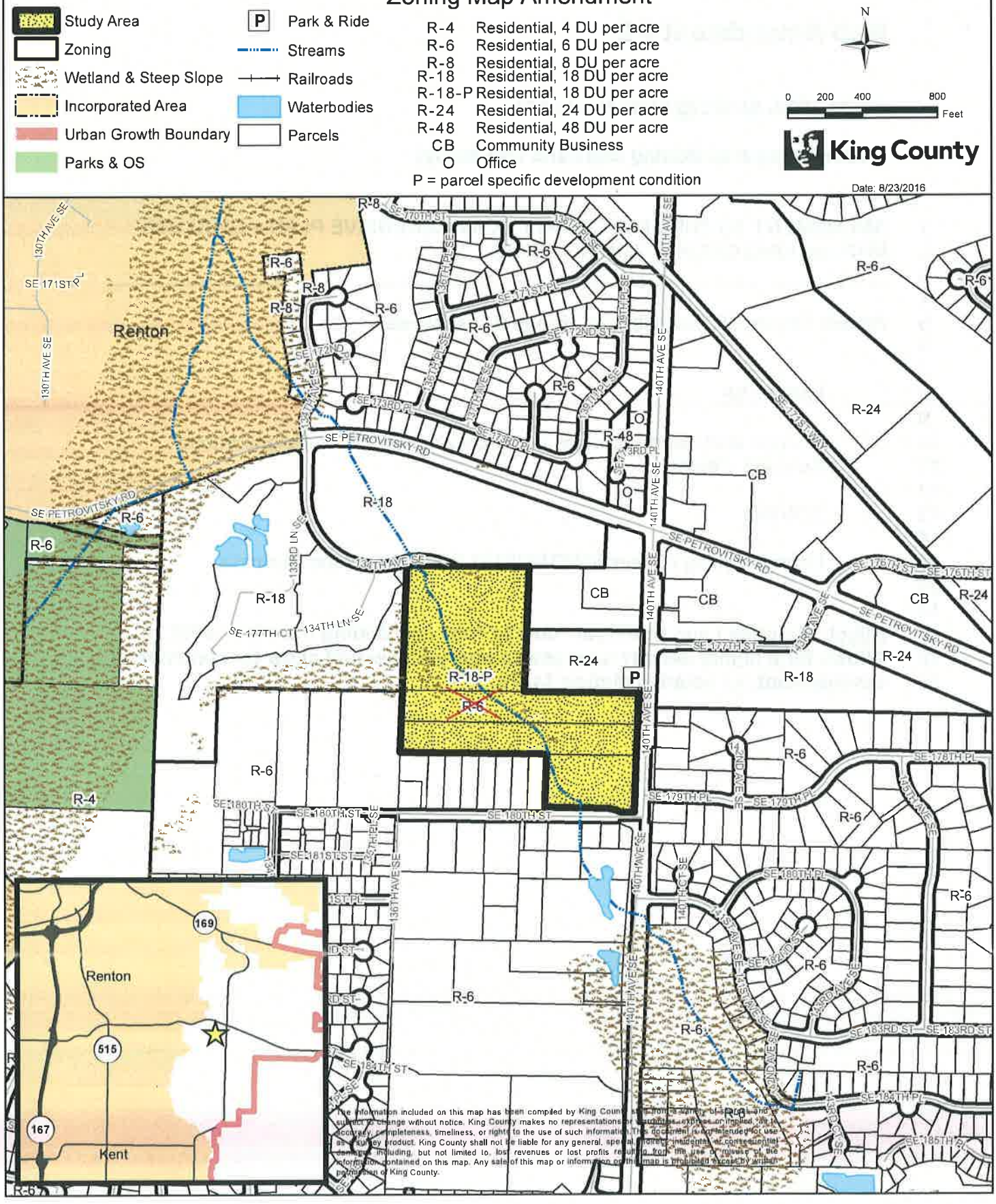


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Map Amendment #1 - Fairwood A

2016 King County Comprehensive Plan

Zoning Map Amendment



Map Amendment # 2

South 360th Street @ State Route 161

(Federal Way Area Zoning and Land Use Study)

AMENDMENT TO THE KING COUNTY COMPREHENSIVE PLAN – LAND USE MAP and KING COUNTY ZONING ATLAS

Amend Section 28, Township 21, Range 04 as follows:

LAND USE

Change land use designation on parcel 2821049171 to Neighborhood Business Center.

ZONING

Change zoning on parcel 2821049171 to Neighborhood Business.

Effect: Amends Land Use from "um" to "nb" and Zoning from R-4 to NB. Allows for a higher density land use category that would allow for commercial development, as noted in Motion 14276.

Map Amendment #2 - Federal Way

2016 King County Comprehensive Plan

Land Use Map Amendment

- Study Area
- CPLU
- Wetland & Steep Slope
- Incorporated Area
- Urban Growth Boundary
- Parks & OS
- P Park & Ride
- Streams
- Railroads
- Waterbodies
- Parcels

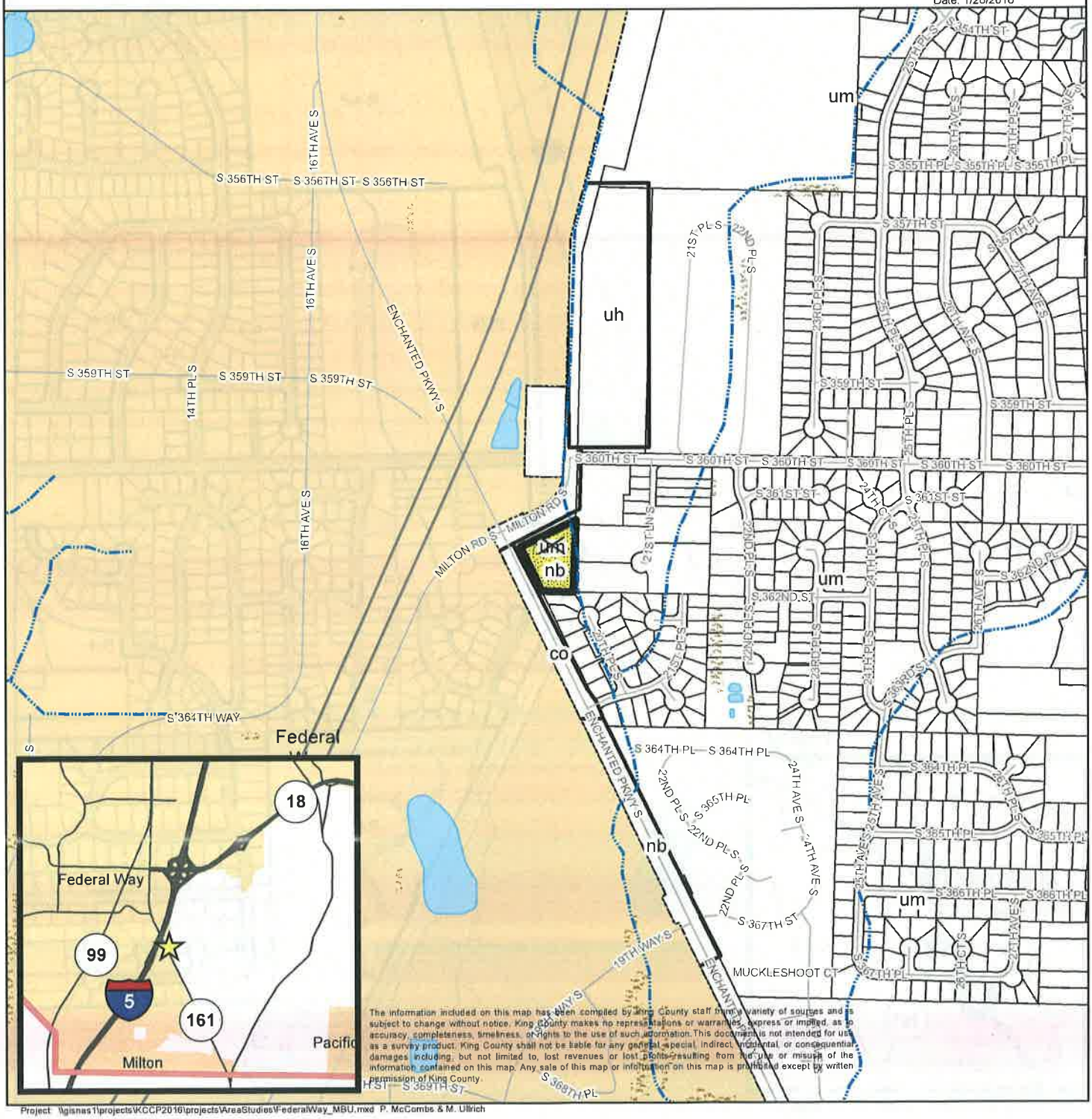
co Commercial Outside of Centers
nb Neighborhood Business Center
uh Urban Res., High (>12du/acre)
um Urban Res., Medium (4-12du/acre)

N

0 200 400 800 Feet

King County

Date: 1/26/2016



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Project: \\gisnas1\projects\KCCP2016\projects\AreaStudies\FederalWay_MBU.mxd P. McCombs & M. Ullrich

Map Amendment #2 - Federal Way

2016 King County Comprhesnive Plan

Zoning Map Amendment

- Study Area
- Wetland & Steep Slope
- Incorporated Area
- Urban Growth Boundary
- Parks & OS
- Zoning
- P Park & Ride
- Streams
- Railroads
- Waterbodies
- Parcels

R-4 Residential, 4 DU per acre
R-4-P Residential, 4 DU per acre
R-6 Residential, 6 DU per acre
R-24 Residential, 24 DU per acre
NB Neighborhood Business

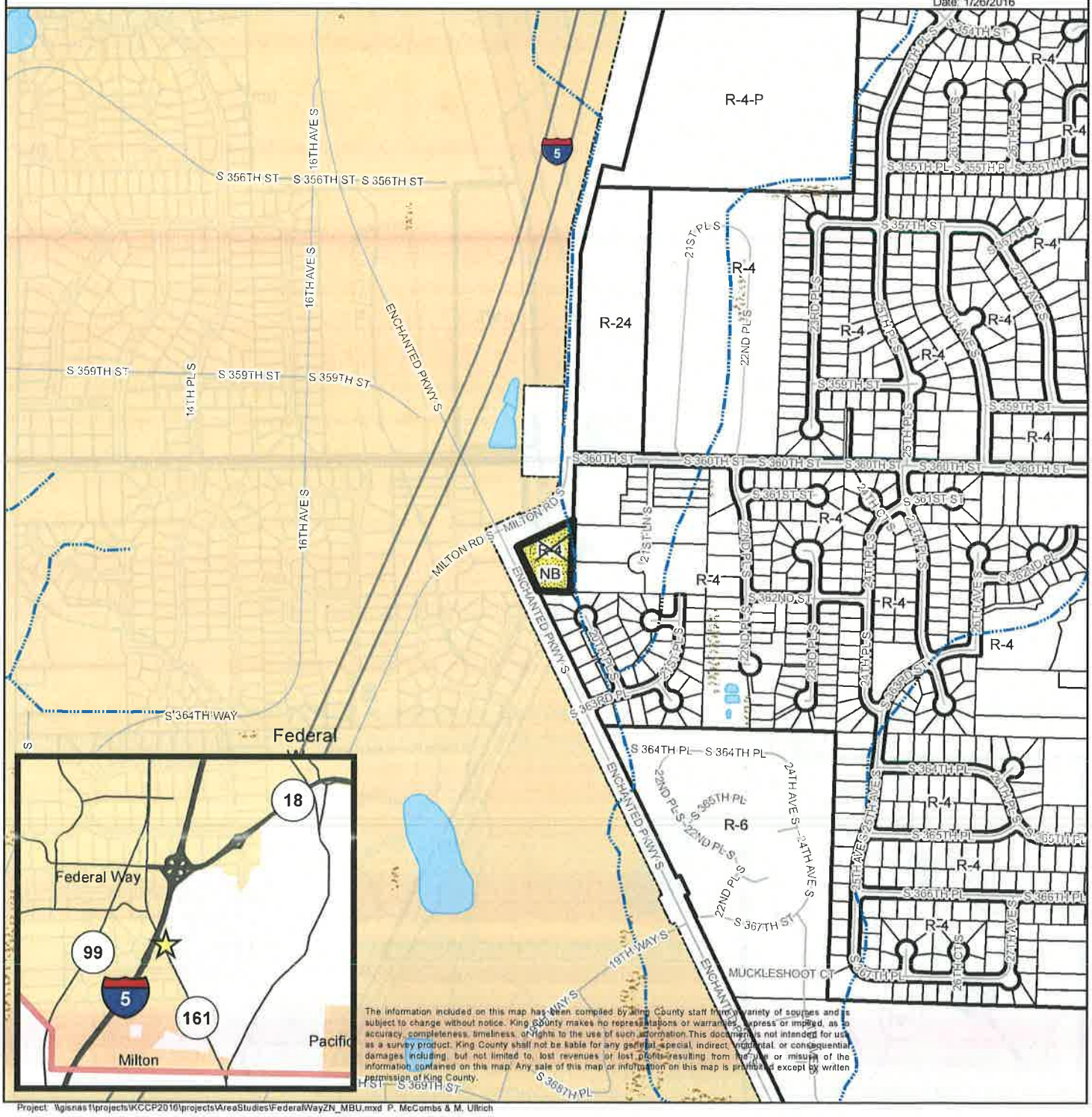
P = parcel specific development condition

N

0 200 400 800 Feet

King County

Date: 1/26/2016



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Project: \\gisnas1\projects\KCCP2016\projects\AreaStudies\FederalWayZN_MBU.mxd P. McCombs & M. Ullrich

Map Amendment # 3

302nd Avenue SE @ 303rd Place SE

(Allison Docket Request Area Zoning and Land Use Study)

AMENDMENT TO THE KING COUNTY COMPREHENSIVE PLAN – KING COUNTY ZONING ATLAS

Amend Section 32, Township 24, Range 07 as follows:

ZONING

1. Remove the "SDO" from parcel 3224079134 and revise the existing split zoning from RA-5(SO) / RA-10 to RA-5.

2. Remove the "SDO" from three adjacent RA-5 (SO) zoned properties; parcels 3224079140, 3224079112, and 3224079021.

3. Remove the "SDO" from one adjacent RA-5 (SO) / RA-10 zoned property; parcel 3224079136.

Effect: Removes an "SDO" condition on the property which has been superseded by the County's Critical Areas Ordinance and is therefore no longer necessary. In practical terms, this will affect only the Allison property (parcel 3224079134) because it has additional development potential and the others are already developed. Also changes split zoning on parcel 3224079134 from RA-5 / RA-10 to RA-5, allowing for the potential development of one additional dwelling unit.

Map Amendment #3 - Allison

2016 King County Comprehensive Plan

Land Use Map Amendment

- Study Area
- Affected Parcels
- CPLU
- Wetland & Steep Slope
- Incorporated Area
- Urban Growth Boundary
- Parks & OS
- Park & Ride
- Waterbodies
- Streams
- Railroads
- Parcels

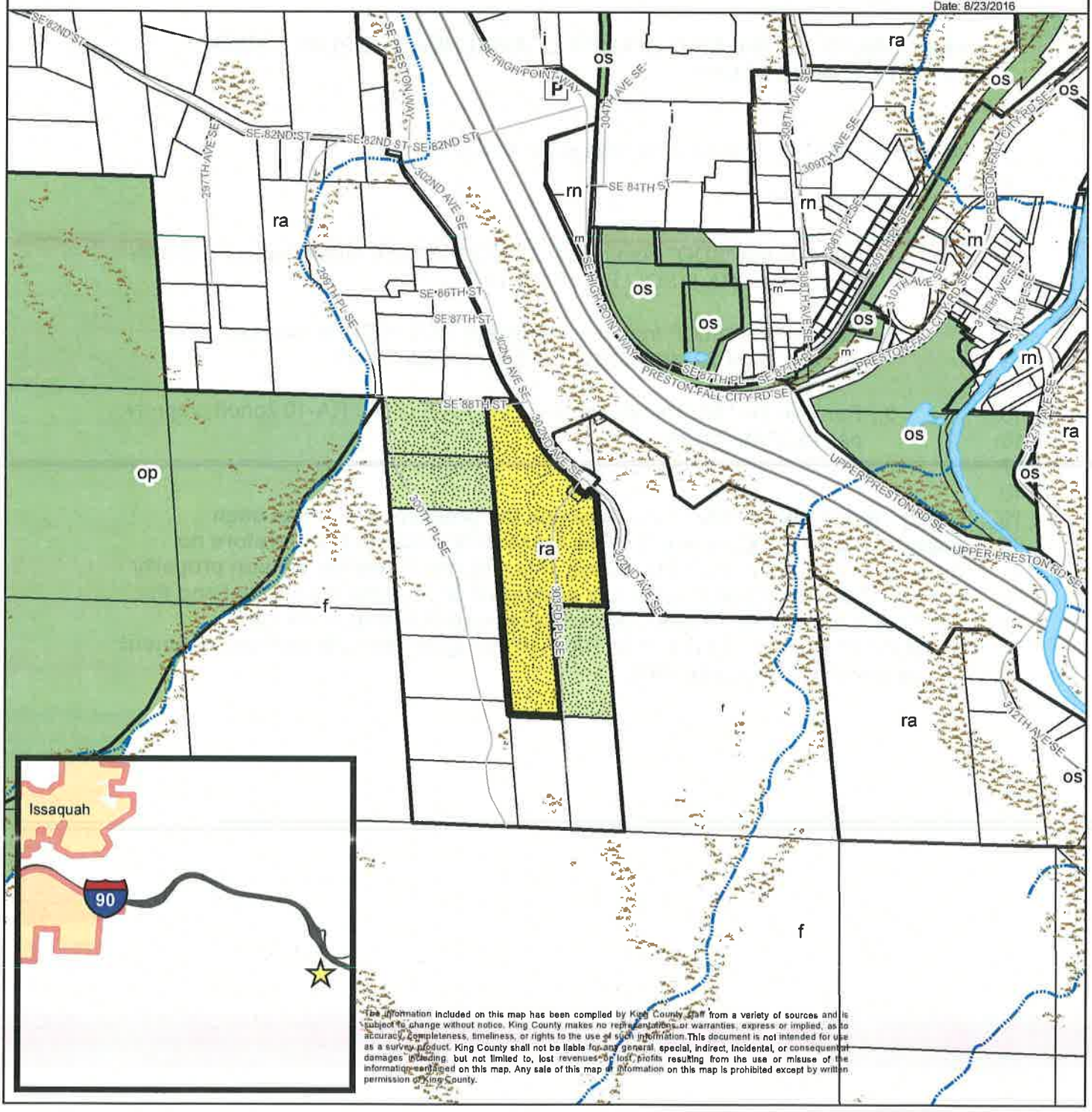
f	Forestry
i	Industrial
op	Other Parks/Wilderness
os	KC Open Space System
ra	Rural Area (1du/2.5-10acres)
rn	Rural Neighborhood

N

0 250 500 1,000 Feet

King County

Date: 8/23/2016



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Map Amendment #3 - Allison

2016 King County Comprehensive Plan

Zoning Map Amendment

Study Area
Affected Parcels
Zoning
Wetland & Steep Slope
Incorporated Area
Urban Growth Boundary
Parks & OS
P Park & Ride
Waterbodies
Streams
Railroads
Parcels

F Forest
F-P Forest
I-P Industrial
NB Neighborhood Business
NB-P Neighborhood Business
RA-2.5 Rural Area, 1 DU/5 acres
RA-5 Rural Area, 1 DU/5 acres
RA-5-SO Rural Area, 1 DU/5 acres
RA-10 Rural Area, 1 DU/10 acres

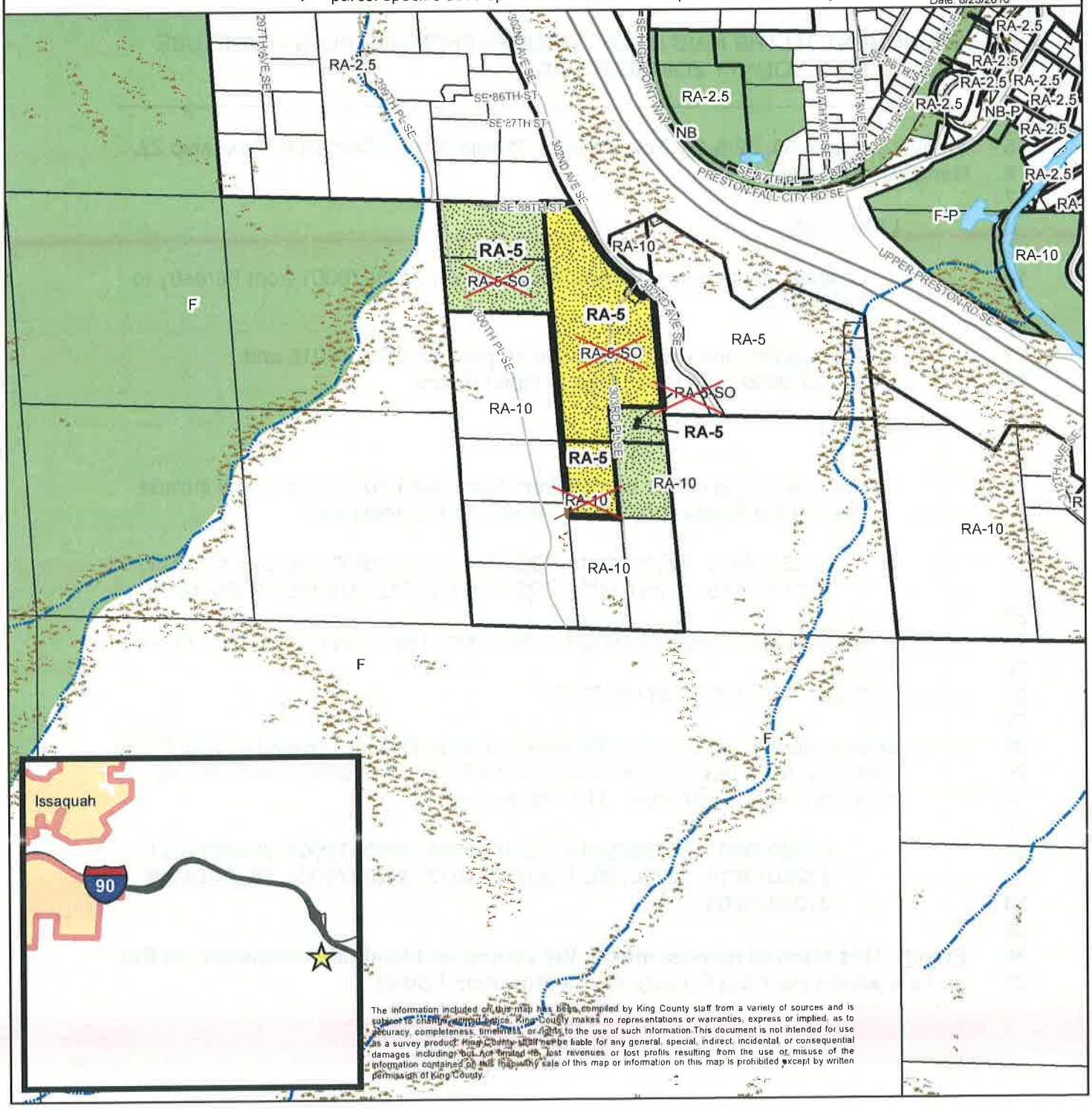
P = parcel specific development condition SO = special district overlay

N

0 250 500 1,000 Feet

King County

Date: 8/23/2016



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Map Amendment # 4

Parcels in Taylor Mountain Forest

(Taylor Mountain Forest Area Zoning and Land Use Study)

AMENDMENT TO THE KING COUNTY COMPREHENSIVE PLAN – LAND USE MAP and KING COUNTY ZONING ATLAS

Amend Sections 30, 32 & 33, Township 23, Range 07 and Section 5, Township 22, Range 07 as follows:

LAND USE

1. Change the land use designation on parcel 3023079001 from Forestry to Open Space.

2. Change the land use designation on parcels 3223079015 and 3223079009 from Rural Area to Open Space.

ZONING

1. Change zoning on ten parcels from Rural Area 10 to Forest, and include them in the Forest Production District. The parcels are:

   0522079001, 3223079014, 3223079001, 3223079009, 3223079011, 3223079015, 3223079021, 3223079027, 3323079005, 3323079009

2. Change split zoning on parcel 3123079003 from Forest / RA-10 to Forest.

FOREST PRODUCTION DISTRICT

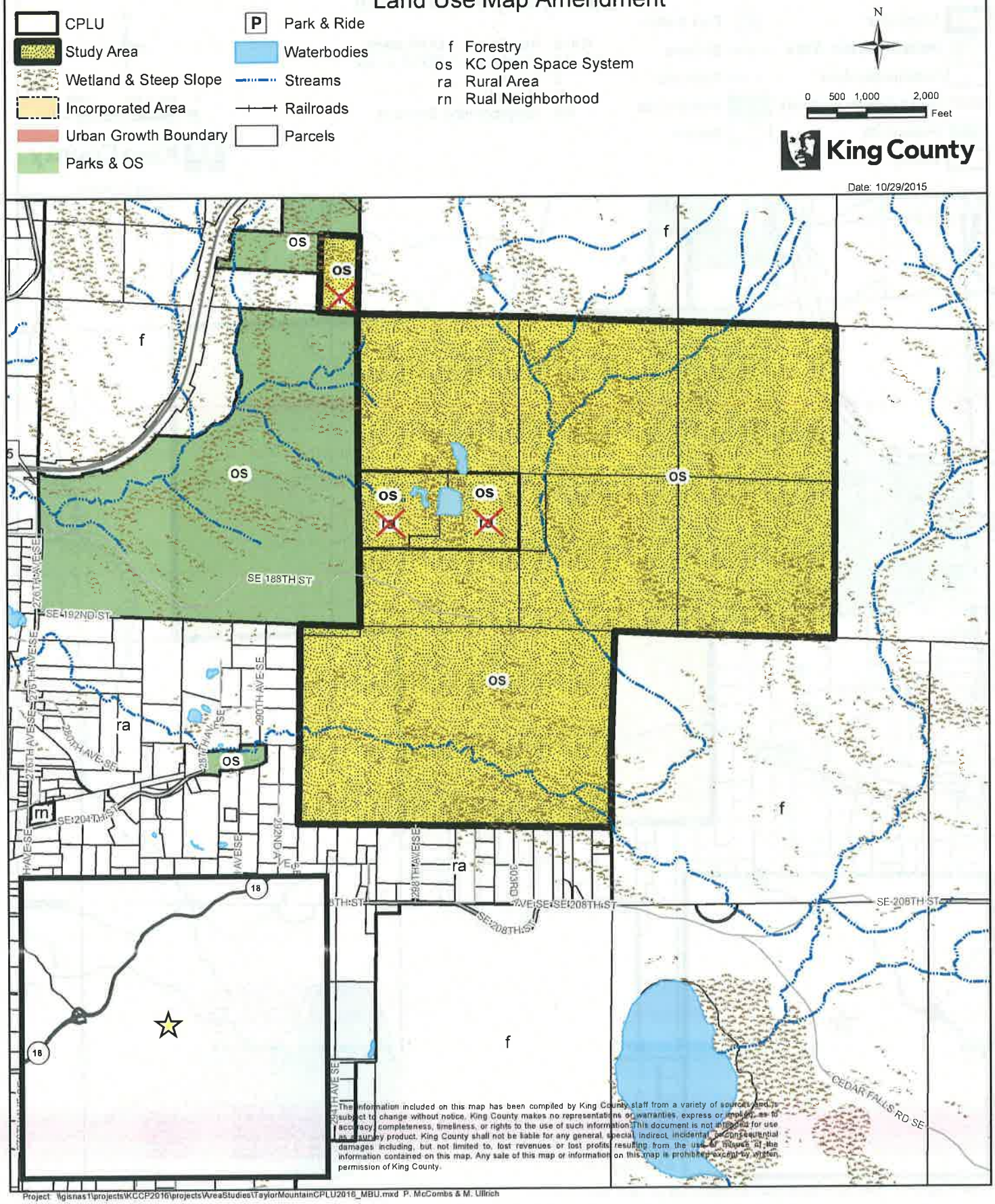
Include eleven parcels in the Forest Production District. Amend all KCCP and Technical Appendix maps that include the Forest Production District to be consistent with this change. The parcels are:

0522079001, 3223079014, 3223079001, 3223079009, 3223079011, 3223079015, 3223079021, 3223079027, 3323079005, 3323079009, 3123079003

Effect: This internal request makes the zoning and land use consistent on the parcels within the King County Taylor Mountain Forest.

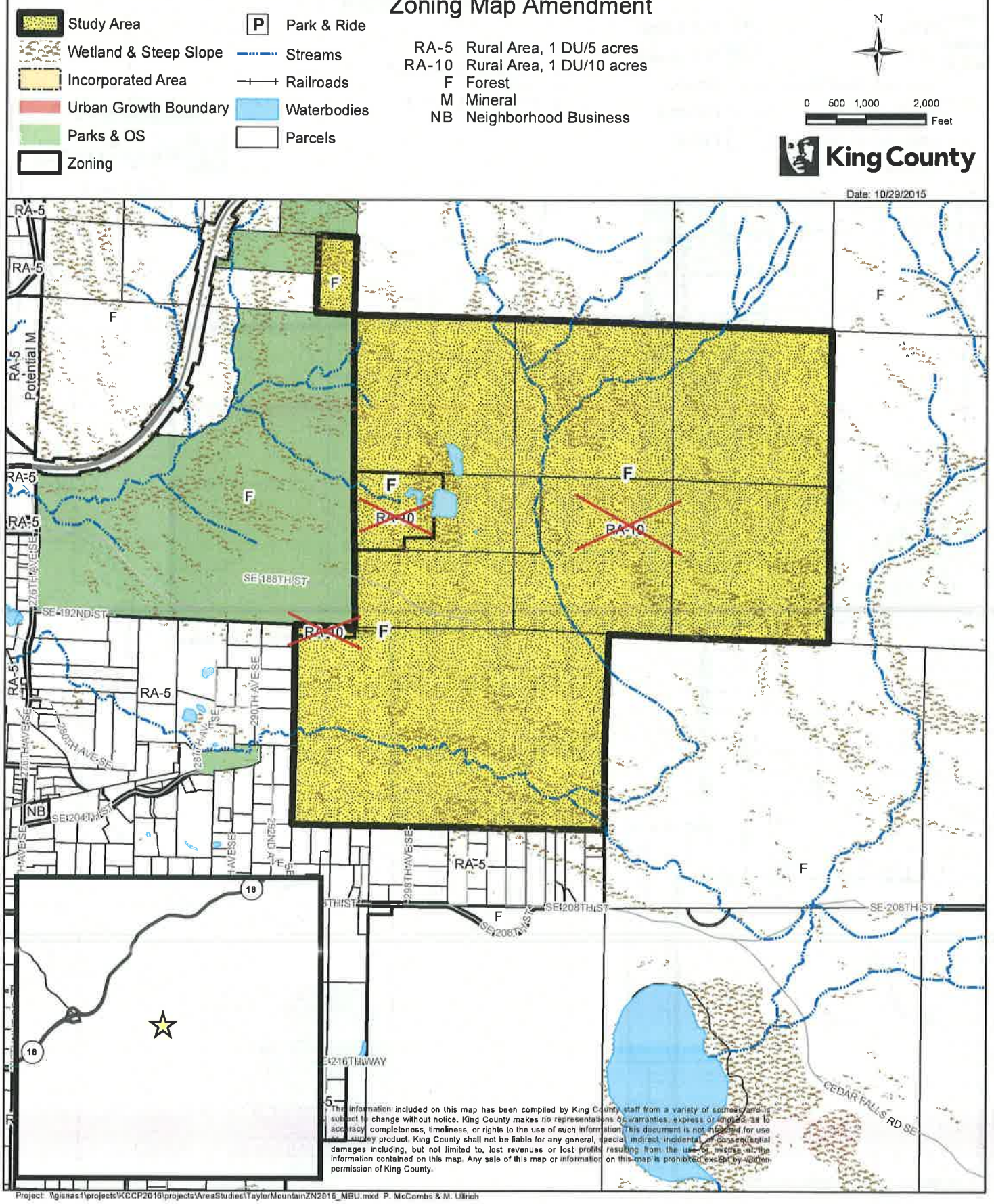
Map Amendment #3 - Taylor Mountain

2016 King County Comprehensive Plan
Land Use Map Amendment



Map Amendment #3 - Taylor Mountain

2016 King County Comprehensive Plan
Zoning Map Amendment



Project: \\gisnas1\projects\KCCP2016\projects\AreaStudies\TaylorMountainZN2016_MBU.mxd P. McCombs & M. Ullrich

Map Amendment # 5

Tall Chief Golf Course

(Tall Chief Area Zoning and Land Use Study)

AMENDMENT TO THE KING COUNTY COMPREHENSIVE PLAN – LAND USE MAP and KING COUNTY ZONING ATLAS

Amend Section 5, Township 24, Range 07 as follows:

LAND USE

1. Change the split land use designation on parcel 0524079002 from Rural Area/Agriculture to Agriculture.

2. Change the land use designation on parcels 0524079025 and 0524079026 from Rural Area to Agriculture.

ZONING

1. Change the split zoning on parcel 0524079002 from RA-10/A-35 to A-35.

2. Change the zoning on parcel 0524079025 from RA-10 to A-10.

3. Change the split zoning on parcel 0524079026 from RA-10/RA-5-SO to A-10, and remove SDO from parcel.

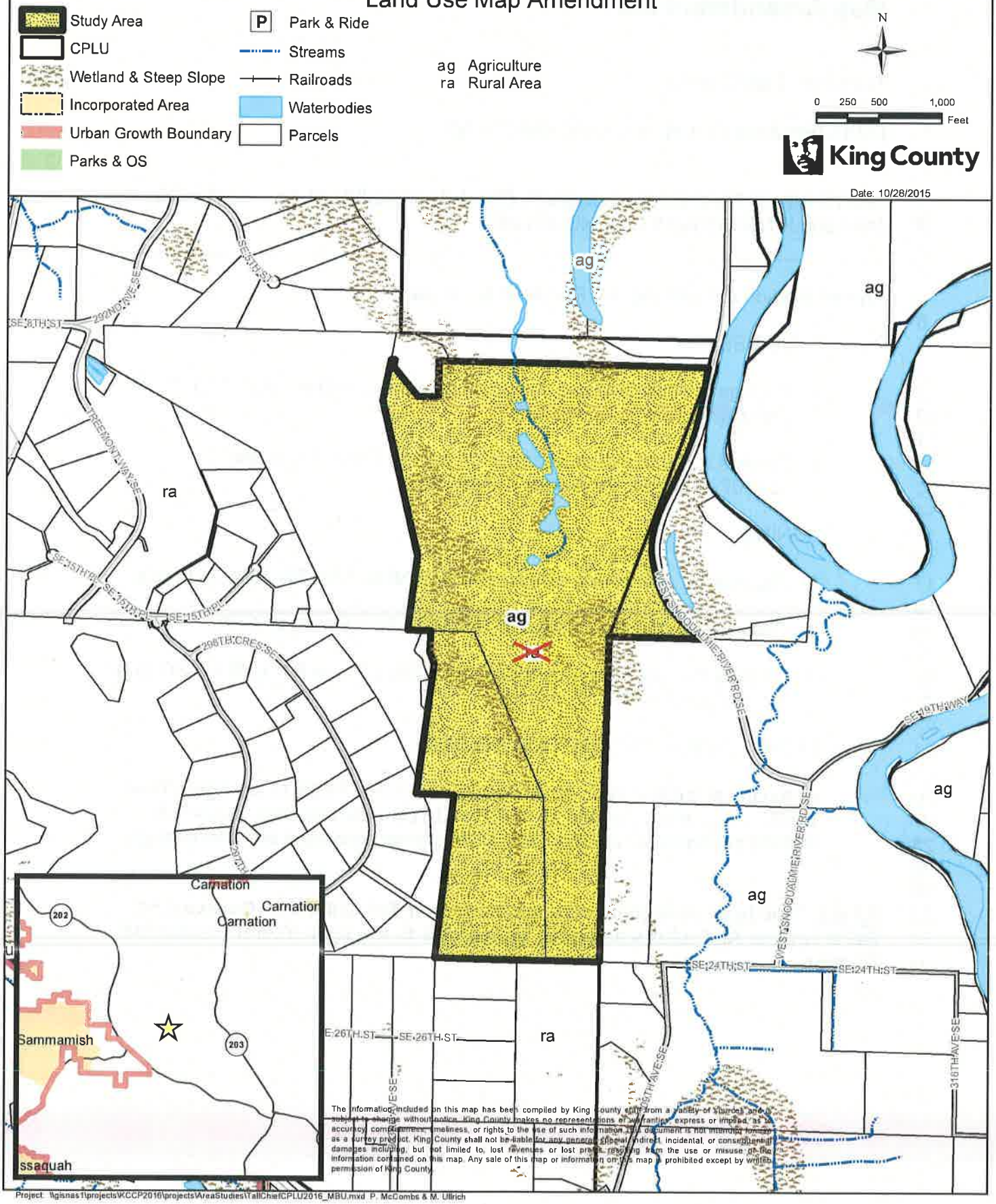
AGRICULTURAL PRODUCTION DISTRICT

Add parcels 0524079002, 0524079025, and 0524079026 to the Agricultural Production District. Amend all KCCP and Technical Appendix maps that include the Agricultural Production District to be consistent with this change.

Effect: This internal request rezones the former Tall Chief Golf Course from Rural Area to Agriculture and adds the parcels to the Agricultural Production District.

Map Amendment #5 - Tall Chief

2016 King County Comprehensive Plan
Land Use Map Amendment



Map Amendment #5 - Tall Chief

2016 King County Comprehensive Plan
Zoning Map Amendment

Study Area
Zoning
Wetland & Steep Slope
Incorporated Area
Urban Growth Boundary
Parks & OS
P Park & Ride
Waterbodies
Streams
Railroads
Parcels

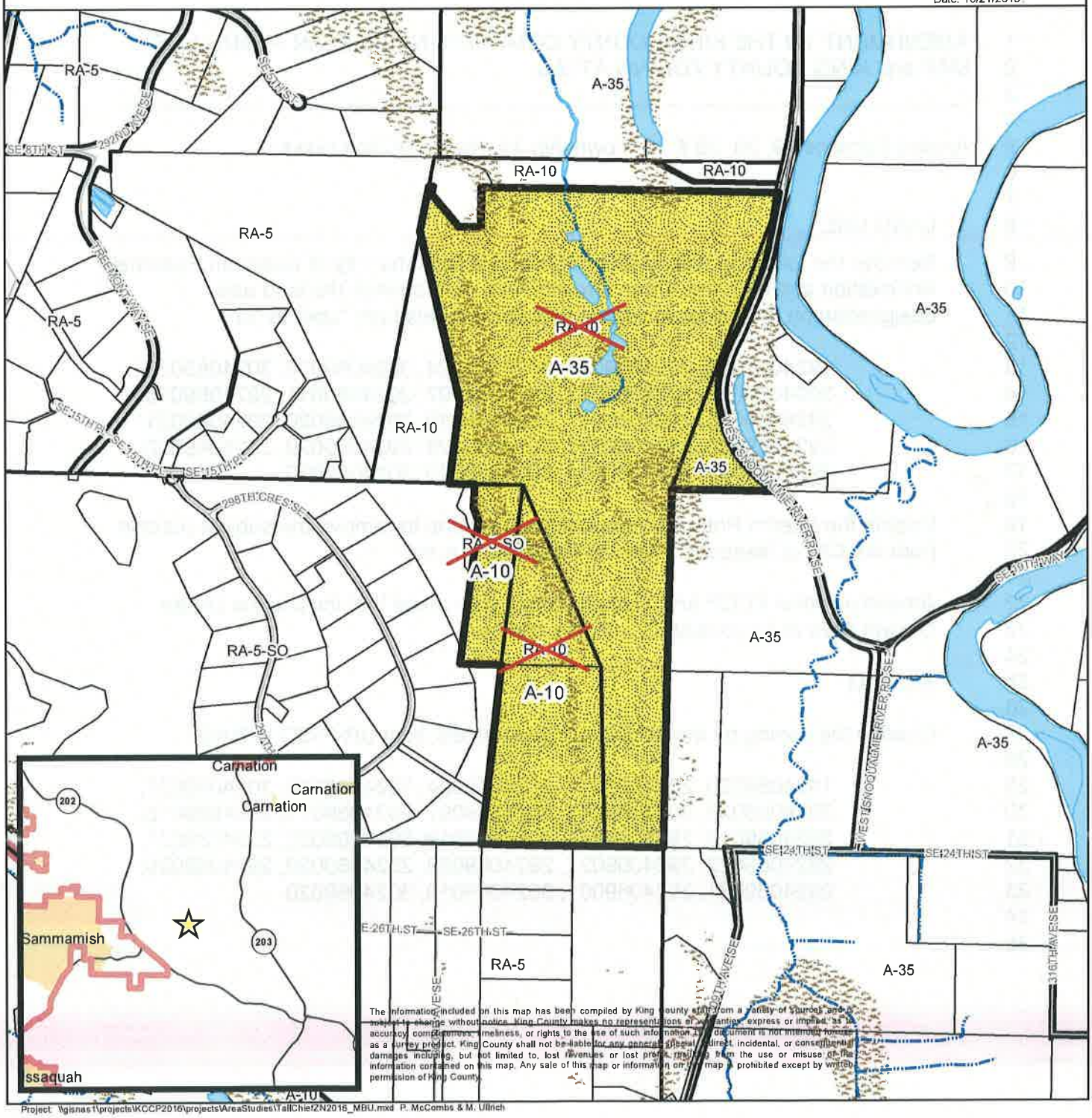
RA-5 Rural Area, 1 DU/5 acres
A-10 Agricultural, 1 DU/10 acres
A-35 Agricultural, 1 DU/35 acres

N

0 250 500 1,000 Feet

King County

Date: 10/21/2015



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Project: \\gisnas1\projects\KCCP2016\projects\AreaStudies\TallChief\2N2015_MBU.mxd P. McCombs & M. Ullrich

Map Amendment # 6

East Cougar Mountain Potential Annexation Area

(E. Cougar Mountain PAA Area Zoning and Land Use Study)

AMENDMENT TO THE KING COUNTY COMPREHENSIVE PLAN – LAND USE MAP and KING COUNTY ZONING ATLAS

Amend Sections 19, 20, 29 & 30, Township 24, Range 06 as follows:

LAND USE

Remove the following twenty-four (24) parcels from the City of Issaquah Potential Annexation and from the Urban Growth Area, and change the land use designation on the following twenty-four (24) parcels from "upd" to "ra":

1924069020, 2024069014, 3024069024, 3024069036, 3024069037, 3024069038, 3024069043, 2924069097, 2924069011, 2924069015, 2924069016, 2924069017, 2924069019, 2924069020, 2924069021, 2924069022, 2924069027, 2924069028, 2924069029, 2924069030, 2924069031, 3024069001, 3024069019, 3024069020

Update the Interim Potential Annexation Area Map to remove the subject parcels from the City of Issaquah Potential Annexation Area.

Amend all other KCCP and Technical Appendix maps that include the Urban Growth Area to be consistent with this change.

ZONING

Change the zoning on the following of the parcels from UR-P-SO to RA-5:

1924069020, 2024069014, 3024069024, 3024069036, 3024069037, 3024069038, 3024069043, 2924069097, 2924069011, 2924069015, 2924069016, 2924069017, 2924069019, 2924069020, 2924069021, 2924069022, 2924069027, 2924069028, 2924069029, 2924069030, 2924069031, 3024069001, 3024069019, 3024069020

Effect: Responds to a request by the City of Issaquah to remove from their Potential Annexation Area and change these parcels to rural land use and zoning designations. Combined, these parcels represent 188 acres (or excluding parcels currently owned by King County, represent 104.59 privately owned acres). This is 24.24% of the 776-Acre Potential Annexation Area request from the City of Issaquah.

The County will continue to discuss with the City of Issaquah, the City of Bellevue, and local residents whether other portions of the remaining area could or should be annexed into these two cities or whether the remaining 588-acres should be removed from the Urban Growth Area and the Potential Annexation Area in a future King County Comprehensive Plan cycle.

Map Amendment #6 - East Cougar Mountain Potential Annexation Area

2016 King County Comprehensive Plan
Land Use Map Amendment

Study Area
Wetland & Steep Slope
Incorporated Area
Urban Growth Boundary
Parks & OS
CPLU

P Park & Ride
Waterbodies
Streams
Railroads
Parcels

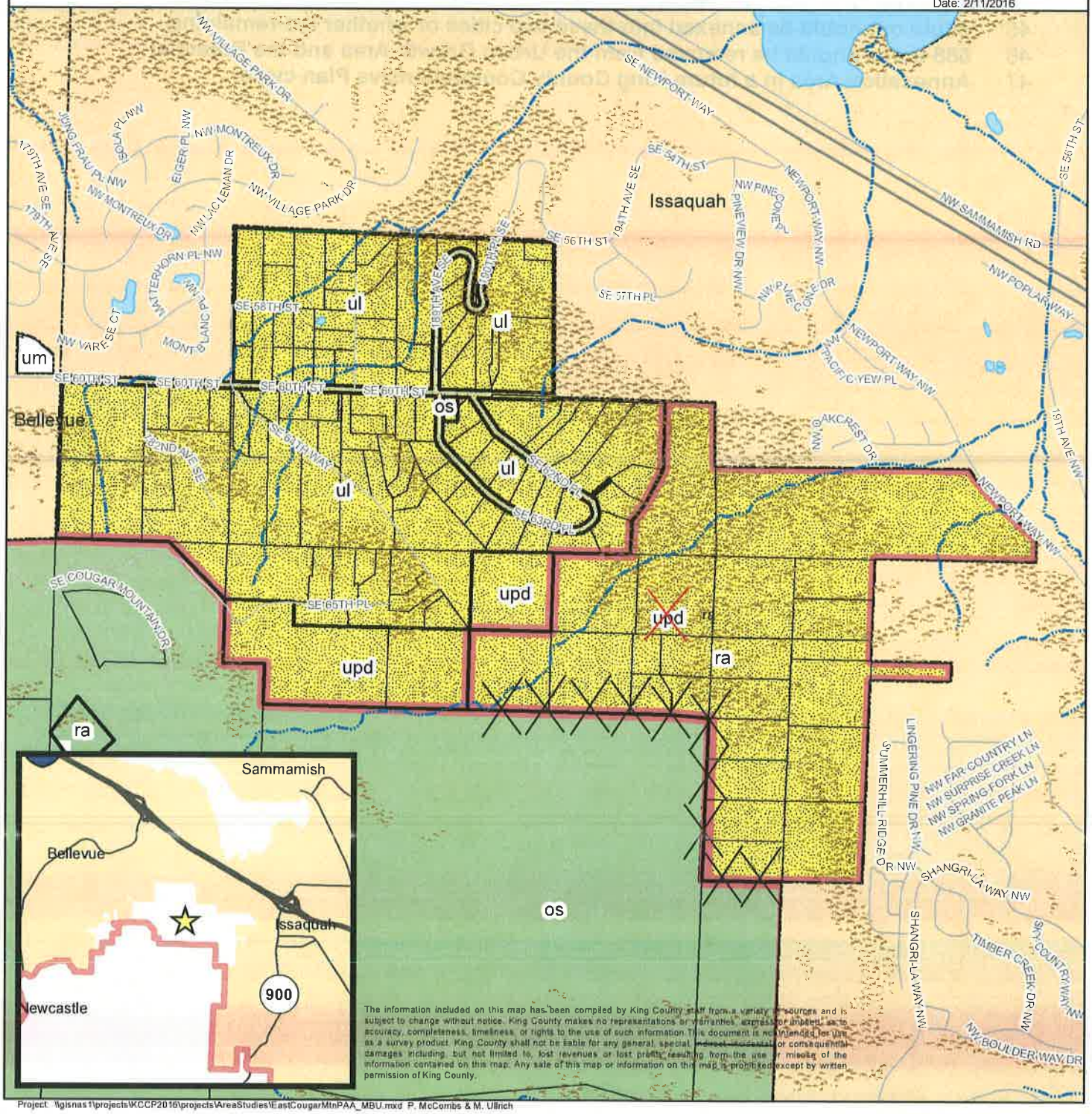
os King County Open Space System
ra Rural Area (1du/2.5-10acres)
upd Urban Planned Development
ul Urban Res., Low (1 du/acre)
um Urban Res., Medium (4-12du/acre)

N

0 200 400 800 1,200
Feet

King County

Date: 2/11/2016



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Project: \\gisnas1\projects\KCCP2016\projects\AreaStudies\EastCougarMtnPAA_MBU.mxd P. McCombs & M. Ullrich

Map Amendment #6 - East Cougar Mountain Potential Annexation Area

2016 King County Comprehensive Plan
Zoning Map Amendment

- Study Area
- Wetland & Steep Slope
- Incorporated Area
- Urban Growth Boundary
- Parks & OS
- Zoning
- P — Park & Ride
- Waterbodies
- Streams
- Railroads
- Parcels

R-1	Residential, one DU per acre
R-4	Residential, 4 DU per acre
RA-5-P	Rural Area, one DU per 5 acres
UR-P-SO	Urban Reserve, one DU per 5 acres
R-1-P	Residential, one DU per acre
RA-5	Rural Area, one DU per 5 acres

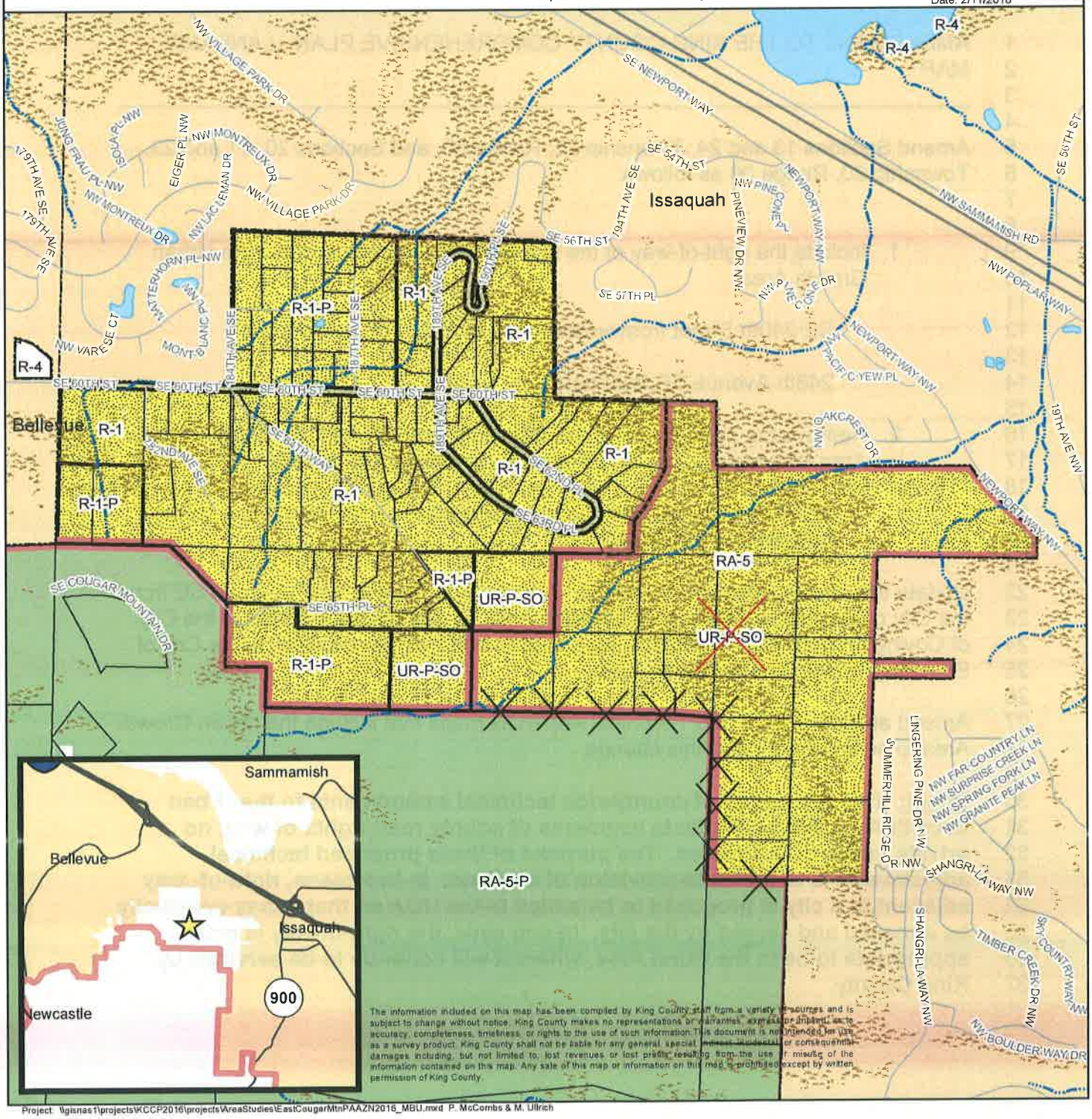
P = parcel specific development condition
SO = special district overlay

N

0 200 400 800 1,200 Feet

King County

Date: 2/11/2016



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Project: \\gisnas1\projects\KCCP2016\projects\AreaStudies\EastCougarMtnPAAZN2016_MBU.mxd P. McCombs & M. Ullrich

Map Amendment # 7

Three Urban Growth Area Amendments in locations noted below

(UGA Technical Corrections Area Zoning and Land Use Study)

AMENDMENT TO THE KING COUNTY COMPREHENSIVE PLAN –LAND USE MAP

Amend Sections 13 and 24, Township 22, Range 05, and Sections 20, 21 and 23, Township 20, Range 06 as follows:

1. Include the right-of-way of the following two segments within the Urban Growth Area.

   SE 240th Street from western city limits to 180th Avenue SE

   248th Avenue SE from north city limits to SE 433rd Street

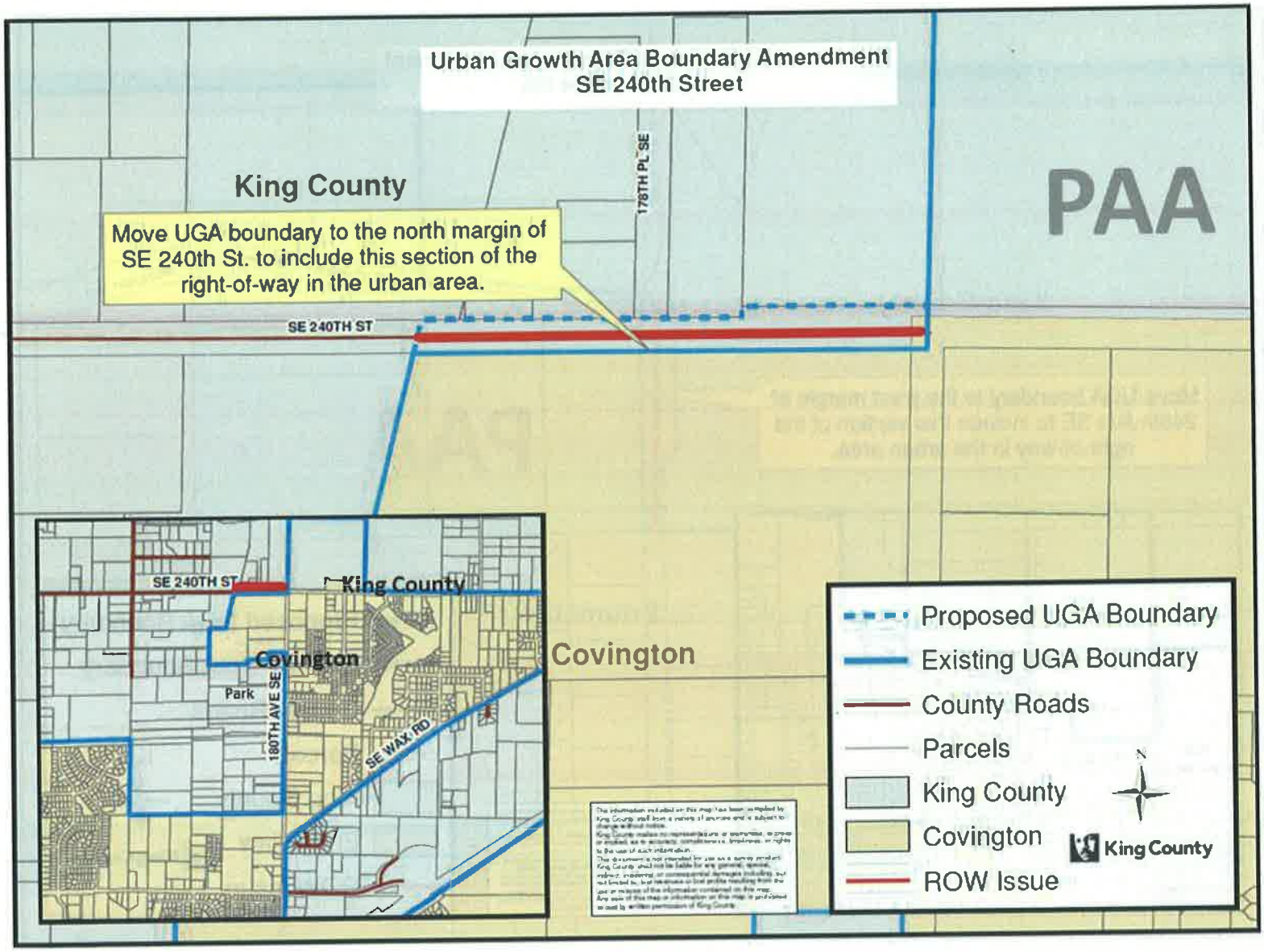
2. Remove the right-of-way of the following segment from the Urban Growth Area for consistency with adjacent rural roadway segments.

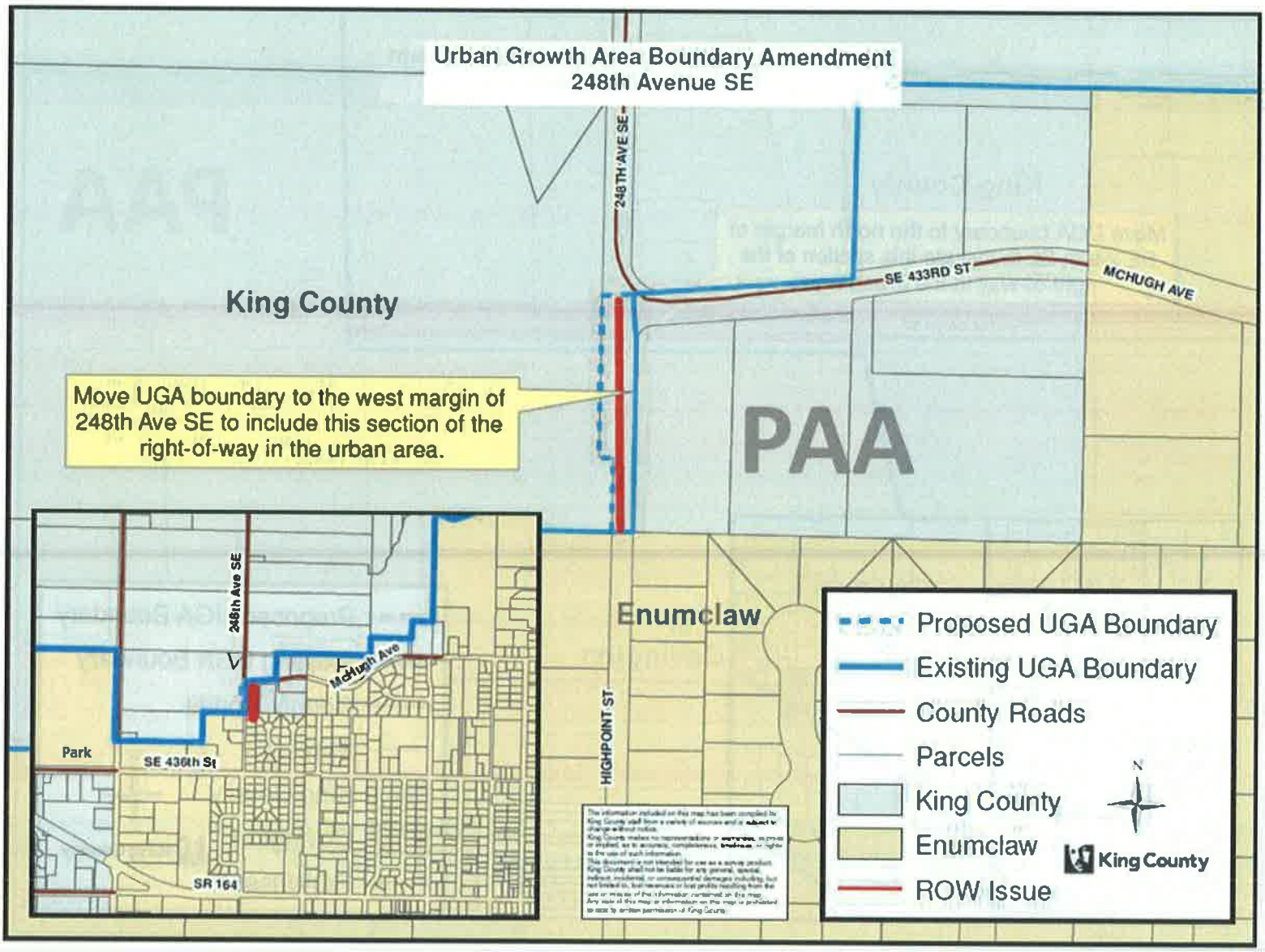
   228th Avenue SE from the north boundary of the UGA to the south boundary of the UGA

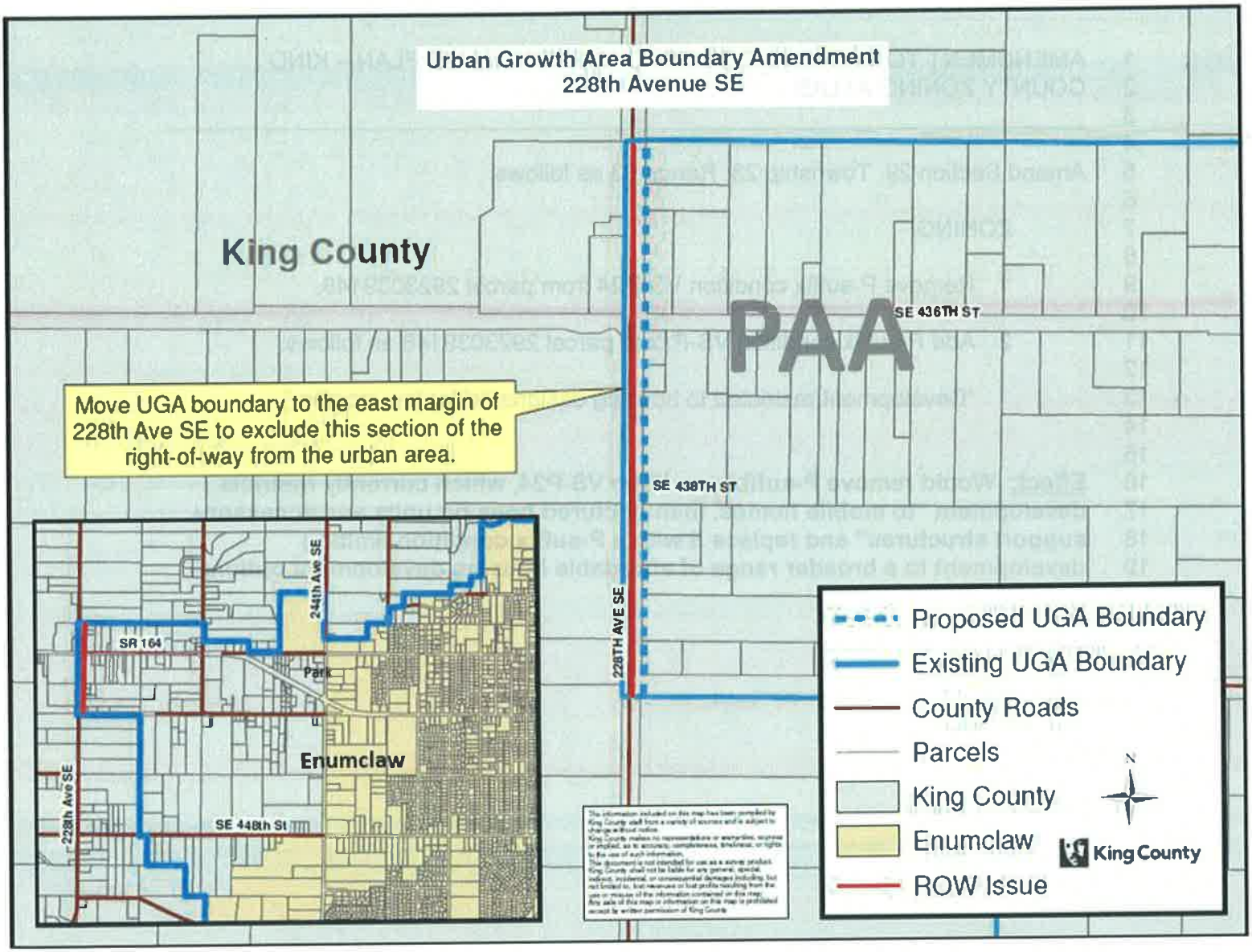
Update the Interim Potential Annexation Area Map to remove 228th Avenue SE from the City of Enumclaw Potential Annexation Area, to add SE 240th Street to the City of Covington Potential Annexation Area, and to add 248th Avenue NE to the City of Enumclaw Potential Annexation Area.

Amend all other KCCP and Technical Appendix maps that include the Urban Growth Area to be consistent with this change.

Effect: This is a series of countywide technical amendments to the Urban Growth Area that only affects segments of county road rights of way; no private property is affected. The purpose of these proposed technical adjustments is to facilitate provision of services. In two cases, right-of- way adjacent to a city is proposed to be added to the UGA so that it may eventually be annexed and served by the city. In one case, the right-of-way is more appropriate to be in the Rural Area, where it will continue to be serviced by King County.


Urban Growth Area Boundary Amendment
SE 240th Street
King County
Move UGA boundary to the north margin of SE 240th St. to include this section of the right-of-way in the urban area.
178TH PL SE
PAA
SE 240TH ST
SE 240TH ST
King County
Covington
Park
180TH AVE SE
SE WAX RD
Covington
Proposed UGA Boundary
Existing UGA Boundary
County Roads
Parcels
King County
Covington
ROW Issue
N
King County


Urban Growth Area Boundary Amendment
248th Avenue SE
248TH AVE SE
SE 433RD ST
MCHUGH AVE
King County
Move UGA boundary to the west margin of 248th Ave SE to include this section of the right-of-way in the urban area.
PAA
Enumclaw
HIGHPOINT ST
248th Ave SE
McHugh Ave
Park
SE 436th St
SR 164
Proposed UGA Boundary
Existing UGA Boundary
County Roads
Parcels
King County
Enumclaw
ROW Issue
N
King County


Urban Growth Area Boundary Amendment
228th Avenue SE
King County
PAA
SE 436TH ST
Move UGA boundary to the east margin of 228th Ave SE to exclude this section of the right-of-way from the urban area.
SE 438TH ST
228TH AVE SE
244th Ave SE
SR 164
Park
Enumclaw
228th Ave SE
SE 448th St
Proposed UGA Boundary
Existing UGA Boundary
County Roads
Parcels
King County
Enumclaw
ROW Issue
N
King County

Map Amendment # 8

SW Gorsuch Road, Near Vashon Highway SW

(Vashon #1 Area Zoning and Land Use Study)

AMENDMENT TO THE KING COUNTY COMPREHENSIVE PLAN – KING COUNTY ZONING ATLAS

Amend Section 29, Township 23, Range 03 as follows:

ZONING

1. Remove P-suffix condition VS-P24 from parcel 2923039148.

2. Add P-suffix condition VS-Pxx to parcel 2923039148 as follows:

"Development restricted to housing designated for low income."

Effect: Would remove P-suffix condition VS-P24, which currently restricts development "to mobile homes, manufactured housing units and accessory support structures" and replace it with a P-suffix condition limiting development to a broader range of affordable housing development options.

Map Amendment #8 - Vashon #1

2016 King County Comprehensive Plan
Land Use Map

- Study Area
- CPLU
- Wetland & Steep Slope
- Incorporated Area
- Urban Growth Boundary
- Parks & OS
- P — Park & Ride
- Streams
- Railroads
- Waterbodies
- Parcels

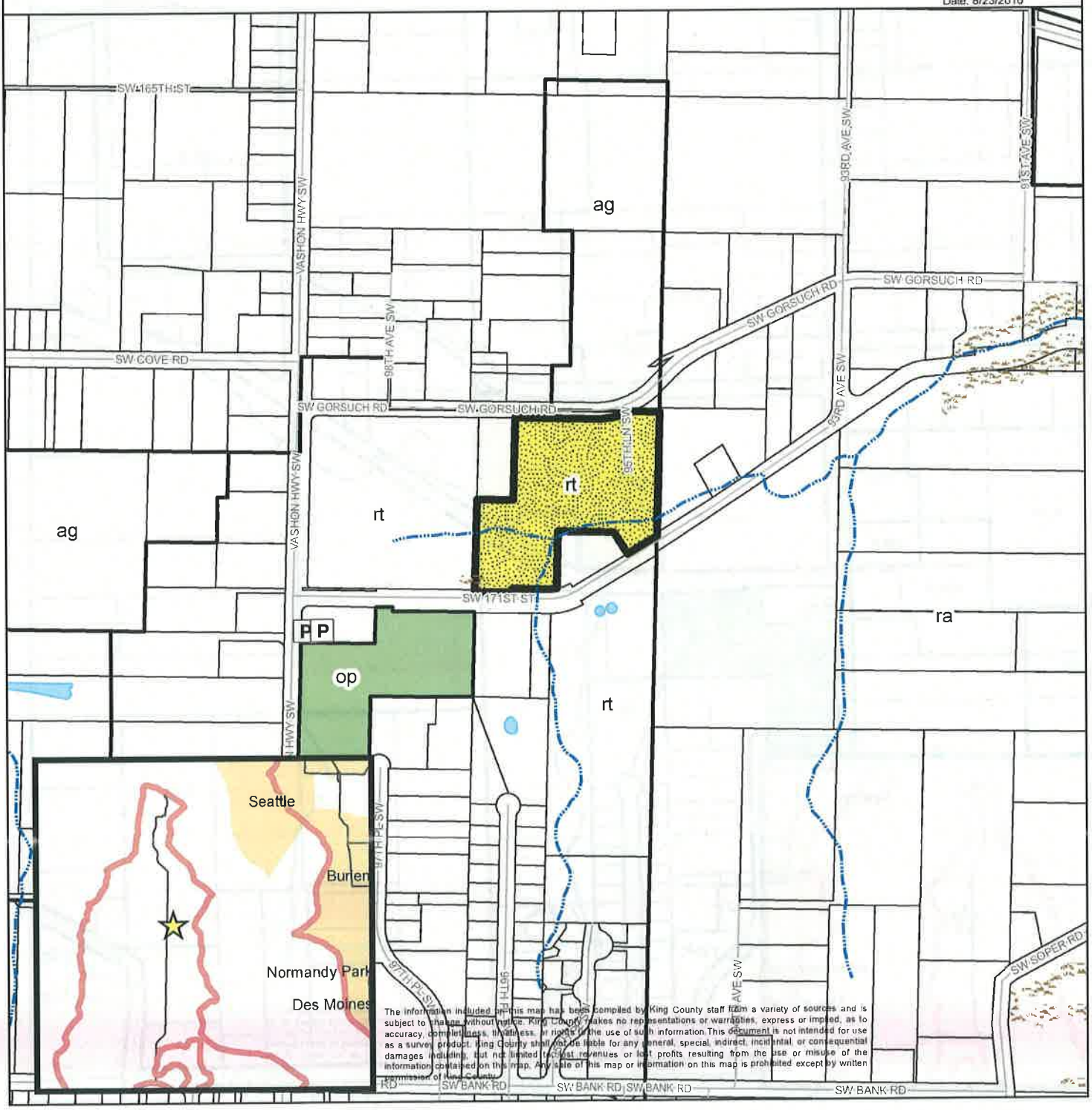
ra Rural Area (1du/2.5-10acres)
op Other Parks/Wilderness
ag Agriculture
rt Rural Town

N

0 200 400 Feet

King County

Date: 8/23/2016



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Map Amendment #8 - Vashon #1

2016 King County Comprehensive Plan
Zoning Map

- Study Area
- Zoning
- Wetland & Steep Slope
- Incorporated Area
- Urban Growth Boundary
- Parks & OS
- P — Park & Ride
- Streams
- Railroads
- Waterbodies
- Parcels

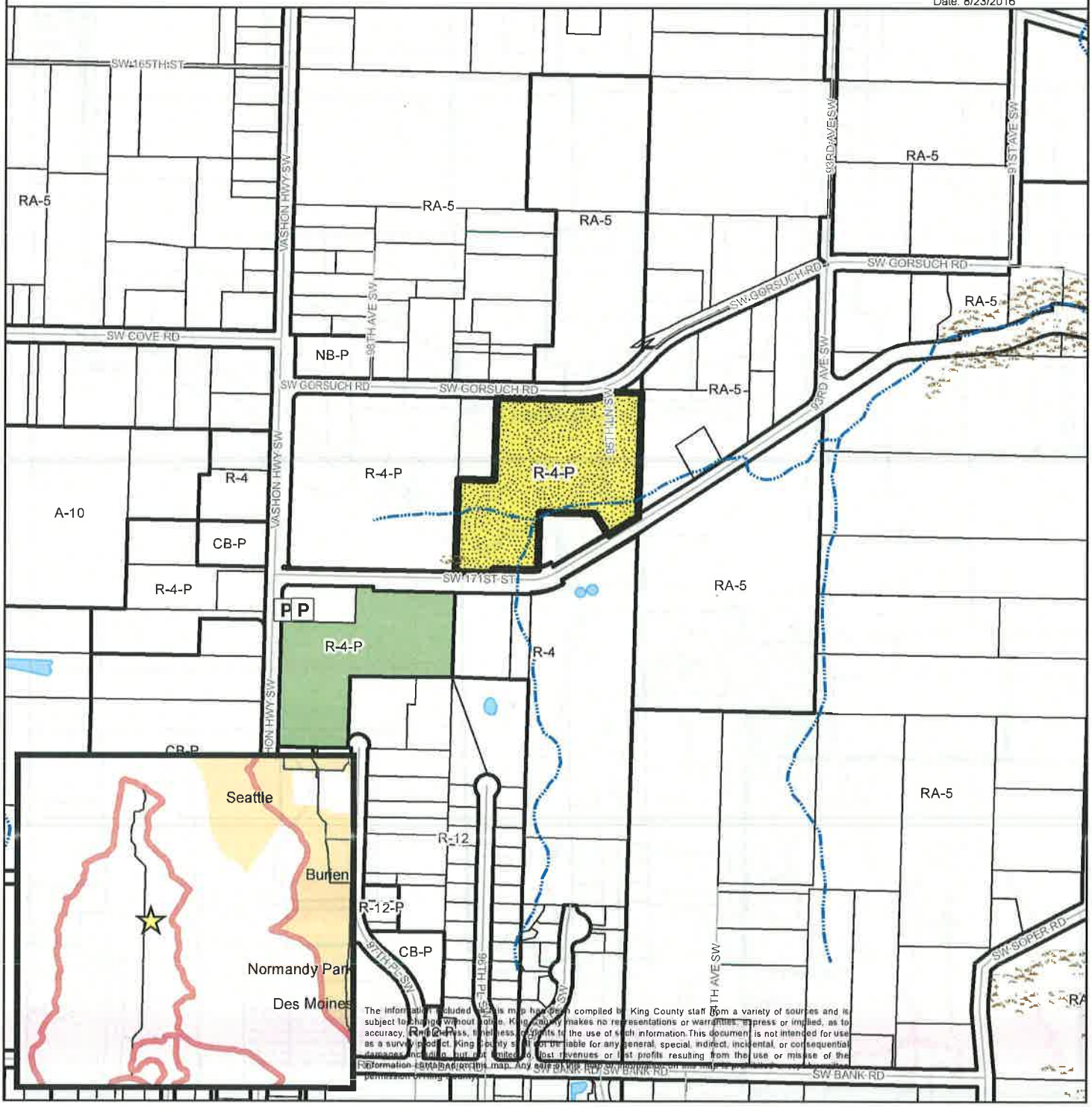
R-12-P Residential, 12 DU per acre
R-12 Residential, 12 DU per acre
R-4 Residential, 4 DU per acre
R-4-P Residential, 4 DU per acre
RA-5 Rural Area, one DU per 5 acres
A-10 Agricultural, one DU per 10 acres
NB-P Neighborhood Business
CB-P Community Business
P = parcel specific development condition

N

0 200 400 Feet

King County

Date: 8/23/2016



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Map Amendment # 9

237th Place SE and SE 288th Street

(Rainier Ridge)

AMENDMENT TO THE KING COUNTY COMPREHENSIVE PLAN – KING COUNTY ZONING ATLAS

Amend Section 03, Township 21, Range 06 as follows:

ZONING

Amend P-suffix condition TR-Pxx on parcel 1531000010 as follows:

"1. A term conservation easement agreement satisfactory to King County shall be recorded within 21 days of approval of this ordinance. The conservation easement shall apply to the remaining 56 acres of the site and shall prohibit all use and development other than passive recreation until such time as the parcel is officially subdivided, whereby the rural portion will be deeded fee simple to King County for the purpose of permanent public passive open space.

2. ((~~Within one year~~))By December 31, 2017, the City of Maple Valley shall ((~~commence~~)) complete annexation proceedings ((~~and the County and the City shall enter into an interlocal agreement addressing: a) annexation of the urban portion of the property; b) zoning for the urban portion of the property that will achieve a minimum density of 4 dwelling units per acre; and c) subdivision procedures that will enable the City of Maple Valley to process a plat application including land within the City and County~~)).

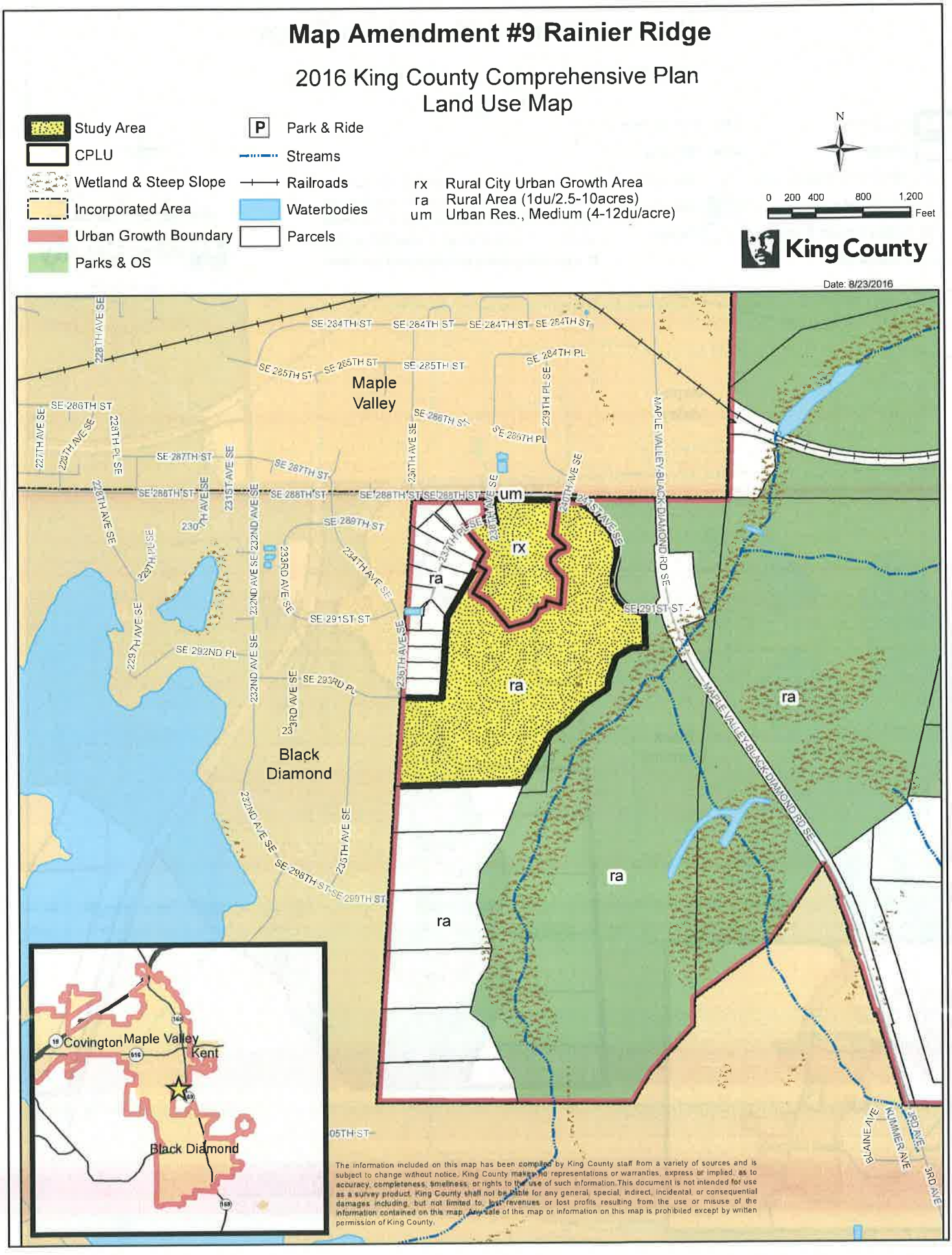
3. SEPA mitigation measures per the MDNS Threshold Determination for project
MAMD13-0001 dated November 26, 2013 shall be implemented and completed upon the approval date of this ordinance.

4. In the event Condition 2 is not satisfied ((~~within one year after Council approval of this ordinance~~)), the site shall ((~~be redesignated in the next King County Comprehensive Plan update~~)) revert to its pre-application land use (Rural Area) and zoning (RA-5-P) designations."

Effect: **Would amend P-suffix condition TR-Pxx to no longer require adoption of an Interlocal Agreement, and would require completion of annexation proceedings by December 31, 2017 in order for the Rainier Ridge Four-to-One UGA amendment to become effective.**

Map Amendment #9 Rainier Ridge

2016 King County Comprehensive Plan
Land Use Map



Map Amendment #9 - Rainier Ridge

2016 King County Comprehensive Plan
Zoning Map

- Study Area
- Zoning
- Wetland & Steep Slope
- Incorporated Area
- Urban Growth Boundary
- Parks & OS
- P — Park & Ride
- Streams
- Railroads
- Waterbodies
- Parcels

RA-10	Rural Area, one DU per 10 acres
RA-5	Rural Area, one DU per 5 acres
RA-5-P	Rural Area, one DU per 5 acres
UR-P	Urban Reserve, one DU per 5 acres

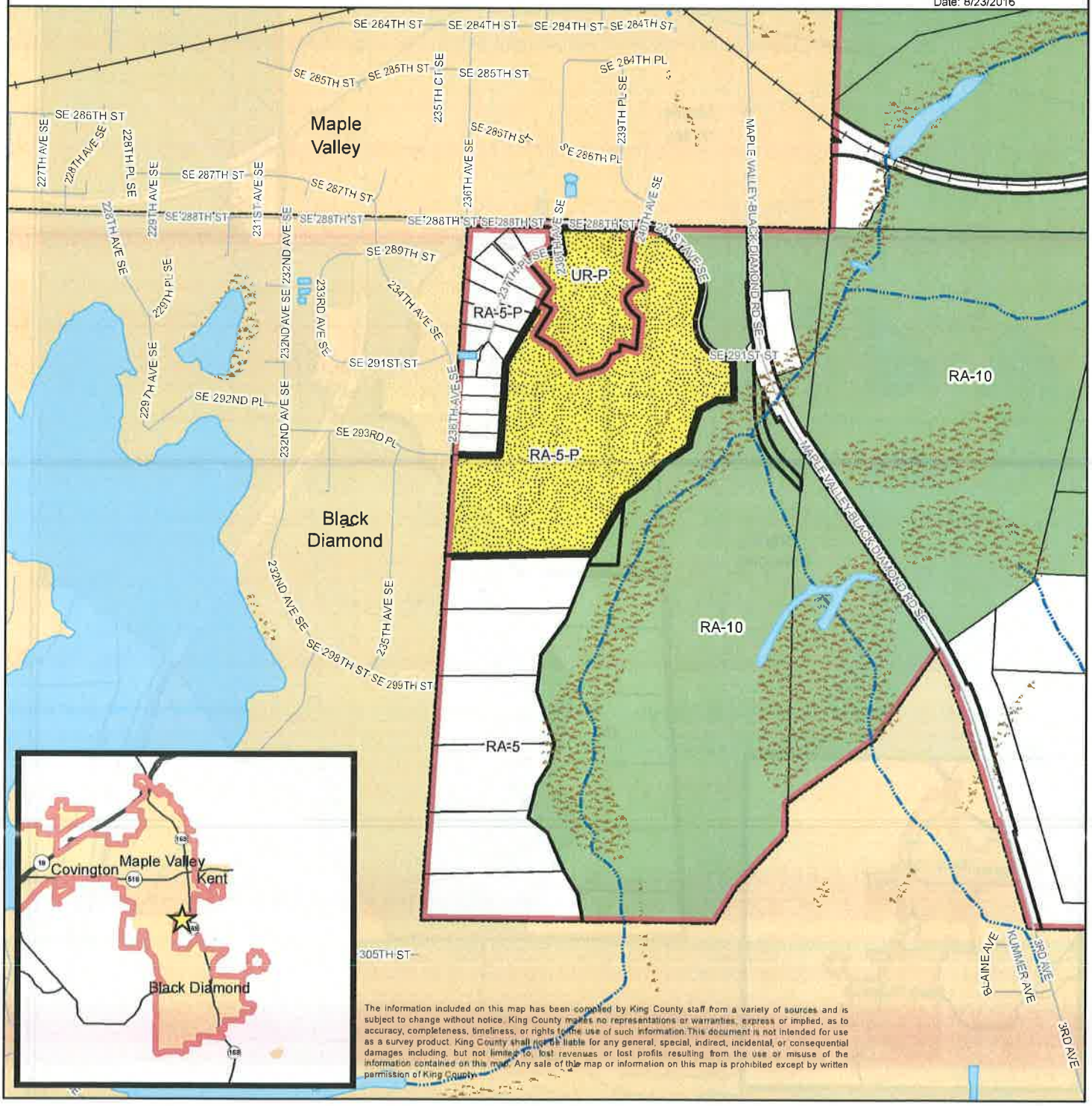
P = parcel specific development condition

N

0 200 400 800 1,200 Feet

King County

Date: 8/23/2016



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Map Amendment # 10

SE Falcon Way at 216th Ave SE and SE 296th St

(Reserve at Covington Creek)

AMENDMENT TO THE KING COUNTY COMPREHENSIVE PLAN – KING COUNTY ZONING ATLAS

Amend Section 4, Township 21, Range 06 as follows:

ZONING

Amend P-suffix condition TR-P49 on parcels 0421069008 and 0421069011 as follows:

- "((~~Development shall be consistent with all City of Black Diamond regulation and guidelines;~~))

- King County and any development applicant shall address traffic in the area to ensure that existing level of service conditions are ((~~addressed and improved – not degraded – by any future development; and~~)) maintained consistent with concurrency requirements in the King County Code and King County Comprehensive Plan;

- ((~~The applicant shall enter into a pre-annexation agreement that includes the use of rural transfer of development rights and conservation of at least four acres of rural land for every acre of urban land.~~)) The site shall be developed at no greater than R-4 zoning on 50% of the site. A notice shall be added to the properties' titles that the current and/or future property owner(s) of the site shall not contest the annexation after the site has been rezoned and platted; and

- The site shall not be rezoned until at least 160.63 acres of land is put in permanent conservation. The total acreage of conserved land will be achieved through a) a permanent conservation easement on up to 20 acres of the site surrounding the new urban development, and b) permanent conservation of off-site lands as follows:
    - Conservation of rural, agricultural and/or forestry lands in the Duwamish-Green River Watershed (via conservation easement(s) and/or purchase of Transfer of Development Rights);

- Conservation of land from King County's high value conservation list; and/or
- Purchase of Transfer of Development Rights from the County's TDR bank."

Effect: **Would amend an existing P-suffix condition TR-P49 as follows:**

- **Remove the requirement that the development be consistent with the City's plans and regulations.**
- **Direct that existing transportation conditions specific to level of service be maintained consistent with the County's concurrency requirements. This would replace the current requirement than general transportation conditions be not only not degraded but also addressed and improved.**
- **Remove the requirement that there be a pre-annexation agreement to guide development, and add requirement that the property owners will not contest annexation.**
- **Requires density to be no greater than four homes per acre on 50% of the site, which would result in up to 80 dwelling units.**
- **Maintains conservation of four acres of land for every acre of land that was added to the UGA (for a total of 160.63 acres), and clarifies how that conservation could be achieved (on-site and off-site).**

Map Amendment #10 - Reserve at Covington Creek

2016 King County Comprehensive Plan
Land Use Map Amendment

- Study Area
- CPLU
- Wetland & Steep Slope
- Incorporated Area
- Urban Growth Boundary
- Parks & OS
- P Park & Ride
- Streams
- Railroads
- Waterbodies
- Parcels

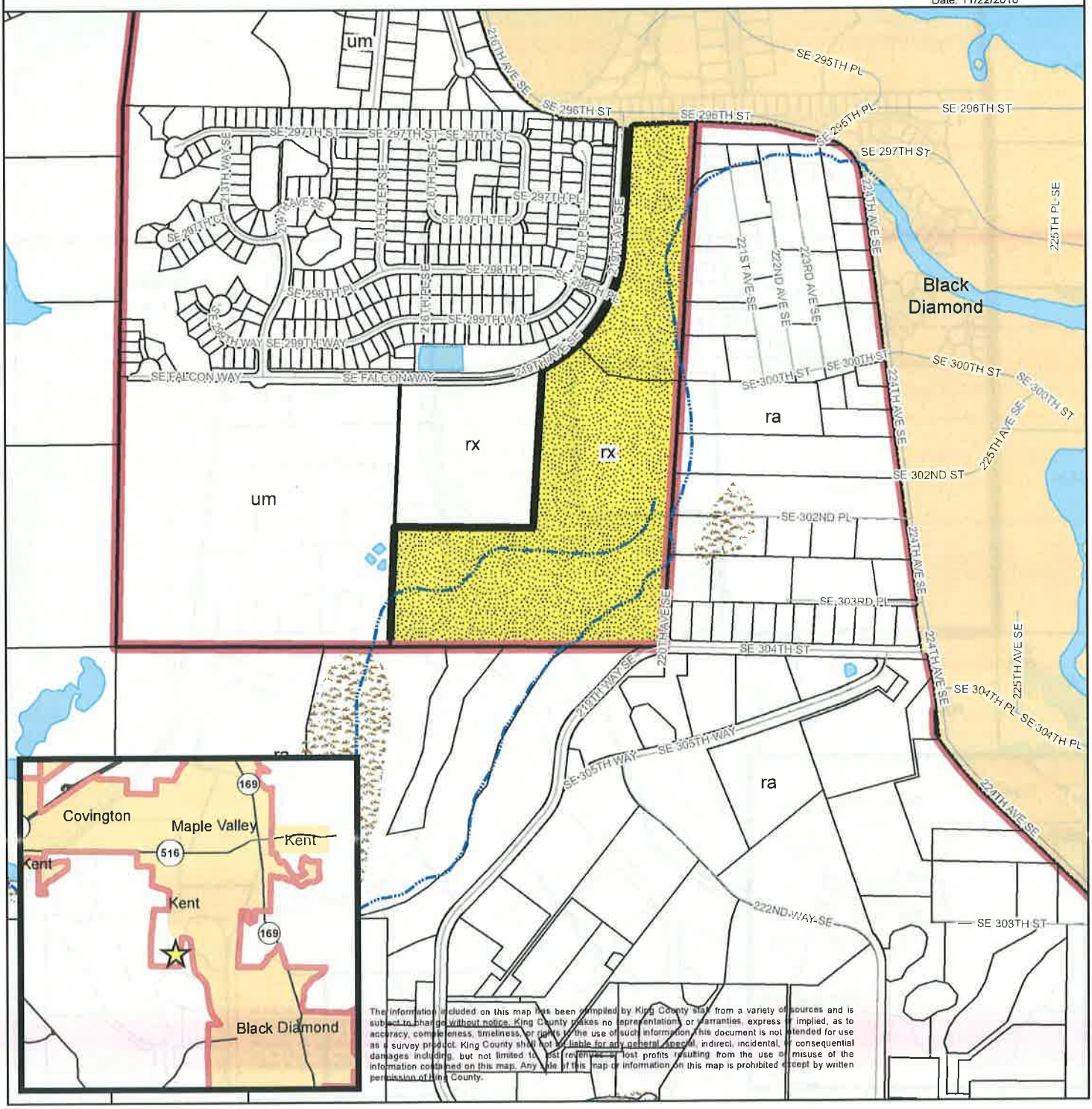
ra Rural Area
rx Rural Cities Urban Growth Area
um Urban Res., Medium (4-12du/acre)

N

0 200 400 800 Feet

King County

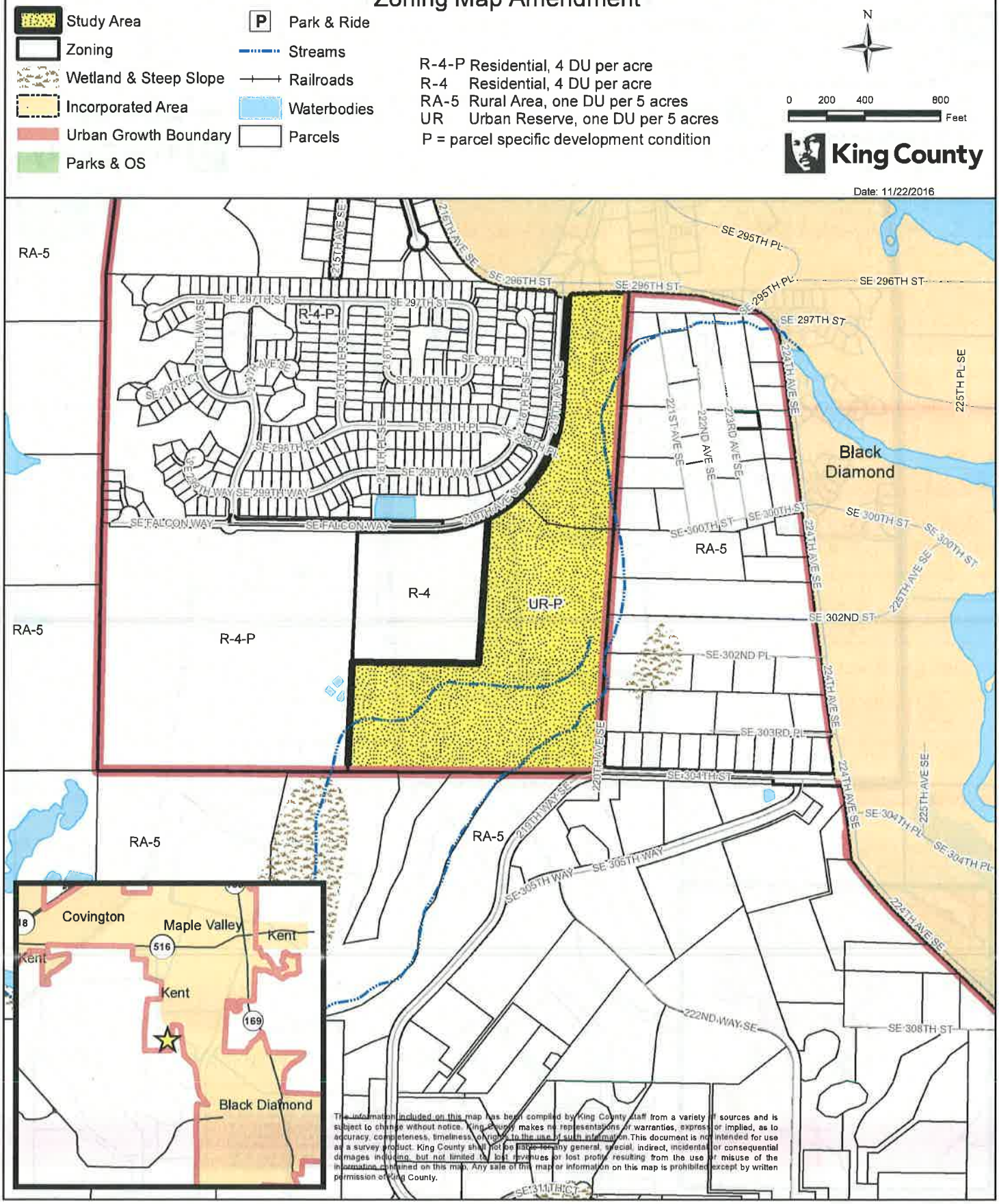
Date: 11/22/2016



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Map Amendment #10 - Reserve at Covington Creek

2016 King County Comprehensive Plan
Zoning Map Amendment



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Attachment C to Ordinance 18427
Technical Appendix A to 2016 Comprehensive Plan

King County

2016
King County Comprehensive Plan Update

TECHNICAL APPENDIX A

CAPITAL FACILITIES

November 22, 2016

Technical Appendix A

Capital Facilities

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I. Introduction

The capital facilities element of the King County Comprehensive Plan is comprised of two parts--the Facilities and Services section contained in Chapter 9: Services, Facilities and Utilities and Technical Appendix A.

Chapter 9: Services, Facilities and Utilities identifies the key issues regarding planning for and financing of capital facilities to serve the needs of existing and new residents. Included are discussions and specific policies directing how King County should meet its capital facilities responsibilities.

This Technical Appendix to Chapter 9: Services, Facilities and Utilities consists of a review of the current status of planning and financing in King County for a broad range of facilities and services. This includes the "full range" identified in the state Growth Management Act. The facilities are organized into two sections, those owned by King County and those owned by other entities.

II. State Requirements

The development of this Technical Appendix was guided by an integrated set of state and local policies and plans. Chapter 9: Services, Facilities and Utilities and this Technical Appendix implement the requirements of the directives listed below. These requirements are met in the documents referenced in Section III.

A. Growth Management Act Goals and Requirements

The Growth Management Act (GMA)(RCW 36.70A.020), states as a goal: "Ensure that those public facilities and services necessary to support development shall be adequate to serve the development at the time the development is available for occupancy and use without decreasing current service levels below locally established minimum standards."

The GMA requires that comprehensive plans include a capital facilities plan element consisting of:

- An inventory of existing capital facilities owned by public entities, showing the locations and capacities of the capital facilities;
- A forecast of the future needs for such capital facilities;
- The proposed locations and capacities of expanded or new capital facilities;
- At least a six-year plan that will finance such capital facilities within projected funding capacities and clearly identifies sources of public money for such purposes; and
- A requirement to reassess the land use element if probable funding falls short of meeting existing needs and to ensure that the land use element, capital facilities plan element are coordinated and consistent.

B. GMA Definitions

The GMA provides the following definitions to be considered in the capital facilities element of comprehensive plans:

- Public Facilities, including streets, roads, highways, sidewalks, street and road lighting systems, traffic signals, domestic water systems, storm and sanitary sewer systems, solid waste transfer and disposal facilities, parks and recreational facilities, and schools.

- Public Services, including fire protection and suppression, law enforcement, public health, education, recreation, environmental protection, and other governmental services.
- Urban Governmental Services, including those governmental services historically and typically delivered by cities, which include storm and sanitary sewer systems, domestic water systems, street cleaning services, fire and police protection services, public transit services, and other public utilities associated with urban areas and normally not associated with non-urban areas.

C. State Department of Commerce Procedural Criteria

The Procedural Criteria for Adopting Comprehensive Plans and Development Regulations, 1992, clarify the above-described requirements by saying that the capital facilities element should serve as a check on the practicality of achieving other elements of the plan. The following steps are recommended in preparing the capital facilities element:

- Inventory of existing capital facilities showing locations and capacities, including an inventory of the extent to which existing facilities possess presently unused capacity. Capital facilities involved should include water systems, sanitary systems, storm-water facilities, solid waste transfer and disposal facilities, schools, parks and recreational facilities, police and fire protection facilities.
- The selection of levels of service or planning assumptions for the various facilities to apply during the planning period (twenty years or more) and which reflect community goals.
- A forecast of the future needs for such capital facilities based on the levels of service or planning assumptions selected and consistent with the growth, densities and distribution of growth anticipated in the land use element.
- The creation of a six-year capital facilities plan for financing capital facilities needed within that time frame. Projected funding capacities are to be evaluated, followed by the identification of sources of public or private funds for which there is reasonable assurance of availability. The six-year plan should be updated at least biennially so that financial planning remains sufficiently ahead of the present for concurrency to be evaluated.

D. King County Countywide Planning Policies

The GMA (RCW 36.70A.210) requires counties and the cities to coordinate developing and

adopting a set of mutually agreed upon planning policies to guide the development of local ((-)) comprehensive plans. In response to this requirement, elected officials representing the ((-)) county and the cities and towns of King County joined together to cooperatively develop and adopt the King County Countywide Planning Policies.

The Countywide Planning Policies provide a framework for developing the comprehensive plans in King County. The framework provides a mechanism for achieving consistency among comprehensive plans. Jurisdictions must develop comprehensive plans according to policies addressing capital facilities issues, including siting of facilities and the timing and phasing of land development in concert with facilities and services.

The Countywide Planning Policies adopted by the King County Council and ratified by the cities call for jurisdictions to define the full range of urban services and how they plan to provide them (PF-1). Jurisdictions must identify the services needed to achieve adopted service levels.

Timeliness for constructing needed services shall be identified. The countywide development pattern must include sufficient supply of quality places for housing, employment, education, recreation, open space and the provision of community and social services.

III. Range of Facilities and Services

A. Facilities & Services Provided by King County

1. General Government

The Capital Improvement Budget is divided into three strategic plan goal categories.

- The Economic Growth and Built Environment category includes CIP projects for the King County International Airport, road services, transit, park facilities and housing programs.
- The Environmental Sustainability category includes CIP projects for wastewater treatment, solid waste, flood and surface water, and open space land acquisition.
- The General Government category includes capital improvements for the King County Courthouse and Administration Building complex and for all other county facilities, technology, Harborview Medical Center and facility leases.

For more information please see the current adopted version of King County's Real Property Asset Management Plan (RAMP). The RAMP contains a thorough inventory of existing general government facilities and the conditions of the buildings owned by King County.

2. Parks, Recreation & Open Space

A current inventory of King County Park Sites and Facilities is on file in the Department of Natural Resources and Parks. For more information please see the current adopted King County Open Space Plan and the Six Year Parks Capital Improvement Program found in the King County Budget.

3. Surface Water Management

The inventory of existing facilities is on file at the King County Department of Natural Resources and Park's Water and Land Resources (WLR) Division. For additional information on future planned facilities and improvements to existing facilities, please see the current adopted version of the Capital Improvement Budget.

In addition the WLR Division has adopted the following functional plans and regulations: Stormwater Management Program (SWMP) Plan, the Coal Creek Basin Plan, Soos Creek Basin Plan, Covington Master Drainage Plan, Bear Creek Basin Plan, Lower Cedar River Basin and Nonpoint Pollution Action Plan, Issaquah Creek Basin and Nonpoint Pollution Action Plan, May Creek Basin and Nonpoint Pollution Action Plan, Surface Water Design Manual, East Lake Sammamish Basin and Non-point Action Plan, Hylebos Creek and Lower Puget Sound Basin Plan, and the Water Quality Ordinance.

4. Solid Waste

The Solid Waste Division of the Department of Natural Resources and Parks manages all county-owned solid waste handling facilities, including recycling and transfer facilities and the Cedar Hill Regional Landfill. An inventory of facilities is available at the Solid Waste Division.

For additional information please see the current adopted version of the King County Comprehensive Solid Waste Management Plan and the Solid Waste Transfer and Waste Management Plan.

5. Sanitary Sewer Collection & Treatment

The Wastewater Treatment Division of the Department of Natural Resources and Parks operates the regional wastewater treatment system for most of West King County, including the City of Seattle and portions of Snohomish County and Pierce County. The regional wastewater system consists of regional and local treatment plants and associated facilities including, conveyance pipelines, reclaimed water pipelines, outfalls, pump stations, regulator stations, and combined sewer overflow treatment plants. More information on the system's facilities is available in the King County Regional Wastewater Services Plan and capital project implementation plans.

Other operational plans for the Wastewater Treatment Division are the Combined Sewer Overflow Long Term Control Plan, Conveyance System Improvement Plan, King County Biosolids Plan, and the Strategic Asset Management Plan.

The Wastewater Treatment Division finances its capital program through the issuance of sewer revenue bonds, with the proceeds of federal and state grants and loans, and with revenues from the monthly sewer rate and the capacity charge.

6. Flood Warning and Flood Hazard Management

The River and Floodplain Management Program within the Water and Land Resources Division of the Department of Natural Resources and Parks currently provides regional flood warning along the Snoqualmie, Tolt, Cedar, Green and White Rivers and Issaquah Creek and flood

hazard management services countywide. The King County Flood Hazard Management Plan is adopted to provide regional flood hazard management and identify capital needs and includes:

- A Risk Assessment to identify flood and erosion hazards, determine the impact and analyze the vulnerability of those hazards;
- Accomplishments since 1993;
- An inventory of existing flood protection facilities owned or managed by King County, showing their locations by river mile;
- A ten-year action plan that identifies the projects that will be completed and the projected cost over the ten-year time frame; and
- Flood hazard management risk areas and the proposed projects to address those risk areas.

7. Health & Human Services

Public Health

Public Health – Seattle & King County is charged with protecting the health and well-being of King County residents residing outside of the City of Seattle through prevention, intervention, education and regulation. Please see the Master Plan for Seattle-King County Public Health Facilities for an inventory of facilities, forecast of future needs and a finance plan.

Medical Examiner

The Medical Examiner Division of Public Health – Seattle & King County investigates all sudden and unexpected, violent and suspicious deaths which occur in King County. For more information on the facility please see the RAMP and the King County Public Health Operational Master Plan. A Facilities Master Plan for the Medical Examiner's Division evaluates requirements for future capital facility needs. Future finance plans will be developed to the extent major capital projects and recommended.

Emergency Medical Services

The King County Emergency Medical Services Division is responsible for coordinating all aspects of emergency medical services in King County and developing, implementing and administering a mobile intensive paramedic care services program in cooperation with King County fire districts, municipal fire departments, and hospital providers. The Emergency Medical Services are regional. For more information, please see the Emergency Medical Services Master Plan.

Harborview Medical Center

Harborview Medical Center, the public health hospital for the region, operates trauma and burn

centers; functions as the home base for Airlift Northwest; serves as the research and teaching facility for the University of Washington; manages the King County AIDS Clinic; and provides ambulatory and emergency room care. The services provided by the Harborview Medical Center are regional. For more information please see the Harborview Medical Center Long Range Capital Improvement Program Plan.

Human Services

The Department of Community and Human Services is responsible for planning, management, fiscal accountability and service delivery for programs of the Behavioral Health and Recovery Division, Community Services Division, and Developmental Disabilities Division. The Department does not own or operate capital facilities. Where applicable, King County distributes the federal and state funds to the various independently operated programs that are responsible for their own facilities. A list of programs that the Department of Community and Human Services supports is available at the King County Department of Human Services.

8. Law, Safety and Justice

The following sections address the Regional Justice Center and the Law, Safety and Justice Agencies which include the Corrections and Detention, Prosecuting Attorney Office, Department of Public Defense, District Court, Sheriff's Office, Department of Judicial Administration, Youth Services Center and Superior Court. The sections are further categorized by regional and local functions.

Regional Services

The Regional Justice Center

The agencies included in the King County Regional Justice Center are the Prosecuting Attorney, the Public Defense, Superior Court, Public Safety, District Court, Adult and Juvenile Detention and Judicial Administration. The complex houses detention beds, courtrooms and office space, and is located in the City of Kent in southeast King County. For more information please see current adopted version of the Facilities Program Plan and the Facilities Master Plan for the King County Law, Safety and Justice.

Corrections and Detention

The King County Department of Adult Detention operates facilities for housing inmates at the King County Correctional Facility and the Work Release Facility in the Courthouse. For more information please see the Facility Program Plan and the Regional Justice Center Facility Master Plan.

Prosecuting Attorney

For information on the Prosecuting Attorney's Office please see the Law, Safety and Justice Facilities Map, the Facility Master Plan and the Facility Program Plan.

Judicial Administration

The Department of Judicial Administration serves as the Clerk's Office to the King County Superior Court and operates a full service branch office at the King County Regional Justice Center. The Department of Judicial Administration will increase office space in the Regional Justice Centers, the King County Courthouse and other locations throughout the County as outlined in the Facility Master Plan. Refer to the Facility Program Plan for the current space allocation and financing plans.

Superior Court

The Superior Court occupies space at the King County Courthouse, King County Regional Justice Center, Youth Services Center and Harborview Medical Center. For more information please see the Facility Program Plan and the Facility Master Plan for the Regional Justice Center.

Local Law, Safety & Justice

District Courts

Currently, the King County District Court owns or leases eleven facilities. For more information please see Law, Safety and Justice Facilities Map. The forecast for staffing requirements is driven by expected workload. The staffing requirements are then translated into space needs. For more information please see the Facility Master Plan, the Facility Program Plan and the Regional Justice Center financing plan.

Public Safety

The King County Sheriff's Office is primarily responsible for the public safety of unincorporated King County and also provides regional services. The Facility Master Plan forecasts staffing for the department and relates staff to the expected staffing increases. Please refer to the Facility Program Plan for the staffing and space allocation. The amount of space at the precincts will depend on the size of the service area and changing operational requirements.

Please refer to the section entitled Regional Justice Center for relevant financing details concerning the King County Sheriff's Office space in the Regional Justice Center. The Facility Program Plan for the King County Regional Justice Center contains details concerning the cost of space for the King County Sheriff's Office. Space needs for the King County Sheriff's Office outside of those included in the Regional Justice Center will be funded through the County's

biennial budget process to prioritize and fund capital improvement projects.

9. Transportation

Please refer to the current adopted version of the King County Transportation Needs Report, the King County Six-Year Transit Plan and the Transportation Inventory and Technical Appendix C: Transportation to the King County Comprehensive Plan.

B. Facilities and services provided by other entities:

King County has some existing processes for collecting the information required by the GMA for facilities and services. There are many special districts in King County that provide services for either water, sewer, schools, or fire. King County Code requires certain water and sewer utilities to complete a comprehensive plan. The comprehensive plan requirements for each type of facility differ. In general, they must all inventory facilities, projected needs, determine capacity, and provide capital improvement programs. King County has a Utilities Technical Review Committee (UTRC) that reviews and makes a recommendation to the King County Council to approve water and sewer plans and the School Technical Review Committee (STRC) that reviews and approves school plans. There are no such requirements for fire districts or libraries.

1. Drinking Water Supply

County residents receive potable water from a variety of sources. These sources are classified as either private or public water systems. Private water systems serve only a single connection and usually consist of a well used for a single home. There are an estimated 12,000 private water systems in King County.

Public water systems contain more than one connection. These systems are managed by:

- homeowners;
- private, non-profit organizations and corporations such as homeowners' associations;
- private, for-profit companies; and
- municipal governments and water/sewer districts.

Public water systems are further classified by size. A public water system is classified as a *Group B* system if, in general, it serves from 2 to 14 connections. About 1600 *Group B* public water systems currently operate in King County. In general, a *Group A* system serves 15 or more connections. There are 214 *Group A* public water systems in the county.

Most Residents Served by Seattle Public Utilities

The City of Seattle, through the Seattle Public Utilities, provides potable water for approximately

1,189,000 people, either through direct service or the sale of water to 18 other water utilities. The Cascade Water Alliance provides water to approximately 340,000 people. The remaining King County population, about 500,000 people, obtain their potable water from approximately 14,000 other public and private systems. The reason for the tremendous number of water systems with small numbers of connections is largely historical. At the time when many of these systems were developed there were no other viable options for water service. Over time, a regional network of inter-connected systems has been developed in some parts of the county. Although the regional network is not complete, many areas of the county can now be served without the need to form new water systems.

King County Regulatory Role in Water Supply

King County is not a water utility and does not supply potable water to residents. Instead, King County has certain regulatory authority for Group A and Group B water systems that operate in unincorporated King County.

Several state agencies also have a role in regulating water utilities. The Washington State Department of Ecology issues water rights, which allow waters of the state (surface and ground water) to be appropriated for public benefit. A water right is required for any water utility using more than 5000 gallons of water per day or with 7 or more connections. The Washington State Department of Health regulates drinking water quality for Group A systems and Group B systems.

Group A systems that are expanding are required to prepare water system comprehensive plans every six years for approval by the Washington State Department of Health. If those expanding Group A systems operate in unincorporated King County, the plans are also required to be approved by King County. Water district comprehensive plans are also approved by King County. The following table identifies the water utilities that are required to plan for King County. The King County approval process consists of two steps, (1) review of the comprehensive plan by the Utilities Technical Review Committee, an inter-departmental staff group, and (2) approval by ordinance by the Metropolitan King County Council and King County Executive. The plans and their approving ordinances, and related plan review information, are available for inspection by the public by contacting the Chair of the Utilities Technical Review Committee at (206) 477-5387.

Water Utilities Required to Plan for King County

Algona, City of	King County Water District 119
Ames Lake Water Association	King County Water District 123
Auburn, City of	King County Water District 125
Bellevue, City of	Kirkland, City of
Black Diamond, City of	Lakehaven Utility District
Bothell, City of	Lake Forest Park Water District

Burton Water Company	Mirrormont
Carnation, City of	North Bend, City of
Cedar River Water and Sewer District	North City Water District
Coal Creek Utility District	Northwest Water Systems
Covington Water District	NE Sammamish Sewer & Water District
Diamond Springs Water Association	Northshore Utility District
Dockton Water Association	Pacific, City of
Duvall, City of	Preston Industrial Park Water Association
Enumclaw, City of	Redmond, City of
Fall City Water District	Renton, City of
Foothills Water Association	Sallal Water Association
Gold Beach Water Company	Sammamish Plateau Water & Sewer District
Heights Water System	Seattle, City of
Highline Water District	Skyway Water and Sewer District
Issaquah, City of	Snoqualmie, City of
Kent, City of	Snoqualmie Pass Water Utility District
King County Water District 19	Soos Creek Water and Sewer District
King County Water District 20	Tacoma, City of
King County Water District 45	Tukwila, City of
King County Water District 49	Union Hill Water Association
King County Water District 54	Upper Preston Water Association
King County Water District 90	Washington Water Service
King County Water District 111	Westside Water Association
King County Water District 117	Woodinville Water District

In addition, if a water system operates in the right-of-way of a King County road (i.e., if a system's water main runs along the road), then a franchise is required. A franchise is an agreement between King County and the water system identifying the conditions that must be met by the water system in order for it to operate in King County right-of-way. The County must approve any construction work proposed by a franchised utility in King County right-of-way.

Water and the King County Permitting Process

If your property is in unincorporated King County and you want to undertake development activity, you will need to obtain approval from the King County Department of Permitting and Environmental Review (DPER). DPER will coordinate review of applications for building permits, subdivisions, rezones, and lot line adjustments and will require information demonstrating that water is available to serve the property. If you are proposing to obtain water from a private water system (a well connected to a single home), you will need at least five acres of property located in the Rural Area. A private water system on five acres of property is allowed within the Urban Area only if public water cannot be provided in a timely and reasonable manner. However, any property owner receiving permission to put a private system in the Urban Area must agree to connect to a public water system when public water is available. In all cases, you will need approval of the private well site from Public Health – Seattle & King County.

If you are proposing to obtain water from a public water system, then you need to obtain a certificate of water availability from the public water system. The certificate demonstrates that the public water system has water available to serve the new connection or connections being proposed. Sometimes a public water system is limited in its ability to provide water to new connections because of supply, water right or infrastructure limitations. In such cases, the water system may declare a moratorium on new connections and may not issue new certificates of water availability. Several water utilities in the county have declared moratoria over the years.

Public Water System Coordination Act

Chapter 70.116 RCW, the Public Water System Coordination Act, was used by King County in the past to establish four planning areas -- East King County, Skyway, South King County, and Vashon. King County, the Washington State Department of Health, and water utilities have developed a Coordinated Water System Plan (CWSP) for each of these four areas. The plans establish service areas, provide water demand forecasts, and discuss minimum water system design requirements. Water system plans prepared by individual water utilities, such as those listed in the table above, must be consistent with all applicable CWSPs. The CWSPs and their approving ordinances, and related plan review information, are available for inspection by the public by contacting the Chair of the Utilities Technical Review Committee at (206) 477-5387.

2. Sanitary Sewer Collection & Treatment

In general, public sewers are required in the urban area and prohibited in the rural area, where on-site wastewater treatment and disposal (septic) systems are used. Chapter 9: Services, Facilities and Utilities of the King County Comprehensive Plan and King County Code chapters 13.24, 28.84, and 28.86 provides policy guidance regarding public sewer facilities.

Local and Regional Wastewater Treatment Facilities

The wastewater collected by public sewers is conveyed to either a local treatment plant or one of King County's regional wastewater treatment plants. Local treatment plants include those operated by Duvall, Enumclaw, North Bend, Snoqualmie, Midway Sewer District, Lakehaven Utility District, Snoqualmie Pass Utility District, and Southwest Suburban Sewer District. In addition, King County operates the local treatment plant on Vashon Island and a local treatment plant in the City of Carnation.

King County provides regional wastewater conveyance and treatment at is three regional treatment plants, the West Point Treatment Plant in Seattle, South Treatment Plant in Renton, and the Brightwater Treatment Plant north of Woodinville, in unincorporated Snohomish County.

King County provides regional wastewater treatment to 17 cities and 17 local utilities. The county's Wastewater Treatment Division serves about 1.5 million people, including most urban areas of King County and parts of south Snohomish County and northeast Pierce County.

King County Regulatory Role in Wastewater Treatment

The Washington State Department of Ecology requires sewer utilities to prepare sewer comprehensive plans. King County reflects this state mandate by requiring that sewer utilities prepare sewer comprehensive plans if they are located in King County and discharge to King County's system or serve unincorporated areas. A new sewer comprehensive plan is required every six years. The sewer utilities required to plan are shown in the following table.

Sewer Utilities Required to Plan for King County

Algona, City of	North Bend, City of
Auburn, City of	Northshore Utility District
Bellevue, City of	Pacific, City of
Black Diamond, City of	Redmond, City of
Bothell, City of	Renton, City of
Carnation, City of	Ronald Wastewater District
Cedar River Water and Sewer District	Sammamish Plateau Water & Sewer
Coal Creek Utility District	Seattle, City of
Duvall, City of	Skykomish, City of
Highlands Sewer District	Skyway Water and Sewer District
Issaquah, City of	Snoqualmie, City of
Kent, City of	Snoqualmie Pass Utility District
Kirkland, City of	Soos Creek Water and Sewer District
Lake Forest Park, City of	Southwest Suburban Sewer District
Lakehaven Utility District	Stevens Pass Sewer District
Mercer Island, City of	Tukwila, City of
Midway Sewer District	Valley View Sewer District
Muckleshoot Tribe	Vashon Sewer District
NE Sammamish Sewer & Water District	Woodinville Water District

The King County approval process for sewer comprehensive plans consists of either one or two steps depending on whether the utility serves unincorporated areas or not. If service is provided to unincorporated areas, then the plan undergoes the following: (1) review of the comprehensive plan by the Utilities Technical Review Committee, and (2) approval by ordinance by the Metropolitan King County Council and King County Executive. If a sewer utility discharges to the King County conveyance and treatment system, but does not serve unincorporated King County, then the plan undergoes technical review by the Utilities Technical Review Committee and approval by the Director of the Department of Natural Resources and Parks. The plans and their approving ordinances, (if any) and related plan review information,

are available for inspection by the public by contacting the Chair of the Utilities Technical Review Committee.

Public Sewers and the King County Permitting Process

If your property is in unincorporated King County and you want to undertake development activity, you will need to obtain approval from the King County Department of Permitting and Environmental Review (DPER). DPER will coordinate review of applications for building permits, subdivisions, rezones, and lot-line adjustments and will require information demonstrating that sewer service is available to serve the property. If you are proposing to have an on-site wastewater treatment (septic) system, you will need to meet the minimum lot size, setback, and design requirements identified in the Code of the King County Board of Health – Title 13: On-Site Sewage.

If you are proposing to utilize public sewers, then you need to obtain a certificate of sewer availability from a sewer utility. The certificate demonstrates that the sewer utility has capacity available to serve the new development being proposed. Sometimes a sewer utility is limited in its ability to accept additional sewage flows because of capacity or treatment constraints. In such cases, the sewer utility may declare a moratorium on new sewer connections and may not issue new certificates of sewer availability.

3. Schools

King County does not own or operate school facilities. King County Code includes a method for school districts with territory in unincorporated King County to request the collection of an impact fee from new residential developments when the district is experiencing a lack of capacity due to growth. The district must adopt a six-year capital facilities plan that plans for new capacity and submit the plan to King County for adoption as a capital facilities component of the King County Comprehensive Plan. King County's School Technical Review Committee reviews each school district's capital facilities plan, enrollment projections, standard of service, the district's overall capacity over a six-year time frame to ensure consistency with the King County Comprehensive Plan, adopted community plans, and the district's calculation and rational for proposed impact fees.

School district capital facility plans are adopted annually by King County. Of the 20 districts in the County, 13 have plans currently adopted by the County. Since capital facilities plans are not mandatory for special districts under GMA, King County has no way of compelling a school district to prepare a plan unless they want a school impact fee. The Seattle, Mercer Island and Tukwila school districts do not have any unincorporated territory so they are not eligible for a school impact fee from King County. The Bellevue, Shoreline, Skykomish and Vashon school districts have territory in unincorporated King County but have adequate capacity in existing facilities and therefore are not eligible for impact fees and are not required to submit a plan to

King County.

In general, school districts obtain funds for new construction and improvements to existing facilities from voter-approved bonds. School districts may also qualify for state matching funds for new construction and for the renovation of capital facilities based on a formula that considers a number of factors, including the assessed valuation of the property within the particular school district. In addition, school districts have the authority to request one-year capital project levies and six year renovation and modernization levies, with voter approval. Operating funds come from the state for "basic education." Programs that are not funded by the state are funded through maintenance and operation levies.

For more information, please see the current adopted versions of the following plans:

Auburn School District No. 408 Capital Facilities Plan

Enumclaw School District No. 216 Capital Facilities Plan

Federal Way School District No. 210 Capital Facilities Plan

Fife School District No. 417 Capital Facilities Plan

Highline School District No. 401 Capital Facilities Plan

Issaquah School District No. 411 Capital Facilities Plan

Kent School District No. 415 Capital Facilities Plan

Lake Washington School District No. 414 Six-Year Capital Facilities Plan

Northshore School District No. 417 Capital Facilities Plan

Renton School District No. 403 Capital Facilities Plan

Riverview School District No. 407 Capital Facilities Plan

Snoqualmie Valley School District No. 410 Capital Facilities Plan

Tahoma School District No. 409 Capital Facilities Plan

4. Fire Protection

King County does not own or operate fire districts. Fire protection districts are responsible for delivering emergency services, including fire protection and emergency medical services countywide. Fire districts are required to plan consistent with the King County Comprehensive Plan and to use the King County Comprehensive Plan as a basis for determining future land use, housing, and other relevant elements of the plan for information to plan their future growth. Most of the fire protection districts project population growth based on King County projections from the Annual Growth Report. In addition, they use response time as the level of service

standard for judging when new facilities are needed. The majority of fire districts fund capital projects within their current year operating budget, or request bond issues for large capital projects.

Fire Districts and Fire Stations with service in unincorporated King County

Fire District Number:	Locally known as:
King County Fire Protection District No. 10 a. Station 74 b. Station 76 c. Station 78 d. Station 79 e. Station 86	Eastside Fire and Rescue – Issaquah
King County Fire Protection District No. 11 a. Station 18	North Highline Fire District
King County Fire Protection District No. 13 a. Station 55 b. Station 56 c. Station 57 d. Station 58 e. Station 59	Vashon Island Fire & Rescue
King County Fire Protection District No. 14	Kirkland
King County Fire Protection District No. 16	Bothell/Kenmore
King County Fire Protection District No. 20 a. Station 21 b. Station 22	Skyway Fire
King County Fire Protection District No. 24	Kent Fire
King County Fire Protection District No. 25	Renton Fire
King County Fire Protection District No. 27 a. Station 271	Fall City Fire
King County Fire Protection District No. 28 a. Station 2 b. Station 3	Enumclaw Fire
King County Fire Protection District No. 31	Auburn Valley Regional Fire
King County Fire Protection District No. 34 a. Station 13 b. Station 14 c. Station 18	Redmond Fire
King County Fire Protection District No. 36 a. Station 33 b. Station 35	Woodinville Fire & Rescue
King County Fire Protection District No. 37	Kent Fire
King County Fire Protection District No. 38 a. Station 88	North Bend, Eastside Fire and Rescue – Issaquah
King County Fire Protection District No. 39	South King Fire & Rescue

a. Station 61 b. Station 65	
King County Fire Protection District No. 40 a. Station 17	Renton Fire
King County Fire Protection District No. 43 a. Station 82 b. Station 84 c. Station 85	Maple Valley Fire
King County Fire Protection District No. 44 a. Station 92 b. Station 93 c. Station 94 d. Station 95 e. Station 96 f. Station 97 g. Station 98	Mountain View Fire & Rescue
King County Fire Protection District No. 45 a. Station 68 b. Station 69	Duval Fire
King County Fire Protection District No. 47 a. Station 88 b. Station 89	Kangley Palmer Fire-Ravensdale
King County Fire Protection District No. 50	Skykomish Fire – Covers Stevens Pass Also
King County Fire Protection District No. 51 a. Station 291	Snoqualmie Pass Fire Department

5. Libraries

Libraries in King County are maintained by the King County Library System (KCLS), which is not part of County government. KCLS serves residents in unincorporated areas and in annexed and contracting cities. KCLS also contracts with King County to provide services in the King County Jail, Youth Service Center, Cedar Hills Alcoholism Treatment Facility and Kent Regional Justice Center.

Long-term plans are addressed in the system's current Long Range Plan. At the heart of the plan is a distribution of library facilities and collections based on population projections of the King County Annual Growth Report, community profile and assigned roles for each library. The system of capital facilities owned and operated by the King County Library System consists of community libraries listed in the following table.

The program for library building and renovation is detailed in the KCLS Capital Plans and Facility Assessment Program. Call 425-369-3200 for more information.

King County Library System Facilities

Algona-Pacific	Lake Forest Park
Auburn	Lake Hills
Bellevue Regional	Maple Valley
Black Diamond	Mercer Island
Bothell Regional	Muckleshoot
Boulevard Park	Newcastle
Burien	Newport Way
Carnation	North Bend
Covington	Redmond Regional
Crossroads	Redmond Ridge
Des Moines	Renton
Duvall	Renton Highlands
Enumclaw	Richmond Beach
Fairwood	Sammamish
Fall City	Service Center
Federal Way Regional	Shoreline
Federal Way 320th	Skykomish
Foster	Skyway
Greenbridge	Snoqualmie
Issaquah	Southcenter
Kenmore	Valley View
Kent Regional	Vashon
Kingsgate	White Center
Kirkland	Woodinville
	Woodmont

6. Electric, Gas and Telecommunications

Electric, gas, and telecommunications facilities in King County are a mix of private and public ownership. They are subject to varying levels of regulatory oversight from local, state, and federal agencies. These facilities and services differ from other facilities and services contained in this technical appendix in that there is no requirement for a finance plan or for level of service standards. Finance plans are not required for private electric, gas, and telecommunications facilities that provide services to unincorporated King County.

Reference is made below to the utilities' current plans for resources or facilities. Resource plans are updated on a schedule mandated by the regulatory body such as the Washington Utilities and Transportation Commission or the Seattle City Council. Resource plans may also be called integrated resource plans, least-cost plans, or similar terms.

The inventories and maps of electric, gas, and most telecommunications facilities are limited to the major elements of the utility network and generally do not include the minor facilities that deliver the service to the end user.

Electric

Electric utilities in King County share what is described as an "integrated regional electric system." Regardless of ownership, all elements of the system are designed and operated to work in a complementary manner. The elements include transmission lines, substations and generation facilities. Current capital facilities plans and six-year finance plans are available from Bonneville Power Administration, Seattle City Light, Puget Sound Energy and the Tanner Electric Cooperative.

Natural Gas

Puget Sound Energy is the major supplier of natural gas to King County. The City of Enumclaw operates a local distribution system that serves local customers in unincorporated King County. For information on the Puget Sound distribution system and areas where natural gas service is and is not available, please contact Puget Sound Energy or the City of Enumclaw.

Telecommunications

Telecommunications services include both switched and dedicated voice, data, video, and other communication services delivered over the telephone and cable network on various mediums, including, but not limited to, wire, fiber optic, or radio wave. Either regulated or non-regulated companies may provide these services. Cable service includes communication, information and entertainment services delivered over the cable system whether those services are provided in video, voice or data form.

Telecommunication services follow growth and have capacity to match whatever growth occurs in King County. The telecommunications network is gradually being updated to fiber optic but the exact schedule and locations are not available.

King County

2016
King County Comprehensive Plan Update

TECHNICAL APPENDIX B

HOUSING

November 22, 2016

Technical Appendix B

Housing

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I. Introduction

Housing Needs Analysis

In 1994, King County adopted its Comprehensive Plan under the framework of the Washington State Growth Management Act and the King County Countywide Planning Policies (CPPs). Since that time, the Comprehensive Plan has guided King County's housing efforts through a variety of ways. The County exercises direct control over some measures such as development regulations in unincorporated areas. The County also provides direct funding for affordable housing efforts through the King County Housing and Community Development Program.

In addition to direct efforts, the County works in conjunction with many public, private and nonprofit entities to promote housing development and affordability. The County is a partner with most cities outside of Seattle through the Community Development Block Grant (CDBG) and HOME Investment Partnerships Program (HOME Program) Consortiums to allocate and administer affordable housing development funds. Recent efforts and strategies of the Consortium are detailed in the 2015-2019 Consolidated Housing and Community Development Plan (Consolidated Plan). The County also participates with most[1] cities, including Seattle, in the administration and allocation of Regional Affordable Housing Program (RAHP) funds.

In addition, the County participates with all cities in the Growth Management Planning Council (GMPC) to address housing affordability and planning, and partners with cities through subregional funding and planning groups including: A Regional Coalition for Housing (ARCH), the North King County Human Services Planners, the South King County Human Services Planners, and Sound Cities Association to plan for and provide affordable housing in those subregions.

This Housing Technical Appendix provides an assessment of the demographic and economic characteristics of persons and households in King County, the local housing stock, and its ability to serve the housing needs of County residents now and in future. This analysis provides the basis for policies in the Housing and Human Services Section of the Urban Communities Chapter of the King County Comprehensive Plan.

This analysis recognizes that most housing will be developed by the private sector and that the majority of housing development will occur within cities. Rural unincorporated areas are not anticipated to have a significant amount of housing development and therefore this analysis concentrates on housing development within the urban growth boundary. In addition, unincorporated urban areas will continue to be annexed to existing cities over the coming years. While the County maintains influence on housing development in these areas through

[1] All cities in King County are eligible to sign a RAHP Agreement with the County, but not all cities elect to do so. A majority of cities representing the most populated areas of King County do sign RAHP Agreements.

development regulations, the analysis anticipates that the magnitude of this influence on housing development will diminish due to annexations.

As a result, the County's role as a regional leader and administrator of Consortium efforts will become the County's primary mechanism to promote housing development and affordability. Therefore, this analysis provides significant focus on housing stock and demographics data for all of King County and for areas outside of Seattle (Consortium cities) to provide an integrated view, analysis and response to housing needs at a countywide level.

DATA SOURCES

This analysis relies upon a variety of data sources compiled at various times over the last three decades. Sometimes these data sources are not directly comparable but are similar enough that they can be used to identify trends.

The main data sources for this analysis are the 2010 U.S. Census, the American Community Survey (ACS) for 2007 – 2011 and 2013, and HUD Comprehensive Housing Affordability Study (CHAS) for 2008 - 2012 data. Data from the census is now limited to basic demographic data such as age, race, and ethnicity, household type and size, and housing tenure.

The five-year ACS survey data provides information on income, poverty, immigrant population, language spoken at home, housing cost burden, and other data that is no longer collected by the decennial census. Only the five-year ACS aggregation provides this information at the census tract level and for census-designated places smaller than 20,000 persons. Other sources for the analysis in this appendix are:

- The 1990 Decennial Census and the 2000 Decennial Census (for historical comparison);
- King County Buildable Lands Report;
- King County Assessor's data;
- Washington State Employment Security Department;
- United States Department of Housing and Urban Development;
- Dupre + Scott Apartment Advisors, Inc.;
- Puget Sound Regional Council;
- Northwest Multiple Listing Service; and
- Draft Area Plan on Aging for Seattle-King County, 2016-2019.

II. Definitions

A. Affordable Housing

Affordable Housing is defined by the Department of Housing and Urban Development as housing affordable at 30 percent or less of a household's monthly income. This is a general term that may include housing affordable to a wide range of income levels. There are some differences in how this is calculated for rental housing and ownership housing.

Affordable Rental Housing means a housing unit for which the monthly rent including basic utilities amount to 30 percent or less of a household's monthly income, and which matches or exceeds the size designated for the number of persons in the household.

Affordable Ownership Housing means a housing unit for which the monthly mortgage payment (principal and interest) and other costs including property taxes and if applicable, homeowners dues or insurance, amount to no more than 30 percent of the household income, and which matches or exceeds the size designated for the number of persons in the household.

Area Median Income (AMI) or "Median income" means annual household income for the Seattle-Bellevue, WA Metro Area as published on approximately an annual basis by the U.S. Department of Housing and Urban Development (HUD). The AMI includes adjustments in income level and affordable rent according to household size, and based on a presumed correspondence between household size and the size of the housing unit, and on the likelihood that larger households may have more than one wage-earner. "Area" means the Seattle-Bellevue HUD Metropolitan Fair Market Rent Area (HMFA) which in 2015 included King and Snohomish Counties. Median income is also reported by the annual American Community Survey.

Very low-income households are households earning 30 percent AMI or less for their household size.

Low-income households are households earning 31 percent to 50 percent AMI for their household size.

Moderate-income households are households earning 51 percent to 80 percent AMI for their household size.

Middle-income households are households earning 81 percent to 120 percent AMI for their household size.

Affordable rent or sales price assume that a household will generally need one less bedroom than the number of persons in the household, for example a two person household would need a one bedroom unit while a three person household needs a two bedroom unit. However, HUD

assumes a correspondence between household size and income and the size of the housing unit in setting maximum rents. In 2015 the assumptions were the following.

Studio Units	One person household
One bedroom Units	One and a half (1.5) person household
Two bedroom Units	Three person household
Three bedroom Units	Four and a half person household

For rental units, affordable housing costs typically assume inclusion of basic utilities. These assumptions are not consistent in all data used in this analysis and therefore some figures may not be directly comparable. However, it is anticipated that these differences are minor enough to allow for general comparisons and will not significantly affect the conclusions of this analysis.

Other Definitions

Workforce Housing is housing that is affordable to households with one or more workers. Creating workforce housing in a jurisdiction implies consideration of a range of income levels from 30 percent to 80 percent of AMI. There is a high need for workforce housing that is close to job centers and high capacity transit.

Universal Design is the design of products, buildings, and environments to be usable by all people, to the greatest extent possible, and which allows people to age in place in their home without the need for adaptation or specialized design. Universal design is a component of both sustainable development and healthy housing.

Sustainable Development seeks to balance urban growth with natural resource protection and energy efficiencies which help address climate change. Building location is central to sustainability and may also include general design, site planning (e.g. low-impact development practices), preservation of trees, construction and operational practices, water savings, energy efficiencies, materials selection, durability, enhanced indoor environmental quality, lower dependence on automobile transportation, and adaptability to all stages of life.

Healthy Housing is housing which protects all residents from exposure to harmful substances and environments, reduces the risk of injury, provides opportunities for daily physical activity, and assures access to healthy food and social connectivity. These goals can be achieved through building practices that promote health, land use patterns, transportation systems, open space and other amenities which result in healthy neighborhoods.

B. King County Consortium

Since the late 1970's, King County has provided housing planning and program administration on behalf of a Consortium of jurisdictions organized to receive federal Community Development Block Grant (CDBG) funds, HOME Investment Partnership Act (HOME) funds, and Emergency Solutions Grant (ESG) funds. The Consortium presently includes unincorporated King County and 36 municipal jurisdictions in King County.[2]

King County administers federal resources on behalf of the Consortium as well as state and local housing funds. The County works cooperatively with other jurisdictions to award funds through a competitive process to projects which address high priority needs and goals identified in the Consolidated Plan and related plans such the King County Strategic Plan, King County Countywide Planning Policies, VISION 2040, and Health and Human Services Transformation and the joint Transformation initiatives including Familiar Faces, Communities of Opportunity, Accountable Communities of Health and its subcommittees, and Best Starts for Kids Levy.

C. Subregions of the King County

For purposes of this analysis, much of the data has been aggregated to large subregions which, along with the City of Seattle, account for all King County. Outside of Seattle, most of the North, East Urban, and South Regions fall within the Urban Growth Area of King County, with the exception of Vashon which is included with the South Region, and parts of Union Hill/Novelty Hill, which is included in the East Urban Region. There are still unincorporated urban areas of King County, such as White Center, Skyway, Fairwood, and north and south Lakeland that fall within these urban regions. The remaining two regions, the Northeast Rural Cities and Rural Region, and the Southeast Region, include incorporated cities (such as Carnation, Snoqualmie, Covington and Enumclaw), rural areas, and at least one unincorporated area (East Renton Highlands) that straddles the urban growth boundary and contains both urban and rural parts. Cities such as Carnation, Snoqualmie, and Enumclaw have traditionally been called "rural cities". They are officially within the urban growth area of the County, but they are surrounded by rural areas.

For purposes of the King County Consortium Consolidated Housing and Community Development Plan (Consolidated Plan) King County is divided into three general subregions: North/East, South, and Seattle.

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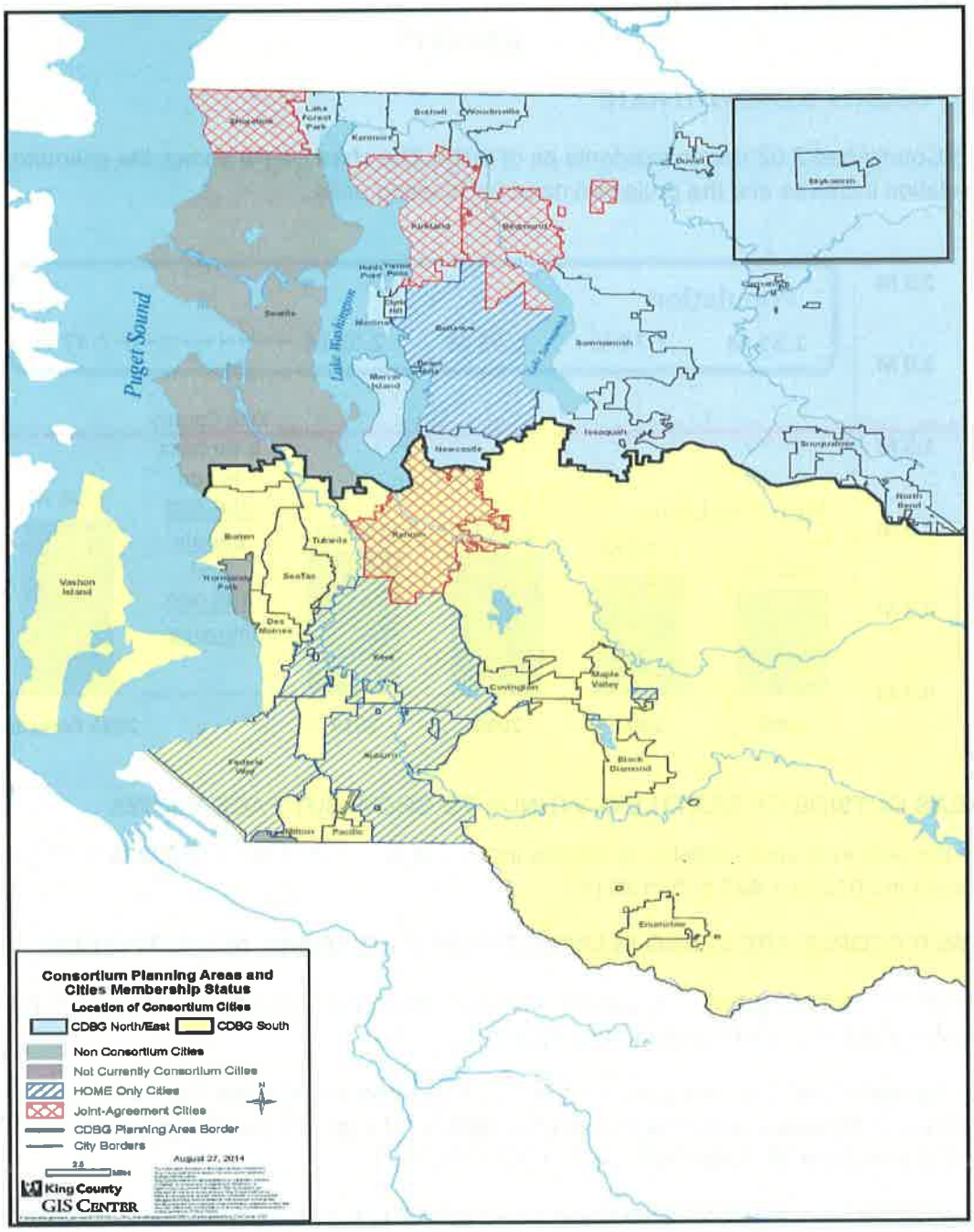
[2] The cities of Seattle, Bellevue, Kent, Federal Way, and Auburn do not participate in the CDBG Consortium because they receive their own CDBG funds. The cities of Bellevue, Kent, Federal Way, and Auburn do, however, participate in the HOME Consortium. Four cities, Kirkland, Redmond, Renton, and Shoreline are "Joint Agreement Cities" which qualify for their own CDBG funds, but choose to administer them jointly with King County. For more information about this programs, see the Consolidated Plan posted at the link below.
http://www.kingcounty.gov/socialservices/Housing/PlansAndReports/HCD_Plans/ConsolidatedPlan.aspx

There are several reasons for this particular regional division. One is that Consortium funding is apportioned to areas outside of Seattle, and CDBG funding, in particular, is generally allocated between the North/East regions of the County, and the South/Southeast regions of the County. The dividing line is roughly south of Newcastle and south of Issaquah. Another reason for this division is that the East Urban Region corresponds closely to the cities that belong to A Regional Coalition for Housing (ARCH).

Because ACS data is not available at the census-block level, and because census tracts often cross city boundaries, it has usually been more efficient to aggregate census and ACS data based on cities and census-designated places (CDPs) into these regions, rather than to aggregate it based on census tract data.

The map on the following page shows the subregions of the County used in the Consolidated Plan.

King County Consortium CDBG/HOME/ESG Planning Area



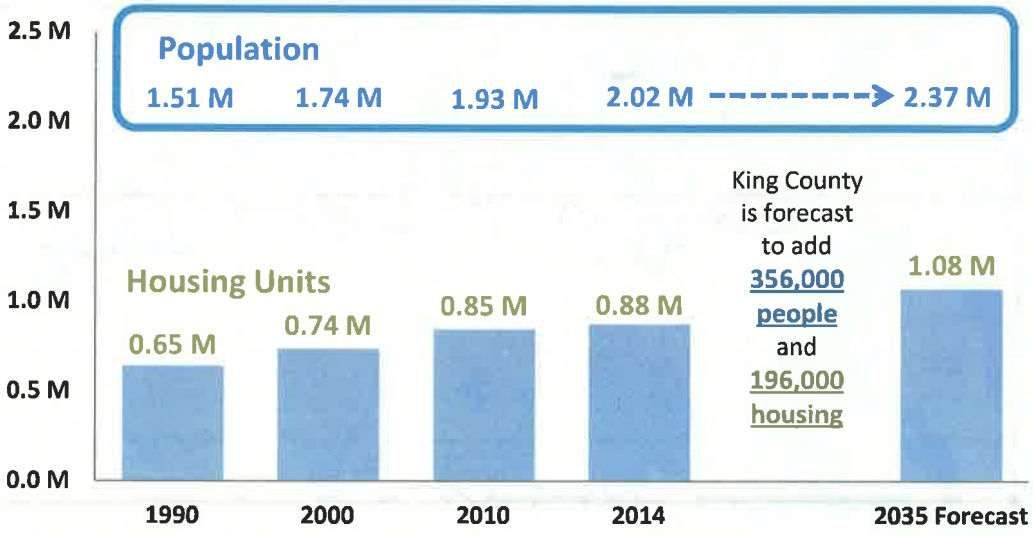
III. Characteristics of Households

A. Demographic Trends

GROWTH

KING COUNTY'S GROWTH RATE

King County had 2.02 million residents as of 2014. The chart below shows the estimated population increase and the projected need for housing units.



AREAS OUTSIDE OF SEATTLE CONTINUE TO GROW BUT PACE SLOWS

The population in areas outside of Seattle increased from 1,173,660 in 2000 to 1,322,589 persons in 2010 to 1,427,595 in 2014.

FEWER PEOPLE ARE LIVING IN UNINCORPORATED AREAS, MORE IN CITIES

Most of the county's growth has been in the cities, while the unincorporated areas of King County continue to shrink in size and population.

The number of residents living in unincorporated areas dropped more than seven percent during the 2000 – 2010 decade mainly due to annexations. The unincorporated population fell from 349,773 (2000) to 325,000 (2010) to 253,300 (2015).

A drop in the unincorporated population occurred in 2010 (post-census) and 2011-2013 when large annexations took effect in Burien (part of White Center), Kent (Panther Lake area) Kirkland (Finn-Hill and Juanita Kingsgate), Bellevue (Eastgate) and Bothell. This reduced the unincorporated population and added that population to the cities. With this change, residents of

the unincorporated areas are about 13 percent of the County's total population. With the recent annexations included, 87 percent of King County residents now live in cities.

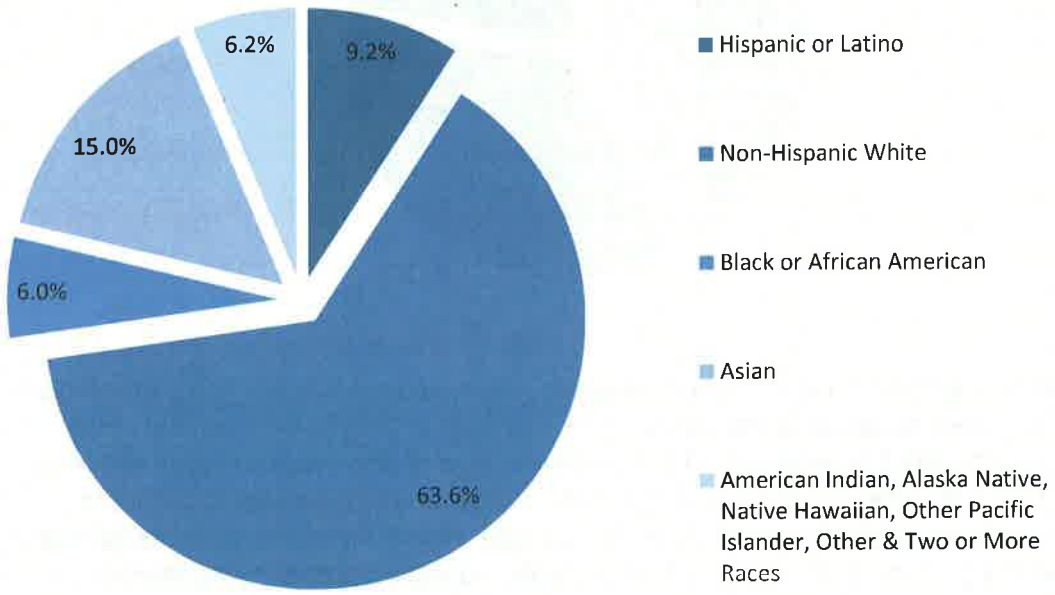
Because King County administers funds for affordable and homeless housing and for community development throughout most of the cities of King County, as well as for the unincorporated areas of the County, this appendix covers demographic, income and housing trends for all of King County with a particular emphasis on King County outside Seattle.

RACE and ETHNICITY

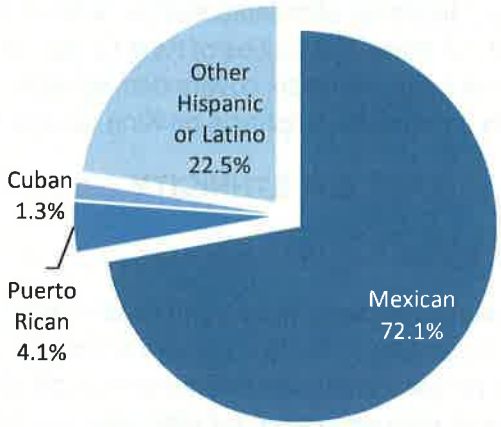
DIVERSITY HAS INCREASED

In 2000, 73.4 percent of King County residents were non-Hispanic white. By 2010, this figure had decreased to 64.8 percent. In other words, 35.2 percent of the population were "persons of color" defined as those who are Hispanic-Latino or non-white or both. The group with the greatest growth was the Hispanic/Latino population (of any race) which rose to 9.2 percent of the population. Asian population rose from under 11 percent to 15 percent.

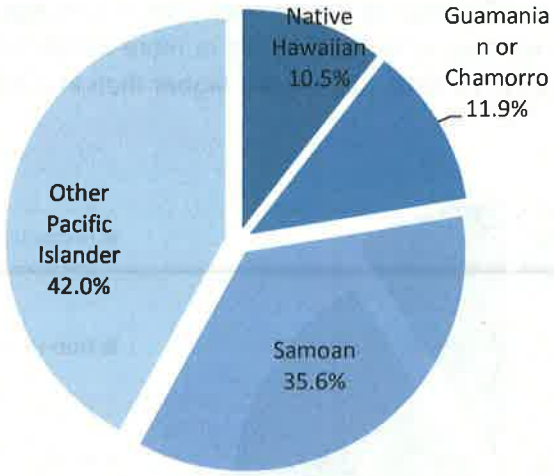
The percentage of non-Hispanic black residents rose to 6.2 percent. The percentage of Native American residents remained similar at 0.7 percent. The percentage of Hawaiian and Pacific Islander residents is 0.7 percent. Residents of two or more races, but non-Hispanic, made up 4.1 percent of the population in 2010, just slightly higher than in 2000.



Hispanic and Latino Sub-Groups in King County, outside of Seattle



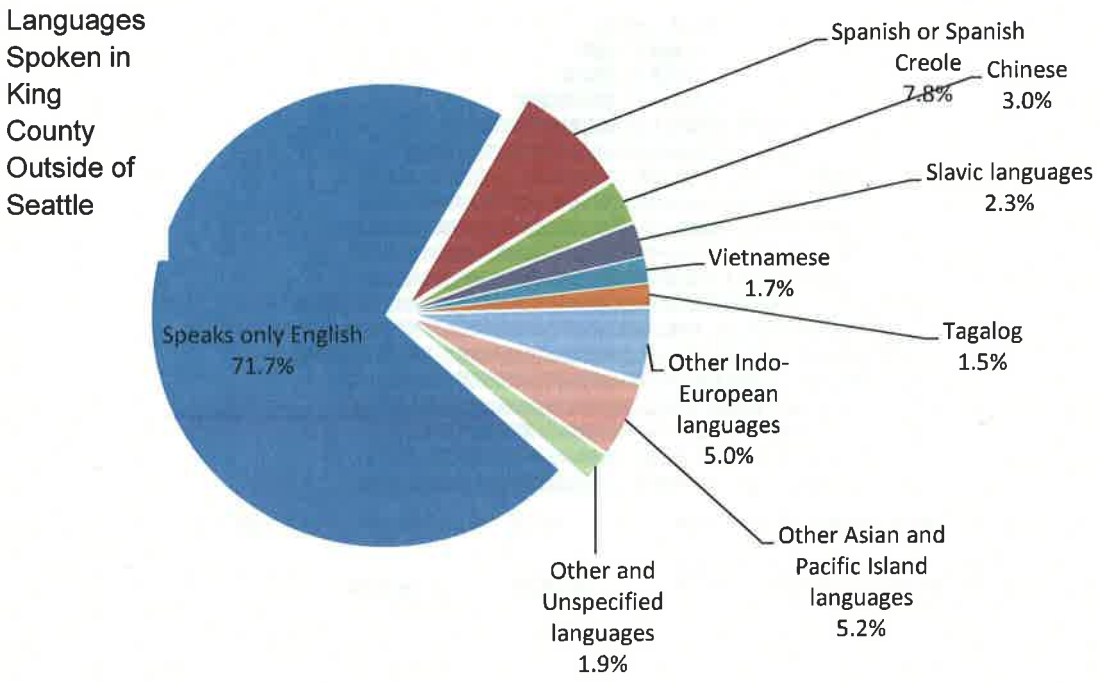
Pacific Islander Sub-Groups in King County, outside of Seattle



In areas outside of Seattle, the increase in diversity was more pronounced. The percentage of Non-Hispanic White residents decreased from 76.1 percent in 2000 to 64.1 percent of the population in 2010 to 62.5 percent in 2013. The percentage of Non-Hispanic Black residents increased from 3.9 percent in 2000, to 5.2 percent in 2010, and to 6 percent in 2013. The percentage of Asian residents increased to 15.5 percent. Native American residents decreased slightly from 0.9 percent to 0.7 percent of the population outside Seattle. Pacific Islands account for 0.9 percent of the population, 4.0 percent are mixed race and 0.2 percent are of "other race". Together those who identified as American Indians, Pacific Islanders, "other races" or mixed races (but non-Hispanic) were 6.4 percent of the population outside of Seattle.

MAJORITY OF GROWTH IN KING COUNTY IS FROM IMMIGRATION

More of King County's growth since 2000 has been from foreign-born immigrants. The pie figure below shows most the languages spoken in King County.

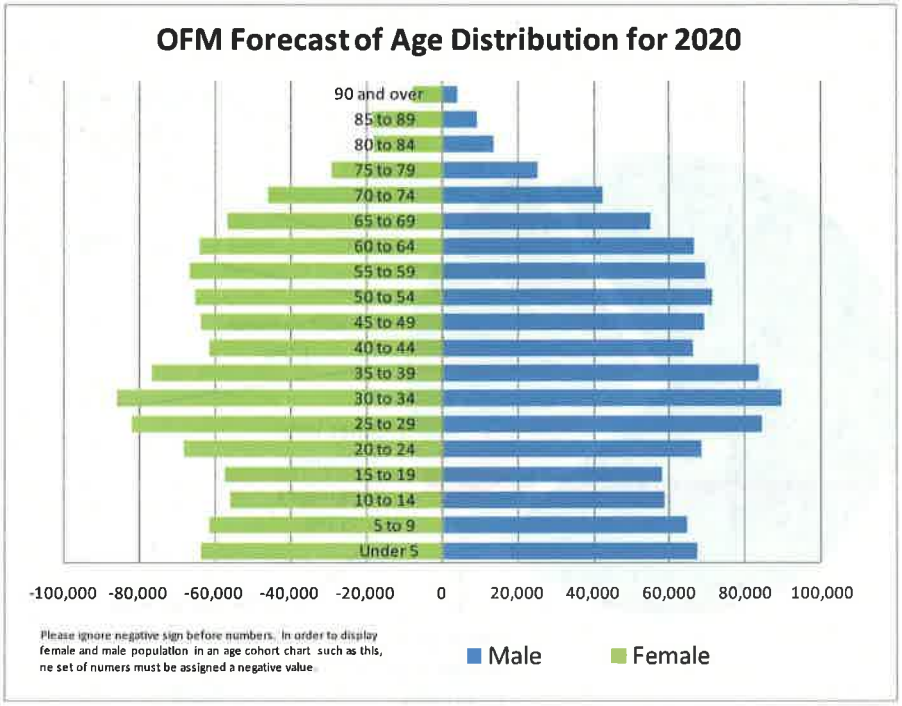


AGE

MEDIAN AGE IS OLDER COUNTYWIDE, SOUTH KING COUNTY IS RELATIVELY YOUNG

The median age in the County, from the 2010 census, was 37.1 years compared to 35.7 years in 2000. Women's median age is 1.6 years older than men's. The U.S. median age is just slightly higher at 37.2 years.

As a comparison of these two age-cohort charts shows, the relatively large age groups from 25 to 60 are moving upwards in age, increasing the 55 + population, while the youth and teen populations remain relatively stable.



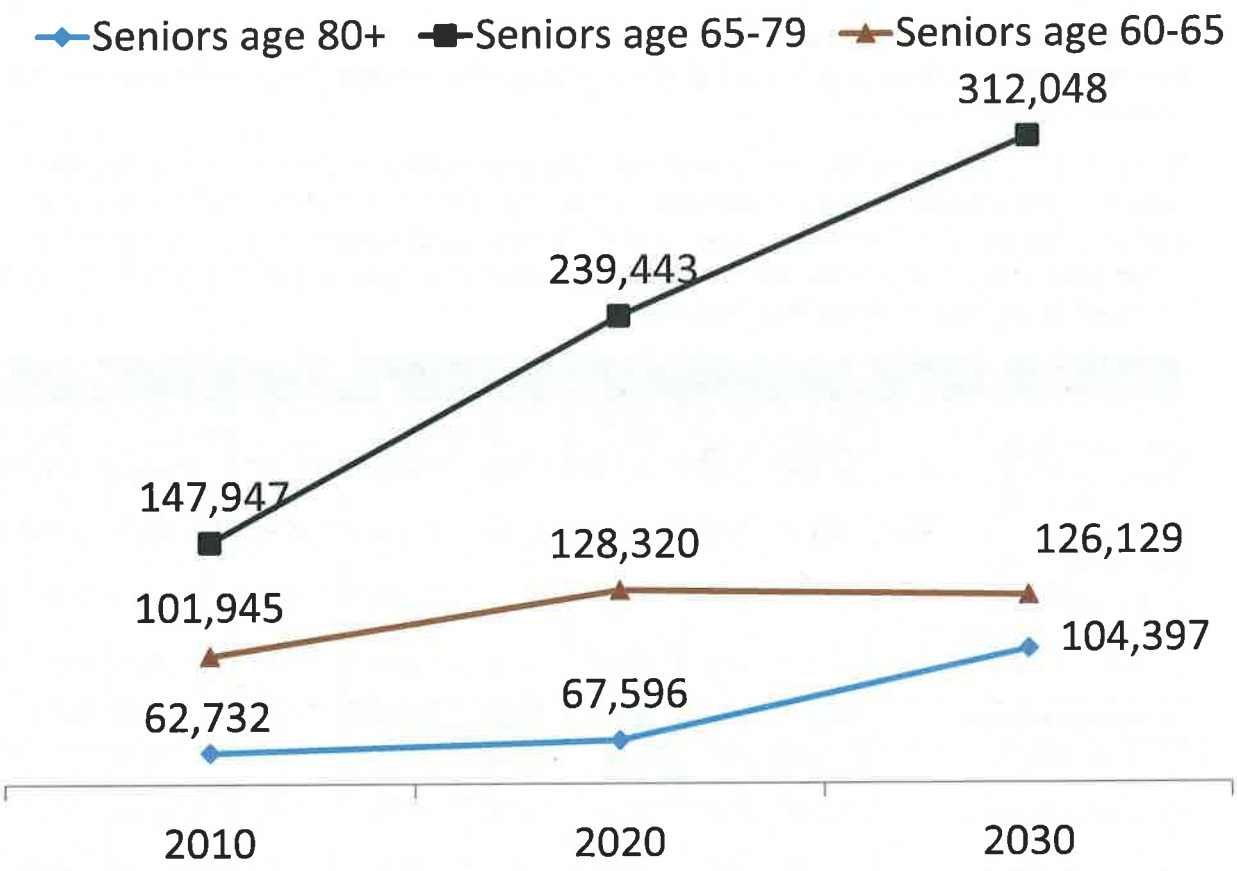
The Office of Financial Management projections depend on significant in-migration in the 20 - 35 year old age group – more so than would be expected solely from the aging of that smaller cohort. Given the number of young adults who come to King County for study and jobs, this may be a realistic assumption.

SENIOR POPULATION WILL GROW SIGNIFICANTLY IN COMING DECADE

Even after accounting for a generous amount of out-migration of older adults, there is likely to be a large increase in the population of adults over 65 years of age in King County in the next decade. Depending on the level of out-migration, this increase could be as high as 150,000 or more as the baby boomers (born from 1945 – 1964) continue to age. The end of the baby boom generation will turn 65 in 2030.

Taken together King County is likely to see the addition of over 150,000 seniors in the next 15 years with the largest cohort over the age of 80. This increased number means there is a high need to increase the housing stock for seniors in King County.

Increase in Senior Population Ages 65-79



NEARLY HALF OF SENIORS LIVE ALONE

48 percent of senior households are single person households. 41 percent are married couples who may or may not have children or others living with them. Eight percent of seniors live with other family members but with no spouse, while three percent of seniors live with an unrelated (non-family) person. It appears that the senior population - those over 65 years of age - is spread fairly evenly between Seattle and the suburban and rural areas.

HOUSEHOLD TYPES

NON-FAMILY[3] HOUSEHOLDS CONTINUE TO INCREASE

Continuing the trends of the last few decades, the 2010 census showed that the number of non-family households have increased, reaching 41.5 percent of all county households compared to 35.5 percent in 1980. Non-family households include single persons and unrelated individuals living together.

While numerically family households have increased by over 41,000 (just under ten percent), they have again declined as a percent of all King County households. They now represent 58.5 percent of all households.

Since 1980 the number of married couples with their own children under 18 years of age have declined from 25 percent of all households, to just 20 percent. Since 2000 there has been no change in the percent of married couples without children, and a small decline in the percent of single parent households. However, there has been a notable rise in the number and percent of extended family households without children.

Type of Household (HH)	1980		1990		2000		2010	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Family Households*	**320,707**	**64.5%**	**378,290**	**61.4%**	**419,959**	**59.1%**	**461,510**	**58.5%**
Married Couples with own Children less than 18 years old	125,091	25.2%	139,346	22.6%	150,574	21.2%	158,646	20.1%
Married Couples, no own Children less than 18 years old	140,724	28.3%	164,698	26.7%	179,194	25.2%	198,845	25.2%
Single-Parent Households with own Children less than 18 years old	33,057	6.6%	45,894	7.5%	51,323	7.2%	54,861	7.0%
Other Family Households*	21,835	4.4%	28,352	4.6%	38,868	5.5%	49,158	6.2%
Non-Family Households*	**176,556**	**35.5%**	**237,502**	**38.6%**	**290,957**	**40.9%**	**327,722**	**41.5%**
Single Person, Male	61,638	12.4%	81,170	13.2%	102,143	14.4%	115,616	14.6%
Single Person, Female	76,900	15.5%	98,429	16.0%	115,020	16.2%	129,083	16.4%
Other Unrelated Person Households	38,018	7.6%	57,903	9.4%	73,794	10.4%	83,023	10.5%
King County Total Households	**497,263**	**100.0%**	**615,792**	**100.0%**	**710,916**	**100.0%**	**789,232**	**100.0%**

FAMILY HOUSEHOLDS HOLD STEADY

Family households remain over two-thirds of King County households outside of Seattle.

[3] The Census defines families as two or more related persons living in the same household. Non-family households are all other occupied households, and include single persons living alone.

King County Outside Seattle	1990	Pct of all 1990 HH	2000	Pct of all 2000 HH	2010	Pct of all 2010 HH
Family Households	**265,861**	**70.1%**	**306,569**	**67.8%**	**339,820**	**67.2%**
Married with Own Children < 18	107,704	28.4%	118,225	26.1%	121,611	24.0%
Married Without Own Children <18	111,494	29.4%	126,895	28.0%	143,358	28.3%
Single Parents	30,698	8.1%	37,362	8.3%	40,658	8.0%
Other Families	15,965	4.2%	24,077	5.3%	34,193	6.8%
Non Family Households	**113,769**	**30.0%**	**145,868**	**32.2%**	**165,902**	**32.8%**
Single Person Households					127,645	25.2%
Other non-Family Households					38,257	7.6%
Total KC Households Outside Seattle	**379,090**	**100.0%**	**452,417**	**100.0%**	**505,722**	**100.0%**

SMALL HOUSEHOLDS CONTINUE TO BE THE NORM THROUGHOUT THE COUNTY

As was the case in 2000, one and two-person households represent 64 percent of all County households. One-third of all households, both countywide and in Seattle, are two-person households.

However, over 41 percent of Seattle households are single-person households, while in areas outside of Seattle just 25 percent of the households are single-person households.

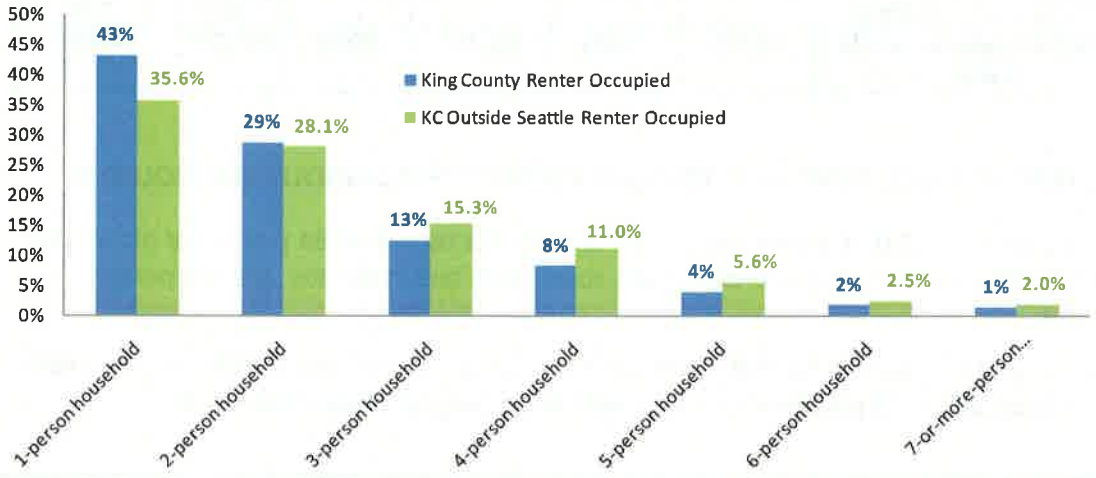
	King County, Washington				Seattle city, Washington				KC Outside Seattle			
	Owner Occupied Units	Renter Occupied Units	Both Renter and Owner	Percent of All Units	Owner Occupied Units	Renter Occupied Units	Both Renter and Owner	Percent of All Units	Owner Occupied Units	Renter Occupied Units	Both Renter and Owner	Percent of All Units
1-person household	105,491	139,208	244,699	31.0%	40,208	76,846	117,054	41.3%	65,283	62,362	127,645	25.2%
2-person household	168,683	92,793	261,476	33.1%	50,877	43,559	94,436	33.3%	117,806	49,234	167,040	33.0%
3-person household	78,579	40,488	119,067	15.1%	20,874	13,597	34,471	12.2%	57,705	26,891	84,596	16.7%
4-person household	72,514	26,723	99,237	12.6%	16,748	7,357	24,105	8.5%	55,766	19,366	75,132	14.9%
5-person household	25,745	12,860	38,605	4.9%	4,861	3,091	7,952	2.8%	20,884	9,769	30,653	6.1%
6-person household	9,352	5,727	15,079	1.9%	1,556	1,415	2,971	1.0%	7,796	4,312	12,108	2.4%
7-or-more-person household	6,354	4,715	11,069	1.4%	1,238	1,283	2,521	0.9%	5,116	3,432	8,548	1.7%
Total:	466,718	322,514	789,232	100.0%	136,362	147,148	283,510	100.0%	330,356	175,366	505,722	100.0%

RENTER HOUSEHOLDS ARE GENERALLY SMALL HOUSEHOLDS

43 percent of renters live in a single person household. Among all King County renter households, 72 percent are one or two person households.

The older we get the more likely we are to live alone, especially if we are renters. 77 percent of senior renters live by themselves, while 38 percent of senior homeowners live alone.

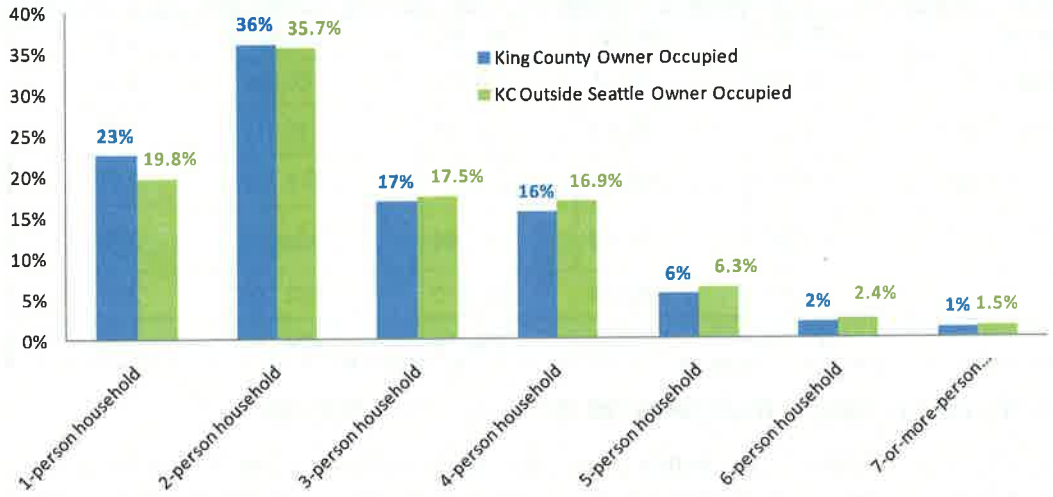
Distribution of Renters by Size of Household: 2010



OWNERSHIP HOUSEHOLDS ARE SLIGHTLY LARGER

59 percent of homeowner households are also one or two person households. However, only about 23 percent of homeowners live alone. About 91 percent of all homeowner households in King County consist of four persons or fewer, while nine percent are larger households.

Distribution of Homeowners by Size of Household: 2010



OUTSIDE SEATTLE, 10 PERCENT OF HOUSEHOLDS ARE FIVE OR MORE PERSONS

Although a significant majority of households in areas outside of Seattle are one and two-person households, larger households are not uncommon. 44 percent of all households outside Seattle have three or more persons, while ten percent of the households – both renter and owner - have five or more persons.

Among renters, 4.5 percent of households outside Seattle are six - or seven-person households, while among owner households about 3.9 percent have six or seven members.

AVERAGE HOUSEHOLD SIZE

Average household size in King County has remained stable from 1990 through 2010 at approximately 2.4 persons per household. An anticipated decrease in household size has not occurred. Households were smallest in Seattle and Kirkland. The table below shows the pattern of household sizes which tend to be larger in the less urbanized areas to the east and southeast.

Sub-Region	Total Population, 2010	Total Housing Units, 2010	Occupied Housing Units, 2010	Total Population in Households, 2010	Average Persons Per Occupied Housing Unit, 2010
East Urban Region	460,931	199,067	184,305	457,671	2.48
North Urban Region	65,605	28,055	26,585	64,097	2.41
NE Cities and Rural Areas	85,613	32,624	30,719	85,311	2.78
South Urban and Vashon	586,055	235,336	219,531	579,798	2.64
Southeast Cities and Rural Areas	124,385	47,200	44,664	124,011	2.78
Seattle	608,660	308,516	283,510	583,735	2.06
King County	1,931,249	851,261	789,232	1,894,118	2.40

GROWTH RATE OF ELDERLY HOUSEHOLDS IS LIKELY TO ACCELERATE

The movement of older adults into the senior population will rise dramatically during the coming decade. It is likely this aging group of "baby boomers" will add at least 115,000 to the population of seniors living in King County by 2020, and as many as 200,000 by 2025.

Many elderly are living longer. In King County, the population over 85 increased by 38 percent during the 2000 to 2010 decade, following a rise of 44 percent in the 1990s.

Senior households have considerably less income than the average county household. 61 percent of King County households headed by an adult over 65 years of age earned 80 percent of median income or less.

THE PERCENTAGE OF RESIDENTS WITH A DISABILITY MAY GROW AS SENIORS INCREASE

34.5 percent of those over 64 years reported having some type of disability. This is lower than the nearly 36 percent of seniors reporting a disability in 2010. However, as the number and proportion of older seniors grow, the proportion of residents with a disability is likely to increase.

Just under nine percent of residents over the age of 64 had a self-care disability. This percentage has been virtually unchanged since 1990. A self-care disability is a physical, mental or emotional condition, lasting six months or more that causes a person to have difficulty dressing, bathing or getting around the home.

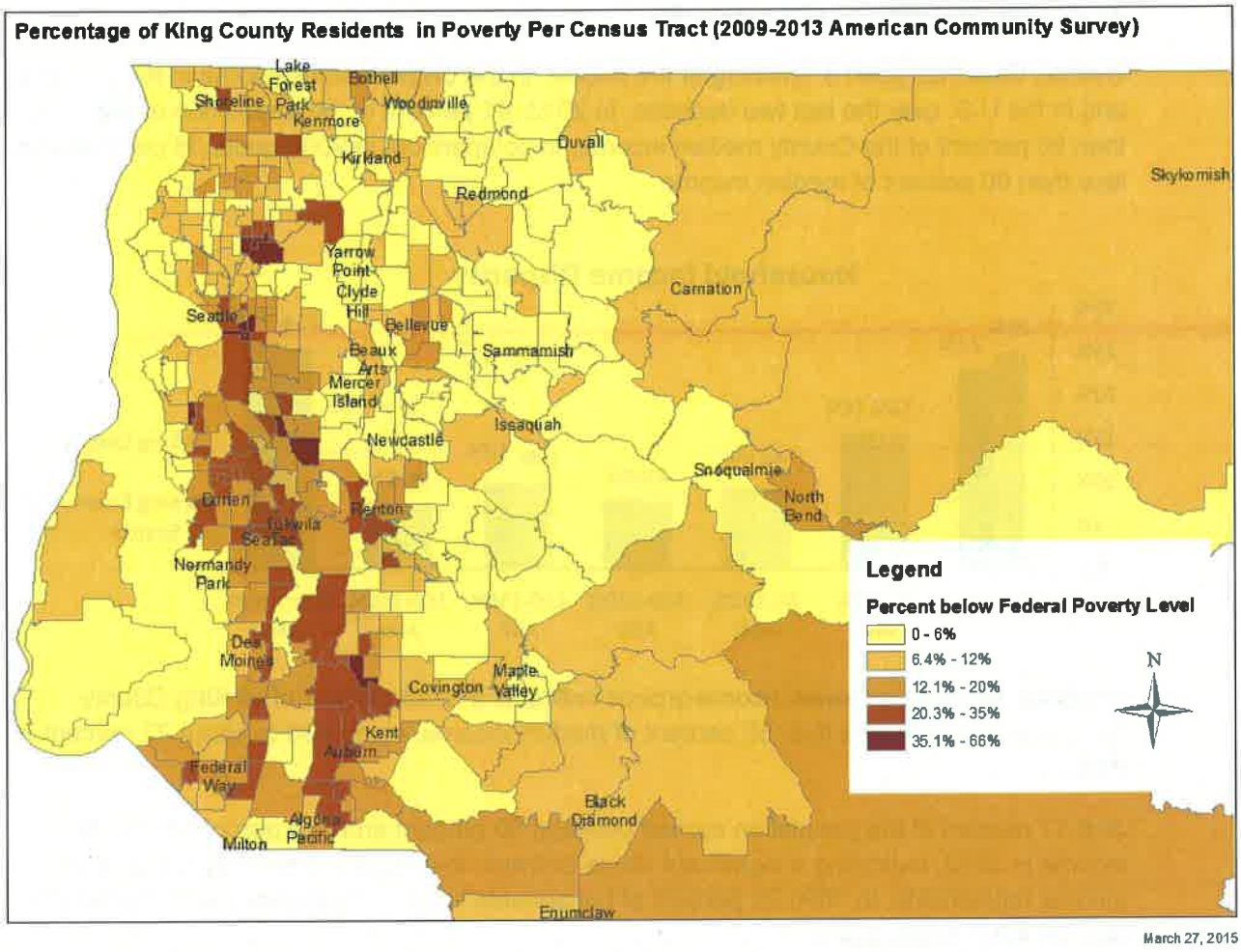
B. Household Income Trends

HUD Area Median Family Income: Median family income calculated by HUD based upon family of four in 2014 was $86,600.

100% AMI=$86,600
80% AMI=$69,400
50% AMI=$43,400
30% AMI=$26,040

HOUSEHOLDS IN POVERTY HAVE INCREASED COUNTYWIDE

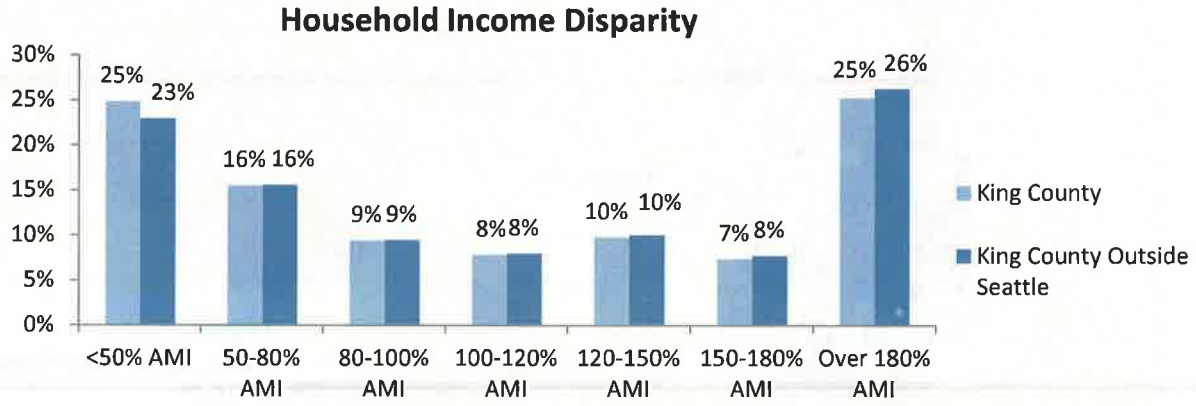
The number of persons in poverty increased from 9.7 percent to 12.4 percent countywide between 2009 and 2014. In 2014, nearly 257,916 persons lived in poverty within King County, up from 186,000 in 2009. 36 percent of households headed by a single mother with children under five years of age were poor. The map below shows census tracts with high poverty rates.



Whatever one's household income, living in an area of the County with lower incomes and higher poverty rates can limit a household's opportunity and raise questions of equity of services. There is often pressure on schools, social services, and governmental services in low-income areas, and less access to well-paying jobs or to frequent public transportation service.

THERE ARE FEWER MIDDLE INCOME HOUSEHOLDS AND MORE HOUSEHOLDS THAT ARE LOW INCOME OR HIGH INCOME

Overall, there has been a "thinning of the middle" in the distribution of income in King County and in the U.S. over the last two decades. In 2013, 41 percent of the population earned less than 80 percent of the County median income. In comparison, in 2000 about 38 percent earned less than 80 percent of median income.



A breakdown of these lower income groups indicates that 25 percent of all King County households earned less than 50 percent of median income, compared to about 22 percent in 2000.

Just 17 percent of the population earned between 80 percent and 120 percent of median income in 2013, indicating a significant divide between low income households and upper income households. In 1990 22 percent of households fell into this group, while in 2000, 20 percent were in this group.

This growing divergence in income is a national trend that has been occurring since the late 1970s.[4] The common perception that most U.S. households are "middle" (moderate, median, or high median) income does not appear to be the case.

[4] See Timothy Noah, *The Great Divergence,* Slate (online magazine), November, 2010.

SENIOR HOUSEHOLDS HAVE LOWER INCOMES THAN THE GENERAL POPULATION

In 2013 the median income for all senior households (those headed by a householder 65 years of age or older) was $43,500. This means that half of all senior households earned that amount or less. This is less than two-thirds of the median income for all households in King County. 41 percent of King County senior households had less than $35,000 income per year (50 - 60 percent AMI).

- At $35,000 a household could afford about $875 per month in total housing costs.
- The 21.5 percent of senior households who earn less than 30 percent of median income (under $20,500) could afford less than $512 per month in total housing costs.

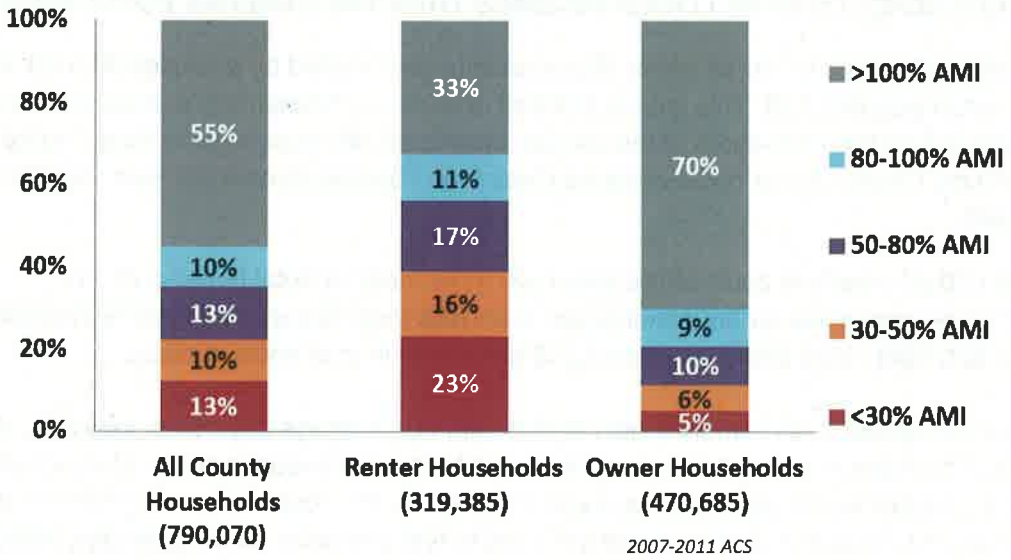
Although some seniors may own their own homes with no mortgage payments, they may still find it difficult to manage property taxes, utilities, and home maintenance costs. They are also likely to have higher health costs than younger households. For those who rent, incomes at or below 50 percent of median income make it difficult to find adequate housing and pay rising health care costs.

THE POPULATION OVER 65 YEARS OF AGE WILL GROW BY UP TO 200,000 PERSONS BY 2030, MORE THAN DOUBLING THE CURRENT NUMBER OF SENIORS

The population of seniors is projected to grow by about 115,000 by 2020 and by another 55,000 to 80,000 by 2025. Assuming that the income distribution remains roughly the same, by 2025 - 2030 there is likely to be an additional 80,000 seniors (about 40 percent of 200,000 new seniors) whose income will make it difficult to meet their housing needs without assistance. This growing segment of the population will also have a significant impact on the type and size of housing that will be needed. Housing units and neighborhoods that are universally-designed and accessible will make it easier for seniors to "age in place" or to find housing that meets their changing needs.

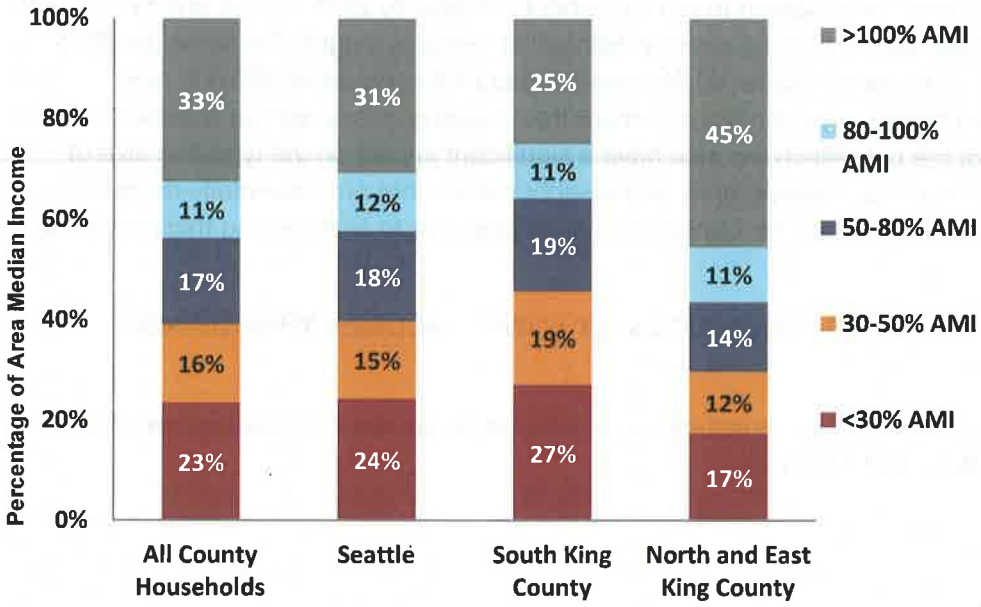
RENTER HOUSEHOLDS HAVE SIGNIFICANTLY LOWER INCOMES THAN OWNER HOUSEHOLDS

About 60 percent of King County households own a home, while about 40 percent are renters according to the 2007 - 2011 ACS data.



As shown in the graph above, households in lower income categories are more likely to rent than own homes.

RENTER HOUSEHOLDS INCOMES



The King County median income was approximately $86,600 in 2014. Half of all renters make less than 60 percent of the County median income, making it difficult for them to meet their housing expense.

While there are many fewer homeowners in the lowest income categories, 30 percent of those making half of median income or less, do own a home. They constitute about eight percent of all

households in the County. Many of these may be senior householders who own their homes but have limited income with which to pay property taxes and home maintenance expenses.

INCOME AND TENURE IN KING COUNTY OUTSIDE SEATTLE

Median income is higher in King County outside of Seattle than in the City of Seattle. Median homeowner income is slightly lower in King County outside of Seattle than in Seattle.

Nearly two-thirds of households in King County outside Seattle are homeowners, and one-third of households are renters. Homeownership outside Seattle is considerably higher than the homeownership rate in Seattle.

In Seattle, renter households are just over half of all households. As with King County as a whole, renters outside of Seattle are more likely to earn less than 80 percent of median income. About 60 percent of those renters earn 80 percent of median income or less. About 40 percent earn less than 50 percent of median income.

IMPLICATIONS OF INCOME TRENDS:

Many King County households still struggle to meet housing costs, particularly if they earn 50 percent of median income or less. There is an insufficient quantity of housing (either rental or ownership) that is affordable to the lower income groups.

The growing disparity between upper income households and lower income households poses particular challenges for the housing market.

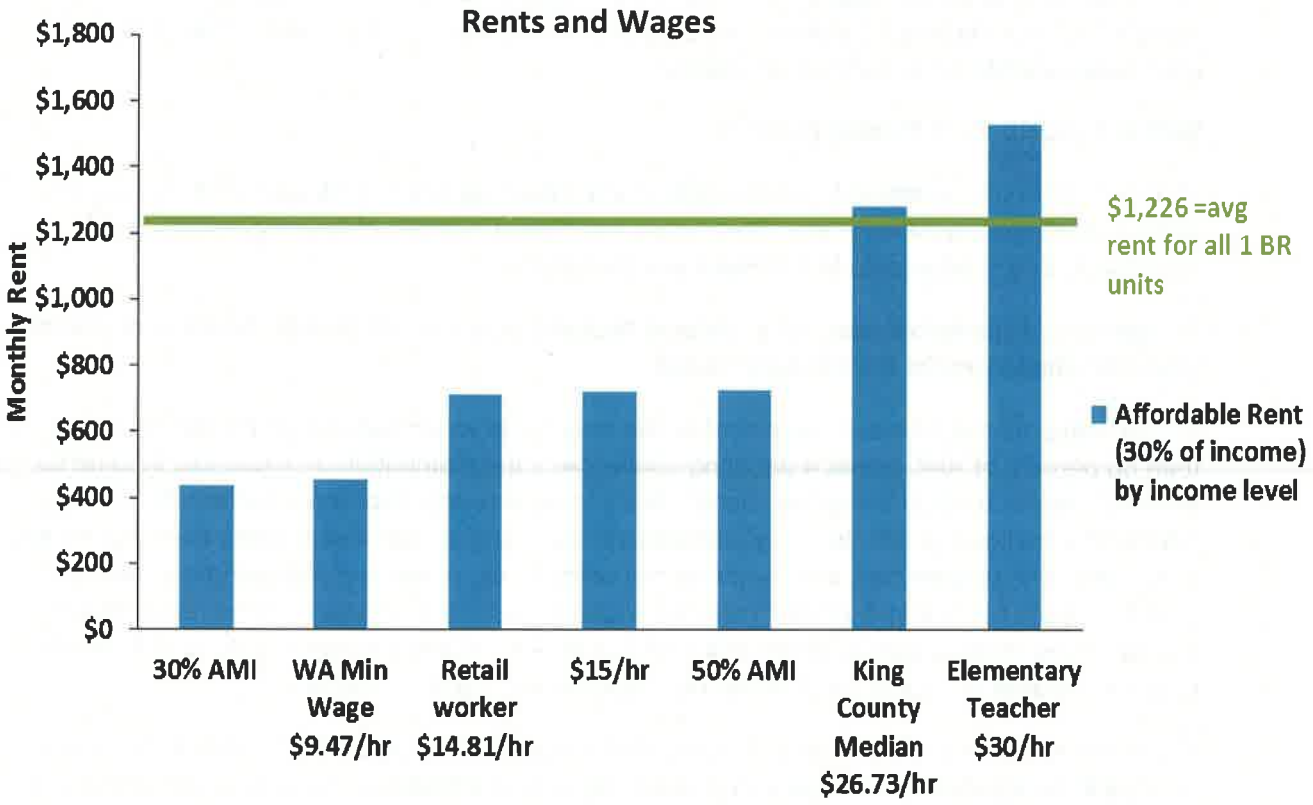
The growing number of senior households, the majority of whom currently have incomes less than 80 percent of AMI, poses a daunting challenge. If the distribution of household income for seniors remains roughly the same, there is likely to be a severe shortage of affordable rental housing for that group. Efforts to support seniors remaining in their own homes, such as offering assistance with property tax, maintenance and utility taxes, public and designing homes and neighborhoods for "aging in place," could help take some of the pressure off the rental housing market. Nevertheless, many seniors will continue to need affordable rental units, and they will need convenient access to health and social services and grocery stores.

Since the economy in King County is strong compared to some parts of the country, there is unlikely to be significant out-migration to other regions, and King County is likely to continue to experience growth in immigrants, especially those with technical job skills. Building or rehabilitating sufficient housing with easy access to public transportation and/or close to job centers will help prevent greater pressure on an already over-burdened road system, and help reduce the negative environmental impacts of more cars on the road.

IV. Housing Development Trends

The 1990s was a decade of strong growth in the economy in King County with employment at 1.15 million in 2000. The 1990s were followed by a decade with two recessions. Job growth leveled off, and the employment high in 2008 was barely above the 2000 level. In the last three years, from 2012 to mid-2015, King County has gained 120,000 jobs, or 40,000 added jobs per year, a rate of growth much higher than King County's long-term average.

By 2010, due to the effects of the 2007 – 2009 recessions King County had lost 4.5 percent of the jobs it had in 2000. By 2015, with the economic recovery, jobs in King County have increased to 1.3 million.



From 2000 to 2010, the number of households increased significantly in each of the subregions as demonstrated in the table below.

	Total Pop in 2010	Total Housing Units, 2010	Households 2000*	Households 2010	2010 Household by Three Regions	Percent Change in Households Since 2000	Covered Jobs in 2000	Covered Jobs in 2010	Covered Jobs 2010 by Three Regions	Percent Change in Jobs Since 2000	Number of Jobs Per Household in 2010
SEATTLE	608,660	308,516	296,200	283,510	310,095	4.7%	532,500	462,180	480,327	-9.8%	1.6
NORTH URBAN REGION	65,605	28,055		26,585				18,147			0.7
EAST URBAN REGION	460,594	199,067	184,150	184,305	215,024	16.8%	304,000	297,181	314,882	3.6%	1.6
NORTHEAST RURAL CITIES and NE Rural Area	85,951	32,624		30,719				17,701			0.6
SOUTH URBAN REGION	585,717	235,336	230,550	219,531	264,195	14.6%	314,600	283,982	304,420	-3.2%	1.3
SOUTHEAST Cities and SE Rural Area	124,723	47,200		44,664				20,438			0.5
KING COUNTY TOTAL	**1,931,249**	**851,261**	**710,900**	**789,232**		**11.0%**	**1,151,100**	**1,099,639**	**1,099,629**	**-4.5%**	**1.4**
TOTAL KC OUTSIDE SEATTLE	**1,322,589**	**542,745**	**452,401**	**505,722**		**11.8%**	**658,340**	**637,449**		**-3.2%**	1.3

*Data from Census 2000 was aggregated into four larger sub-regions: SeaShore, Eastside, South, and Rural. For rough comparison purposes with 2010, Seashore corresponds to Seattle and the North Urban Region; Eastside and half of the Rural region corresponds to East and Northeast regions, South and half of the Rural region corresponds to South and Southeast Regions. Thus for comparison purposes, the four 2000 sub-regions and the six 2010 sub-regions are each combined into three roughly comparable larger regions, indicated by the shading.

The final column in the table shows the number of jobs per household (or jobs/housing balance) in each of the six subregions for the 2010 Census. For King County as a whole, there were 1.4 jobs per household and 1.3 jobs per housing unit. This is considerably lower than the 1.5 jobs per housing unit in 1990 and the 1.6 jobs per housing unit in 2000.

IMPLICATIONS OF LOCATION TRENDS:

Growth is occurring in urbanized areas, primarily in cities and increasingly often in urban centers. To adequately accommodate this growth, a variety of urban housing types is required. These include single family infill, accessory dwelling units, mixed-use buildings and multi-family construction. Transit-oriented development is an important way to link housing with transit services to improve mobility.

Measures to support infill and transit-oriented housing can help accommodate development more efficiently. Examples of these measures could include mandatory and voluntary requirements, density bonuses, accessory dwelling unit allowances, and micro housing.

V. Characteristics and Use of the Housing Stock

A. Age and Condition of the Housing Stock

HALF OF THE HOUSING STOCK WAS BUILT OVER 45 YEARS AGO

HUD evaluates the condition of housing stock based upon age and four conditions: 1.) Lack of kitchen, 2.) Lack of bathroom, 3.) Overcrowding as defined by more than 1.5 person per room, and 4.) Cost burden. This criterion for assessing the condition of housing may not capture the complete picture of the condition of the housing stock.

Over half of the housing stock in King County was built before 1980, more than 45 years ago. In Seattle, about 70 percent was built prior to 1980.

In areas outside of Seattle, just under half of the housing stock was built before 1980. Houses built in the early suburban building boom from 1950 to 1970 are now 40-60 years old, and if not well-maintained, may be showing signs of aging and deterioration.

King County	
Total:	**790,070**
Owner occupied:	**470,685**
Built 2005 or later	26,531
Built 2000 to 2004	36,464
Built 1990 to 1999	64,415
Built 1980 to 1989	71,116
Built 1970 to 1979	67,438
Built 1960 to 1969	59,929
Built 1950 to 1959	48,909
Built 1940 to 1949	32,050
Built 1939 or earlier	63,833
Renter occupied:	**319,385**
Built 2005 or later	18,660
Built 2000 to 2004	22,793
Built 1990 to 1999	44,551
Built 1980 to 1989	52,532
Built 1970 to 1979	54,676
Built 1960 to 1969	41,915
Built 1950 to 1959	28,326
Built 1940 to 1949	16,172
Built 1939 or earlier	39,760

The figure to the left lists the age housing stock in King County by decade built. The figure below lists the number of homes with one or more housing problems as defined by HUD.
2007-2011 ACS

King County	
Total:	**790,070**
Owner occupied:	**470,685**
With one selected condition	156,725
With two selected conditions	3,034
With three selected conditions	260
With four selected conditions	31
No selected conditions	310,635
Renter occupied:	**319,385**
With one selected condition	136,956
With two selected conditions	10,887
With three selected conditions	1,161
With four selected conditions	23
No selected conditions	170,358

King County Net of Seattle		
Property Type	**Number**	**% of Total Units**
1-unit detached structure	332,818	62%
1-unit, attached structure	22,852	4%
2-4 units	31,486	6%
5-19 units	74,396	14%
20 or more units	61,818	11%
Mobile Home, boat, RV, Vans	16,635	3%
Total	**540,005**	**100%**

2007-2011 ACS

B. Utilization of the Housing Stock

OWNERSHIP RATE HAS DECREASED SLIGHTLY SINCE 2005

In King County, the number of households who own their own house or condominium increased from 58.8 percent in 1990 to a high of 61 percent by 2005 and, by the 2010 census, it had fallen to 59.1 percent. For an urban county such as King County, the current homeownership rate is more in line with historic rates. There is considerable fluidity and interaction between the ownership and rental markets.

	Homeownership/Rental Rate in King County		
	King County	**Seattle**	**King County net Seattle**
Owner	59%	48%	65%
Renter	41%	52%	35%

Home ownership, at 48 percent in Seattle, is lower than the County rate. This is typical in larger cities, which usually have a higher percentage of renters. In areas outside of Seattle, nearly two-thirds of households own their own home.

An adequate supply of affordable rental units continues to be critically important in King County. Seniors who wish to downsize may sometimes choose rental units rather than maintaining a home with its considerable taxes, insurance, and maintenance costs. The following tables indicate housing stock in the County and the number of bedrooms.

King County Type of Property - Net of Seattle		
Property Type	**Number**	**% of Total Units**
1-unit detached structure	332,818	62%
1-unit, attached structure	22,852	4%
2-4 units	31,486	6%
5-19 units	74,396	14%
20 or more units	61,818	11%
Mobile Home, boat, RV, Vas	16,635	3%
Total	**540,005**	**100%**

2007-2011 ACS

Number of Bedrooms	Owners		Renters	
	Number	%	Number	%
No bedroom	764	0%	6,438	4%
1 bedroom	7,756	2%	49,512	29%
2 bedrooms	52,459	16%	72,723	42%
3 or more bedrooms	274,128	82%	43,810	25%
Total	**335,107**	100%	**172,483**	100%

2007-2011 ACS

LOW VACANCY RATE FOR RENTAL UNITS

The tables below show vacancy trends over the past 20 years for rental housing.

Vacancy Rate by Dupre + Scott	1995	2000	2005	2010	2015
King County	4.8%	3.7%	6.7%	4.9%	3.6%

Vacancy Rate by Dupre + Scott	Fall 2015
Total King County	3.9%
North King County	2.5%
Central King County	3.9%
Eastside King County	3.9%
South King County	2.4%
Southeast King County	3.9%

This table shows the vacancy rate for the subregions of King County as defined by Dupre + Scott. These subregions include parts of Seattle in North, Central and South King County.

During the past recession the vacancy rate peaked at 6.8 percent in 2009. An apartment vacancy rate of five percent is considered in balance. In the past vacancy rates have often been higher in the South and Southeast sub-regions compared to Seattle. However as of the end of 2015 South King County had the lowest vacancy rate. There are relatively few apartment rentals in that area.

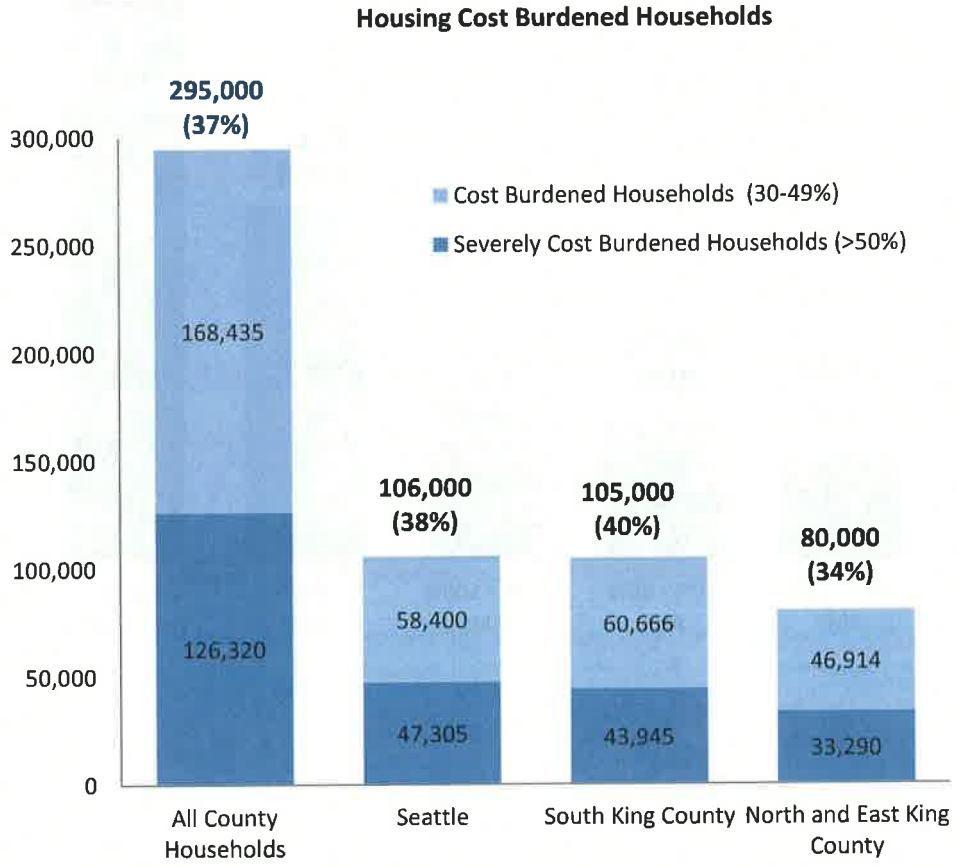
VI. Housing Need and Affordability

A. Housing Affordability Trends

MANY HOUSEHOLDS PAY MORE THAN 30 PERCENT OF THEIR INCOME FOR HOUSING.

The following figures show the percentage and number of households paying more than 30 percent of their income for housing in King County. The lighter blue shows the number of households who pay more than 30 percent of their income for housing and the deeper blue shows the number of households who pay more than 50 percent of their income for housing. This is referred to as cost burdened and severely cost burdened respectively.

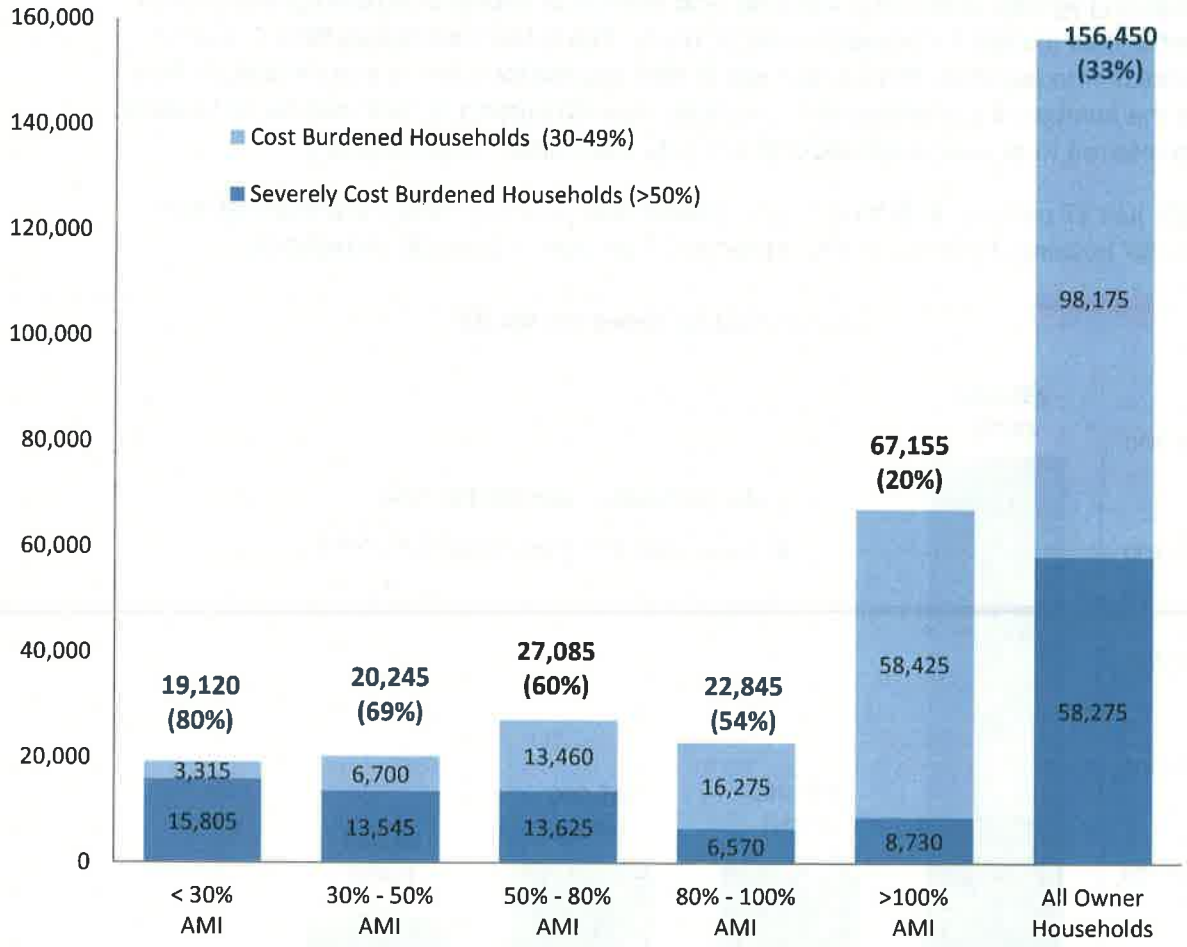
In 1990, just 27 percent of all King County households paid more than 30 percent of their income for housing. By 2013, that had risen to 37 percent or 295,000 households.



2007-2011 ACS

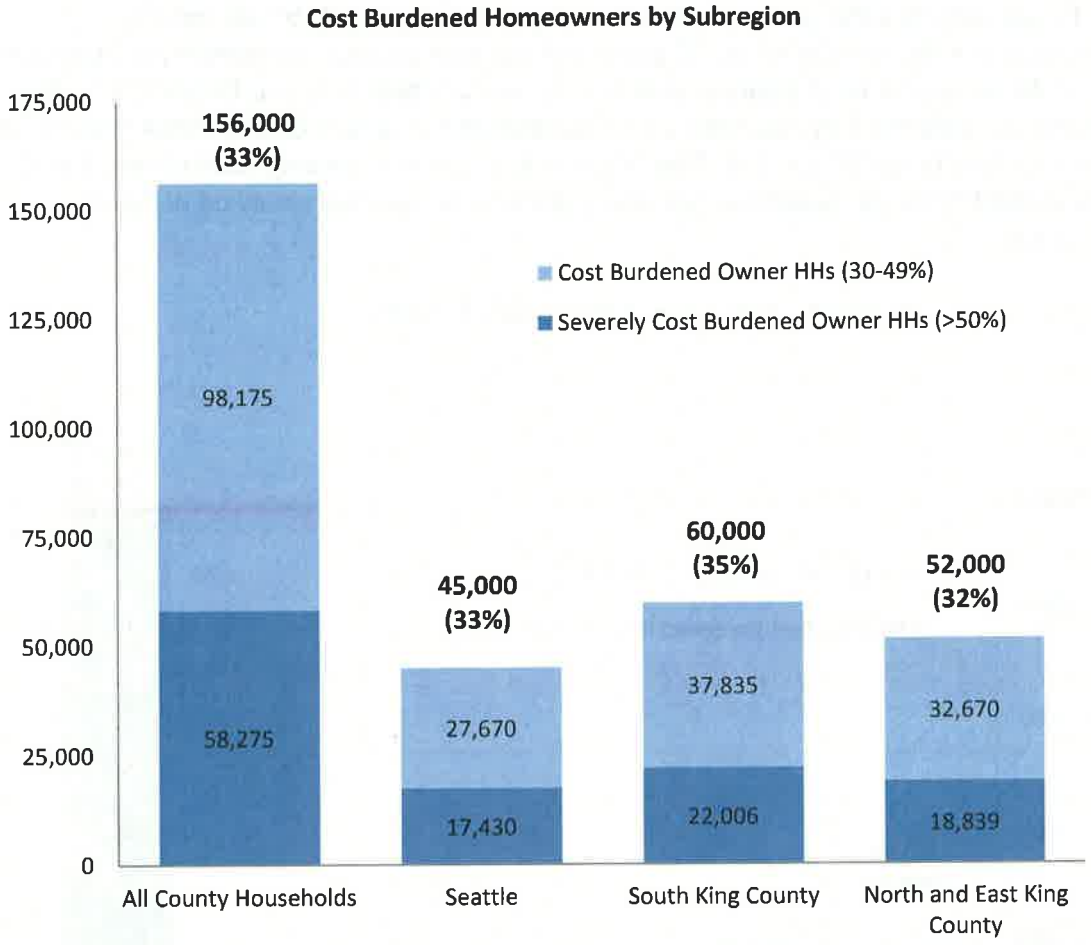
Over one-third of homeowners paid more than 30 percent of their income for housing. The graph below shows the percentage of cost burdened and severely cost burdened homeowners across King County grouped by incomes. Households with income below 80 percent of area median experience housing cost burden at a greater percentage than households with income above 80 percent of area median.

Homeowner Households and Cost Burden



2007-2011 ACS

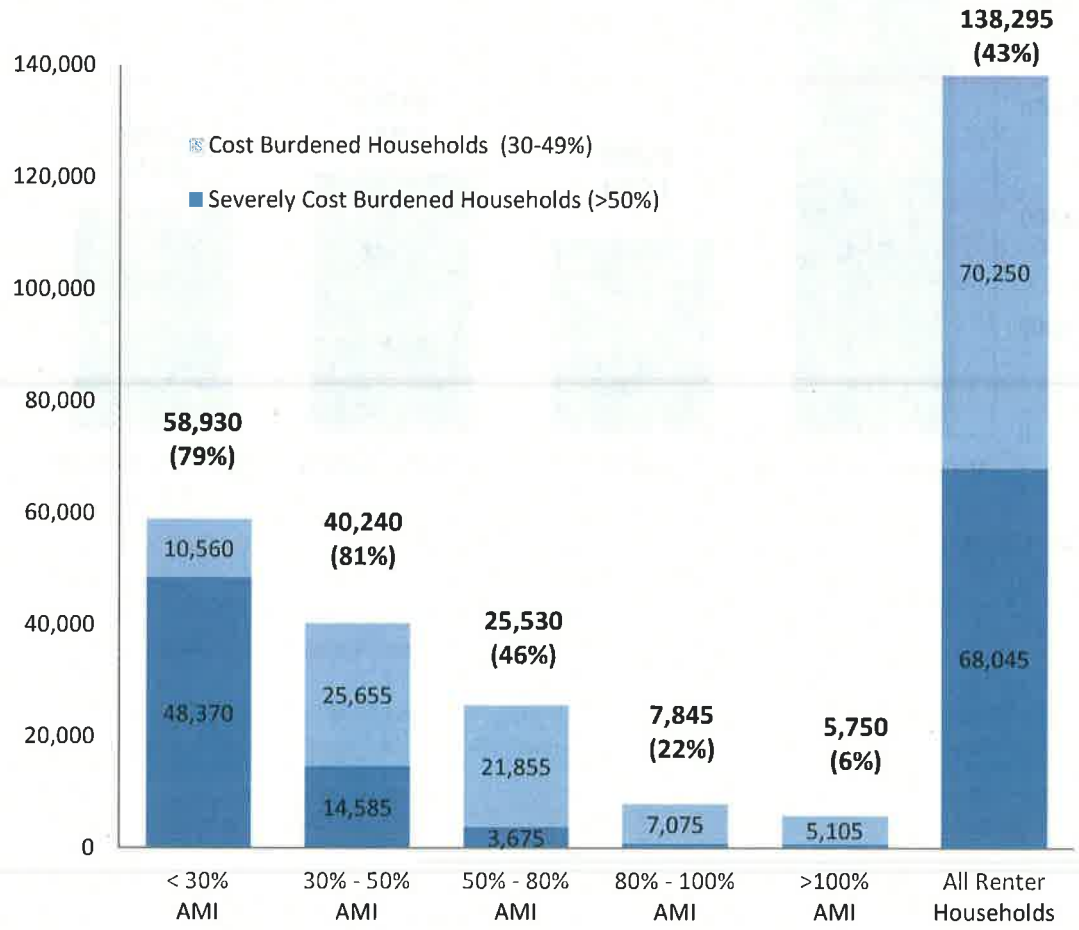
The following graph shows cost burdened homeowner households by subregion. South King has the highest percentage, at 35 percent, of cost burdened homeowners.



2007-2011 ACS

43 percent of renter households paid more than 30 percent of their income for housing. The following graph shows the number and percentage of cost burdened and severely cost burdened renter households across King County grouped by income. King County's lowest income households face the greatest risk of housing instability. Nearly 50,000 renter households, with incomes at or below 30 percent of the area median, are severely housing cost burdened. An additional 14,585 households, with incomes between 30 and 50 percent of area median, are severely housing cost burdened. Together, that is almost 65,000 renter households with incomes at or below 50 percent of the area median who are severely cost burdened and unstably housed. With one adverse event, many of these households would be at risk of homelessness.

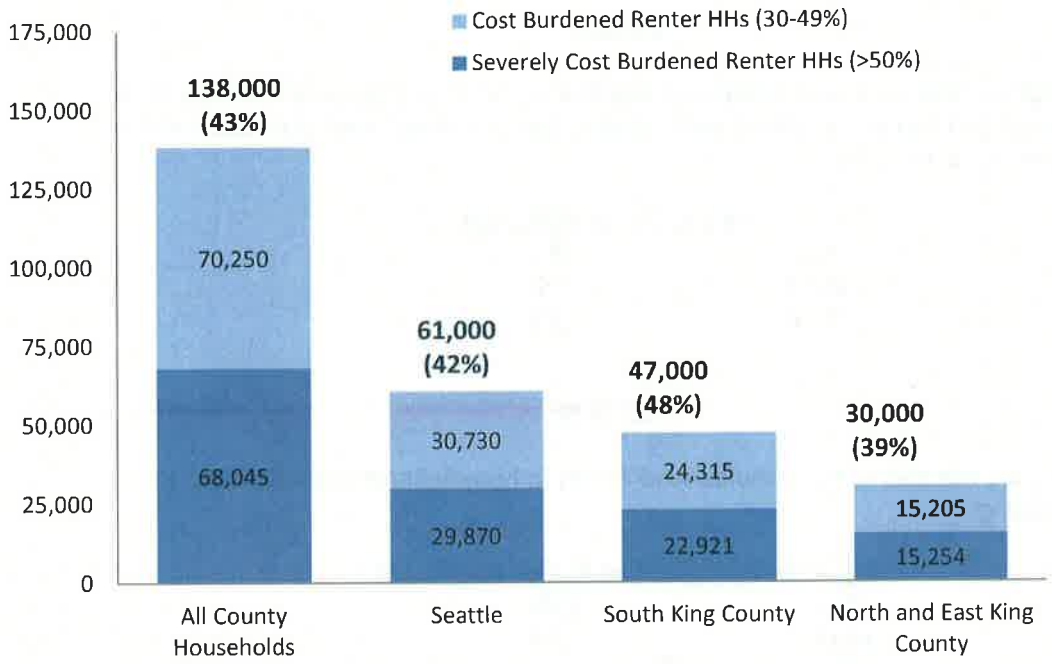
Cost Burdened Renter Households by Income



2007-2011 ACS

The following chart identifies cost burdened renter households by subregion. South King County has the highest percentage of burdened renter households at 48 percent.

Cost Burdened Renter Households by Subregion



2007-2011 ACS

B. Homelessness in King County

NUMBER OF HOMELESS PERSONS CONTINUES TO RISE, BUT MORE ARE HOUSED

All Home's (formerly the Committee to End Homelessness) vision is that homelessness is rare in King County, racial disparities are eliminated, and if one becomes homeless, it is brief and only a one-time occurrence. All Home adopted a four-year Community Strategic Plan as a recommitment to the vision of ending homelessness and to the steps needed to make this vision a reality. These steps include: 1.) A commitment to creating more affordable housing, 2.) A new focus on prevention, and 3.) An expansion of pre-adjudication and sentencing alternatives.

RARE

On the morning of January 29, 2016, volunteers counted 4,505 men, women and children without shelter. This number represents an increase of 19 percent over those found without shelter during the 2015 One Night Count. The table below shows the number of homeless households housed during the past four years.

Number of Households Housed	
2012	5,883
2013	6,779
2014	7,148
2014	5,072

BRIEF

This is the length of time in an individual or household spends in emergency shelter and transitional housing. The table below shows the average length of time households were in shelters or transitional housing.

Average Number of Days	
2013	151
2014	112
2014	130

ONE TIME

This measures the number of households who return to homelessness after exiting to permanent housing.

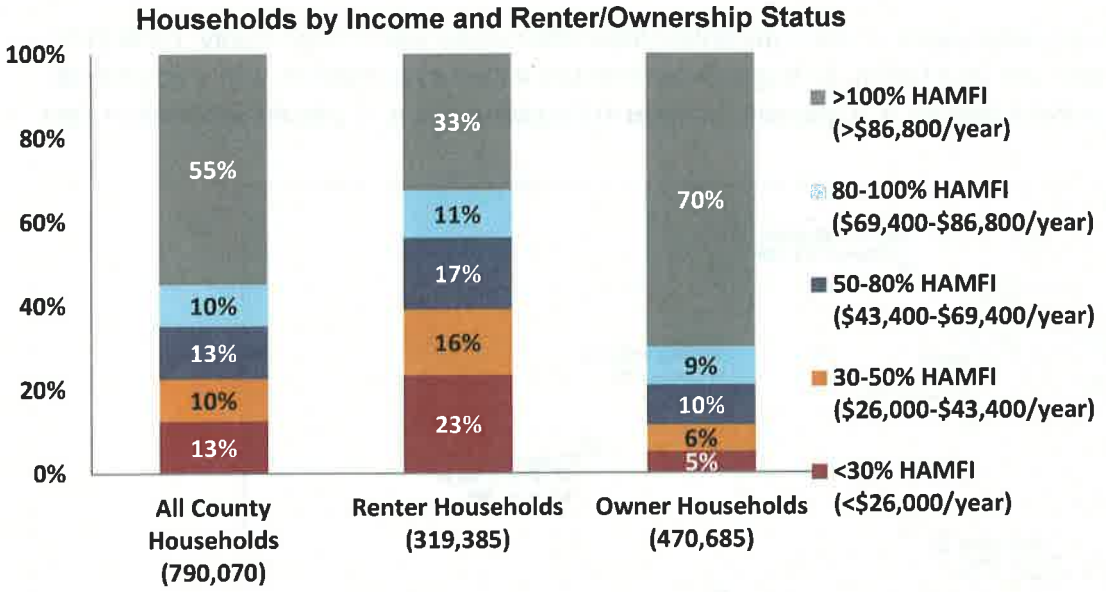
Households Returning to Homelessness	
2013	20%
2014	16%
2014	12%

C. Rental Housing Affordability Trends

THE CRITICAL NEED IS FOR AFFORDABLE RENTAL HOUSING FOR VERY LOW AND LOW- INCOME HOUSEHOLDS.

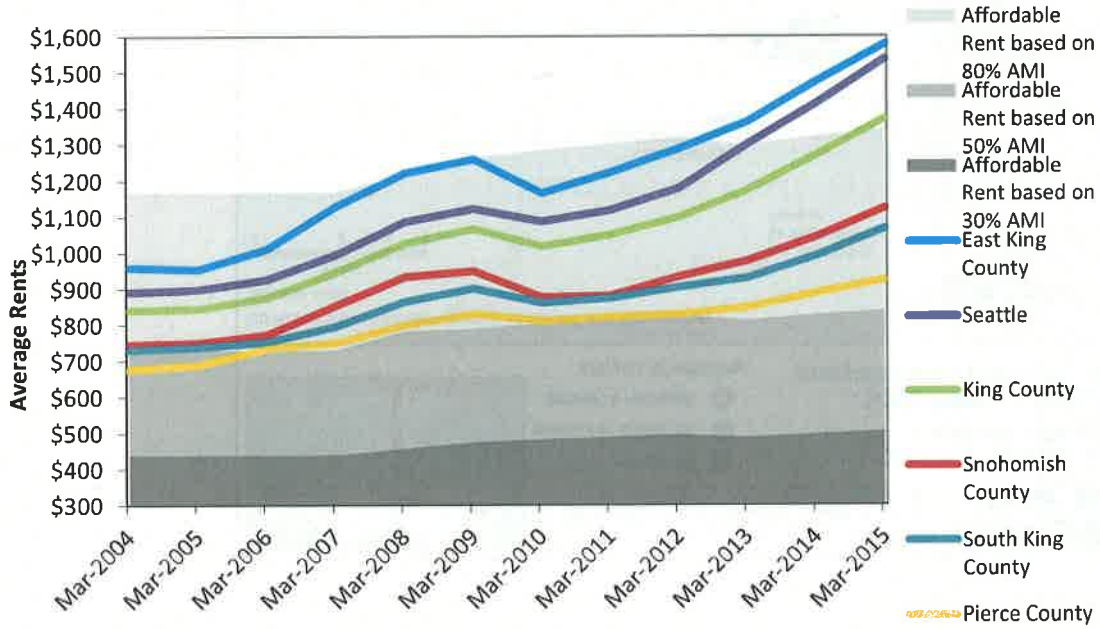
Housing affordable for households with incomes below 50 percent AMI is almost exclusively through subsidized multi-family rental housing, and the amount of that housing is insufficient in nearly all jurisdictions.

Renter households make up approximately 40 percent of all households in King County. Approximately half of these renter households have incomes at or below 50 percent of area median. The following table identifies the income ranges for renter and homeowner households.



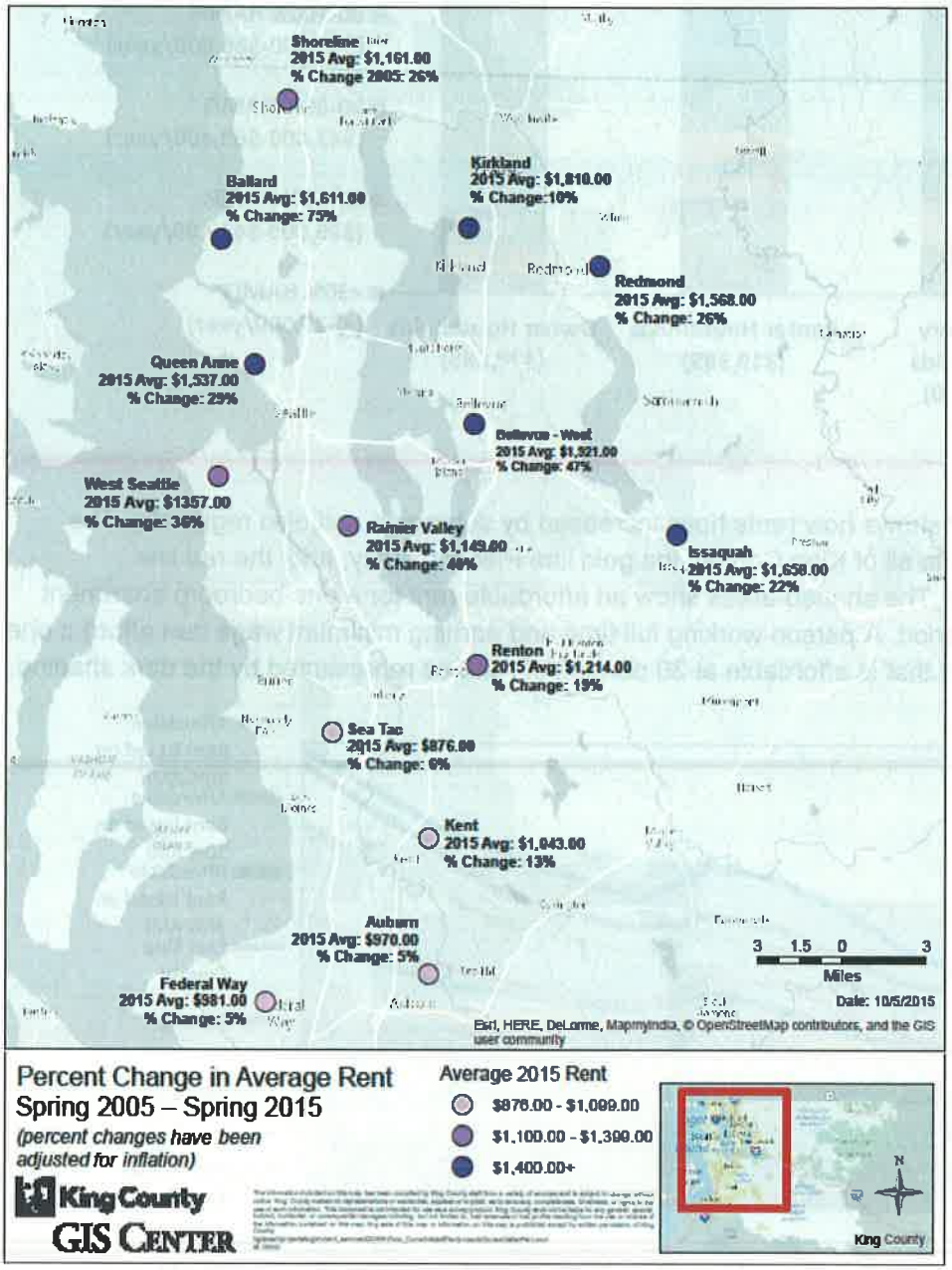
2007-2011 ACS

The following chart shows how rents have increased by subregion and also regionally. The green line represents all of King County; the gold line Piercy County; and, the red line Snohomish County. The shaded areas show an affordable rent for a one bedroom apartment during the same period. A person working full time and earning minimum wage can afford a one bedroom apartment that is affordable at 30 percent of AMI, as represented by the dark shading.



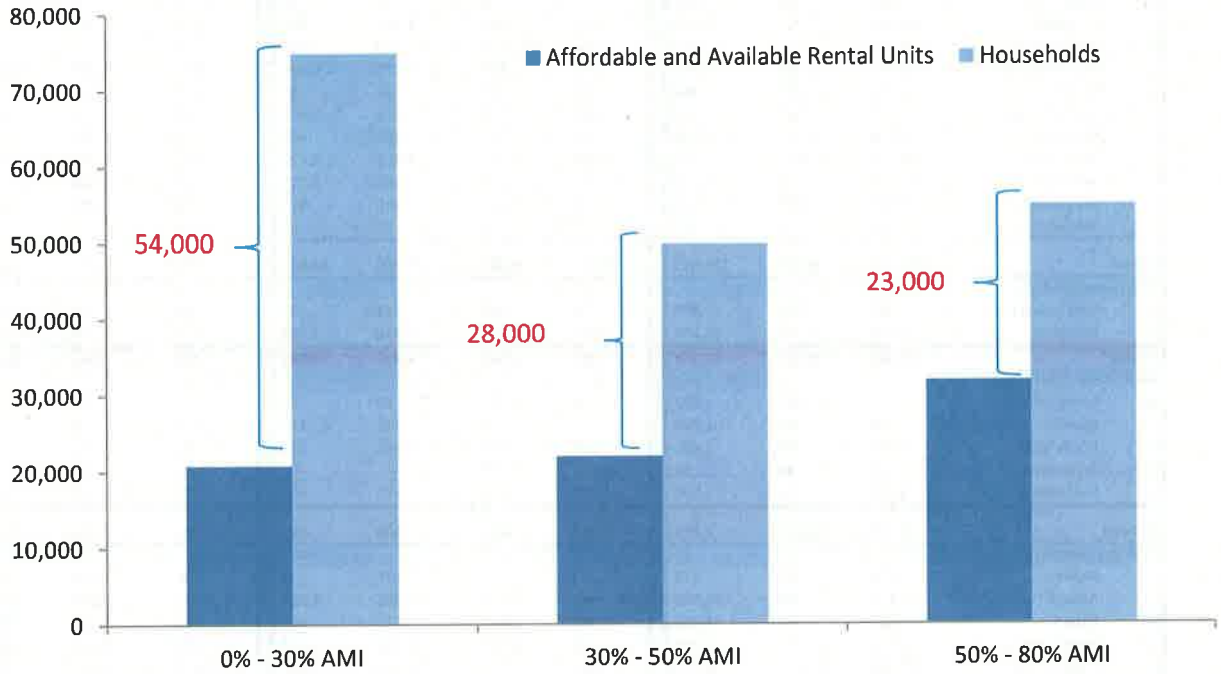
Average Apartment Rent from Dupre & Scott and Affordable Rent based on AMI from HUD.

This following map shows some of the subregional differences within King County. From 2005 to 2015, adjusted for inflation, average rents increases varied by subregion, with a 36 percent increase in West Seattle, a 26 percent increase in Shoreline and a 13 percent increase in Kent.



AFFORDABILITY AND SUPPLY GAP FOR VERY LOW INCOME RENTERS

As the supply and demand graph below shows, there is a gap of about 54,000 between the number of households in this very low income category and the number of rental units affordable to them. The highest need is for housing for the people with very low incomes.



The table on the following page lists the housing stock – both rental and homeownership - by jurisdictions and in unincorporated King County.

HOUSING AFFORDABILITY: 2008-2012 CHAS Dat a					RENTER: Number of Units by Gross Rent				OWNER: Number of Units by Home Value			
	CITY OR CDP	Total housing units	Total Rental Units	Total Homeowner	<30% AMI	31 - 50% AMI	51 - 80% AMI	over 80% AMI	Under 50% AMI	51 - 80% AMI	81 - 100% AMI	Over 100% AMI
EAST SUBREGION												
E	Beaux Arts Village	149	14	135	-	-	4	10	-	-	-	135
E	Bellevue	52,730	23,155	29,575	1,370	1,130	9,335	11,320	625	730	1,265	26,955
E	Bothell (part)	7,060	2,505	4,555	135	258	1,263	850	525	348	528	3,155
E	Clyde Hill	956	109	847	10	4	15	80	14	4	4	825
E	Hunts Point	185	23	162	-	4	4	15	8	-	-	154
E	Issaquah	13,535	5,230	8,305	415	300	1,465	3,050	140	530	815	6,820
E	Kenmore	8,059	2,185	5,874	155	380	1,220	430	325	310	529	4,710
E	Kirkland (Greater)	38,344	13,389	24,955	740	1,384	5,170	6,095	955	1,215	2,475	20,310
E	Medina	1,014	134	880	15	14	15	90	25	10	-	845
E	Mercer Island	9,720	2,510	7,210	240	160	455	1,655	95	55	105	6,955
E	Newcastle	4,029	1,039	2,990	60	40	489	450	60	135	165	2,630
E	Redmond	23,725	11,305	12,420	610	660	3,860	6,175	580	390	765	10,685
E	Sammamish	15,399	1,699	13,700	25	24	535	1,115	145	170	360	13,025
E	Woodinville	4,799	1,870	2,929	145	220	930	575	54	210	185	2,480
E	Yarrow Point	433	59	374	-	4	30	25	4	-	-	370
E Total		**180,137**	**65,226**	**114,911**	**3,920**	**4,582**	**24,790**	**31,935**	**3,555**	**4,107**	**7,196**	**100,054**
NORTH SUBREGION												
N	Lake Forest Park	5,200	870	4,330	60	145	515	150	70	135	330	3,795
N	Shoreline	21,649	7,395	14,254	875	1,420	3,710	1,390	405	1,129	2,060	10,660
N Total		**26,849**	**8,265**	**18,584**	**935**	**1,565**	**4,225**	**1,540**	**475**	**1,264**	**2,390**	**14,455**
NORTHEAST SUBREGION												
NE	Carnation	765	163	602	4	40	90	29	59	49	95	399
NE	Duvall	2,178	320	1,858	-	30	155	135	150	25	219	1,464
NE	North Bend	2,430	975	1,455	125	170	390	290	95	45	120	1,195
NE	Skykomish	66	12	54	-	12	-	-	12	14	18	10
NE	Snoqualmie	3,518	714	2,804	80	19	170	445	65	90	109	2,540
NE Total		**8,957**	**2,184**	**6,773**	**209**	**271**	**805**	**899**	**381**	**223**	**561**	**5,608**
SOUTH SUBREGION												
S	Algona	995	222	773	4	89	125	4	150	310	199	114
S	Auburn	27,869	11,304	16,565	985	4,070	4,935	1,314	3,485	3,060	3,700	6,320
S	Burien	16,867	8,065	8,802	970	2,670	3,570	855	574	1,715	1,879	4,634
S	Des Moines	11,823	4,435	7,388	585	1,370	1,910	570	660	1,560	1,984	3,184
S	Federal Way	35,105	15,635	19,470	1,035	4,730	8,305	1,565	2,670	4,865	4,825	7,110
S	Kent	40,289	18,865	21,424	1,425	5,895	9,580	1,965	2,275	4,140	5,874	9,135
S	Milton	3,064	1,345	1,719	65	65	845	370	125	335	470	789
S	Normandy Park	2,759	735	2,024	105	325	180	125	69	10	60	1,885
S	Pacific	2,453	1,265	1,188	100	485	635	45	139	439	295	315
S	Renton	37,694	17,190	20,504	1,530	3,430	8,700	3,530	1,805	3,110	4,334	11,255
S	SeaTac	10,430	4,825	5,605	390	1,720	2,320	395	945	1,390	1,575	1,695
S	Tukwila	7,579	4,695	2,884	215	1,390	2,670	420	284	700	810	1,090
S Total		**196,927**	**88,581**	**108,346**	**7,409**	**26,239**	**43,775**	**11,158**	**13,181**	**21,634**	**26,005**	**47,526**
SOUTHEAST SUBREGION												
SE	Black Diamond	1,635	105	1,530	10	85	10	-	160	115	385	870
SE	Covington	5,890	995	4,895	45	60	780	110	310	900	1,330	2,355
SE	Enumclaw	4,415	1,615	2,800	235	625	570	185	505	520	925	850
SE	Maple Valley	8,078	1,364	6,714	185	174	580	425	190	799	1,715	4,010
SE Total		**20,018**	**4,079**	**15,939**	**475**	**944**	**1,940**	**720**	**1,165**	**2,334**	**4,355**	**8,085**
SEATTLE SUBREGION												
SEA	Seattle	294,470	156,245	138,225	18,175	29,740	63,605	44,725	3,255	4,395	9,455	121,120
SEA Total		**294,470**	**156,245**	**138,225**	**18,175**	**29,740**	**63,605**	**44,725**	**3,255**	**4,395**	**9,455**	**121,120**
Total UKC CDPs		122,003	17,081	104,922	1,829	3,773	7,809	3,670	5,668	14,007	19,553	65,694
Grand Total		**849,361**	**341,661**	**507,700**	**32,952**	**67,114**	**146,949**	**94,647**	**27,680**	**47,964**	**69,515**	**362,542**

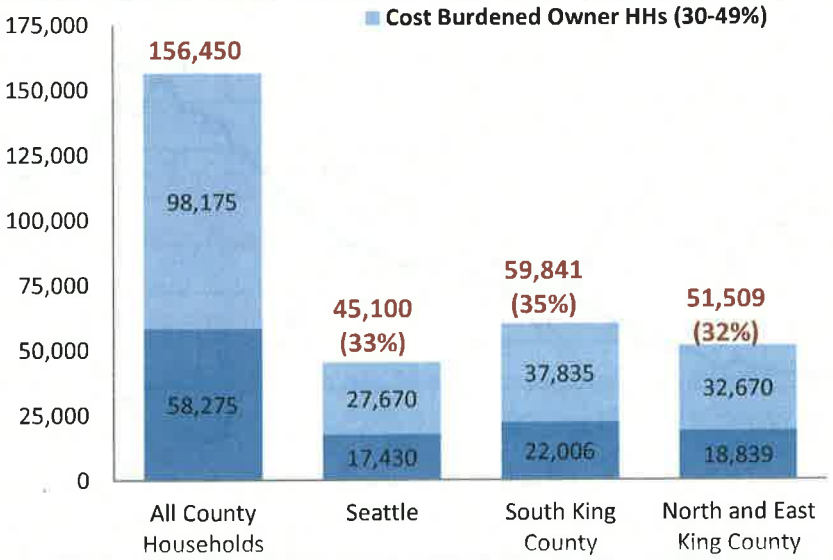
PUBLICLY-ASSISTED UNITS PROVIDE SOME AFFORDABILITY FOR VERY LOW INCOME.

There is a gap between the number of affordable rental units available and the number of low-income households, particularly for households with incomes under 50 percent of area median. In 2014 in King County there were approximately 58,000 publically assisted units at 949 sites. In addition to the King County Housing Finance Program, this included affordable projects funded by the Washington State Housing Finance Commission, Washington State Department of Commerce, the King County Housing Authority, the Seattle Housing Authority, the Renton Housing Authority, the City of Seattle and ARCH.

D. Housing Ownership Affordability Trends

OWNERSHIP HOUSING SCARCE FOR LOW, MODERATE AND MEDIAN INCOME HOUSEHOLDS

Based upon HUD 2008-2012 CHAS data on reported home values, 5.4 percent of all owner-occupied homes including condominiums would be affordable to households earning 50 percent of median income in 2012. 15 percent of homes in King County would be affordable to households earning 80 percent of area median income. 29 percent of homes in King County would be affordable to households earning 100 percent of area median income. The following table shows the number and percentage of homeowners in King County who pay more than 30 percent and 50 percent of their income for housing.



FIFTEEN PERCENT OF COUNTY HOMES ARE AFFORDABLE AT 80 PERCENT AMI

There is a clear differential in home affordability among the subregions. The south subregion has the highest percentage of homes affordable to households with incomes at or below 80 percent of AMI and. Seattle has the lowest percentage of homes affordable to households with incomes at or below 80 percent of AMI. The North Urban subregion and Unincorporated King County fall somewhere in the middle of the other subregions.

The table below lists median sale prices for King County homes over the past ten years.

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
$425,000	$455,000	$429,950	$380,000	$375,000	$340,000	$365,000	$415,000	$440,000	$480,000

From 2006 to 2014 home sales prices increased 13 percent. From 2014 to 2015 home sales prices increased 14 percent. Inventories are low and buyers are engaging in bidding competitions to purchase homes.

The graph below show how home prices have changed since 1994 through 2013 in relation to the affordability index. The affordability index signifies the buying power for a family earning the median income. An index of 100 signifies that a family has enough income to qualify for a mortgage loan on a median priced home.



It is notable that while home prices tripled in current (or nominal) dollars in the 1970s and doubled in the 1980s, the increase from 1990 to 2000 and from 2000 to 2010 was somewhat slower - at around 61 percent. Over the long term, however, home prices continue to rise faster than the general rate of inflation.

CONDOS PROVIDE MORE AFFORDABLE OWNERSHIP THAN SINGLE FAMILY HOMES

In 2015 the median condo price ($260,000) was over half of the median price of a single family home ($480,000). As with single family homes, more condominiums are affordable in the South.

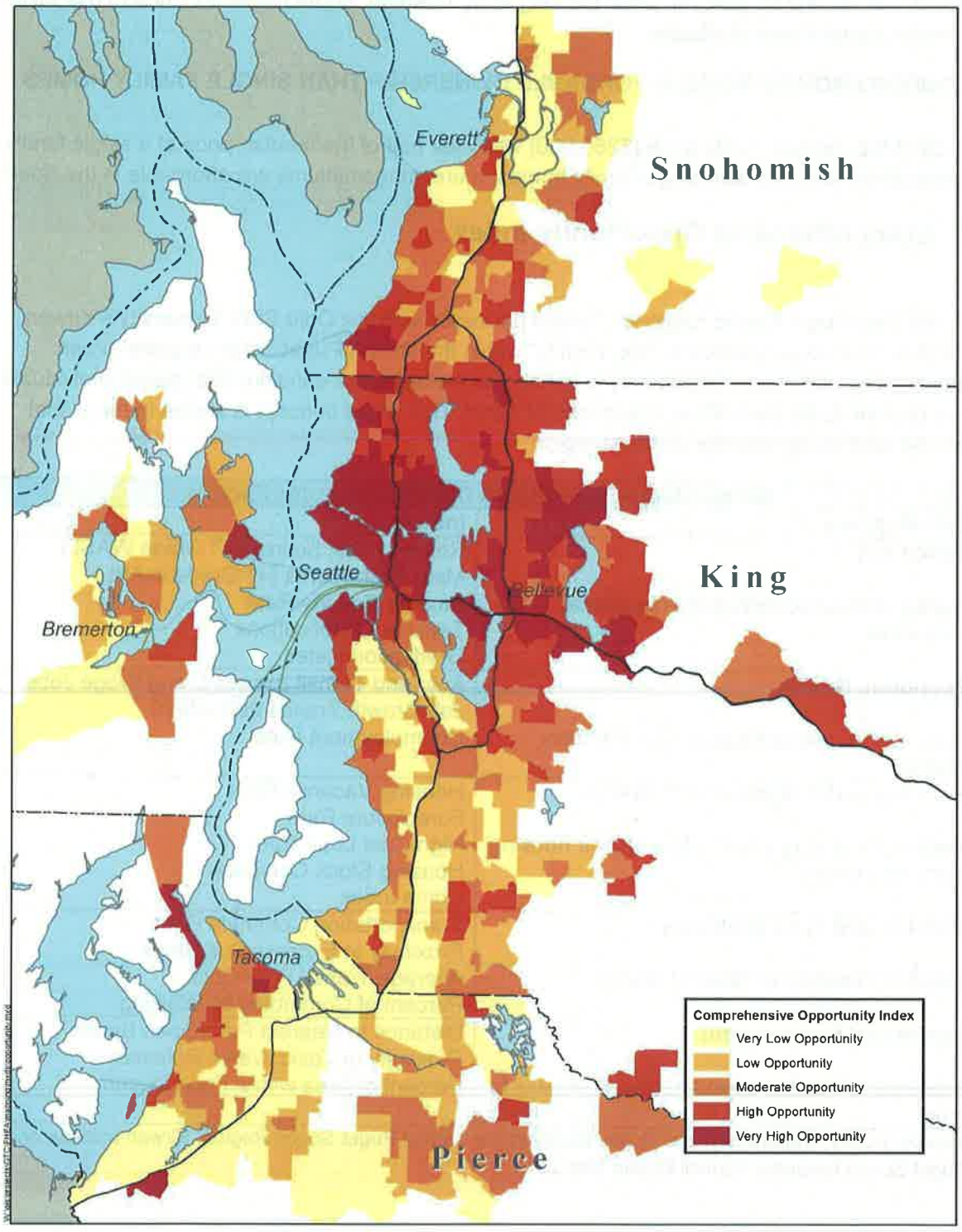
E. Comprehensive Opportunity Index

In 2012 the Puget Sound Regional Council partnered with the Ohio State University's Kirwan Institute to analyze "Access to Opportunity" within the central Puget Sound regions' urban growth area. Access to Opportunity is defined as a situation or condition that places individuals in a position to be more likely to succeed or excel. This broad concept is shown in maps that portray relative opportunity across a region.

Comprehensive Access to Opportunity Index Factors	
Sub-Measure	**Indicators**
Education Quality of local schools and educational resources	Reading Test Scores (4th Grade WASL) Math Test Scores (4th Grade WASL) Student Poverty Rate Teacher Qualifications Graduation Rates
Economic Health Proximity to, and participation in, the labor market	Auto and Transit Access Living Wage Jobs Job Growth Trends 2000-2010 Unemployment Rate
Housing and Neighborhood Quality The health of neighborhoods and their housing stock and market	Housing Vacancy Rate Foreclosure Rate High Cost Loan Rate Housing Stock Condition Crime Index
Mobility and Transportation Resident mobility by different modes	Transportation Commute Cost Proximity to Express Bus Stops Average Transit Fare Cost Percent of Commutes by Walking
Health and Environment Proximity to healthy open space and access to food	Distance to Nearest Park/Open Space Proximity to Toxic Waste Release Percent of Area with a Food Desert

Source: Equity, Opportunity, and Sustainability in the Central Puget Sound Region; Kirwan Institute and Puget Sound Regional Council Report May 2012

Comprehensive Opportunity Index



F. Resources for Affordable Housing

RESOURCES AVAILABLE TO ADDRESS THE GOALS OF THE KING COUNTY CONSORTIUM CONSOLIDATED PLAN

King County prepares the Consolidated Plan on behalf of the King County Consortium, a special partnership between King County and most of the suburban cities and towns. King County partners with its suburban cities and towns for the allocation of federal Community Development Block Grant (CDBG), HOME Investment Partnership Program (HOME), and Emergency Solutions Grant (ESG) funds, as well as for certain local funds. The CDBG Consortium is comprised of most cities and towns in King County, plus the unincorporated areas of the County. It excludes Seattle, Bellevue, Kent, Auburn and Federal Way, which receive CDBG funds directly from the federal government. For the HOME Consortium, all members of the King County CDBG Consortium participate, plus all the cities above that receive their own CDBG except Seattle, which is large enough to receive its own HOME grant directly from HUD. The ESG Consortium includes all CDBG Consortium jurisdictions. See the adopted King County Consortium Consolidated Plan on the Department of Community and Human Services/Housing and Community Development Program web page as noted below.

http://www.kingcounty.gov/socialservices/Housing/PlansAndReports/HCD_Plans/ConsolidatedPlan.aspx

King County partners with all cities, including Seattle, for the allocation of a number of other local fund sources: 1) Regional Affordable Housing Program (RAHP) capital funds and operations/maintenance funds; 2) Veterans and Human Services Levy Capital funds; and 3) 2331 Homeless Housing Act document recording fee funds.

Goals and objectives in King County Consortium's Consolidated Plan for 2015-2019 are:

Goal 1	Ensure decent affordable housing;
Goal 2	End homelessness;
Goal 3	Establish and maintain a suitable living environment and economic opportunities for low and moderate-income persons.

FORMULA GRANT PROGRAMS

The Consortium receives three federal entitlement grants on an annual basis: 1.) CDBG in the approximate annual amount of $4,500,000; 2.) HOME in the approximate annual amount of $2,700,000; and 3.) ESG in the approximate annual amount of $300,000. Other federal, state, and local funds are listed below in approximate amounts. All of these resources come with restrictions and regulatory requirements regarding allowed uses. Other leveraged funds such as Low Income Housing Tax Credits (LIHTC) and Continuum of Care funds, are secured through competitive applications and are not guaranteed. Some of these funds, such as the Regional Affordable Housing Program provide leverage for federal dollars to fulfill match requirements.

KING COUNTY AFFORDABLE HOUSING

King County faces unprecedented affordable housing challenges. Amidst tremendous economic and population growth, many in our community are struggling to meet their basic housing needs. Nearly 59,000 low income households are paying over half of their income towards their housing costs. These families and individuals are often one setback away from homelessness. There are already over 4,505 homeless individuals living outdoors on any given night in King County. Add to these the projected population growth, increased housing costs and the desire for affordable housing near transit and the need for an affordable housing strategy for King County is clear.

AFFORDABLE HOUSING EFFORTS

Jurisdictions including King County support a wide range of mandatory and incentive programs to support housing affordability. King County provides impact fee waivers and density bonuses for affordable housing development. In addition, surplus property and master planned development provisions of the King County Code provide further support for housing affordability.

King County and its jurisdictions continue to work with a variety of partners on a number of initiatives including fair housing access, transit oriented development, zoning provisions, innovative housing models, group homes for residents receiving supportive services, preservation of affordable housing, and efforts to expand capital and operating funding for affordable housing, including housing for older adults, people who are homeless, and people with behavioral health, cognitive, physical and developmental disabilities.

VII. Planning for Future Growth

Housing Capacity Trends

KING COUNTY HOUSEHOLD GROWTH TARGETS

The Washington State Growth Management Act (GMA) requires counties and cities to work together to plan for growth. In King County, the Growth Management Planning Council (GMPC) is the countywide planning body through which the County and cities collaborate. The GMPC develops and recommends Countywide Planning Policies (CPPs) to the King County Council where they are reviewed, adopted and sent to the cities for ratification.

The CPPs identify housing and job targets, as specified in VISION 2040, adopted by the Puget Sound Regional council in 2008. The allocation of growth, consistent with VISION 2040, focuses on the two Metropolitan cities (Seattle and Bellevue), Core cities with designated Urban Centers, and Larger cities.

The housing growth targets for the period 2006-2031, called for King County's jurisdictions to accommodate 233,077 new households within the Urban Growth Area through 2031. King County has land capacity to accommodate, more than double the housing target. Although permits for new housing units dipped dramatically in 2009, King County is on track to meet the 22 year target.

MULTIFAMILY DEVELOPMENT IS GROWING FASTER THAN SINGLE FAMILY

According to Washington State Office of Financial Management, King County has created nearly 42,024 housing units between 2010 and 2015, and 30,406 of those were multifamily units. Mobile homes declined by 243 units during the same period.

Of the more than 100,000 net new units built between 2000 and 2010, the majority (59 percent) were in multifamily structures. In all of King County, from 2000 to 2010, there has been about a 10 percent increase in the number of single-family structures and a 23 percent increase in multifamily structures. Seattle shows a higher percent of multifamily units than single family units.

LAND CAPACITY IS ADEQUATE FOR FUTURE GROWTH

The housing growth targets in the CPPs for the period 2006-2031, called for King County's jurisdictions to accommodate 233,077 new households within the Urban Growth Area through 2031. King County has land capacity to accommodate, more than double the housing target. Although permits for new housing units dipped dramatically in 2009, King County is on track to meet the 22 year target.

ADEQUATE CAPACITY EXISTS FOR AFFORDABLE HOUSING DEVELOPMENT

Affordable housing can be created through a variety of housing types, however some types such as multi-family (apartments, townhouses, condominium), micro-housing, group homes and accessory dwelling units will provide the bulk of housing affordable to very-low, low and moderate income households.

The CPPs indicate that jurisdictions should plan for approximately 24 percent of its projected net household growth to be new or rehabilitated and preserved housing units which are affordable to those earning 50 percent AMI or below (low income households). It should plan for an additional 16 percent of its new or rehabilitated and preserved units to be affordable to those earning from 50 – 80 percent AMI (moderate income households). Capacity in multi-family and mixed-use zones will provide the bulk of capacity for housing development affordable to low-income households.

Given the large proportion of the multifamily capacity located in mixed use zones within each subarea in King County, particular care should be taken to support housing development in mixed use zones. This can be supported through efforts such as transit-oriented development and innovative housing solutions.

VIII. Conclusions

The following key conclusions indicate trends that have begun or accelerated during the past decade. These demographic, economic, and housing trends are, in most cases, likely to continue, and they suggest the housing policies and strategies that will be most critical and effective in providing appropriate and affordable housing choices.

- The County is growing at a healthy rate, and will be challenged to provide an adequate supply and variety of housing choices that are in close proximity to high capacity transit and job centers.

- The percent of the population who are persons of color has increased from 10.2 percent in 1990 to 35.2 percent in 2010. The rapidity and size of this change is exceptional. Youth of color make up 47.3 percent of those 18 years of age or less. Housing for youth and young adults is a priority.

- King County is likely to continue to attract and retain young and middle-aged adults because of a positive economic outlook and strong technology sector.

- A big change will be the rapid increase in senior households with about 200,000 "baby boomer" adults – 50 to 64 years of age in 2010 - becoming seniors by 2025. About half of current seniors live alone, and most of the remaining seniors live in two-person households. The majority of seniors earn less than 80 percent AMI. Many would like to remain in their own homes as they age, but they may need both financial and physical support to do so. Those who choose to move are likely to need small, accessible housing units in pedestrian-friendly neighborhoods with amenities, services and good mobility.

- There is a growing divide between upper income households and lower income households, with only about 18 percent of all King County households falling into the "middle" income groups of 80 percent to 120 percent of median income. This growing income disparity is a cause for concern.

- The Comprehensive Opportunity Index paints a picture of two King Counties depending on where people live, and such a lack of equity throughout our region puts us at a disadvantage to grow our economy for the benefit of all of our residents, unless we take affirmative action and begin to close the gap on such inequities.

- The most critical housing shortage is for households at or below 30 percent of median income. Even with publicly-assisted units included, there are about 55,000 more renter households in this income category than there are affordable rental units.

- The need for housing affordable to households earning between 30 and 50 percent AMI is also acute, even when subsidized units are included. Depending on the geographic area, households at 50 – 80 percent AMI may also have difficulty finding affordable units.

- Homelessness increased in King County, although more people who were formerly homeless are housed.

- Federal and state resources for housing have decreased in recent years, while the need for affordable housing has increased.

- There is adequate capacity in King County for a full range of housing types that will serve the housing needs of all segments of the community. The challenge is in assisting the development of this capacity. King County will continue to exert direct and indirect efforts guided by the CPPs, the Comprehensive Plan and the Consolidated Plan to achieve housing goals.

King County

2016
King County Comprehensive Plan Update
Technical Appendix C
Transportation

Contents:

I. Requirements of the Transportation Element
II. Arterial Functional Classification
III. Transportation Inventory
IV. Travel Forecast Summary
V. Transportation Needs Report (separate document)

King County, Department of Transportation, Road Services Division
201 South Jackson Street; KSC TR 0317; Seattle, WA 98104
http://www.kingcounty.gov

I. Requirements of the Transportation Element

Specific requirements for the transportation element are found at RCW 36.70A.070(6)(a). The transportation element of the King County Comprehensive Plan (the Plan) meets those requirements as follows:

- **Land Use Assumptions** – The transportation element is based on the same population and employment growth targets provided in Chapter 2 of the Plan.

- **Estimated Traffic Impacts to State-Owned Facilities** –The travel forecast in Technical Appendix C uses the Puget Sound Regional Council Travel Model, which incorporates state owned facilities.

- **An Inventory of Transportation Facilities and Services** – The inventory is provided in Appendix C. As required by growth management legislation, it includes air, water, and ground transportation facilities and services as well as transit alignments and general aviation airport facilities. It includes both county-owned and state-owned transportation facilities within the county's boundaries.

- **Level of Service Standards Including Standards for State Routes** – King County has adopted urban and rural area level of service standards for its Transportation Concurrency Management Program.

- **Actions to Bring Facilities into Compliance** – King County's Transportation Needs Report is adopted by reference along with the Plan. In addition, the Roads Capital Improvements Program, guided by the Strategic Plan for Road Services, identifies specific projects, strategies, and actions to address transportation needs.

- **Traffic Forecasts for at Least Ten Years** – Travel forecasts were developed using the Puget Sound Regional Council's Travel Model with a 2031 horizon year. These travel forecasts were used to analyze state and county transportation facilities.

- **State and Local Transportation Needs to Meet Current and Future Demands** – The King County Road Services Division Transportation Needs Report identifies local system needs, the Strategic Plan prioritizes these needs, and the Capital Improvement Program funds and implements projects. State and local transportation needs are included in the Puget Sound Regional Council travel demand forecasts provided in Technical Appendix C. These elements of the Plan address the Growth Management Act requirement of identifying state and local system needs to meet current and future demand.

- **Analysis of Funding Capability** – A financial analysis is included in the Transportation Needs Report, which is adopted as an element of the Plan in Appendix C1. More information on the financial analysis and supporting policies is provided in Chapter 8, Section IV. of the Plan.

- **Intergovernmental Coordination** – Road Services Division contacted adjacent cities, counties, and transit agencies to coordinate between local transportation systems. King County Road Services' use of the Puget Sound Regional Council Travel Model means the inclusion of regional capacity projects identified in Transportation 2040, a key input in the travel demand analysis. Chapter 8, Section V. contains a discussion of additional intergovernmental coordination efforts by King County.

- **Transportation Demand Management** – King County includes demand management strategies in its policies, codes and project implementation as well as providing support for others through its transit, rideshare, and market strategies. Chapter 8, Section II.K. of the Plan and the transportation inventory in Technical Appendix C contain more information on TDM-related efforts by King County.

- **Nonmotorized Transportation** – King County's pedestrian and bicycle component includes collaborative efforts to identify and designate planned improvements for pedestrian and bicycle facilities and corridors that address and encourage enhanced community access and promote healthy lifestyles. See Chapter 8, Section II.J. of the Plan. King County's Transportation Needs Report includes the road-related non-motorized capital facility's needs, and the Regional Trails Needs Report located in Appendix C2 of the Plan.

- **Concurrency** – The concurrency program is described in Chapter 8, Section II.G. of the Plan.

- **Consistency of Plans**--The comprehensive plan is consistent with Transportation 2040, the regional transportation plan for the four-county region. Transportation 2040 is consistent with the region's urban growth strategy, Vision 2040, also developed by the Puget Sound Regional Council. The Puget Sound Regional Council reviews the Plan for consistency and has certified previous versions of the Plan and its amendments. Consistency was further enhanced in this version by the adoption of Puget Sound Regional Council's regional modeling products and plan review by other jurisdictions. The comprehensive plan provides policy direction for the development of the county's functional plans.

II. Arterial Functional Classification

Functional classification is the designation of highways, roads and streets into groups according to the "function" each road serves or is intended to provide. A foundational principle to this grouping process is that individual roads do not serve travel independently; instead, most travel involves movement through a network of roads. Functional classification helps to define the part that any individual road will play in serving traffic through the road system.

There are two primary functions of a road, and at times they may conflict with each other. First, the road provides mobility for users. Second, the road must provide access to adjacent land uses. Functional street classification is an important tool for planning a transportation or roadway system, as well as in designing and constructing individual facilities. The classification system and King County Road Standards are used to distinguish between different types of roads for planning analyses, road design, and for allocating public funds for transportation improvements.

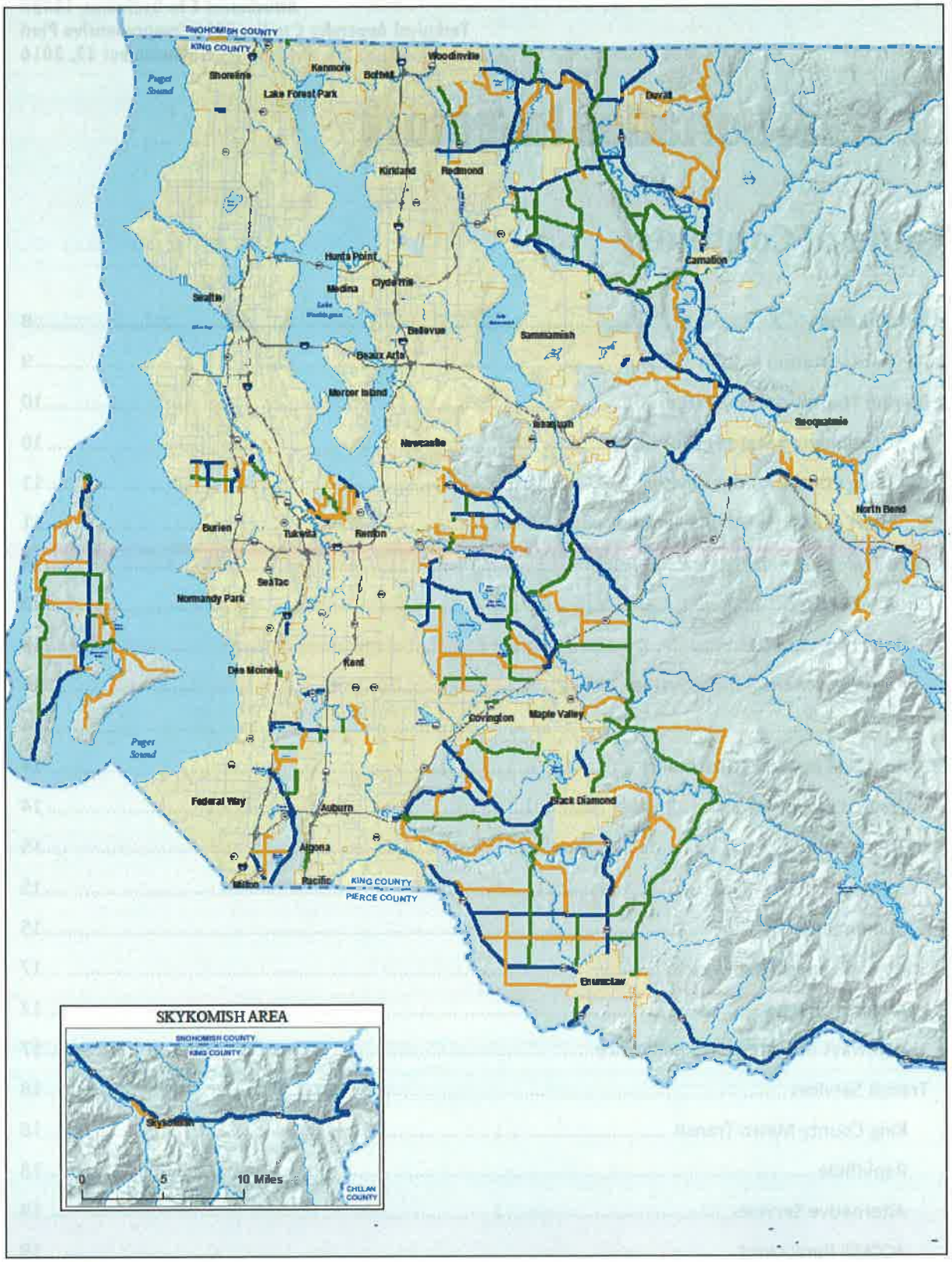
In unincorporated King County, there are three types of arterial roadways:

Principal Arterials - Provide for movement across and between large subareas of an urban region and serves primarily through traffic with minimum direct access to neighboring land uses. This category includes freeways and major highways under the jurisdiction of the Washington State Department of Transportation.

Minor Arterials - Provide for movement within the larger subareas bound by principal arterials. A minor arterial may also serve through traffic but provides more direct access to neighboring land uses than does a principal arterial.

Collector Arterials - Provide for movement within smaller areas which are often definable neighborhoods, and which may be bound by arterials with higher classifications. Collectors serve very little through traffic and serve a high proportion of local traffic requiring direct access to abutting properties. Collector arterials provide the link between local neighborhood streets (i.e. non-arterials) and larger arterials.

The arterials of the King County road network can be seen in the map "2016 King County Arterial Functional Classification."



2016 King County Arterial Functional Classification

Unincorporated King County Roads

- Principal (P)
- Minor (M)
- Collector (C)

N

0 5 Miles

5



King County

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III. Transportation Inventory

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1. Introduction

A. Requirements

The Growth Management Act [RCW 36.70A.070(6)(A)] requires an inventory of air, water, and land transportation facilities and services, including transit alignments, and general aviation facilities, to define existing capital facilities and travel levels as a basis for future planning. The inventory must include state-owned transportation facilities within the unincorporated King County boundaries. This document fulfills this requirement by describing King County's multi-modal transportation system and by identifying available resource materials.

B. Process

The County's approach to the inventory construction is that of reference, rather than collection. This approach will enable planners to evaluate inventory information and determine what data will best meet their studies' requirements. Even though the scope of the Comprehensive Plan Transportation Element is primarily focused on the unincorporated King County, the scope of the Transportation Inventory is generally countywide.

C. Coordination

The regional coordination of land use and transportation is mandated by the Growth Management Act [RCW 47.80.010].[1]King County has taken an active role in assuring a regionally coordinated transportation system. In cooperation with other central Puget Sound jurisdictions, King County is striving towards a regional approach to important planning issues such as level of service, concurrency, locations of regional and countywide transportation facilities, financing, non-motorized transportation, and Transportation Demand Management.

D. Organization

The inventory is organized into three categories—(1) an inventory of the air transportation facilities and services; (2) an inventory of marine transportation facilities and services; and (3) an inventory of land transportation facilities and services.

[1] Revised Code of Washington 47.80.010. http://apps.leg.wa.gov/RCW/default.aspx?cite=47.80.010

2. Air Transportation System

The Growth Management Act requires an inventory of the air transportation system to define existing capital facilities and travel levels as a basis for future planning. The air transportation system plays an important role as part of the regional and national transportation network because it provides for quick and efficient intrastate, interstate, and international travel of passengers and cargo.

King County public-use airports represent an essential element of the County's transportation system and provide critical support to the King County economy. Twenty-two airports are located within King County.[i] The King County airports span a broad range in terms of scale and role, from the Port of Seattle, Seattle-Tacoma International Airport to King County International Airport-Boeing Field, to seaplane facilities and small privately owned airstrips.[ii] The King County airport inventory consists of public use and privately owned airport facilities which are open to the public.

The Puget Sound Regional Council (PSRC), Air Compatible Land Use Program Update Study, December 2011, included a wide variety of activities related to planning and support for the central Puget Sound region's public use airport system.[iii] Program activities were included such as airport ground access planning, regional air cargo planning, cooperative efforts with the WSDOT Aviation Division in planning for long-range airport capacity, and ongoing efforts to address airport compatible land use under the PSRC's Growth Management Act (GMA) authority. WSDOT is scheduled to release an update to the state Aviation System Plan in June, 2016.

The Air Compatible Land Use Program Update Study, King County International Airport's Adopted Master Plan, and Port of Seattle, Airport Statistics are available at:

http://www.portseattle.org/About/Publications/Statistics/Airport-Statistics/Pages/default.aspx

http://www.wsdot.wa.gov/aviation/Planning/

http://www.psrc.org/transportation/airtrans

http://www.kingcounty.gov/transportation/kcdot/Airport/Planning.aspx

http://www.portseattle.org/About/Publications/Pages/default.aspx

3. Marine Transportation System

The Growth Management Act requires an inventory of the marine transportation system to define existing capital facilities and travel levels as a basis for future planning. The marine transportation system plays an important role in the movement of people and goods within King County, supplying the main commuter link between Seattle's central business district and the west Puget Sound corridor and as the hub network for local, regional and international freight movements.

The marine passenger transportation system serves the entire Puget Sound region from Tacoma to Sidney, British Columbia. The facilities that serve King County include ferry terminals and vessels servicing ferry routes. Ferry service is primarily provided by Washington State Ferries and the King County Ferry District that is responsible for the King County Water Taxi passenger-only ferry service. Other passenger-only ferry operators offer more recreational and travel-related service such as Clipper Navigation, Inc. Kitsap County and the Port of Kingston are working toward developing service from Kitsap County across the Puget Sound.

A. Washington State Ferries

The Washington State Ferries was established in 1951 and is the largest ferry system in the United States. The system includes 20 terminals and 24 vehicle/passenger ferries, carrying over 23 million passenger and vehicle trips annually. A new pilot vehicle reservation system - debuted in 2009 – continues to expand on select routes to spread demand and reduce invest capital improvement costs associated with traffic control.[iv]

Washington State Ferries provides service to 20 different communities in 8 different counties, including King County. The service serves two vital transportation functions: As a marine highway and as a transit service provider.[v] They provide frequent mainland access to several island communities including Vashon Island in King County, Bainbridge Island in Kitsap County and Whidbey Island in Island County. Washington State Ferries takes people to and from work in the downtown Seattle business corridor and to other communities on the east and west sides of Puget Sound.

Detailed information about Washington State Ferry System and Long-Range Plan are available at:

http://www.wsdot.wa.gov/ferries/

http://www.wsdot.wa.gov/ferries/Planning/ESHB2358.htm

B. King County Marine Division

The King County Department of Transportation, Marine Division is responsible for the operations, moorage, and maintenance of the vessels that provide passenger-only ferry services in King County. Passenger-only ferry services are currently provided between downtown Seattle, Vashon Island, and West Seattle.

The Marine Division operates out of three terminals: Pier 50 in downtown Seattle and the ferry dock on Vashon Island, both leased from Washington State Ferries. The West Seattle ferry dock, located at Seacrest Park, is leased from Seattle Parks and Recreation. King County Marine owns a moorage and maintenance barge located on the Seattle waterfront.

The Marine Division owns three vessels: The MV Sally Fox and MV Doc Maynard are vessels constructed for the Marine Division in 2014 – 2015. Each vessel holds a capacity of 278 passengers. The MV Spirit of Kingston is a 150 passenger vessel that was acquired from the Port of Kingston in 2013.

In 2015, King County's Water Taxi provided service for over 515,000 passengers system-wide. In early 2015, the Marine Division released "Water Taxi Watch", a real time vessel tracking system for riders. In 2015, research began on the potential viability of expansion routes, primarily on Lake Washington and in the Puget Sound. This will include an assessment of passenger-only ferry expansion options that build on new transit options to be delivered through Sound Transit's University Link and other funded regional transit expansions being delivered in the next decade.

Additional information on services provided is available at:

http://www.kingcounty.gov/transportation/kcdot/WaterTaxi

C. Port of Seattle Marine Facilities and Services

The Port of Seattle plays a key role in transportation and travel to and from the Pacific Northwest, and is also a key builder of road and rail infrastructure, partnering with other agencies to improve freight traffic in the Puget Sound region. The Port operates:

- Passenger cruise terminals: Smith Cove Terminal and Pier 66.

- Four Commercial Marine Docks/Piers: Fishermen's Terminal, Piers 90/91, Maritime Industrial Center, and Bell Street Pier.
- Four public marinas: Bell Harbor Marina, Fishermen's Terminal, Harbor Island Marina, and Shilshole Marina.

Seaport publications on seaport activities, facilities plans, and service and activity levels are available at: https://www.portseattle.org/Cargo/SeaCargo/Pages/default.aspx

4. Land Transportation System

This section includes a wide range of information and references for land transportation related facilities, services and transportation demand management programs in King County. This information provides a foundation for the Comprehensive Plan transportation element and for future transportation planning.

County Roads

Road Log

The County Road Log represents a detailed inventory of physical and administrative features that describe the county's unincorporated roadway system. Physical features include information on pavement type, roadway and shoulder width, number of lanes, median, pavement type, retaining and sea walls, guardrails, sidewalks and walkways. Administrative features include information such as the roadway's functional classification and its comprehensive plan designation as being located in the urban or rural areas.

A general inventory of King County's road infrastructure as of 2016 includes the following:[vi]

Roadways	1,469 miles
Bridges	181
Traffic Signals	78
Traffic Control Signs	Over 44,000
Traffic Cameras	50
Drainage Ditches	~ 5.7 million feet

Additional information related to the road log can be obtained by contacting the Road Services Division, Strategic Business Operations Section, Project Support Services.

The King County Road Index map book, 2015 edition, is available at:
http://www.kingcounty.gov/operations/GIS/Maps/VMC/Transportation.aspx

Pavement Management System

The Pavement Management System is used by the Road Services Division to track pavement conditions and develop resurfacing programs for unincorporated King County roads. The pavement condition of arterials, including collectors, and local access roads are evaluated every two to three years.

For more information on the Pavement Management System, contact the King County Department of Transportation, Road Services Division or visit: http://www.kingcounty.gov/depts/transportation/roads/paving-projects.aspx

Bridges

Bridges span physical obstacles such as bodies of water, creeks, streams, rivers, valleys, railroad crossings, and roads to connect King County's road network. County engineers inspect and maintain an inventory of 181 bridges across King County, from Vashon Island to Skykomish. [vii]

In 2016 this inventory included:

- 174 vehicular bridges wholly owned by King County Road Services Division.
- 3 bridges co-owned with other agencies.
- 3 pedestrian bridges.
- 1 safety corridor bridge

An updated list of bridge needs is included in the Annual Bridge Report, as required by King County Ordinance 11693.[viii] Roads Services is required to review and update its list of bridge needs for replacement/rehabilitation, seismic retrofit, and re-decking annually, preparatory to the Capital Improvement Program budgeting process.

The King County Annual Bridge Report is available at:
http://www.kingcounty.gov/depts/transportation/roads/bridges.aspx

Roadside Barriers (Guardrails)

One way King County promotes safety on county-maintained unincorporated roads is by installing new guardrails, repairing existing barriers and rails, and upgrading older guardrails to meet current roadway standards. This network includes approximately 114 miles of guardrail. More information on guardrails can be obtained by contacting the Road Services Division, Engineering Services Section.

Traffic Control Devices

Traffic control devices are signals and information systems used to regulate, warn, or guide both vehicular and pedestrian traffic. These devices are placed on, over, or adjacent to a roadway, pedestrian path, or shared-use path. Examples of traffic control devices include traffic signals, signs, and pavement

markings. Information on traffic control devices can be obtained by contacting the Roads Services Division, Traffic Section at:

http://www.kingcounty.gov/depts/transportation/roads/traffic.aspx

Traffic Counts

Information on unincorporated area traffic counts can be found at: http://gismaps.kingcounty.gov/TrafficCounts/

Safety

The Road Services Division produces an annual Traffic Safety Report. This report reviews collision trends within unincorporated King County in the ongoing effort to reduce the number and severity of collisions. The report is intended to provide critical information that can be used to better allocate limited safety funds, increase driver awareness of safety concerns, and improve the safety of the traveling public.

King County Traffic Safety Reports are available at:
http://www.kingcounty.gov/depts/transportation/roads/traffic.aspx

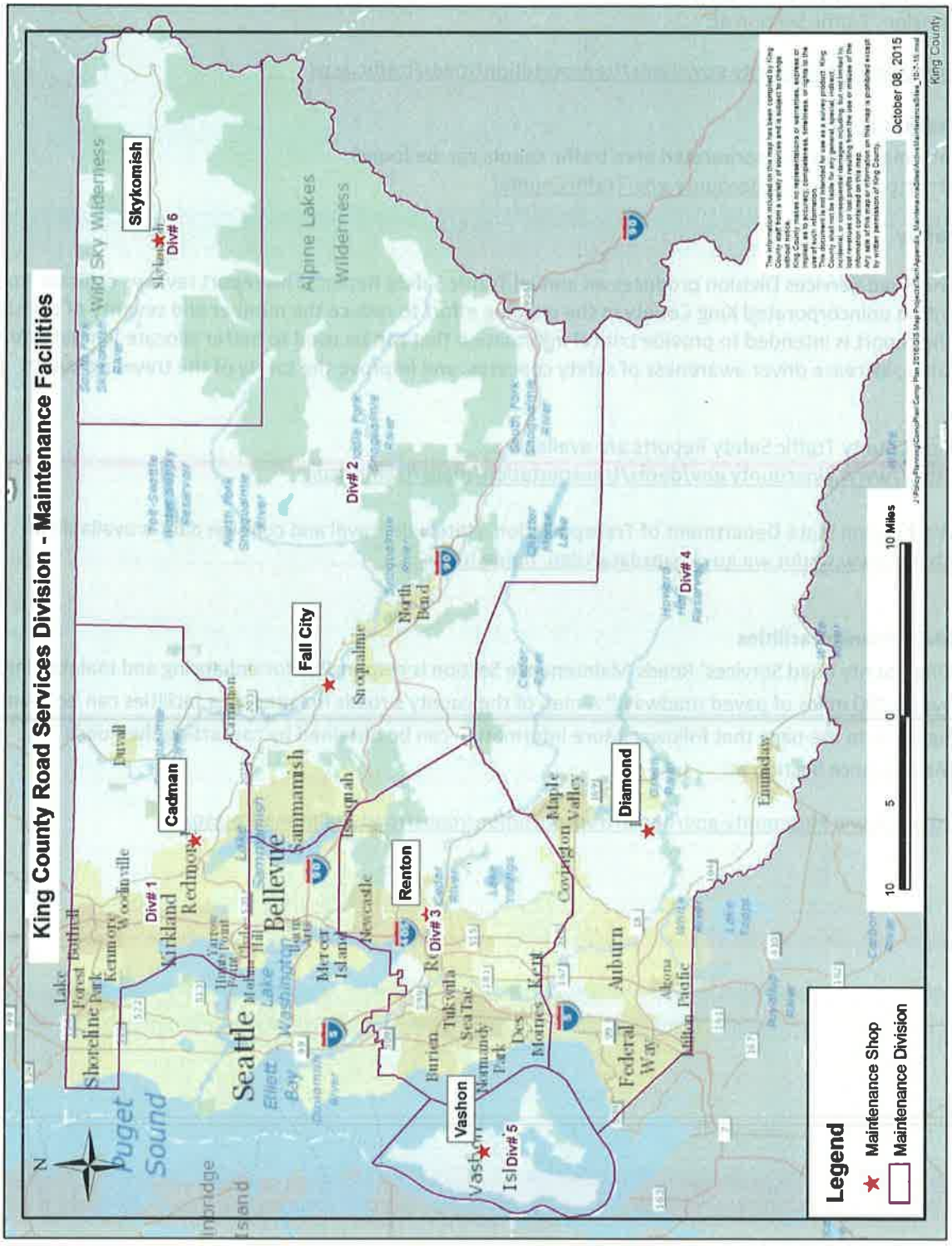
Washington State Department of Transportation, statewide travel and collision data is available at:
http://www.wsdot.wa.gov/mapsdata/tdgo_home.htm

Maintenance Facilities

King County Road Services' Roads Maintenance Section is responsible for enhancing and maintaining over 1,400 miles of paved roadway.[ix] A map of the county's roads maintenance facilities can be found in Figure A on the page that follows. More information can be obtained by contacting the Roads Maintenance Section at:

http://www.kingcounty.gov/depts/transportation/roads/road-maintenance.aspx

Figure A


King County Road Services Division - Maintenance Facilities
Skykomish
Div# 6
Cadman
Div# 1
Fall City
Div# 2
Renton
Div# 3
Diamond
Div# 4
Vashon
Div# 5
Legend
Maintenance Shop
Maintenance Division
10 Miles
October 08, 2015
King County

State and Federal Highways

Major Highways

The State Highways of Washington comprise of a network of state highways, including all Interstate and U.S. Highways that pass through the state, maintained by the Washington State Department of Transportation. Four Federal Highways and twenty-eight State Highway Routes are located in King County, including five ferry routes.[x] All state highways are designated by the Washington State Legislature.[xi]

Maps of the State Highways can be viewed at:

http://www.wsdot.wa.gov/Publications/HighwayMap/view.htm

Highways of Statewide Significance

Highways of Statewide Significance (HSS) include interstate highways and other state principal arterials that are needed to connect major communities in the state. The designation helps assist with the allocation and direction of funding.

A map of the HSS corridors is available at:
http://www.wsdot.wa.gov/planning/HSS/

A map of both state and regionally significant state highways within King County is available at:
http://www.psrc.org/transportation/t2040/los/

Transit Services

Transit services in King County are provided by four public transit agencies. King County Metro Transit (Metro) provides the vast majority of regular bus service and general public demand area response transit ("DART") available to King County residents. Pierce Transit and Community Transit provide commuter bus services into King County urban centers including downtown Seattle, downtown Bellevue, and the University District in northeast Seattle. Sound Transit provides regional high capacity transportation throughout parts of King, Pierce and Snohomish counties through commuter rail (Sounder), light rail (Link) and a regional express bus system (ST Express).

King County Metro Transit

In a service area of more than 2,000 square miles and 2 million residents, Metro operates over 200 bus, trolley and demand area response transit (DART) routes that serve destinations across King County.[xii][xiii]

Metro at a Glance (2015)[xiv]

- Fixed-route ridership: 121.8 million
- Vanpool ridership: 3.5 million
- Access ridership: 1.4 million
- Annual service hours: 3.6 million
- Active fleet: 1,473 buses
- Bus stops: 8,079
- Park-and-rides: 130
- Park-and-ride spaces: 25,468

A list of Metro routes and schedules, including route maps, is available at:
http://metro.kingcounty.gov/schedules/

Other information about Metro's system and performance can be found at: http://metro.kingcounty.gov/am/accountability/

Metro Services

RapidRide

RapidRide is Metro's arterial bus rapid transit network launched in 2010. As of 2015, Metro operates 6 RapidRide lines throughout King County. RapidRide separates itself from standard bus service with high frequency (every 10 minutes during peak hours), fewer stops, use of semi-exclusive lanes, and all-door passenger boarding and exiting. Additional information on RapidRide is available at:

metro.kingcounty.gov/travel-options/bus/rapidride/

Alternative Services

The King County Metro Alternative Services Program brings a range of mobility services to parts of King County that do not have the infrastructure, density, or land use to support traditional fixed-route bus service. As such, alternative services are an important part of Metro's efforts to cost effectively deliver transportation alternatives across King County. The program is guided by the King County Metro Transit Five-Year Implementation Plan for Alternatives to Traditional Transit Service Delivery adopted in 2012.

Alternative Services include: VanPool, MetroPool, VanShare, TripPool, SchoolPool, Real-Time Rideshare, CarPool, Community Shuttles, Emergency Ride Home, Community Van, and Bicycle Library.

Information on Metro's Alternative Services Program is available at: http://metro.kingcounty.gov/programs-projects/alternative-services/

Access Paratransit

The ADA Paratransit Program provides next-day, shared rides on Access Transportation within ¾ of a mile on either side of non-commuter fixed route bus service during the times and on the days those routes are operating.[xv] Paratransit service is intended to offer a comparable level of service to that provided by regular bus service. Paratransit service is not required nor intended to meet all the transportation needs of persons with disabilities. Rather, it is intended to provide public transportation in a more specialized form. Individuals must be evaluated and deemed eligible prior to using ACCESS services. Eligibility is based on whether your disability prevents a person from performing the tasks needed to ride regular bus service some or all of the time. Metro provides ACCESS service through private contractors.

Additional information on the ADA Paratransit Program:
http://metro.kingcounty.gov/tops/accessible/programs/paratransit.html

Transportation Demand Management, Equity and Social Justice, and Partnership Programs

Metro offers many programs, products, and services to area employers, other organizations, and individuals. Major Metro programs include:

ORCA Business Products[xvi] – Employers can contract with Metro to provide ORCA cards as subsidized passes for their employees for access to public transportation services, including bus, commuter rail, Link light rail, streetcar, ferry, water taxi, vanpool/vanshare, and guaranteed ride home service. Employers can select a comprehensive program or a flexible package to suit their needs.

ORCA LIFT – This is a program that provides reduced transit fare that provides a discounted rate of $1.50 per trip for residents who earn less than 200-percent of the federal poverty rate, which is currently $23,340 for a one-person household.[xvii] ORCA LIFT is one of the largest programs of its kind in the United States.

Information on ORCA LIFT can be found at:
http://metro.kingcounty.gov/programs-projects/orca-lift/

Commuter vans (vanpool/vanshare) – Vanpools provide a complete trip, usually travel at least 10 miles each way from home or park-and-ride to a worksite and can have as many as 15 riders. Vanshares are intended to bridge the gap between public transportation (bus, train, water taxi, or ferry) and a final destination. Metro provides the van and covers rider support services, maintenance, insurance, fuel, tires and training for a per-rider monthly fee.

Community Access Transportation – This program provides vans, maintenance, and some operating funds to community organizations. [xviii] The program makes use of high-quality retired Access and vanpool vehicles for transportation services operated by these organizations. One example is the Downtown Circulator Bus, a free downtown circulator bus for people living on low incomes that provides access to health and human services in downtown Seattle. The circulator bus is operated through a partnership with the nonprofit organization, Solid Ground.

Bicycle programs and facilities – Metro supports bicycling in conjunction with public transportation by providing racks on every bus to accommodate three bicycles, racks on request for vanpools, bicycle lockers at park-and-rides and transit centers, a bicycle station, and information about getting around by bicycle. Bicycling is also included as a travel option in Metro incentive programs that encourage alternatives to driving alone.

Home Free Guarantee – Metro provides emergency taxi service for commuters who arrive at work without their personal vehicle (by transit, carpool, vanpool, bicycle or walking) and have an unplanned emergency or unscheduled overtime.

Information on this program can be found at:
http://www.kingcounty.gov/transportation/CommuteSolutions/products/HFG.aspx

JARC program – The Job Access Reverse Commute (JARC) Transportation Program partners with social service agencies, community based organizations, housing authorities, local jurisdictions and employers to assist with transportation issues for low income individuals.

Information on Metro's JARC program can be found at:
http://metro.kingcounty.gov/tops/jobaccess/jobseeker.html

In Motion – In Motion enlists local businesses, organizations, and communities as partners to entice people to register as participants and pledge to reduce car trips over a period of time. Participants earn rewards for their reduced trips.

Information on In Motion can be found at:
http://www.kingcounty.gov/transportation/kcdot/MetroTransit/InMotion.aspx

Rideshare Online - RideshareOnline.com provides free online self-serve ride matching services. The online system matches commuters interested in sharing rides in carpools, commuter vans, group biking, event travel, and with other parents transporting kids to school.

Information on Metro's Rideshare program can be found at:
http://metro.kingcounty.gov/tops/van-car/van-car.html

Special and Custom Bus Service

Metro provides special transit services for major community and sporting events in partnership with event sponsors.

Information regarding Metro's special event service can be found at:
http://metro.kingcounty.gov/up/spclevent.html

Contract Services

Metro serves as the operator for other transit services in Seattle and King County. Metro operates nine Regional Express bus routes and Central Link light rail for Sound Transit. Metro operates the Seattle Streetcar South Lake Union line for the City of Seattle.

Service Connections

Metro service connects to a wide range of other transportation services in King County, including for bus, rail, ferry, and air travel hubs. Metro provides intermodal connections with Sound Transit Link light rail and Sounder commuter rail service, Amtrak rail service, Washington State Ferries, and Sea-Tac International Airport. Metro also connects with other bus services including Sound Transit, Community Transit, Pierce Transit and intercity Greyhound bus service.

In June 2014, the King County Executive issued an executive order directing the King County Department of Transportation to increase joint planning and integration with Sound Transit. The action was

reciprocated by adoption of a related motion by the Sound Transit Board of Directors.

Further information on the collaboration between Metro and Sound Transit can be found at: www.kingcounty.gov/elected/executive/constantine/News/release/2014/September/10_metro-sound-transit-report.aspx

Capital Facilities

Metro provides buses, use of semi-exclusive lanes, and facilities such as park-all-door passenger boarding and-rides and bus shelters for King County bus exiting. Voter approved sales tax and federal grants are the primary revenue sources.

Physical Plant

Metro's administrative offices are located at 201 South Jackson Street in downtown Seattle. Metro also has seven operating bases located throughout the county, and a variety of other physical facilities to support the provision of transit and ridesharing service. Major facilities include:

Central Campus and SODO (Seattle)

- Atlantic/Central Bases, 1270 6th Ave. S., Seattle
- Atlantic Maintenance, 1555 Airport Way South, Seattle
- Central Maintenance, 640 South Massachusetts, Seattle
- Ryerson Base, 1220 4th Ave. S., Seattle
- Transit Control Center, 1263 6th Ave. S., Seattle
- Employee Parking Garage, 1505 6th Avenue South, Seattle
- Tire and Millwright Shop, 1555 Airport Way South, Seattle
- Marketing Distribution Center, 1523 6th Ave South, Seattle
- Power Distribution, 2255 4th Avenue South, Seattle

Campus & Eastside

- Bellevue Base, 1790 124th NE, Bellevue
- East Base, 1975 124th NE, Bellevue
- Vanpool Distribution, 18655 NE Union Hill Road, Redmond

Tukwila

- South Base, 12100 East Marginal Way S., Tukwila

- Training and Safety Center, 11911 East Marginal Way S., Tukwila
- South Facilities, 11911 East Marginal Way S., Tukwila
- Component Supply Center, 12200 East Marginal Way S., Tukwila

Shoreline

- North Base, 2160 N. 163rd St., Shoreline

Metro operates the Downtown Seattle Transit Tunnel (DSTT), a 1.3 mile dual-bore transit-only facility with five stations. Four stations are served by bus and Link light rail, while Convention Place Station is served by buses only. The DSTT is served by 14 Metro bus routes, one Sound Transit Regional Express bus route, and Sound Transit Link light rail. Joint bus-rail operations began in the DSTT in 2009 with the start of Central Link light rail service. The DSTT is one of very few facilities in the world with joint operations. DSTT operating hours are 5 a.m. to 1 a.m. from Mondays to Saturdays and 6 a.m. to midnight on Sundays. Metro also operates service on the SODO busway, a transit-only roadway between South Spokane Street and Royal Brougham Way in Seattle.

Fifteen Metro routes use electric trolley buses. To support the electric trolley bus network, Metro operates and maintains a network of overhead power infrastructure and electrical substations to power the system.

Bus Stops and Shelters

Metro's transit system is very large and includes 9,200 bus stops and 1,568 bus shelters. Many of these stops and shelters are maintained by Metro in coordination with jurisdictions.[2]

Park-and-Ride Lots

A park-and-ride lot is a designated passenger facility where individuals can leave their private vehicles or bicycles to access public transportation. A park-and-ride lot can also serve as a park-and-pool lot, where individuals can rendezvous to form carpools and vanpools.

There are 130 park-and-ride facilities (64 permanent and 66 leased park-and-ride lots) in the King County Metro area, with a total of 25,489 vehicle spaces as the end of 2014.[xix] Metro, Sound Transit, and WSDOT own permanent park-and-ride lots within King County, and a wide variety of agencies and organizations own spaces that Metro leases for use. Metro maintains approximately 55 park-and-ride lots owned by Metro and WSDOT.

A list of park-and-ride locations with information on capacity, routes, and amenities can be found at: metro.kingcounty.gov/tops/parknride/

Metro's quarterly park-and-ride utilization reports can be found at:

[2] http://www.kingcounty.gov/transportation/kcdot/MetroTransit/PowerAndFacilities/BusShelters.aspx

http://metro.kingcounty.gov/am/accountability/park-ride-usage.html

Charging Station Program

King County promotes the use of alternative fuel vehicles. King County's charging station program is an initiative aimed at growing the plug-in vehicle market. As of June 2012, King County Metro manages 27 earlier generation 110-volt plug-in outlets.[xx] The latest County effort adds 36 new, 220-volt electric vehicle charging stations at multiple locations. In a related effort, the County created the Metropool program, adding 25 all-electric vehicles to the Vanpool, Vanshare, and Motorpool programs.

More information on the Metropool program is available at:
http://metro.kingcounty.gov/tops/van-car/programs/metropool/index.html

More information on park-and-plug spaces and locations in King County park-and-rides is available at: http://metro.kingcounty.gov/tops/parknride/

Capital Program

Metro Transit is one of twelve capital programs at King County and is part of King County's Capital Improvement Program. Capital projects help to maintain and improve King County assets and infrastructure. Metro has its own designated revenue sources and service areas.

Metro's Public Transportation Fund Capital Program provides for ongoing replacement of aging infrastructure and supports service delivery and expansion. The focus of the Capital Improvement Program (CIP) is on maintaining existing infrastructure and systems, partnering with other regional transportation agencies and providing the physical capacity needed to support projected service. As a part of the long range planning effort started in 2013, Metro will review capital needs based on the future network.

More information can be found at: http://www.kingcounty.gov/exec/PSB/Budget/CIP.aspx

Information on King County's Transit Asset Management Program (TAMP) can be found at: http://www.kingcounty.gov/transportation/kcdot/MetroTransit/PowerAndFacilities/AboutUs.aspx

Sound Transit

Sound Transit is a regional transit authority implementing and providing a high capacity transportation system throughout parts of King, Pierce and Snohomish counties through commuter rail (Sounder), light rail (Link) and a regional express bus system (ST Express). More information can be found here:

http://www.soundtransit.org/

ST Express Regional Bus Service

ST Express regional bus service includes limited-stop bus routes, partnerships with WSDOT to develop HOV direct-access projects, and a variety of community connection facilities including transit centers, access improvements, and park-and-ride lots. [xxi] ST Express buses travel between major cities in King, Snohomish, and Pierce counties.

Information on routes, related projects, and fares is found at:

soundtransit.org/Rider-Guide/ST-Express-bus

Sounder Commuter Rail

Sounder commuter rail uses diesel-powered locomotives and multi-level passenger coach trains that run on BNSF Railway Company railroad freight tracks.[xxii] Sounder shares the tracks with freight trains and ((-)) Amtrak passenger trains, using upgraded signals, switches, and street crossings. Trains travel between Lakewood and Seattle and between Everett and Seattle.

Information on routes, related projects, and fares is found at:

soundtransit.org/Rider-Guide/Sounder-train

Link Light Rail

Link light rail is an electrically-powered service that provides high-capacity transportation within the region's highest employment and transit ridership areas.[xxiii] Central Link light rail travels between the University of Washington campus in Seattle and Sea-Tac Airport.[xxiv]

Information on routes, related projects, and fares is found at:

soundtransit.org/Rider-Guide/Link-light-rail

System Expansion

The initial phase of the regional mass transit system was completed in 2016, connecting Sea-Tac Airport, downtown Seattle, and the University of Washington.[xxv] The second phase of "ST2", expands the transit system throughout the region, and is scheduled for completion in 2023. Sound Transit has begun planning for the expansion of the regional transit system. In late 2014, Sound Transit updated its Long-Range Plan, the roadmap for future development of the regional transit system

Based on its long range, Sound Transit is working to develop a new System Plan – "ST3" which was adopted by the voters in November 2016. (http://soundtransit3.org/)

Sound Transit's Long Range Plan can be found at:
http://www.soundtransit.org/longrangeplan

Service Integration

Sound Transit services are integrated with the local bus routes operated by King County Metro so that all services support and complement each other. A 1998 Memorandum of Understanding (MOU) between the two agencies established the basic principles under which a coordinated system will be planned and operated.[xxvi] The partnership was strengthened by an initiative announced in late 2014 by the King County Executive Dow Constantine to increase joint planning and integration between the two agencies for operating efficiencies and future service expansion.[xxvii]

Information on Sound Transit's services and plans is available at:
soundtransit.org/Projects-and-Plans

Sound Transit's Transit Development Plan Annual Reports are available at:
soundtransit.org/About-Sound-Transit/News-and-events/Reports/Transit-Development-Plan

Additional information and a full report on King County Metro and Sound Transit service integration is available at:
Getting There Together (Transit Integration Report, September 2014)

High Occupancy Vehicle System

The High Occupancy Vehicle (HOV) system is an important element of King County's and the region's multi-modal transportation system. High occupancy vehicle lanes - also known as carpool lanes, commuter lanes, diamond lanes, or bus lanes - are reserved for vehicles containing at least a specified number of occupants (such as 2, 3, 4, or more) or for transit vehicles.[xxviii] Such lanes can be on highways, on arterials, or on metered entrance ramps to highways. They may be physically separated from other lanes, or indicated with signage. Some operate only during certain hours. Other types of strategies that potentially promote higher vehicle occupancy include ridesharing programs, parking management, guaranteed ride home policies, and other employer-based programs.

Coupled with the County's Transportation Demand Management program, HOV facilities are designed to help accommodate growth by moving more people in fewer vehicles, reducing the need for new road construction or major widening projects on the County's existing arterial system. Recent changes to the HOV lane system include direct access ramps to support Sound Transit's regional bus service, as well as freeway to freeway improvements to interconnect the system. The HOV system is a crucial part of the central Puget Sound area's highway system, carrying more than 1/3 of freeway travelers during rush hours.[xxix] Today, approximately 310 lane miles of operating HOV facilities are available for use in King County by transit, carpools, and vanpools.

Information on the HOV system is available at: http://www.wsdot.com/HOV/default.htm

For a complete list of Sound Transit projects visit: http://www.soundtransit.org/Projects-and-Plans

Nonmotorized Facilities

Bicycle Parking and Lockers

Bicycle parking and secure storage support ridership by increasing options for people to connect to bus service or to meet a carpool or vanpool. King County park-and-ride lots and transit centers have bicycle racks and/or bicycle lockers on a space-available basis to cyclists who commute. Metro aims to reduce car travel to these locations by making it reliable to secure bicycles. Combined, Metro and Sound Transit currently provide 523 lockers across 40 locations for cyclists.[xxx]

Information on bicycle parking and lockers is available at:
http://metro.kingcounty.gov/tops/bike/parking/index.html

King County Trails

The King County Parks System includes more than 294 miles of regional greenway and shared use paths.

This expanding network includes over 175 miles of trails for hiking, biking, walking, and horseback riding. The backcountry trail system offers 130 miles of backcountry trails with year-round accessibility for hiking, mountain biking, and horseback riding. These trail systems provide extensive opportunities for recreation usage and non-motorized mobility and commuting throughout King County. The planned future Regional Trail system anticipates about 300 miles of King County regional trails.

Information about the King County Regional Trails System is available at:
http://www.kingcounty.gov/recreation/parks/trails.aspx

Historic and Scenic Roads and Highways

King County Heritage Corridors

In an effort to preserve the county's transportation history, King County has identified nine "Heritage Corridors" in unincorporated King County.[xxxi] These corridors share King County's history through its most formative decades of development, from the 1870s through the 1930s. They touch on industrial, commercial, agricultural, and maritime themes. Identification of these Heritage Corridors helps the county maintain and operate its historic and scenic roads in keeping with their unique character.

The Heritage Corridors program also includes public education materials that enhance the public's travel experience and lead to a greater understanding and appreciation of the region's transportation history. The county also encourages adjacent private property owners to support the preservation of the corridors.

The identified Heritage Corridors are:

☐ Cedarhurst Road / Westside Highway, Vashon Island

☐ Dockton Road, Vashon-Maury Island

☐ Green Valley Road, Auburn-Black Diamond

☐ Issaquah-Fall City Road, Snoqualmie Valley

☐ Osceola Loop, Enumclaw Plateau

☐ West Snoqualmie River Road, Snoqualmie Valley

☐ West Snoqualmie Valley Road / Carnation Farm Road, Snoqualmie Valley

☐ Old Cascade Scenic Highway, Stevens Pass

☐ Old Sunset Highway, Snoqualmie Pass

Information about King County's Heritage Corridors, including maps and final report, are available at: http://www.kingcounty.gov/depts/transportation/roads/historic-corridors.aspx

Washington State Scenic and Recreational Highways

Washington's Scenic and Recreational Highways, as designated in RCW 47.39, are important access routes to some of the most scenic resources and best recreational destinations in the state.[xxxii] In King County there are approximately 175 miles of designated Scenic and Recreational Highways. These include portions of I-90 (Mountains to Sound Greenway), US 2 (Stevens Pass Greenway), SR 410 (Chinook Pass Scenic Byway), and SR 202 (Cascade Valleys Scenic Byway).

A map of Washington Scenic and Recreational Highways is available at:
wsdot.wa.gov/LocalPrograms/ScenicByways/Map.htm

Corridor management plans are available at:
wsdot.wa.gov/LocalPrograms/ScenicByways/CorridorManagementPlans.htm

Rail

Interstate Rail Facilities

The rail network in the state has three distinct types of rail services: freight, intercity passenger, and commuter. The Class I railroad system primarily serves the inland transportation component of the supply chain for large volumes of import and export cargo moving through state ports including the Port of Seattle. Two Class I railroads, the BNSF Railway and the Union Pacific Railroad, as well as 24 short-line railroads operate through communities in Washington State. [xxxiii],[xxxiv] Amtrak provides intercity passenger rail service along the I-5 corridor, this intercity rail service is known as Amtrak Cascades.[xxxv] As the demand for reliable passenger rail travel increases, stations are being expanded and refurbished to serve growing numbers of passengers and to provide them with enhanced security, comfort, and timely information. The Cascades High-Speed Rail Program consists of a series of projects that will increase service reliability and add two Amtrak Cascades round trips between Vancouver, B.C. and Portland. Currently there are two Amtrak Stations in King County.

Sound Transit's Sounder commuter rail uses diesel-powered locomotives and multi-level passenger coach trains that run on BNSF Railway Company railroad freight tracks.[xxxvi] Sounder shares the tracks with freight trains and Amtrak passenger trains, using upgraded signals, switches, and street crossings. Trains travel between Lakewood and Seattle and between Everett and Seattle.

A complete description of the existing freight and Amtrak facilities, projects, and data is available at:
http://www.wsdot.wa.gov/Freight/Rail/default.htm
http://www.wsdot.wa.gov/rail/

Information on Sounder routes, related projects, and fares is found at:
soundtransit.org/Rider-Guide/Sounder-train

Freight Transport

Freight transport, is a major function of the regional transportation system. The Puget Sound Regional Council (PSRC) has developed a comprehensive, multimodal Freight Strategy that will serve as the freight component of the adopted long range transportation plan, Transportation 2040.[xxxvii] The Freight Strategy describes the regional freight mobility system and incorporates all of the main freight modes, including rail, truck, air, and marine cargo. It examines the current and future conditions and issues as the region looks to planning for a sustainable transportation system out to 2040.

The PSRC Freight Strategy is available at:
http://www.psrc.org/transportation/freight

Additional information on the freight system in King County is available at:
http://www.wsdot.wa.gov/freight/
http://www.wsdot.wa.gov/Freight/FGTS/CountyMaps.htm

IV. Travel Forecast Summary

The Washington State Growth Management Act (GMA) requires the transportation element of comprehensive plans to include a forecast of traffic for at least ten years based on the adopted land use plan, and to provide information on the location, timing, and capacity needs of future growth (RCW 36.70A.70(6)(E). It also requires an estimate of traffic impacts to state-owned transportation facilities resulting from the land use assumptions. To meet these requirements, the King County Department of Transportation Road Services Division adopted the Puget Sound Regional Council's (PSRC) Regional Travel Demand Forecasting Model (Travel Model).

The PSRC Travel Model forecasts future travel patterns and conditions within the four counties (King, Kitsap, Pierce, and Snohomish) of the Puget Sound region.[3] The Travel Model produces data that are used to analyze the likely impacts of travel forecasts on the region's transportation infrastructure and environment and thus provides the foundation from which the PSRC develops many of its plans, most notably the regional transportation plan, *Transportation 2040*. The Travel Model is used to support the technical analysis of transportation projects and investments under consideration in the region.[4] In addition to transportation analysis, the travel model also supports growth management activities at the agency.

King County Road Services worked with PSRC modeling staff to run a model scenario with a forecast year of 2031. Raw model output was analyzed by King County planning staff. The forecasted p.m. peak hour (afternoon rush hour[5]) traffic volumes on state facilities were mapped to review performance on state facilities (Figure 1). Modeled traffic volumes and roadway capacities on local roads were also reviewed for indications of potential future congestion. Road segments where traffic volumes exceeded roadway capacities (ratios greater than 1) are were mapped (Figure 2). Planning and engineering staff considered Travel Model analysis and other factors in the development of projects for King County's Transportation Needs Report.

Detailed information on the traffic forecasting model and assumptions used for the Comprehensive Plan are available from the Puget Sound Regional Council.

Puget Sound Regional Council Travel Model information is available at:
http://www.psrc.org/data/models/trip-based-travel-model/
More information on Transportation 2040 is available at:
http://www.psrc.org/transportation/t2040

[3] Puget Sound Regional Council, *Travel Demand Forecasting*, 1.
[4] Ibid., 3.
[5] Defined by PSRC as 3:00 pm – 6:00 pm

Figure 1

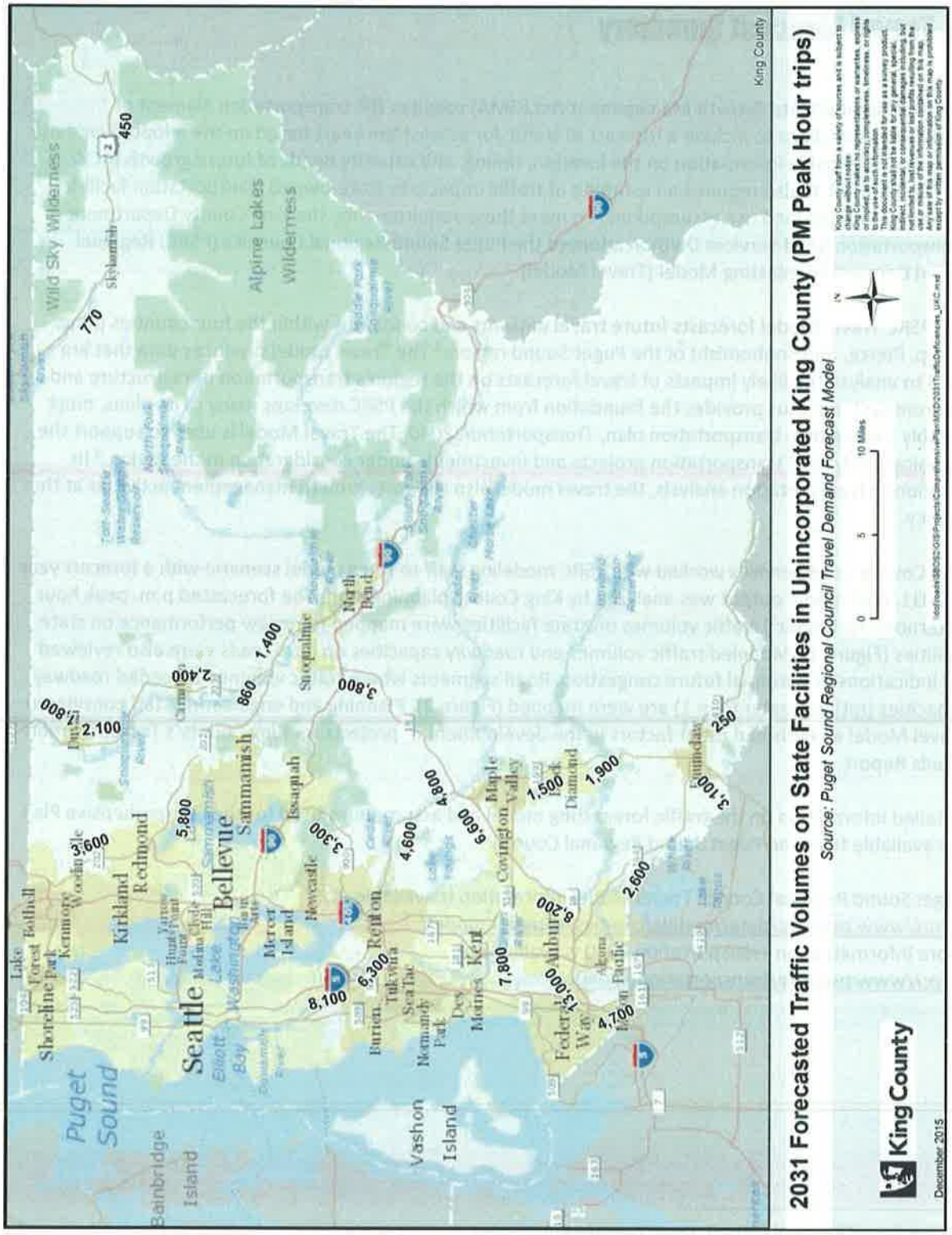

2031 Forecasted Traffic Volumes on State Facilities in Unincorporated King County (PM Peak Hour trips)
Source: Puget Sound Regional Council Travel Demand Forecast Model
King County
December 2015
Wild Sky Wilderness
Alpine Lakes Wilderness
Puget Sound
Seattle
Bellevue
Kirkland
Redmond
Issaquah
Sammamish
Renton
Auburn
Kent
Federal Way
Maple Valley
Covington
Enumclaw
Vashon Island
Bainbridge Island
Shoreline
Lake Forest Park
Kenmore
Woodinville
Mercer Island
Newcastle
Burien
Tukwila
SeaTac
Normandy Park
Des Moines
Algona
Pacific
Black Diamond
Snoqualmie
North Bend
Skykomish
King County
450
770
1,800
2,100
2,400
1,400
860
3,800
5,800
3,300
4,600
4,800
6,600
1,500
1,900
3,100
250
2,600
8,200
13,000
7,800
6,300
8,100
4,700

Figure 2


PSRC 2031 Travel Model Forecast for Unincorporated King County*
Bothell
Lake Forest Park
Shoreline
Kenmore
Woodinville
NE 145th St
SR 202
West Snoqualmie Val Rd NE
Duvall
Puget Sound
Kirkland
Lake Washington
NE Novelty Hill Rd
Redmond
Carnation
Lake Sammamish
Seattle
Bellevue
Elliott Bay
Sammamish
Mercer Island
SE Issaquah-Fall City Rd
Issaquah
Snoqualmie
Newcastle
SR 900
Issaquah Hobart Rd SE
North Bend
SR 18
Burien
Tukwila
Renton
SeaTac
SE Petrovitsky Rd
Vashon Island
Normandy Park
Des Moines
Kent
Maple Valley
Covington
Puget Sound
Auburn
Federal Way
Black Diamond
Algona
Pacific
Milton
Enumclaw
SR 410
King County
2031 Forecasted Congestion
Major Road
King County
June 2015
N
0
4
8 Miles
*PM Peak Travel, Volume/Capacity 1.0 or greater

[i] Federal Aviation Administration, "Airport Data."
[ii] Port of Seattle, "Airport Statistic: 2014 Airport Activity Highlights."
[iii] Puget Sound Regional Council, "Airport Compatible Land Use Program Update."
[iv] Washington State Ferries, "WSDOT - Ferries - Vehicle Reservations."
[v] Washington State Ferries, "Washington State Department of Transportation Ferries Division Final Long-Range Plan."
[vi] King County Metro, "About Metro - King County Metro Transit."
[vii] King County Department of Transportation Road Services, "2013 Annual Bridge Report," 3.
Ibid., 13.
[ix] King County Road Services Division, "2015-2016 Line of Business Plan," 5.
[x] Washington State Department of Transportation, "View and Print the State Highway Map."
[xi] Washington State Legislature, "RCW 47.04.020: Classification of Highways."
[xii] King County Metro Transit Division, "2014 Stratgeic Plan Progress Report," 5.
[xiii] King County Metro, "2013 Strategic Plan Progress Report," 26.
[xiv] King County Metro Transit Division, "2014 Stratgeic Plan Progress Report," 5.
[xv] King County Metro, "Accessible Services - King County Metro Transit."
[xvi] King County Metro, "Comparing Business Passport to Business Choice."
[xvii] King County Executive, "Find out Today If You Qualify for ORCA LIFT, Metro's New Reduced-Fare Bus Pass."
[xviii] King County Metro, "Accessible Services - King County Metro Transit."
[xix] Transit Route Facilities Group and Metro Transit Division, "Park-And-Ride Utilization Report," 1,3.
[xx] King County Department of Transportation, "Charging Station Program."
[xxi] Sound Transit, "ST Express Bus - SoundTransit."
[xxii] Sound Transit, "Sounder Train - SoundTransit."
[xxiii] Sound Transit, "Link Light Rail - SoundTransit."
[xxiv] Sound Transit, "University Link Extension."
[xxv] Sound Transit, "History: What Voters Approved."
[xxvi] Sound Transit Finance Committee, "Resolution No. R98-33."
[xxvii] King County Executive, "Joint Planning of Region's Bus and Rail Will Create Efficiencies and Enable Future Service Expansion."
[xxviii] Puget Sound Regional Council, "Congestion Management Strategies."
[xxix] Washington State Department of Transportation, "WSDOT - High Occupancy Vehicle (HOV) Lanes."
[xxx] King County Metro, "Bike Parking at Transit Facilities - Bike Travel - King County Metro Transit."
[xxxi] King County Road Services, "Historic and Scenic Corridors Project - King County Road Services."
[xxxii] Washington State Department of Transportation., "WSDOT - Washington State Scenic and Recreational Highways."
[xxxiii] Washignton State Department of Transportation, "WSDOT - Freight Rail."
[xxxiv] Ibid.
[xxxv] Washington State Department of Transportation, "WSDOT - Passenger Rail in Washington."
[xxxvi] Sound Transit, "Sounder Train - SoundTransit."
[xxxvii] Puget Sound Regiona Council, "Freight Mobility / FAST Corridor."



2016
Technical Appendix C1:
Transportation Needs Report

November 22, 2016

King County
Department of Transportation
Road Services Division

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Chapter 1: Planning Context and Introduction

What Is the Transportation Needs Report and How Is It Used?

The Transportation Needs Report (TNR) is a long-term, comprehensive list of improvements to the roads, bridges and related infrastructure located in unincorporated King County. It includes consideration of significant projects in adjacent cities, counties, and on state highways as they relate to the overall functioning of the transportation system. The transportation needs outlined in the TNR include those that are currently known, as well as those that are forecast due to regionally-adopted targets for growth and development. For the most part, King County Road Services' engineers and transportation planning staff identify project needs based on infrastructure condition, technical assessments, and community input; others are developed based on traffic model data provided by the Puget Sound Regional Council (PSRC).

The TNR is a functional plan of the King County Comprehensive Plan. Together with the King County Department of Transportation, Road Services Division (Roads) Six-Year Capital Improvement Program (CIP) and the biennial operating budget, it fulfills the requirement of growth management legislation (RCW 36.70A.070) as the transportation capital facilities plan element of the King County Comprehensive Plan.

How does this TNR comply with the law?

1. It is based on the land use element of the comprehensive plan.
2. The list of transportation needs and recommended improvements for capacity projects was developed using travel demand forecasts that are based on the regionally-adopted growth targets.
3. It includes a financial analysis that reflects the most recent land use changes, project amendments, costs, and financial revenue assumptions.
4. It documents intergovernmental coordination, with particular attention to potential impacts on adjacent jurisdictions.
5. It includes non-motorized needs (bicycle and pedestrian).

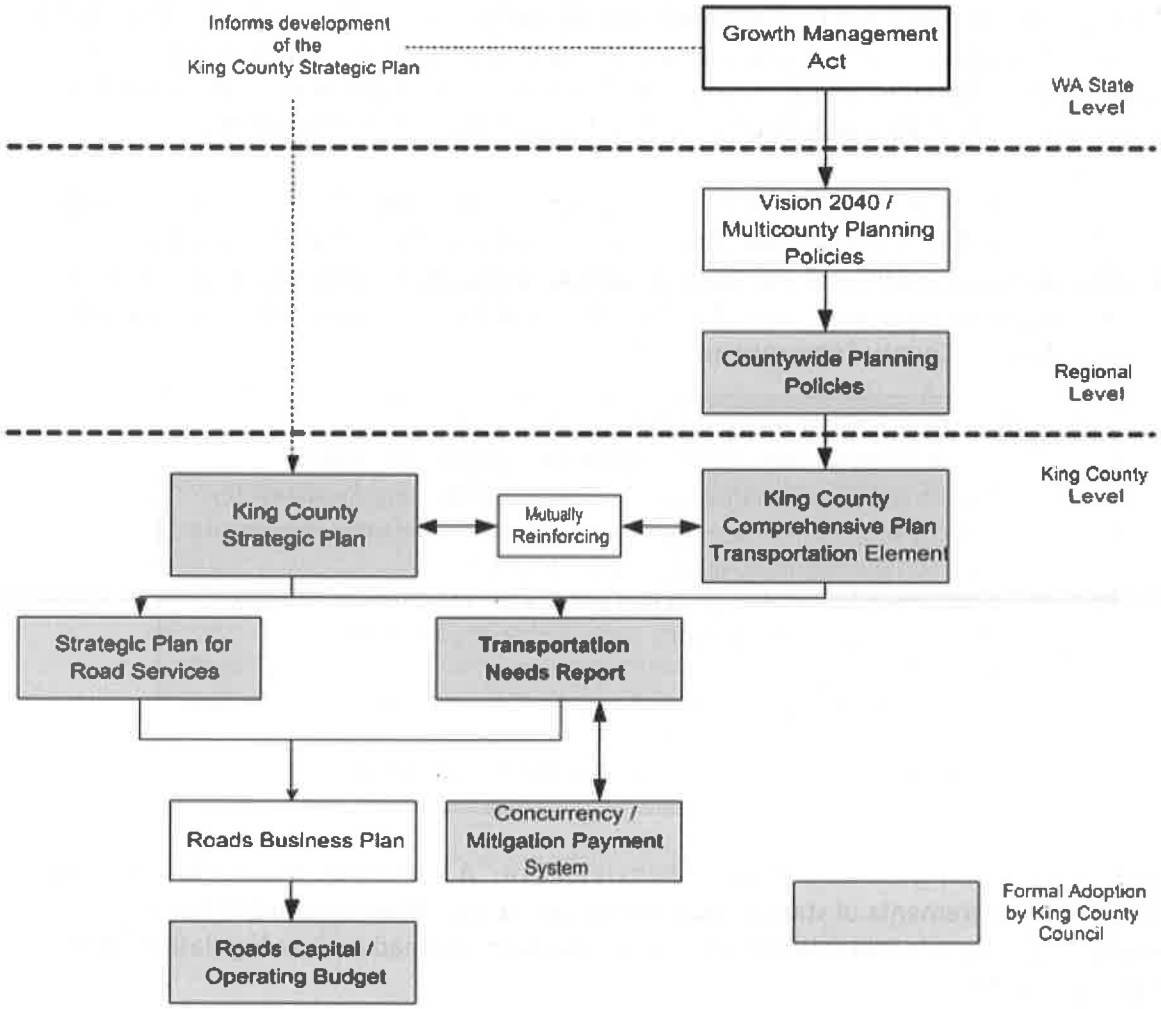
Relationship to King County Comprehensive Plan: A primary purpose of the TNR is to fulfill specific requirements of state growth management legislation for comprehensive planning. King County's TNR fulfills these requirements as outlined in state legislation (RCW 36.70A.070 (6)) are:

- Specific actions and requirements for bringing into compliance locally-owned transportation facilities or services that are below the Comprehensive Plan established level of service standard;
- Forecasts of traffic of at least ten years based on the adopted growth targets and land use plan to provide information on the location, timing, and capacity needs of future growth;
- Identification of state and local system needs to meet current and future demands;

- An analysis of funding capability to judge needs against probable funding resources; and
- A multiyear financing plan based on the needs identified.

The schedule for updating the TNR corresponds to major updates of the Comprehensive Plan, which occurs every four years. If circumstances warrant, interim updates may be developed and transmitted with the annual Comprehensive Plan technical amendments.

Planning Hierarchy Relationship to Growth Management Planning



Rural Regional Corridors

Rural Regional Corridors are recognized in the King County Comprehensive Plan as segments of certain arterials that pass through rural lands to primarily connect urban areas. This type of roadway plays a key regional mobility role in the county's transportation system. While additional capacity is generally prohibited by county policy on arterial roads in the rural area, a limited exception is made for Rural Regional Corridors. These corridors may receive capacity improvements if the increased capacity is designed to serve mobility and safety needs of the urban population while discouraging inappropriate development in the surrounding Rural Area or natural resource lands.

Rural Regional Corridors must be classified as Principal Arterials and carry high traffic volumes, defined as a minimum of 15,000 Average Daily Trips. They also have at least half of their PM Peak trips (the evening commute) traveling to cities or other counties. They connect one urban area to another, or to a highway of statewide significance that provides such connection, by traversing the rural area.

Based on the criteria in the Comprehensive Plan, the following King County unincorporated area roadways currently quality as Rural Regional Corridors:

	Woodinville Duvall Road	Novelty Hill Road	Issaquah Hobart Road	Avondale Road
Limits	Woodinville city limits to Duvall city limits	Redmond city limits to W. Snoq. Valley Road	Issaquah city limits to SR-18	NE 116th to Woodinville-Duvall Road
Functional Class	Principal Arterial	Principal Arterial	Principal Arterial	Principal Arterial
Average Daily Trips (ADT)	20,000	20,0000	18,000	16,000

Transportation Planning and Funding:

The TNR evaluates the difference between identified transportation needs and future revenues for King County. This analysis augments recent work undertaken by Roads to assess the County's ability to maintain the condition of its roadway assets given declining revenues. Projections illustrate that Roads' revenues will not keep pace with maintenance and preservation needs for King County's system given declining federal gas tax revenues and insufficient local property tax and other state revenues.

Most of the federal funding for transportation to the region is allocated via the PSRC which is the Municipal Planning Organization for King, Snohomish, Pierce and Kitsap Counties. PSRC developed grant criteria focuses on capacity and mobility projects primarily in identified urban centers. Upon completion of the few remaining annexations of urban areas into cities, King County Road's service area will be the rural area. Given the significant decline in revenues, the division is focused on core life safety, regulatory compliance and the maintenance and preservation of existing infrastructure which leaves no funding to add capacity to King County's unincorporated road system. Over the past two funding cycles, King County Roads has been unsuccessful in receiving funding for rural projects in countywide competitions. Rural projects

do not compete well against urban projects located in and around PSRC-identified centers. The majority of federal funding allocated to the region is allocated to urban projects that serve centers, fulfilling Growth Management Act goals. The PSRC does allocate funds exclusive to the rural area for rural roadway projects, but the amount is a little over $3 million every two years. By comparison, the total amount of federal funds awarded to all of the jurisdictions in King County amounts to between $50-55 million, every two years. Given these criteria and funding limitations, the county expects revenue from federal grant funds will continue to decline.

Historically, 50+ miles were overlaid annually to preserve roads near the lowest lifecycle cost. Based on current funding levels, after the 2015-2016 biennium, overlay funding will need to be funded primarily by grant funds. In the past two grant cycles (2013 and 2016), King County received funding to overlay eight miles of road in unincorporated King County.

The $16 billion 2015 state transportation package included close to $1M per year for unincorporated King County roads. Additional funds allocated to the State Transportation Improvement Board (TIB) and the County Road Administration Board (CRAB) for transportation projects are not projected to generate additional revenues due to the allocation methods and grant criteria that govern awards by these agencies. CRAB funding for counties is constrained by Washington Administrative Code that limits allocations based on lane miles as opposed to use.

Based on revenue projections, King County Roads does not have the funds to address the majority of the projects contained in the TNR. When capital funds are available, they will be directed to safety, regulatory and preservation projects consistent with Roads Strategic Plan and Line of Business Plan.

Coordination: The TNR helps to coordinate transportation improvements connecting King County with other jurisdictions including the Washington State Department of Transportation (WSDOT), adjacent cities, and counties. The Puget Sound Regional Council model incorporates the location and type of capacity projects anticipated by other agencies. The model helps King County understand how the overall transportation system will function in the future, indicating where unincorporated capacity improvements may be needed. By clearly showing the scope, location and cost of unincorporated road system projects, the TNR provides other jurisdictions with information to use in appropriately coordinating connecting systems.

Annexations: Cities considering annexing portions of unincorporated King County can refer to the TNR for identified road improvements that their city may need to address in the future.

Development Review: The TNR serves as a source of information in the review of proposed land developments and in determining appropriate mitigation measures required as a condition of new development approval. The County's Mitigation Payment System (MPS) uses the TNR to

help identify growth-related projects for the impact fee system; however, given the lack of funding for capacity improvements, the MPS system is going to need a major overhaul since there will soon be no funded growth-related road projects on which to charge impact fees.

Road Vacation: Property owners can petition King County to have portions of the County's unused road rights-of-way sold to them if the property is not needed for current or future transportation purposes. The TNR is used to identify future projects on the road system and is one tool in the road vacation process.

How is the TNR put together?

The development of the TNR is part of a comprehensive planning process guided by state growth management legislation. This process links the guidance of the King County Comprehensive Plan and the *Strategic Plan for Road Services* with the development of the TNR, the Roads Six-Year CIP, and the Roads biennial budget.

The Strategic Plan for Road Services (SPRS) articulates the division's mission and vision. It focused direction for an approximately ten year time frame by aligning employees, services, and programs with the overarching goals of King County. The plan informs decisions by the King County Executive and Metropolitan King County Council on matters of policy, operations, and budget. SPRS provides a framework to manage the division's programs and services.

Roads' Strategic Plan focuses on the critical funding problem coupled with a backlog of road system maintenance and preservation needs. While the Road Services Division recognizes that it may not be able to fully accomplish all of the goals and strategies suggested in the strategic plan, the plan prioritizes work that meets the most critical needs within available funding and resources. It places high priority on immediate operational safety, regulatory compliance (clean water activities), and the maintenance and preservation of infrastructure. The goals identified in the strategic plan are as follows (in order of priority):

1st Prevent and respond to immediate operational **life safety** and property damage hazards.
2nd Meet **regulatory requirements** and standards in cooperation with regulatory agencies.
3rd Maintain and **preserve the existing roadway** facilities network.
4th Enhance **mobility** (movement of people and goods) by facilitating more efficient use of the existing road system.
5th Address roadway **capacity** when necessary to support adopted growth targets.

Roadway Prioritization:

A key component identified in the strategic plan was the establishment of a service strategy. The plan creates a triaged approach toward maintaining and preserving infrastructure. According to the plan, the most-used arterials would receive the highest level of maintenance and preservation, storm response and snow and ice removal, while the lowest-priority roads could receive less service. Core Safety and regulatory compliance are the county's highest priorities and are accomplished regardless of the priority tier of the roadway.

The tiers are types of roads defined using objective criteria. Roads are categorized according to volume of use by motorists, safety requirements, detour length, and whether the road is considered sole-access, a lifeline route or important for buses. More information on the road tier system can be found by visiting: http://www.kingcounty.gov/transportation/kcdot/Roads/NewServiceLevels.aspx

The tier information establishes the criticality of the road to the operation of the network. Particularly given limited resources, the strategic plan directs that the most critical roads are prioritized for funding and inclusion in Roads' Capital Improvement Program.

Service Levels for Unincorporated King County Roads

Tier 1
Heavily traveled; connect large communities, major services, and critical infrastructure.

Tier 2
Highly used local roads; serve local communities and large residential areas.

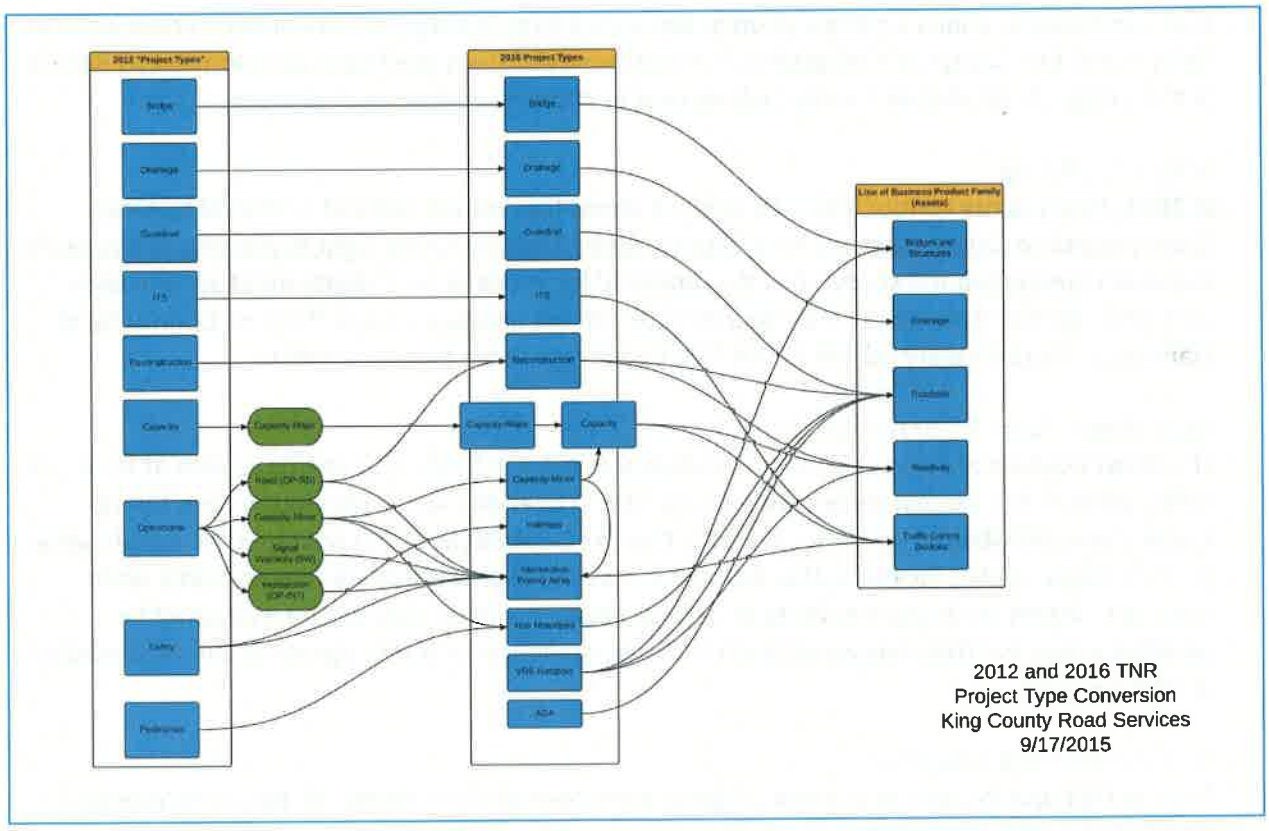
Tier 3
Highly used local roads that serve local communities and large residential areas.

Tier 4
Local residential dead-end roads with no other outlet.

Tier 5
Local residential roads that have alternative routes available for travel in case of road closures.

How Has the 2016 Transportation Needs Report Changed?

Organizing assets by Road Services Line of Business Plan product families:
Previous versions of the TNR organized projects into a series of project types. This version aligns the projects into the five product families identified by the Road Services Division 2015-2016 Line of Business Plan: Roadway, Roadside, Bridges and Structures, Traffic Control Devices and Drainage. The following graphic illustrates the migration of projects from previous project types to the Business Plan product families into which the projects in this TNR have been organized.



Including maintenance – programmatic/operating expenditures:
Road Services has developed various programs to respond to the emergent and routine needs of its assets. Descriptions of these programmatic maintenance and operations activities have been added to this version of the TNR to illustrate work being done by the agency, outside of capital projects that is funded by the operating budget.

Safety Projects:
Road Services analyzes accident data to determine the location of high accident locations. Once locations have been identified, projects are then designed to remedy any safety problems where possible. In 2015, a High Accident Location and Road Segment Analysis was done that identified locations with high accident rates (number of accidents/average daily traffic).

Accident rate is being considered in identifying the location of safety projects eligible for federal funding, but proposal projects to address safety problems will not be completed until spring 2016. The priority process for safety projects is discussed further in Chapter Two of this document.

Capital Project Completions:

Capital projects completed since the adoption of the 2012 Transportation Needs Report were deleted from the needs list.

Annexations:

Cities continue to annex portions of unincorporated King County. When annexed areas include TNR project locations, the TNR project is either removed from the Transportation Needs Report or the project is shortened to only include that portion in unincorporated areas.

Street Lighting:

In 2014, King County conducted a study on all street lighting owned and operated by King County Roads in unincorporated King County, called the LED Street Light Replacement Study. As engineers conducted the study, they documented locations in the County Road System with turn lanes that do not comply with Section 5.05 (Street Illumination) of the King County Road Standards. Projects were added to the TNR to address these turn lane needs.

Signal Warrant Priority Array:

The latest analysis of intersections was completed in April, 2015. Intersections with at least one traffic warrant for a signal were added to the TNR. Locations which previously met, but no longer meet the Manual on Uniform Traffic Control Devices (MUTCD) warrants for signals were deleted. In particular, locations that no longer met the four MUTCD volume warrants were removed. When the highest priority locations receive funding, they will be evaluated to consider a solution that may result in either the installation of traffic signals or the construction of roundabouts.

Non-motorized Projects:

For this TNR update, non-motorized projects were re-evaluated based on the Comprehensive Plan policy guidance and assessment of current conditions. Road Services staff reviewed each project and considered factors including potential non-motorized travel destinations, traffic volumes and speeds, existing shoulder widths, and proximity of a school or other community gathering place. Road staff also researched resident requests for sidewalk locations and, where appropriate, included those projects in this edition of the TNR.

Drainage Projects:

Drainage projects have been divided into three primary categories: 1) Large-scale preservation projects (previously included in the TNR); 2) Small-scale routine maintenance; and, 3) Small-scale drainage preservation projects. Two of the three categories of projects have been added to the 2016 TNR. Routine drainage maintenance needs are captured by description in Chapter Two.

Roads has embarked on an asset management program identified in the strategic plan that seeks "to make the most cost-effective operating and capital investments—from maintenance through preservation and replacement—at whatever funding level is available." Drainage needs are identified in conjunction with other roadway assets. The first step in developing an inventory of drainage needs is to assess the condition of the infrastructure. In 2015, a pilot project was launched to develop a methodology for screening and scoring the condition of the pipes, vaults and ditches that make up part of the drainage infrastructure in the right-of-way. As a result, additional drainage needs will be identified for future editions of the TNR.

Chapter 2: How Road Services Prioritizes Unincorporated King County's Roadway Assets

Roadway

Roadway Facts

Nearly 1500 miles (more than the distance from Canada to Mexico)

About 1/3 of the road system consists of arterials; of which 320 miles require reconstruction.

Over 1 million trips per day occur on King County roads.

The Roadway category of assets is one of five product families identified in the division's Line of Business Plan. This category of assets includes the drivable surface and supporting road base -- including several layers of gravel, dirt, and other materials of the road. Road pavement protects against deterioration of the road base that is the structural integrity of the road. If the road base becomes deteriorated, no amount of repaving will keep the surface smooth and repaving will not last as long as expected.

This section discusses how stand-alone projects are prioritized, the tasks associated with maintenance and operations and the programs associated with managing unincorporated King County's roadways. Needs associated with traffic impacted by the design constraints of the road prism are discussed in the Traffic Control Devices Section.

Pavement Inspection and Testing

Pavement and road deterioration continues from the impacts of stormwater, weather changes and growing traffic volumes. Pavement condition index scores and deflection testing data reflect a snapshot in time but, over time, give you a rate of deterioration.

The state County Road Administration Board requires the County to rate and report on pavement condition in order for the County to receive state gas tax revenues.

Pavement Condition Index (PCI): PCI is a scale of pavement condition rating ranging from 0 to 100, with 0 representing the worst and 100 representing the best possible condition. Road Services categorizes pavement condition as: Very Poor (PCI<25), Poor (PCI 25-49), Fair (PCI 50-70), and Good to Excellent (PCI 71-100). Ratings are based on a visual assessment of road surface conditions therefore may not accurately indicate the condition of the under laying base and sub-grade of the pavement.

Historically, Road Services conducted field assessments of arterials on a routine schedule to visually determine the condition of the pavement by walking all of its arterials on a rotating

basis. In some cases, advances in and access to current satellite imagery such as Google Street View allows visual assessments to be conducted over the internet, saving labor costs.

PCI scores guide Road Services' engineers toward pavement preservation measures; whether crack sealing, overlay, or pavement rehabilitation.

Deflection Testing: Between 2003 and 2012, Roads conducted deflection testing on all of the County's arterials to evaluate the subsurface condition. The deflection testing (Falling Weight Deflectometer testing) consisted of applying a seating drop and one loading drop. The spacing between tests was about 200 feet. In the 2003 and 2007 deflection testing efforts, core samples of the road material were collected and analyzed. Samples were analyzed for surface composition, base course thickness, composition and course condition, subgrade soil type, and subgrade strength.

Deflectometer testing was done using trailer mounted equipment consisting of a load package, load plate, load cell, and geophones referred to as deflection sensors. The load package was made of steel plates balanced on either side of the load cell and tower assembly. This package was raised up to a set height and dropped onto the load plate. During the loading of the plate, the load cell records the amount of load applied to the plate (over a period of time) and the maximum load is recorded. Once captured, the deflectometer data was analyzed using the AREA and EVERCALC 5.0 programs to determine the condition of the roadway. The data and calculated parameters were used to identify sections of roadway categorized as having low structural value (i.e. candidates for road reconstruction or rehabilitation) and to provide input for pavement rehabilitation or overlay.

Pavement Preservation Program

In light of declining roads revenues, Road Services has revisited how it manages pavement preservation. Beginning in 2015, the program is managed by a team of technical experts that, instead of using strictly overlay, research and employ other cost-effective rehabilitation and preservation approaches to collect cost-specific data from rehabilitation and preservation measures performed and to process road condition data. Road Services uses the County Road Administration Board (CRAB) visual data collection system (VisRate) to select potential candidates for either preservation or reconstruction. These road segments are either placed into Roads' Maintenance Section's High Risk Roads Preservation or the Roads' Countywide Preservation lists. The amount funded every year from these lists depends upon available revenue.



Approach

Roads' Pavement Preservation Program has adopted a new approach to managing King County's roadway system given that funding levels are insufficient to manage the system in a traditional way – repaving at optimal times to maximize lifecycle and minimize cost. By conducting minor rehabilitation and maintenance activities, Roads' pavement preservation approach seeks to delay the decline of pavement surface conditions and extend service life. Road Services uses a variety of pavement management strategies and processes in the most cost-effective way possible toward managing unincorporated roadways.

King County's arterial road system will be subject to considerable deterioration over the next ten years due to recent and projected lack of resources to invest in pavement maintenance or reconstruction. Portions of the system may be subject to speed limitations or partial closure in the future.

- Crack sealing, patching, minor reconstruction, seal coatings, paving, and shoulder restoration.
- Implement pavement management techniques according to their appropriate use for materials, condition, structure, Road Services' tier, and road classification.
- Conduct a cost-benefit analysis to guide decisions regarding the use of these techniques.
- Collect life-cycle costs for each resurfacing type; costs of maintenance and rehabilitation activities to be updated at the end of each construction season. Cost and performance data regarding both contracted work and work performed by County forces will be updated and compared to the data available from peer agencies.
- Conduct an annual review of Washington State Department of Transportation and other peer agencies to identify those agencies' use of different types of overlay and seal technologies. Any successful new technologies will be evaluated to determine whether they align with Roads' goals.
- As data accumulates in the new asset management system, Road Services will be able to use the data to establish performance measures and targets, which will better guide decision making.
- Prepare yearly accomplishment report for the Governmental Accounting Standards Board (GASB) and both projection and accomplishment reports for the County Road Administration Board (CRAB).

Prioritization

The process by which roadway preservation candidates are prioritized conforms to the priority matrix and tiered service strategy established by Roads' Strategic Plan. The allocation of available funding is further prioritized through Roads' Tiered Road Classification (Tiers 1, 2, and 4 receive the highest priority; Tiers 3 and 5 the lowest). Candidates for pavement preservation will be selected based on these priorities; the lack of available funding means, however, that portion of the County's roadway network will not be adequately preserved.

Selection

Selection of roadway candidates for preservation starts with the collection and entry of visual condition data into the Division's Comprehensive Pavement Preservation List (CPPL), which provides the specific roadway condition data needed to assist Engineers in establishing smaller Year-, Tier-, or PCS score-specific candidates' lists. These lists are shared and reviewed with the Maintenance Section to coordinate pavement preservation efforts throughout the County.

Prioritization Process Outline:

1. Process visual condition rating data.
2. Update the CPPL as new data is received.
3. Create candidates list to facilitate collaboration with the Maintenance Section, the development of Capital Improvement Program (CIP) projects, and potential federal and state grant funding calls.
4. Evaluate potential preservation options based on projected funding.
5. Publish final candidates' list for High Risk Roadway Candidates; implemented by Maintenance staff.
6. Develop the candidates' list for upcoming year; implemented as preservation projects and done by a contractor.

Roadway Reconstruction

Roadway reconstruction involves full removal and replacement of the surface layer, road base, and ancillary structures (culverts, guardrail). Reconstruction projects follow the same prioritization matrix as described for the Pavement Preservation Program, except that average daily traffic and truck traffic is also evaluated for roadway segments identified for full reconstruction. Segments with higher, heavy truck traffic are anticipated to degrade at a quicker rate, increasing the priority of the road reconstruction need. This heavy truck traffic is typically on roads designated as a freight corridor for the transportation of goods or provides access to facilities that routinely uses heavy trucks, such as gravel mines, transfer stations or farm-to-market roads.

Did you Know?
Many of the County's older roads were built upon wood, rock, and brick; rather than being engineered with modern materials.

In 2007, as part of Road Services' deflectometer testing, 82 road segments were identified as having high deflections requiring further analysis to determine if full road reconstruction was needed. Following the analysis, a preliminary scope of work and cost estimate was developed for the reconstruction of 30 road segments; which were subsequently added to the 2008 TNR. Additional deflectometer testing (completed in 2012), routine pavement condition testing, and other studies have identified new reconstruction projects and roads have been rehabilitated or annexed

Since 2007, many of the road segments identified in the 2016 TNR as having reconstruction needs have been temporarily preserved using the approaches listed above; specifically pavement overlay, rehabilitation, or crack sealing and patching. Depending on the original road

design, these preservation measures can extend the life of the road three to ten years, until funding is available for full reconstruction.

Roadway Maintenance and Operations

The roadway enables the 24/7 movement of people and goods; serving residents, commerce, emergency services, and other users. Cars, trucks, buses and bicycles all use the roadway for their travel needs. Traffic volume and vehicle weight, especially heavy trucks and buses, plus water and weather, all impact the rate of deterioration of the roadway asset.

Road Services employs programs that facilitate routine inspections, maintenance, repair, and operation of the roadway. These programs fall into the following categories:

Gravel Road Fact
Gravel roads need to be graded seven times a year to remove ruts and corrugations in the gravel roadway surface.

Small Surface Repairs: Pothole filling; square cut, skin surface and grinder patching; acute pavement surface repair; crack sealing and pouring; curb and gutter replacement and repair; and gravel roadway grading and patching.

General Roadway Maintenance: Routine, but important safety and environmental compliance work; such as sweeping and dust control. This removes leaves, rocks, fallen trees and debris from the roadway keeping it safe. Prompt cleaning also prevents dirty sediments from flowing into creeks and streams, polluting them and endangering salmon and water quality.



Storm - Quick Response: Work associated with any unanticipated damage and emergency repairs related to storm events, landslides, or severe roadway condition deterioration such as snow and ice control, de-icing applications, and storm washout repair from flooding.

Roadside

Roadside is another of the five product families in Road Services' Line of Business Plan. The roadside category of road infrastructure includes road system features and components within the road right-of-way but outside the travel lanes of the road. Drainage facilities may be located in the roadside area, but are treated as a separate category. Roadside infrastructure includes:

Roadside Facts

Over 827 miles of gravel shoulders

Over 73,000 linear feet of sidewalk

An average of 2700 cubic yards of slide debris removed from the roadway annually.

An average of 400 danger trees removed annually.

- Non-motorized assets, including sidewalks, pathways and American Disability Act compliant ramps to enhance pedestrian safety and mobility;
- Road shoulders to provide space for slow moving and disabled vehicles, non-motorized travel, construction and maintenance activities and emergency and police activities;
- Guardrail to mitigate impacts to cars that run off the road and help prevent vehicles from colliding with dangerous obstacles or vulnerable areas; and
- Landscaping and vegetation that includes landscaped walls, slopes and planters.

Non-Motorized Safety and Mobility

2015 Non-Motorized Evaluation

For the 2016 TNR, Roads reviewed the previous list of non-motorized projects for reasonable need based on the answers to the following questions regarding corridor use:



- Does the corridor serve transit?
- Does the corridor have logical termini (i.e. joins into another non-motorized facility)?
- Does the corridor connect to logical and commonly accessed destination points such as parks, libraries, trails, community centers, shopping and commercial areas?
- Does the corridor provide a community walking or biking school route? Is the segment close to a school?
- Will the proposed scope of work improve upon the existing conditions?

Once the non-motorized "uses" of the project corridor were determined, the existing conditions of the corridor were reviewed for:

- Existing width of paved and gravel shoulders.
- Condition of the paved and gravel shoulders.
- Road volume and use (i.e. local access vs arterial).
- Density of the surrounding area.

Non-motorized projects that met the following criteria were removed:

- Did not serve a community or provide a connection to other facilities or destination points; and had acceptable shoulder widths.
- Were located in low density areas and on low volume roads; and answered "no" to the use questions listed above.
- Were either annexed by adjacent cities or constructed by Road Services since adoption of the 2012 TNR.

Road Services solicited King County Parks for projects that would modify the roadside infrastructure. That list of projects has been included here for planning purposes but because they are captured in King County Parks' needs list they have not been included in the TNR project lists or maps.

King County Parks
Proposed Future Projects with Potential King County Roads Overlap:

Trail Project	Location	Description	From	To	Comment
Green to Cedar Rivers Trail (South Segment)	Maple Valley/Black Diamond Green River Valley at 218th Ave SE	Trail sidepath or other trail/road ROW project	218th Ave SE at Green to Cedar Rivers Trail	SE Green Valley Road	Current feasibility study uses 218th Ave SE as a possible route for the trail in south Black Diamond to SE Green Valley Rd
Green to Cedar Rivers Trail (South Segment)	Upper Green Valley at 218th Ave SE	SE Green Valley Road crossing			Current feasibility study would have the trail cross SE Green Valley Rd at 218th Ave SE
Green to Cedar Rivers Trail (South Segment)	Upper Green Valley at SE Green Valley Road	SE Green Valley Road Sidepath	218th Ave SE	SE Flaming Geyser Road	Current feasibility study envisions sidepath along SE Green Valley Road from 218th Ave SE to SE Flaming Geyer Rd

Trail Project	Location	Description	From	To	Comment
Green River Trail, North Extension (Green to Duwamish)	Tukwila and Unincorporated King County at W. Marginal Place	W. Marginal Place Sidepath or other trail/road ROW project	S 102nd Street	S. Director Street	Feasibility study envisions extending the Green River Trail along W. Marginal Place between Cecil Moses Park in Tukwila to Seattle's South Park community
Snoqualmie Valley Trail, Snoqualmie Mill Gap	Unincorporated King County, Snoqualmie River Bridge at SE Reinig Rd	SE Reinig Road Trail Bridge crossing			New trail bridge structure will be needed to cross SE Reinig Rd to facilitate trail development through the Mill Gap from the Snoqualmie River Bridge. An interim at-grade crossing may be used.
Green River Trail, Phase 2	S. 259th Street, south Kent at Green River Trail	Green River Trail, Phase 2 project at S. 259th Street	S. 259th Street	Existing Green River Trail	ROW improvements may be needed to transition trail segment to street
Green River Trail 2.2	S. 259th Street, south Kent at Green River Trail	Trail sidepath or other trail/road ROW project	S 259th Street at Union Pacific Railway bridge	S 259th Street at Green River Trail Phase 2	Project assumes that S 259th Street ROW will be used for a sidepath between the UP RR bridge and the proposed Green River Trail, Phase 2
Green River Trail, Phase 3	Green River Road, Unincorporated King County	Trail sidepath or other trail/road ROW project	Green River Road at Green River Trail, Kent	Green River Road at S 277th Street	Alternative concept for this trail segment would cross Green River Road where the existing Green River Trail meets the road in south Kent, cross the road, then used use Green River Road ROW for sidepath segments to S 277th Street bridge
Green River Trail, Phase 5	Green River Valley	SE Green Valley Rd sidepath or other trail/road ROW project	SR-18	SE Flaming Geyser Rd	Upper Green River Trail concept would develop a sidepath along SE Green Valley Road and the Green River
East Plateau Trail	Unincorporated King County near Klahanie; SE Duthie Hill Road near SE Issaquah-Fall City Road	SE Duthie Hill Rd, signalized crossing and other ROW improvements			Likely signalized crossing of SE Duthie Hill Road near SE Issaquah-Fall City Road to access Duthie Hill Park and continue trail to the northeast

Trail Project	Location	Description	From	To	Comment
East Plateau Trail	Unincorporated King County west of Trossachs Blvd SE	SE Duthie Hill Rd Trail crossing and sidepath and/or other trail/road ROW project	Duthie Hill Park west of Trossachs Blvd SE	Trossachs Blvd SE	Planning envisions the trail existing north entrance of Duthie Hill Park and running as a sidepath in SE Duthie Hill Road ROW before crossing at the intersection with Trossachs Blvd SE and continuing north along Trossachs Blvd
Landsburg-Kanaskat Trail	Landsburg Rd SE at Landsburg	Landsburg Rd SE signalized crossing			Likely signalized crossing of Landsburg Road SE from existing Cedar River Trail
Tolt Pipeline Trail and Bridge – Snoqualmie River	W. Snoqualmie Valley Rd NE north of NE 124th Street	W. Snoqualmie Valley Rd NE signalized crossing and/or other trail/road ROW project			Likely crossing of W. Snoqualmie Valley Road to continue trail to the Snoqualmie River
Green to Cedar Rivers Trail (South Segment)	Maple Valley/Black Diamond Green River Valley at 218th Ave SE	Trail sidepath or other trail/road ROW project	218th Ave SE at Green to Cedar Rivers Trail	SE Green Valley Road	Current feasibility study uses 218th Ave SE as a possible route for the trail in south Black Diamond to SE Green Valley Rd

Roadside Barriers; Guardrail



Road Services uses a quantitative methodology for identifying and ranking potential roadside safety mitigation sites into three categories: New barriers, retrofits to existing barriers, and bridge rail upgrades.

Risk potential and severity are the primary considerations when considering guardrail prioritizations. Risk is a function of the probability associated with vehicles running off the road. Severity is the quantitative potential for personal injury if a run-off-the-road accident were to occur. Factors included in the analysis include accident data, average daily traffic, road functional classification, corridor geometry, bridge geometry, speed limit, need as defined by embankment slopes, and roadside obstacles. The algorithms developed to prioritize the retrofit of existing barriers and upgrades to bridge railings incorporate parameters for existing barrier and rail deficiencies.

New Barrier Locations – The sources for establishing potential new barrier locations include:

- Locations not yet built from the existing barrier priority array; and
- A comprehensive roadside hazard inventory that was recently completed on the County arterial roadway system.

Barrier Retrofit – All sites with existing roadside barriers that are not compliant with current standards were included as candidates for barrier retrofit. About half of the existing non-compliant barriers were determined to have deficient crash-worthy end terminals. Risk exposure and the degree of deficiency are the primary considerations in the prioritization process for barrier retrofits. The severity factor was not used because it is assumed that all barrier locations were warranted.

Bridge and Culvert Rails – All bridges and culvert crossings maintained by King County were included as candidates for bridge rail upgrades. Many of the candidate bridges were built prior to the requirement of bridge rails established in 1964. The bridge rail array identifies locations with safety deficiencies and prioritizes their upgrade. Three specific bridge deficiency and difficulty factors were established: structural deficiency, difficulty of upgrade, and end transition deficiency. In addition, a risk potential factor (average daily traffic) and a severity factor (posted speed limit) were included.

Priority arrays were developed for each of the three categories of barrier using the appropriate factors and algorithms. Each priority array was fully tested following development. Statistically valid sample sizes were developed for each array, and county engineering staff field reviewed

and ranked the sites. In each case, rankings correlated 90% or better with the results of the priority arrays.

Americans with Disabilities Act (ADA) Program

The Federal Highway Administration (FHWA) requires compliance with the federal, American with Disabilities Act (ADA). Compliance requires that any alterations to a roadway intersection, including simple overlay, can trigger upgrades for all ADA facilities at the intersection such as curb ramps, push buttons and auditory devices at cross walks to accommodate people with disabilities.



Road Services expects to complete a complete inventory of Americans with Disabilities Act location needs by the end of 2017. The inventory is being conducted using internet mapping resources in addition to field visits. This year, the division will be working to complete an ADA Transition Plan, an element required by FHWA. The plan will attempt to quantify the ADA need and formalize Road Services strategy toward addressing those needs. Since neither the plan nor the inventory is complete, the 2016 TNR does not contain any ADA capital projects.

Roadside Maintenance and Operations

Maintenance and operation activities in and along roadsides are done to enhance pedestrian safety and mobility on pathways and sidewalks and to mitigate the impacts of run-off-the-road collisions from barriers. Properly maintained roadsides have good sight distance and are free of hazards, obstructions and vegetation. The roadside area provides space for vehicles and non-motorized users while mitigating the slide and washout risk of the roadway from hillsides alongside the road.

Slope and shoulder mowing serves a critical safety function by removing vegetation from lines of sight, from blocking visibility of traffic control devices, and from obstructing pedestrian walkways. Roads current funding has reduced the frequency of slope and shoulder mowing activities.

Road Services maintenance and operations employs a continuous cycle of inspections, maintenance, repairs, and replacement of/improvements to its roadside features. These programs fall into the following categories:

- **Vegetation Management** includes mowing and maintaining trees, brush, and natural areas on the roadside to provide clear sightlines for drivers, improve drainage, and to keep traffic control signs, wayfinding signs, and traffic signals from being obscured. Overgrown vegetation on sidewalks, shoulders, and other walkways can lead to pedestrians walking in the roadway, and dangerous or downed trees can block roadways. Noxious weed control and shoulder/roadside spraying is also employed.

- **Clear Zone Safety** addresses federal mandates for removing, retrofitting or re-engineering objects in the roadside clear zone (the area within ten feet of the outside edge of travel lanes), including but not limited to: Repair of sidewalks and walkways, guardrail maintenance, and removal of objects or structures that encroach into roads right of way such as illegally placed fencing, mailboxes and other structures.

- **Shoulder Cleaning and Restoration** involves the maintenance of gravel shoulders, including gravel patching, grading and restoration, and landscape maintenance. Maintaining shoulders prevents standing water and reduces deterioration of the roadway.

- **Storm Response** involves response to slide events, including bank stabilization, material removal and disposal, and repairs. Storm response activities include a preventative maintenance program that identifies areas with greatest washout risk, where measures are implemented to prevent future damage. Most critical washout repairs are made immediately, while others take more time to complete.

- **Minor maintenance** for roadside features includes: Repair or replacement of rock walls, gabion retaining walls and fences, hazardous material and roadside debris/litter removal.

ROADSIDE FACT
Gravel shoulders should be maintained/restored every 2-years.

Traffic Control Devices

Did You Know that Unincorporated King County has...
- ✓ **78 traffic signals?**
- ✓ **Over 44,000 traffic signs?**
- ✓ **Over 200,000 linear feet of thermoplastic markings?**
- ✓ **Over 2,500 miles of lane striping?**

King County's traffic code (Chapter 46.04, King County Code) is based on the Washington Model Traffic Ordinance (Washington Administration Code Chapter 308-330) which is, in turn, based on the Manual on Uniform Traffic Control Devices (MUTCD). The MUTCD was developed by the U.S. Department of Transportation, Federal Highway Administration to set national standards for road managers when installing and maintaining traffic control devices on all public streets, highways, bikeways, and private roads open to public travel. National standards contained within the MUTCD are applicable to all traffic control devices, including:

- **Traffic signs** to warn the public of sharp curves and intersections, guide traffic, control intersections, and prohibit parking.
- **Traffic signals or controls,** including warning flashers and red-light cameras, exclusive and protected left turn lanes, signal timing, signal head visibility, and new intersections within the existing alignment (signalized or roundabouts).
- **Roadway delineation or pavement markings,** including edge line markings, raised pavement markers, or post delineators.
- **Lighting or illumination**.
- **Channelization,** including left and right turn lanes (with signal), acceleration or deceleration lanes, and access restrictions (i.e. curbs).
- **Pavement treatments** such as special surface treatments (i.e. high friction surface).
- **Alignment alterations** that modify the horizontal and vertical alignment, and curve reconstructions.

Traffic control devices optimize traffic performance, promote uniformity nationwide, and help improve safety by reducing the number and severity of traffic crashes. The following sections describe the processes developed for identifying projects and managing programs aimed at addressing accidents, congestion, MUTCD requirements, and design constraints.

Traffic Signals



The process to prioritize signal needs conforms to the laws set forth by the federal government, adopted with amendments by state government, and presented in the *Manual on Uniform Traffic Control Devices* (MUTCD) published by the Federal Highway Administration and the U.S. Department of Transportation.

The prioritization process evaluates signal warrants set forth in the MUTCD and assigns rating values to each warrant. There are 5 primary warrants (described in the inset) used in evaluating a signalization need and the sum of these individual warrant ratings provides a comparison to other potential signal locations.

Prioritization and selection of intersections for signalization starts with data collection. Road Services' Traffic Engineering staff collects vehicle and pedestrian volumes, prevailing speeds, and collision history at each intersection, over the most recent three-year period. Each intersection is then evaluated using MUTCD warrants based on the number of approach lanes and the collected data.

The MUTCD states that signal warrants define the minimum conditions under which installing a traffic control signal might be justified. However, selection and use of traffic control signals should be based on careful analysis of traffic operations, pedestrian and bicyclist needs and other factors, coupled with engineering judgment. Traffic signals should not be installed unless one or more of the nine signal warrants are met. Three of these warrants are based on traffic volumes at several periods during the day: The peak hour, the fourth highest hour, and the eighth highest hour. Another warrant examines the traffic collision history, focusing attention on accidents correctable by signalization (left-turn and right-angle types). Two warrants examine pedestrian activity to determine if pedestrian volumes warrant signalization. Two warrants examine

Five Primary Warrants Used for Unincorporated King County

Warrant 1 – Eight-Hour Vehicular Volume

- Condition A: Minimum Vehicular Volume
- Condition B: Interruption of Continuous Traffic

Warrant 2 – Four-Hour Vehicular Volume

Warrant 3 – Peak-Hour Vehicular Volume

Warrant 6 – Coordinated Signal System

Warrant 7 – Crash Experience

whether signalization would improve traffic flow in a coordinated signal system or roadway network. The final warrant examines the proximity to a grade (rail) crossing.

Five primary warrants are used to prioritize (rate and rank) all intersections. The remaining warrants are also considered in the evaluation process, but these warrants are less applicable to the suburban and rural nature of unincorporated King County.

In addition to the five MUTCD warrants that are most applicable to unincorporated roadways, King County adds a factor for proximity to a school site. This additional factor does not replace the pedestrian-related warrants. For locations near schools, shopping and other pedestrian attractors, the volume of pedestrian activity is examined as well as pedestrian warrants. The proximity to school factor addresses the potential for pedestrian activity outside of average-day activities.

Rating values, representing the degree to which signal warrants are met, are calculated for each of the five primary warrants. Values are summed by intersection, and the list of intersections is sorted to separate those that meet at least one signal warrant from those that do not. Intersections that meet one or more warrants are sorted by rating value from the largest to the smallest and are then numbered according to their order in the list. The resulting list of rank-ordered intersections is called the priority array. It provides a starting point for determining locations to signalize.

Intersections on the top of the priority array undergo an extensive evaluation of alternatives to signalization as listed in the MUTCD, Section 4B.04. The list of alternatives includes, but is not limited to, the construction of additional lanes, revising the intersection geometrics to channelize movements and realign intersections, installing street lighting, improving sight distance, installing roundabouts, implementing other measures to reduce approach speeds, changing lane use assignments, restricting movements, or adding stop controls or intersection flashers. Particular attention is given to the predominant type of collision recurring at the intersection. The evaluation also includes existing and forecast traffic operational analyses to determine the effectiveness of each alternative and development of estimates for cost comparisons. A committee of engineers and maintenance staff reviews the information developed from these analyses and selects the improvement providing the safest, most cost effective, long-term solution.

Traffic Signal Programmatic Needs – Inspection and Planning

The Traffic Control Signal Priority Array includes the results of a review of un-signalized intersections to determine if existing conditions meet the criteria for installation of a new traffic signal, the review of left-turn signal phasing at existing traffic signalized locations, and review of traffic signalized intersections relative to safety and/or congestion concerns. The Traffic Control Signal Priority Array (Array) is updated continuously as new traffic count data and/or requests for review are received. This review looks at un-signalized intersections identified as being congested and/or has a safety concern which a traffic signal may address. The Federal

Highway Administration's *Manual on Uniform Traffic Control Device*s provides a series of tests, called warrants, based on vehicle volumes, pedestrian volumes, collision history, speeds, and proximity to other signals. The Array forms the basis for decisions and selection of projects for the TNR (as discussed above in the Traffic Control Signal Projects section).

Phasing – Monitoring the left-turn phasing at existing traffic signal locations ensures that the appropriate level of protection is provided. Signals with permissive left turn phasing (yield condition indicated by green ball signal display) and those with protected-permissive phasing (green arrow followed by yield condition indicated by green ball signal display) are evaluated to determine if the current left-turn signal phasing is appropriate. If a study finds that the current left-turn signal phasing should be upgraded to provide additional protection for left-turning vehicles, plans are made to implement the changes.

Signal Operations –Existing traffic signal operations are field reviewed on a two year cycle to ensure that changes in conditions such as new development adjacent to the signal, shifts in vehicle volumes due to road improvements, new/improved pedestrian pathways or attractors, growth of vegetation, queue lengths relative to length of existing turn pockets, vehicle delays by movement, and other elements of the traffic signal operation are acceptable based on engineering judgment.

Street Lighting – Is required on all roadways with three or more lanes of travel and as identifiers when a local road intersects an arterial, per the King County Road Standards. Street lighting provides motorists with the increased ability to see existing turn channelization and safely maneuver. King County has identified locations in unincorporated King County with existing turn channelization but limited-to-no street lighting. These street lighting needs will be addressed by King County programmatically.

Intelligent Transportation Systems



Intelligent transportation system (ITS) improvements include cameras, vehicle detection, traffic signal equipment and timing upgrades, pavement conditions sensors, and the communications infrastructure to support these devices.

Road Services' 2005 ITS Strategic Plan identified 34 key corridors that could benefit from ITS implementation. Corridors were chosen after review of various planning documents and from stakeholder feedback regarding transportation needs in unincorporated King County. For the most part, these corridors are linked to each other or to other King County ITS projects, allowing for communications continuity and the establishment of a regional ITS corridor network. Corridors include both urban arterials and smaller-capacity, rural roads.

Other factors such as funding availability, dependence on other projects and overall project feasibility contribute to whether or not an ITS project will be implemented. King County maintains a relative priority of ITS projects that is not organized into a set order for deployment.

Intelligent Transportation Systems (ITS) Corridor Project Prioritization Criteria

In the 2005 ITS Strategic plan, the criteria for analyzing project priorities were established based upon examples from the 2004 Transportation Needs Report, other criteria specific to ITS projects and King County's needs. Each criterion was analyzed on a scale of 1 – 5 points and no single criterion was weighted more heavily than another. Priorities were established by totaling the points received by each project. A general priority level (Low, Medium, High) was then assigned by comparing the scores each project received.

ITS Criteria included:

Average Daily Traffic (ADT): The same traffic volume scale as developed for capacity projects were used to assign priority for ITS projects along roads with the highest ADT.

Volume to Capacity Ratios: Roads whose volumes are approaching or exceeding capacity were given priority.

Accident Rates: Corridors with high accident rates were considered higher priority.

Transit Ridership: Corridors with greater volumes of transit ridership were considered higher priority.

Potential for Annexation: Proposed and approved land annexations for 2004 and 2005 as well as proposed future annexations were considered. Corridors with little probability of annexation were considered higher priority.

Availability of Communications: Corridors with access to communications infrastructure were considered higher priority.

Links to Other Existing/Planned Projects: Higher priority was given to corridor projects that could coordinate or build off of other county ITS corridor projects.

Hazard Areas: King County identified a number of hazards along county roadways, including High Accident Road Segments (HARS), High Accident Locations (HALs), and areas prone to flooding, ice, and landslides. Corridors with two or more of these hazard locations were given a higher score than those where only one identified hazard was identified.

Since 2005, seven of the 34 identified ITS corridor improvements have been completed, two corridors have received partial improvements, two corridors have been designed (construction planned for 2016-2017), and nine corridors have been annexed by other jurisdictions. The majority of the remaining projects were ranked as having a medium or low priority using the criteria presented above. These remaining projects have been included in the 2016 TNR project list.

Programmatic Intelligent Transportation Systems (ITS) Projects

Programmatic ITS projects provide the information processing and dissemination capability to add value to the data collected by the field devices deployed by the corridor projects. They also include countywide projects that can be implemented throughout the County and are not focused on one corridor. The regional ITS projects include Emergency Management, Traffic Management, Data Management, Communications, Maintenance and Construction Activity Coordination and Traveler Information.

Regional ITS projects were evaluated for priority using the following criteria:

- Improvement to traffic flow
- Improvement to incident response time
- Improvement to regional information sharing for traveling public
- Improvement to the efficiency of County services delivery
- Potential for phased implementation
- Relative ease of implementation
- Eligible to leverage non-County funding sources
- Builds upon existing infrastructure/projects

High Accident Locations (HALs) and High Accident Road Segments (HARS)

Every three years King County releases its list of High Accident Locations (HALs) and High Accident Road Segments (HARS). The list is consistent with the goals and criteria established by the Target Zero program, sponsored by the Washington Traffic Safety Commission.

The initial list of HARS projects is compiled by using collision data (crash frequency analysis) from the previous three-year period and applying a Sliding Spot Query. This query "crawls" the database, totaling collisions by a specified length and generating a list of segments where collisions exceed a designated threshold.

A new type of listing was created to address high accident roadway segments that are not part of the arterial system called Local High Accident Roadway Segments (LHARS). Four roadways were found to have high crash frequencies on local unincorporated roads.

Longer corridors of one mile in length were also reviewed for safety concerns stretching along roadway segments considerably longer than 1,000 feet. These roadway corridors were designated as High Accident Corridors and five roads were listed that had 30 or more collisions along their lengths.

Once the locations were identified, data such as collision types, traffic volumes, and roadway characteristics were collected for each location. This information was used to develop improvements intended to reduce the occurrence of collisions called countermeasures. There are a broad range of countermeasures, with approaches ranging from changing roadway geometrics to altering traffic signal timing. Countermeasures were selected based on predominant collision patterns, field observations, County practices, and the experience of the review team.

Countermeasures were developed for most but not all of the locations. There are several reasons for not developing countermeasures for a given location that include:

- Locations where recent or near-term improvements were judged likely to have a significant effect on the predominant accident patterns were omitted.
- Locations that had been recently annexed by other jurisdictions were omitted.
- Sites with no clear collision pattern and no noted deficiencies were omitted.

Once the countermeasures were developed, a benefit-cost analysis was prepared for each location. Benefit/cost ratios are frequently used to prioritize safety improvements since it can indicate if the benefits of a proposed countermeasure are greater than the costs and thus are worthy of improvement. The ratio is equal to the benefit of the expected reduction in collision costs divided by the project cost. Generally, if the ratio is equal to or exceeds one it indicates that the project is worth the investment.

To determine the benefit of the project, the expected reduction in collisions due to a given countermeasure was estimated using nationally published "reduction factors" with modifications based on King County's past experience. The reduction factor was used in combination with typical collision costs to determine the expected societal benefit (in dollars) of completing the improvement. The benefit was then "normalized" by converting to a present value based on the expected service life of the improvement. Finally, the normalized benefit was divided by a planning-level cost estimate to obtain the benefit-cost ratio for the project.

The results of the benefit/cost analysis and detailed documentation of the process used are contained in the report, *High Accident Locations and Road Segments Analysis, King County, Washington*; King County Department of Transportation, Engineering Section; February 2016.

The culmination of this analysis identified a list of safety improvements. These projects were then prioritized further, according to their respective benefit-cost ratio.

The 2016 HAL/HARS analysis will be published in the spring of 2016. This is the comprehensive list of identified life safety needs for roads in Unincorporated King County. Road Services may amend future TNRs with the results of the 2016 High Accident Locations and Road Segments Analysis so that these capital safety projects can be included.

High Crash Rate Analysis

To identify roadway safety needs, there are several different types of data analysis that can be conducted. In 2014, the Federal Highway Administration encouraged local agencies to start using the *crash rate* of a road segment or intersection to determine safety needs. As stated by FHWA, the benefit of a crash rate analysis is that it provides a more effective comparison of similar locations with safety issues by taking traffic volumes into account. This allows for the prioritization of these locations when considering safety improvements with limited resources.

In 2014, King County Roads started developing crash/accident rates for roadway segments and intersections in unincorporated King County. The crash rate is a ratio of accidents divided by average daily traffic. As part of the preliminary analysis, Intersections with rates at or near 1.0 accident per million entering vehicles were considered high crash locations. Roadway sections with crash rates of approximately 5 to 10 accidents per million vehicle miles traveled and higher were deemed high crash roadways.

Small Scope Operational Projects

In 2005, Road Services recognized the need to establish a program for projects that address small scope traffic flow and safety issues. The need for a program arose from the realization that these types of projects had typically not been included in other types of prioritization processes and had not received funding but do yield high benefit to cost rations. Small scope operational project types can include pedestrian facilities, non-signal intersection improvements and projects at various roadway locations.

Project Selection Process

A list of potential improvements was compiled from recommendations by a number of sources including King County Roads engineering staff, businesses, community groups, and members of the general public. Once projects were identified, they were scoped further by conducting:

- A field review - scope verification, cost estimating, and identification of unique constraints and challenges.
- Collection of up-to-date field information and photographs
- Development of site specific diagrams and sketches
- Analysis of King County traffic volume and accident data

The evaluation for each project was based on a preliminary screening of the project information obtained during data collection. Preliminary screening/feasibility analysis was undertaken prior to project development to assure a candidate project is feasible and satisfies program goals and criteria before it is evaluated. As each project was screened, it was assigned a relative (high, medium, low) priority to develop a preliminary ranking and determination of whether to advance formal prioritization process.

Determination of Priority Process Score

The priority process was developed with the purpose of providing a quantitative assessment of each project's merits for comparison with similar projects. Prioritization and selection of projects began with project screening/feasibility analysis and ended with the prioritized project list. Data on vehicle and pedestrian volumes, vehicle speeds, existing and planned facility capacities and accident history at each location over the most recent three or five year period was also collected as part of the analysis process.

Each project was unique due to the specific issues addressed. Certain concerns were indicative of site deficiencies that could be addressed by specific countermeasures – improvements that address problems at a given location to improve the safety or traffic operations. Countermeasures were developed for the three separate categories (pedestrian facilities, non-signal intersection improvements and roadway locations) based on the predominant problems, field observations, King County practices and standards, and the experience of the review team.

Pedestrian-oriented projects used the existing pedestrian priority array (see the non-motorized discussion earlier in this document). The algorithm for non-signal intersection improvements and roadway location projects was developed specifically by Road Services Traffic Engineering staff to score projects in their respective categories.

Evaluations of Candidate Locations and Project Selection

Scores for each location ranged from 0 to 100 into low, medium and high levels. Potential projects were reviewed with planning-level cost estimates and then subjected to a basic financial analysis. Low scoring projects or those with prohibitive costs are given less consideration. The highest scoring projects are prioritized and then considered as best candidates for the program.

Small scope operational projects include a broad cross-section of both urban and rural locations, and priority arrays are developed for each of the three categories. Final project selections are based on the priority scores, weighted based on an assessment of each project's potential effectiveness. Consideration and higher priority is also given to such factors as whether the project can coordinate with or enhance other King County transportation needs and priorities.

Traffic Control Devices: Maintenance and Operations

Traffic Control Devices, including ITS, can promote safety and efficiency, and can enhance transit speed and reliability by enabling the orderly movement of all road users on streets and highways. This equipment provides real-time traffic information to King County traffic operators, the media, and the traveling public.

- *Street Lighting, Signals, Flashers and ITS Equipment* and all associated components such as controllers, lights, mast arms, timers, cameras, cabinets, and loop detectors.
- *Sign* maintenance includes replacement and installation, fabrication, inspection, cleaning, and responding to resident call-outs.
- *Pavement marking* maintenance includes replacement of pavement markings, including striping, thermoplastic, and buttons.

Sign Fact
All signs should be cleaned at least once a year, and replaced every 10 years as reflectivity is reduced

Regular maintenance of traffic control devices ensures that:

- Safety standards are met;
- Damaged signs are replaced;
- Traffic signs, stripes, and markings are replaced so that they are visible night and day;
- Intersections are operating efficiently;
- Traffic control systems are operating correctly;
- Traffic information is accurate, clear, and appropriate; and
- Traffic restrictions are clearly marked.

Drainage

Did you know that unincorporated King County Roads has...

- Over 3,200,000 linear feet of pipe.
- Over 5,000 culverts.
- Over 6,000,000 linear feet of ditch.
- Over 23,000 catch basins.
- Over 750 manholes.

Road Services is responsible for the drainage infrastructure within, alongside and under unincorporated roads right-of-way, including: pipes, ditches, catch basins, manholes, retention/detention ponds, rain gardens, vaults, and bio-swales.

The largest and most costly component of King County's aging system are the enclosed pipes, greater in diameter than 24 inches. These pipes serve a critical role in conveying regional surface waters and will have the largest consequences if they fail, because their failure poses the greatest risk to public safety, property, and aquatic resources.

In unincorporated King County, regional pipe systems represent about 2% of the drainage system in the road right of way. This section discusses how larger-scale drainage projects that would be stand-alone capital projects are identified and prioritized. These large projects are those that are listed in the 2016 TNR. Smaller projects, constructed by in-house staff under the Road Services' Countywide Drainage Program, are not included in the 2016 TNR project list but are prioritized in the same manner.

Larger, Stand-Alone Drainage Project Identification and Prioritization



Drainage projects are identified in two ways: field confirmation of deficiency and a life-cycle analysis/condition rating.

Field Confirmation: Drainage problems and concerns are brought to the attention of Road Services in variety of ways including by resident complaint or concern, as a result of routine road patrol and field work, or from outside or internal agency requests. Drainage complaints and requests are then reviewed to determine the responsible owner. When Road Services is the owner, a project is created and entered into the Drainage Tracker Priority Array. Two evaluation systems are used to rate the priority of drainage projects: a Field Priority Score and Habitat Evaluation Process.

In 2014, Road Services received a grant to fund the development of a third prioritization system for drainage projects based on quantifying the benefits to water quality. That work is underway and will be completed by the end of 2016.

Field Priority Scores: Scores for field priority reflect the problem's threat to the public safety associated with the roadway and its contribution to drainage problems, on private property, downstream of the roadway. There are eight criteria used to evaluate each problem site that yield the field priority score. These criteria help identify system-wide impacts of each drainage problem.

Field priority criteria are assigned point values (from 0 to 10), and weights, (from 1 to 5), based on their importance to the maintenance of the county road system. This assigns priority to projects in the Drainage Tracker and serves as a priority array.

Habitat Evaluation Process: To address federal, state and local regulatory requirements (such as the Endangered Species Act (ESA), the Washington State Hydraulic Code and King County's Critical Areas Ordinance) as well as to improve environmental health, a habitat evaluation is completed for projects that affect aquatic areas, fish habitats and their buffers. These sites are visited by a Road Services staff biologist. The project's impacts or benefits to these areas are identified using the habitat evaluation criteria to generate a priority score.
The Habitat Evaluation is also used to document potential regulatory mitigation requirements.

After the Field Priority Score and the Habitat Evaluation are completed the scores and other available information are entered into the Drainage Tracker. After the projects have been prioritized, the Drainage Tracker is then used to monitor the status of the projects through design, permitting, and project completion.

Drainage Project Prioritization Schemes

Field Priority Criteria

1. Threat to public safety
2. Threat to public property
3. Threat to private property
4. Water quality improvement
5. Maintenance problem resolved
6. Road closure severity (detour, sole access or no impact)
7. Road classification (local access, arterial use, collector use)
8. Road failure potential

Habitat Evaluation Criteria

1. Fish stock status (species of concern or ESA listed?)
2. Site specific information (fish passage, water quality, wetland improvement or risk of habitat damage?)
3. Basin/system concerns (does the project address basin concerns or consideration of the stream habitat opened for fish passage?)

Emergency projects and project schedules: Projects are scheduled in the Countywide Drainage Preservation Program annually. Scheduling annually helps reduce frequent reallocation of resources except in the case of a severe emergency. However, drainage problem sites are reported to Road Services' Maintenance crews almost daily. Some of these drainage concerns are so urgent that they must be included in the current year's work program. Project priorities are re-evaluated every time a new project is added to the Drainage Tracker to ensure that effort is expended on the most urgent safety and preservation projects.

Drainage Program Programmatic Needs

Road Services' Drainage Tracker provides a prioritized list of the known major and minor drainage infrastructure needs. These projects range in scale from the replacement of small segments of pipe to large cross-culvert replacements. They can be triggered by regulatory requirements, or safety and preservation needs. For planning purposes, there is a major division in the backlog of the Drainage Tracker projects between those that impact streams and those that don't. Culvert replacements that impact streams are those that are required to eliminate barriers to spawning fish, including vertical drops, water depth, and water velocity. Non-stream impacting drainage projects include stormwater system retrofits and the installation or replacement of catch basins, vaults or pipes.

Drainage System Condition Assessment: A large portion of King County's unincorporated drainage system is at or nearing the end of its useful life and its current condition is largely unknown. To address this lack of knowledge, an effort is underway to identify the location, age, type, size, and condition of regional drainage facilities in Road Services' road right of way. This information is necessary to identify and assess the urgency and cost of drainage facility maintenance and renewal needs. In 2015, Road Services, in coordination with King County's Water and Land Resources Division, initiated this effort for the parts of unincorporated system deemed most at risk, which is estimated at 40% of the pipes that are 24" and larger system or 2% of the entire system in the road way.



This effort will provide information for Road Services to use in completing an inventory and condition assessment of the remaining drainage system. The assessment will also inform policy discussions regarding the responsibility and funding structure for operation, maintenance, and renewal of regional drainage systems in the unincorporated and incorporated areas.

A final "Road Right-of-Way Drainage Trunk Line Assessment" report was issued in February 2016.[1]

Drainage Maintenance and Operations

Standing water can be a safety hazard to road users and accelerates the deterioration of the roadway surface and substructure. Drainage infrastructure moves stormwater away from the roadway and reduces flood risk to the built environment

Ditch Fact
Ditches need to be cleaned every 2 years.

[1] http://your.kingcounty.gov/dnrp/library/water-and-land/stormwater/KC_ROW_Drainge_Assessment_Final_Report.pdf

(public and private property) by collecting and redirecting stormwater to natural bodies of water and designated collections points. Drainage infrastructure reduces water pollution by collecting stormwater and filtering out pollutants and sediment via settlement, infiltration, or other processes.

To ensure these outcomes, Road Services employs routine inspections, regular maintenance, repair, and the replacement of drainage infrastructure that fall into the following categories:

Quick response: Work associate with unanticipated failures of the drainage system.

Drainage system cleaning: Routine maintenance to the drainage system, including pipe and catch basin cleaning, vactoring sediment, and small incidental repairs.

Ditch maintenance: Reshapes and cleans roadside ditches to ensure proper drainage. This work is primarily preformed through bucket ditching with a front end loader or a back hoe.

Minor repair: Includes repairs to the drainage system, such as: drainage pipe repair or replacement, repair of catch basins, pipe marking, trash rack and header repairs, erosion prevention, rip-rap replacement, and catch basin lid replacement, the installation of stream by-passes, stream restoration all using best management practices.

Stormwater Pond Maintenance: Mowing, brush removal, and cleaning of stormwater ponds.

Drainage infrastructure is doing its job when...

- It meets safety and environmental standards.
- Water on the roadway causes minimal impact to travelers, infrastructure or private property.
- Surrounding streams, rivers and lakes enjoy good water quality.
- Ponds, ditches and enclosed drainage systems are free of litter/debris.
- Road-related ponds or ditches are mosquito free.

Pipe Fact

All pipes need to be marked every 3 years to ensure clear visibility of the drainage infrastructure and provide ready identification of the structure for crews implementing routine maintenance.

Bridges and Structures

Bridges are key components of the County road network, providing routes over bodies of water, roads, lowlands, railroad tracks, or other obstacles. Road Services owns, operates and maintains 181 bridges. The bridge category includes long span bridges (those that appear on the national bridge inventory), short span bridges, safety enhancement bridges (to keep wildlife off of roadways), and pedestrian bridges. These bridges can be made of concrete, steel, timber, or a combination of the three building materials.

Structures include infrastructure designed to retain or contain the natural environment and protect the built environment (seawalls, retaining walls, and riprap walls/slopes); as well as those buildings necessary for daily operations (sheds, maintenance shops, and office buildings).

Bridge Replacement and Preservation



County bridges are inspected regularly and assessed to ensure the safety of the traveling public. Inspection of all County roadway bridges occurs on a two-year cycle and aim to implement the National Bridge Inspection Standards (NBIS) by calculating a sufficiency rating for each bridge. The sufficiency rating is based on factors such as structural adequacy and safety, serviceability and functional obsolescence, and how essential the bridge is for public use. Sufficiency rating ranges from zero (worst) to 100 (best). The sufficiency rating score is used to establish eligibility for federal bridge replacement and rehabilitation funds. Bridges with a sufficiency rating less than or equal to 50 that are either functionally obsolete or structurally deficient, are eligible for replacement funds. Any bridge with a sufficiency rating less than or equal to 80 that is functionally obsolete (defined as the function of the geometrics of the bridge in relation to the geometrics required by current design standards) or structurally deficient is eligible for rehabilitation funds.

In Washington, federal bridge funds are allocated to local agencies through the Washington Department of Transportation (WSDOT) using a competitive process. WSDOT is focusing on funding local agency bridges that are classified as structurally deficient with a sufficiency rating of 40 or less for replacement, and structurally deficient with a sufficiency rating of 80 or less for rehabilitation projects.

Though the sufficiency rating establishes eligibility for federal funding, it is inadequate to prioritize King County's bridges for replacement or rehabilitation because the rating does not give enough weight to important criteria such as load limitations, hydraulics, geometric deficiency, and expected useful life. The King County Bridge Priority Process establishes the need for individual bridge replacement by score and rank using criteria approved by the King County Council (Ordinance 11693).

In 2011, Road Services moved forward with implementing the use of the tier service level criteria for all unincorporated King County Roads. Tier service levels are now applied in addition to the bridge priority process to help establish priorities for allocating funding for bridge projects. The results of the bridge priority process are published annually and reported in Road Services' Annual Bridge Report, a supporting document to the Road Services' budget.

Road Services' bridge priority process is used to inform short- and long-term needs for Road Services 181 bridges. Minor maintenance and repair activities and quick responses to bridge needs are covered by maintenance and operations. Larger projects are designated as stand-alone preservation projects or are addressed through bridge preservation programs, including:

Preservation – Bridge Priority Maintenance (BPM): Includes bridge needs outside of routine or minor maintenance and repair and activities such as: major damage repairs, deck or traffic rail replacements, and scour protection and mitigation.



Bridge Painting: King County has 23 bridges with painted steel components; trusses, steel girders and floor beams, plus secondary stabilizing members. Of these bridges, approximately one-third have lead paint that was applied prior to 1970. All lead paint must be properly removed prior to applying new paint, which necessitates a costly full lead containment and abatement system.

Bridge Inspection: All bridges are inspected at 24 month intervals and the reports for bridges on the National Bridge Inventory are collected and reported to the Federal Highway Administration by the Washington State Department of Transportation. Some bridges require more frequent or special inspections when deterioration is being closely monitored. This work includes not only the labor, but also the equipment and contract services that sustain inspection activities.



Bridge Replacement: Includes design, environmental compliance, and construction of full

bridge replacements. The 20-year projected need for bridge replacement includes 43 bridges selected by using three factors; the current bridge condition and projected remaining useful life based on the age of the bridge, the Council-approved criteria for bridge funding priority, and an expert review of candidate bridges. The resultant list is the best current representation of the bridges that will be most in need of replacement over the next 20 years. The list includes both short-span bridges and bridges eligible for federal funding.

Structures Needed to Protect Vulnerable Road Segments



Structures enable roads to exist in diverse landscapes by controlling and shaping the natural environment and providing protection from environmental impacts such as flooding, tides, waves, storm surges or landslides. Structures include infrastructure such as seawalls, retaining walls, armored slopes, and even bridges.

King County's roadways have suffered repeated failures requiring emergency or routine repairs following storm events or even prolonged rain. These locations have been designated as vulnerable road segments; which was defined as a road segment that requires abnormally expensive and/or frequent repairs. In 2005 the first Vulnerable Road Segments (VRS) study was conducted to identify, quantify, and prioritize vulnerable road segments throughout the County and developed projects to resolve the vulnerability of the identified road segments. The study process developed a list of unstable slopes and locations requiring routine maintenance.



Sixty three road segments were initially identified as candidates. Each of the road segments was grouped into one of six problem categories: steep slopes, landslide, seawall, river erosion, flood, and roadway settlement. These categories helped the team in identifying the proposed solution and the possible environmental impacts, and ultimately the project cost.

Once the projects were grouped into their categories, the project team analyzed the list of identified vulnerable road segments based on the following:

- Traffic data
- Engineering assessment of the problem
- Estimated cost to remedy the problem
- Guardrail needs
- Roadway classification
- Detour length

General information was also developed for each road segment, including but not limited to: the segment location, description of the road segment, and a description of the scope of work. Proposed solutions and recommendations were developed during the analysis, ranging from proposed projects to no action.

In 2008 and 2011, the engineers who conducted the original study regrouped and re-evaluated the existing list against known problems and existing conditions. In 2011, three new road segments were identified as vulnerable road segment candidates.

Priority Ranking: The projects developed during the analysis of the identified road segments were prioritized based on the following:

- **Maintenance Cost per Year** – this is the average estimated amount of money spent each year repairing the road segment to its pre-damage condition (temporary repair). Those projects with higher annual maintenance costs were given a higher priority.
- **Construction Cost/Vehicle** – this factor divides the cost of the permanent construction fix (project identified in the TNR) by the average daily number of vehicles that travel the road. Projects with a lower cost benefitting a higher number of vehicles were given a higher priority.
- **Impact of Failure** – this factor accounted for the importance of correcting a vulnerable road segment. The roadways were scored from 1 to 5, where a score of 1 was associated with a roadway that, left uncorrected, would result in a total failure resulting in complete closure of the road; and a score of 5 was associated with a roadway that, left uncorrected, maintenance would be necessary with no foreseeable loss of road function.
- **Driver Inconvenience** – this factor measures the overall level of driver inconvenience if a segment of road is closed, taking in to consideration the detour length and traffic volume. Road segments involving longer detours with higher traffic volumes were given more priority.
- **Inclusion in a Future Project** – this factor gives priority to segments that were part of a planned project in the RSD CIP or TNR; accounting for the opportunity to complete two needs with one project.



- **Guardrail Need** – this factor gave a higher priority to road segments slated for future guardrail improvements, accounting for the opportunity to fulfill two needs with one project.

The factors were chosen by the project team and refined through an iterative process. After each iteration the values and percentages (weighting) of the factors, as well as the segment rankings were studied for reasonableness. The ranking process was finalized when the full numerical range of each factor was well distributed among the segments and the weighting percentage of each factor seemed to result in a logical ranking of segments. The road segment with the lowest score was considered the best candidate (high priority) for a road project.

Structure Needs: The proposed permanent solutions to the vulnerable road segments included: construction of retaining walls, replacement of seawalls, replacement of culverts with bridges, construction or rockery or armored sloped, raising the roadway with walls and culverts, reconstruct the roadway, roadway re-alignment with walls, and for seven locations it was recommended to continue routine maintenance at that location (no permanent fix). All of the projects identified in the VRS study that result in a permanent repair have been included the TNR list and given the appropriate product family label (i.e. reconstruction projects identified in the VRS study were labeled as roadway projects, and walls and bridges were labeled as bridge/structure projects). The following types bridge/structure needs were identified as part of the VRS study:

- Construct retaining walls to prevent slides on steep slopes above and below the roadway, stabilizing the slope and adjacent river banks
- Replace seawalls to adequately support the road prism, protect the road from storm wave action, and eliminate routine road failures.
- Replace undersized culverts with bridges to provide better conveyance of water, silt, and debris.
- Raise the roadway using walls or other armored structures (i.e. rip rap) to minimize flooding and erosion impacts to the roadway. Typically these projects require the perforations in the armored walls to allow for the conveyance of water and the inclusion of guardrails.
- Armor road shoulders with riprap or other hardened structures to prevent routine washouts during flood events.

Some of the VRS candidates did not result in a proposed project due to various constraints such as: difficulty in obtaining regulatory approvals, low average daily traffic, limited right-of-way, or where an interim repair or routine maintenance was deemed sufficient. Those candidates that resulted in a project are included in the 2016 TNR project list.

Bridges and Structures – Maintenance and Operations

Bridges are key components of the County road network that provide routes over bodies of water, other roads, lowlands, railroad tracks, or other obstacles. Structures related to the road infrastructure enable roads to exist in diverse landscapes by controlling and shaping the natural environment and providing protection from environmental impacts such as flooding, tides, waves, storm surges, or landslides.

Structures related to the services provided by Road Services enable the County to not only provide timely emergency response; but also provide the tools necessary for routine maintenance and operation of the road network.

If bridges and road structures are not regularly inspected and maintained, they may become unsafe and require closures which can result in loss of access to property or longer travel times. If service structures do not supply the necessary tools to accomplish routine or emergency tasks, or are not situated in a location that provides equitable access to the surrounding road network; the public will experience inefficient and inconsistent service. To minimize these consequences and maximize the outcomes listed above, Road Services employs programs that facilitate routine inspection, maintenance, repair, and replacement of Bridges and Structures. These programs fall into the following categories:

Routinely inspected and maintained bridges and structures serve the public by ensuring that:

- Safety and environmental standards are met.
- The structures are free of hazards.
- Roads remain open to travel.
- There are no load or height restrictions.
- They provide non-motorized access.
- Crossing delays are minimized.

Minor bridge maintenance and repair: Includes work associated with routine bridge maintenance and repair such as small repairs, debris removal, surface cleaning, and graffiti removal. Routine inspections, load ratings, and other analyses inform the need for the minor maintenance and repair of structures.

Operations: Includes the resources needed to operate a bascule bridge (such as the South Park Bridge), which requires bridge tender staff to raise and lower the bridge for boat traffic.

Quick response: Includes work associated with unexpected failures in the bridge system and seawalls.

Facilities

Road Services has six regional maintenance facilities and a maintenance headquarters that provide routine and emergency services to the road system throughout the unincorporated area. Many of the County's existing road maintenance facilities are old and require significant capital improvements or have exceeded their useful lives and require replacement. Most are between 40 and 60 years old, with a few dating back to the early 1900s. As such, some do not meet current building standards or do not readily accommodate the needs of a modern workforce and equipment inventory. Some facilities have inadequate heat, insufficient restrooms, or failing septic systems. Some facilities have been plagued by leaking roofs, mold, or rodent infestations.

Maintenance activities keep the County's road-related assets in working condition to maximize the public's investment and provide for the safety of users. People and equipment are the tools to deliver safety services on County roads; adequate tools including heat, power, and weathertight maintenance facilities located in the right places are necessary to support the efficient provision of vital services to the traveling public. The existing conditions of the Road Services facilities have resulted in a compromised ability to provide services, often during public emergencies.

The ability to respond to incidents and public emergencies 24 hours a day, seven days a week is an important part of operating a road network. Emergency response capability also helps keep the road system safe and operational during severe weather and after earthquakes or other events. With deteriorated or a lack of appropriate facilities, the sand used in responding to snow and ice will freeze in trucks, resulting in significant delay of road treatment to make them passable. An investment in the highest priority facility failures and sub-standard facilities are necessary for continued delivery of essential safety and routine maintenance services.

Assessment of current facilities: As part of the facility planning effort to develop the Facilities Master Plan (FMP), the current facilities were assessed for conditions, locations, and functions. The results of these assessments helped identify facility needs.

Physical condition: To get a current and comprehensive understanding of the condition of its existing maintenance facilities, the County engaged facilities consultant DLR Group in 2013 to conduct a facilities condition assessment. DLR Group assessed and documented various components of the buildings and properties of the regional maintenance shops and the maintenance headquarters. The study included the cost estimates for capital needs of each facility and projected costs associated with future use for each facility.

The DLR condition report and analysis was used to help prioritize needed maintenance repairs and inform future cost-benefit analysis and decisions regarding whether to invest in expensive repairs or rehabilitation of facilities, or to relocate or rebuild facilities.

Location suitability: As the unincorporated service area has changed significantly with annexations and incorporations over the past two decades, a number of facilities are no longer sited in the best locations to serve the core unincorporated service areas. In addition, facilities sites have certain size, land use, zoning, environmental and other requirements. Because RSD's facilities have been sited, acquired, and developed ad hoc over a very long period of time, many current facilities have issues related to their location (i.e. the Fall City site is located in the Snoqualmie River Floodplain). The Roads Services Division assessed each facility according to a set of criteria that considered travel time, size, land use issues, and many other factors.

Functional/operational deficiencies: Road Services facilities were also assessed against a set of functional criteria to identify deficiencies from a functional/operational perspective. The functional/operational criteria include covered and heated bays for vehicle and equipment storage; covered sand and bulk salt storage for snow and ice operation; and adequate administrative and crew facilities.

Identified Needs: The consultant identified the following types of facility needs:

- Move and co-locate with WSDOT (including facility expansion)
- Construct and expand permanent facilities
- Relocate and construct or expand permanent facilities
- Enhance two emergency response satellite facilities
- Major renovation of existing facilities
- High Priority Maintenance and Repair (septic system replacement, fencing, doors and windows, HVAC Systems, roof repairs, and interior improvements electrical, plumbing)

Facility Maintenance: Facilities include any properties operated at remote offices, shops, and yards and pit sites. The needs associated with efficiently maintaining and operating these facilities includes, but is not limited to the following: yard maintenance, cleaning, utility service, and building security, and work as needed (carpentry, electrical repair, painting, fence repair, machinery service, structural repairs, and plumbing).

Chapter 3 – Transportation Modeling

The Transportation Needs Report is part of the King County Comprehensive Plan. Travel demand forecasting for the Transportation Needs Report fulfills several requirements for the Transportation element of the King County Comprehensive Plan; these requirements can be found at RCW 36.70A.070(6)(a). They consist of the following: 1. Traffic forecasts of 10 years or more: TNR forecasts are for 2031, 15 years from the expected adoption of the TNR in 2016. 2. Land use assumptions: Regionally adopted household, population and employment data are key inputs into the traffic forecasts used. 3. Intergovernmental coordination: Travel forecasts used for the TNR are based on land use forecast growth target assumptions agreed to regionally by a coalition of jurisdictions in King County. 4. Estimated traffic impacts to state-owned facilities: Year 2031 travel forecasts for state facilities were analyzed as part of a deficiency analysis. 5. Consistency of plans: the PSRC solicited input from member jurisdictions in the development of their travel model, and forecast land use and road improvement assumptions were used for the PSRC's Transportation 2040 plan.

Travel Demand Forecasting at King County

Travel demand forecasting is the process of estimating the number of vehicles that will use a particular transportation facility in the future. Travel forecasting begins with the collection of current traffic data. This traffic data is combined with other known data, such as population, employment and trip rates to develop a traffic demand model for the existing situation. Coupling it with projected data for population, employment, etc., results in estimates of future traffic. Traffic forecasts are used in transportation policy, planning, and engineering, to determine demand and provide the basis for calculating the capacity of infrastructure and determining level of service performance.

The official travel forecasting model at the PSRC is called 4k. It was used in development of the PSRC's Transportation 2040 Plan update in 2014, and is being used for the 2016 King County Comprehensive Plan update. The 4k model is a Trip-Based Model. A trip-based model estimates daily travel patterns and conditions within the four counties (King, Kitsap, Pierce, and Snohomish) of the Puget Sound region. [2]

The 4k model relies upon population and employment forecasts from the land use model at PSRC. The model is used to generate forecasts to provide travel measures for use in regional analysis. For every household in the region, the model estimates how many trips are made each day, where they go, what time of day they travel, which modes they use, and which routes they follow.

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[2] Puget Sound Regional Council, "Travel Demand Forecasting," Analysis and Forecasting at PSRC, October 2009, http://www.psrc.org/assets/2938/Travel_Demand_White_Paper_2009_final.pdf.

Prior to the 4k model, King County used a custom model based on an older generation of the PSRC's Trip-Based Model. The major difference is that the King County model used localized traffic data, including concurrency and local development data specific to unincorporated King County, whereas the PSRC model used regional level data. Following the incorporation of remaining major urban portions of King County, unincorporated King County is primarily a rural area with an older, transportation infrastructure with less density, much lower growth levels, and mature and stable growth patterns. A highly specialized and detailed travel demand model is no longer needed, so in the interest of program and cost efficiency, as well as to ensure regional planning consistency, King County adopted the 4k model in 2015.

Forecasted P.M. peak hour (afternoon rush hour[3]) traffic volumes were reviewed for indications of potential level-of-service problems. King County staff used PSRC Travel Model output data to analyze deficiencies for the forecast year 2031. The Travel Model's afternoon rush hour field covers a three hour time period for both directions of vehicle travel. The latest model forecast showed fewer deficiencies than were forecasted in 2012. This change can be attributed in part to differences in travel models, however these differences are not as great in unincorporated King County, where the PSRC has increased the level of detail in recent versions of its model.

Capacity Projects Derived from PSRC Travel Model for Unincorporated King County

No additional capacity projects were proposed as a result of the deficiency analysis performed for the TNR. Most of the remaining deficiencies are on unincorporated arterial roadways with severe congestion levels and significant cost or engineering challenges dating back many years, and which are unlikely to see improvement without very significant investments.

[3] Defined by PSRC as 3:00 pm – 6:00 pm

Chapter 4 – Drivers of Change Affecting Transportation in Unincorporated King County

Puget Sound Regional Demographic and Employment Trends

The most powerful indicators of how people travel are where they live and work. The Puget Sound region is expected to continue to grow jobs and urbanize, creating more demands on a transportation system that has been outgrown. New forecasts from the PSRC indicate population in the region is expected to reach about five million people by 2040, an approximately 30 percent increase from 2014. This substantial increase in population will create the need for more housing, employment and services, creating significant impacts on travel patterns and demands.

The Puget Sound region's current transportation system reflects and is guided by land use patterns developed through decades of growth. As the region continues to grow in the future, its demographic profile will continue to evolve and changes may likely accelerate. Future transportation system users will include a wider range of ages, and be more ethnically and racially diverse. As jobs increasingly locate into large city centers, alternative modes of travel including transit and non-motorized modes will become increasingly important.

The Millennial Generation (people in their 20s and early 30s in 2015) has the potential to lead lasting change in regional housing and transportation choices. Current trends suggest this younger generation, nationwide, is less car-focused than older generations and values housing locations near mass transit or within walking or biking distance to work, thus making fewer trips by car.[1] As the Seattle area ranks as a top destination for young professionals both locally and nationally, this could signal a greater change in transportation patterns in the region.
The retiring Baby Boomer generation displays similarly more urban-oriented housing choices than past retiring generations. Retirees are increasingly downsizing from suburban homes to city apartments and small houses for pedestrian and transit oriented access to cultural activities and lifestyle amenities.

The region is and will remain a relatively affluent region, with higher wages lead by technology companies and technology workers throughout the regional economy.[2] Their willingness to pay for transportation choices that they value remains high, at least for now. In contrast, lower income populations will face increasing economic challenges as housing, transportation, and other living costs escalate.

Uncertainty lingers, however, over the long-term effects on housing and transportation, given the newness of the younger and older generations' lifestyle choices. In the long-run, if these trends continue, the region's demographics could increase demand for higher density housing

[1] Ibid., 15, 18–20.
[2] Ibid., 38–39.

in compact, walkable neighborhoods and a balanced transportation system that enables these land use patterns.

Puget Sound Transportation Trends

Commuting behavior in the region has been relatively consistent with the bulk of workers choosing to drive alone. Single-occupancy vehicle (SOV) travel will likely continue to be an important mode choice throughout the region as the lack of density and lack of funding makes mass transit service impractical in the rural area. According to findings from the PSRC's recent Regional Travel Survey, most trips in the region – 82% - are still in personal vehicles, but the share of trips by car has been declining steadily since the 1999 Regional Travel Survey.[3] Overall, most trip lengths are the same as they have been in the past, and commute characteristics are mostly the same as well, with a slight increase in distance covered by drivers.[4] Average commute times and distances have fluctuated only slightly, with average drive-alone distance increasing by a mile (to 12.2 miles in 2014) while average commute time wavered around 28 and 29 minutes between 1999 and 2014.

Future gas prices and potential roadway tolling will be significant contributors to further consolidating housing and employers. The regional transportation plan – Transportation 2040 – plans for a regional tolling system as both a way to raise critical funding for transportation capacity investments and to reduce peak-period demand on the transportation system.[5] Several studies have been completed or are currently underway by the Washington State Department of Transportation, such as for State Route SR 167, SR 509 and Interstate 405. The evolution of tolling will likely continue on this pathway, with additional high-occupancy toll lanes brought into operation in the first decade of the plan.[6] Also, major highway capacity projects will be at least partially financed through tolls. Eventually, in the later years of the plan, the intent is to manage and finance the highway network as a system of fully tolled facilities.

The second highest expense for a typical U.S. household is transportation. Gasoline prices are always unpredictable and volatile, mirroring crude oil prices which are determined in the global crude oil market by the worldwide demand for and supply of crude oil.[7] Washington State's previous gas tax of 37.5-cents-per-gallon is one of the highest gas taxes in the United States and with the passing of the transportation package from the 2015 legislative session, will increase the present gas tax 11.9-cents-per-gallon phased in over three years to 49.4-cents-per-gallon -

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[3] Puget Sound Regional Council, "PSRC's 2014 Regional Travel Study: Key Comparisons of 1999, 2006, and 2014 Travel Survey Findings" (Puget Sound Regional Council, June 2015), 1.

[4] Ibid., 21.

[5] "Adopted Transportation 2040 Plan," 39–42,46, accessed July 27, 2015, http://www.psrc.org/transportation/t2040/t2040-pubs/final-draft-transportation-2040/.

[6] Ibid., 47.

[7] "Gas Prices Explained," *American Petroleum Institute*, accessed August 3, 2015, http://www.gaspricesexplained.com/#/?section=gasoline-diesel-and-crude-oil-prices.

second nationally only to Pennsylvania.[8] Combined with the current federal gas tax of 18.4-cents-per-gallon, a total of 67.8-cents-per-gallon will be added to the cost of gasoline for Washington drivers. With overall demand for oil trending up, the price of gas is increasing, making it reasonable to forecast not only $4.00-per-gallon prices in the near-term, as the local and global economy continues to improve, but $5.00-per-gallon prices and above in the decades to come.[9]

Transportation Trends in Unincorporated King County

Decades of annexations, declines in gas tax revenues, and the effects of voter initiatives within King County have all directly contributed to the decline of revenues needed to maintain and preserve King County's nearly 1,500 mile road network.[10] King County Roads' financial forecasts show that revenues needed to sustain capital improvements will end in 2030 and despite significant efficiencies made by the agency, additional cuts to the operating budget will be required if additional revenues are not secured. King County Roads is operating under an unsustainable financial model with insufficient revenue to support unincorporated roadway infrastructure.

In addition, the majority of population, development, and employment growth have been within the Urban Growth Area, not in unincorporated King County.[11] Following adoption of King County's first Comprehensive Plan in 1994, the percent of growth in rural areas has generally declined each year[12] and the small growth trend is expected to continue. The combined population of all small cities and towns is just 5.4% of the county total.[13] With the majority of people and jobs located within the urban growth area, this leaves few employment options in the rural area and the necessity for rural residents to drive long distances to jobs in urban employment centers.

Unless changes are made to the state and regional transportation funding allocation process, federal, state and local transportation investments will continue to be focused within King County's Urban Growth Boundary serving the densest residential and employment centers, which enable local and regional transit improvements and active modes of travel. This leaves unincorporated King County with a more geographically dispersed population – traditionally more difficult to be served efficiently by transit. As transportation investments go to urbanized areas, King County may be forced to examine other transit service delivery options, such as dial-

[8] "Gasoline Tax," accessed August 3, 2015, http://www.api.org/oil-and-natural-gas-overview/industry-economics/fuel-taxes/gasoline-tax.

[9] "U.S. Gasoline and Diesel Retail Prices," *U.S. Entergy Information Administration*, accessed August 3, 2015, http://www.eia.gov/dnav/pet/pet_pri_gnd_dcus_nus_a.htm.

[10] "Executive Constantine Names Panel to Address Sustainable Funding for Deteriorating County Bridges and Roads - King County," accessed September 14, 2015, http://kingcounty.gov/elected/executive/constantine/News/release/2015/August/05-roads-task-force.aspx.

[11] Puget Sound Regional Council, "Population of Cities and Towns," Puget Sound Trends (Puget Sound Regional Council, January 2015), 1, http://www.psrc.org/data/trends.

[12] King County, "The King County Buildable Lands Report 2014," Buildable Lands Report, July 23, 2014, 134.

[13] Ibid., 36.

a-ride, rideshare, and vanpool services in areas with little to no fixed route transit options. With high levels of commuting to jobs in the Urban Growth Area, but little available transit service, many rural unincorporated King County residents will continue to rely on autos to get to work while demand and usage of unincorporated roadways increases by those outside of the County driving into the urban centers.

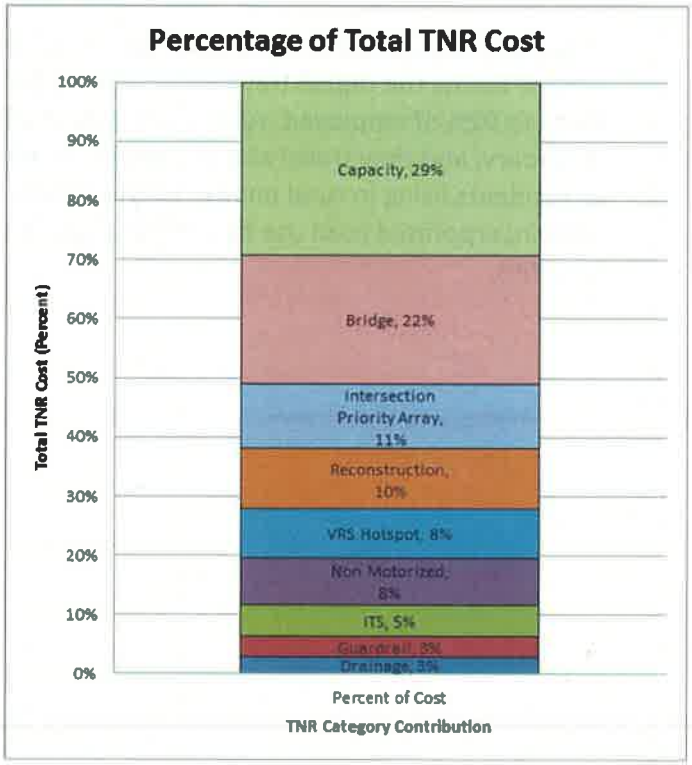
King County's unincorporated road system supports more than one million trips per day with people across the region traveling to work, school, and recreation.[14] The PSRC estimates that close to 92% of employed, rural study area residents travel to jobs inside the Urban Growth Boundary, and they travel about twice as far with an average commute of 22 miles.[15] Just 9% of residents living in rural unincorporated areas work in those areas,[16] illustrating the high level of unincorporated road use by residents coming from and to Pierce, Snohomish and other counties.

[14] "Executive Constantine Names Panel to Address Sustainable Funding for Deteriorating County Bridges and Roads - King County."
[15] "Adopted Transportation 2040 Plan," 4.
[16] Puget Sound Regional Council, "Transportation 2040 Update - Appendix R: Rural Transportation Study," May 29, 2014, 4, http://www.psrc.org/transportation/t2040/transportation-2040-update.

Chapter 5 Project Needs List - Cost Analysis

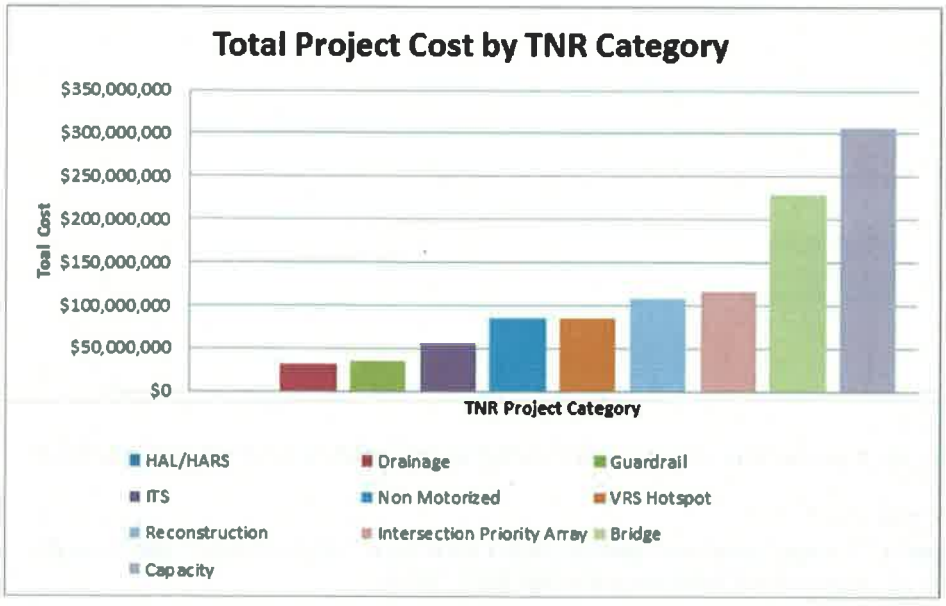
2016 TNR Project list – Composition and Characteristics

The 2016 TNR Project Needs List is composed of projects derived from the varied work within Road Services. Projects were organized within nine categories – Drainage, Guardrail, ITS (Intelligent Transportation Systems), Non-Motorized, VRS Hotspot (Vulnerable Road Segment), Reconstruction, Intersection Priority Array, Bridge and Capacity. This does not include the HAL/HARS category of projects.

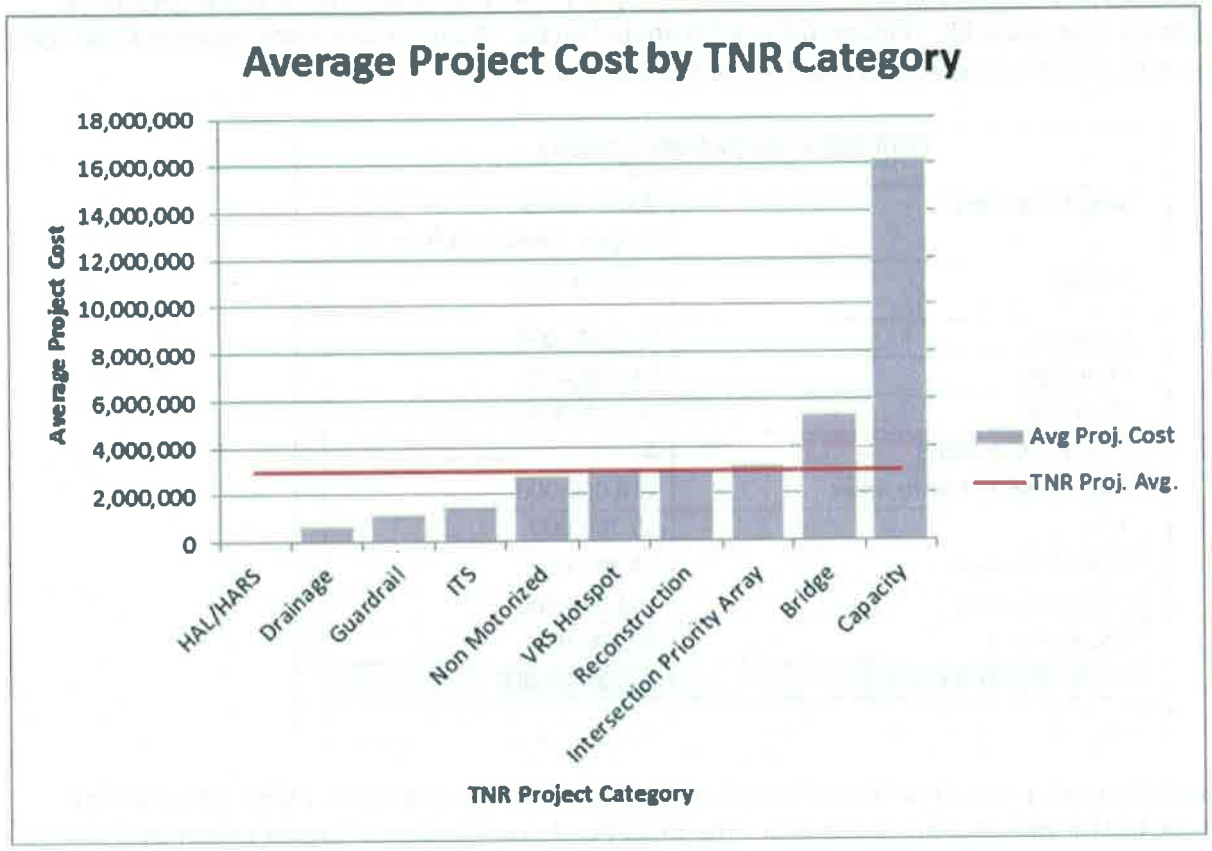


Total costs for Drainage and HAL/HARS (safety) projects are either not or under represented because processes for identifying those needs is underway.

Together the total cost estimates for Capacity and Bridge projects contributed over half of the total cost of the TNR Project Needs List (see graph: Percentage of Total TNR Cost). This is attributed to the significantly higher cost of engineering, materials, physical labor, environmental permitting and cost of right-of-way that goes into widening roads, reconfiguring intersections for roundabouts, and replacing/repairing bridges compared to relatively smaller-scale projects such as guardrail or dynamic messaging boards.



Viewing the project list by average project cost shows the same ascending pattern as by percentage and total project cost (see graph: Average Project Cost by TNR Category). The graph illustrates a stark contrast in individual category project costs. For instance, there is a 135% difference in the average Capacity project cost than the average project cost in the TNR.



Chapter 6. Financial Analysis

Assumptions and Financial Plan

A financial analysis was done to compare the cost of projected needs to Road Services' anticipated revenue. The cost estimates for projects from previous versions of the TNR were updated to account for inflation using a 3% annual factor. Project costs were organized into the ten major asset categories as listed in the table below:

2016 TNR Costs by Asset Category	
Asset Category	**2016 - 2035 Project Costs in dollars ($)**
Bridge	229,000,000
Capacity	307,000,000
Drainage	31,000,000
Guardrail	35,200,000
HAL/HARS (safety)	0
Intersection Priority Array	116,000,000
ITS	55,700,000
Non Motorized	84,900,000
Reconstruction	107,000,000
VRS Hotspot	85,900,000
Total 2016 TNR Costs	1,051,700,000

Available revenues of Road Fund Contribution, Grant Funding, and other minor sources were projected for the 20 years of the plan. The Road Fund Contribution is funded chiefly by a dedicated unincorporated area property tax and gas tax distribution. Property tax revenue projections are based on the most recent approved King County, Office of Economic and Financial Analysis forecast as of September 30, 2015. Gas tax projections reflect increases adopted by the Washington State Legislature in 2015 that for King County amount to $500,000 in 2016 and 2017 and $1.06 million annually from 2018 to 2031.

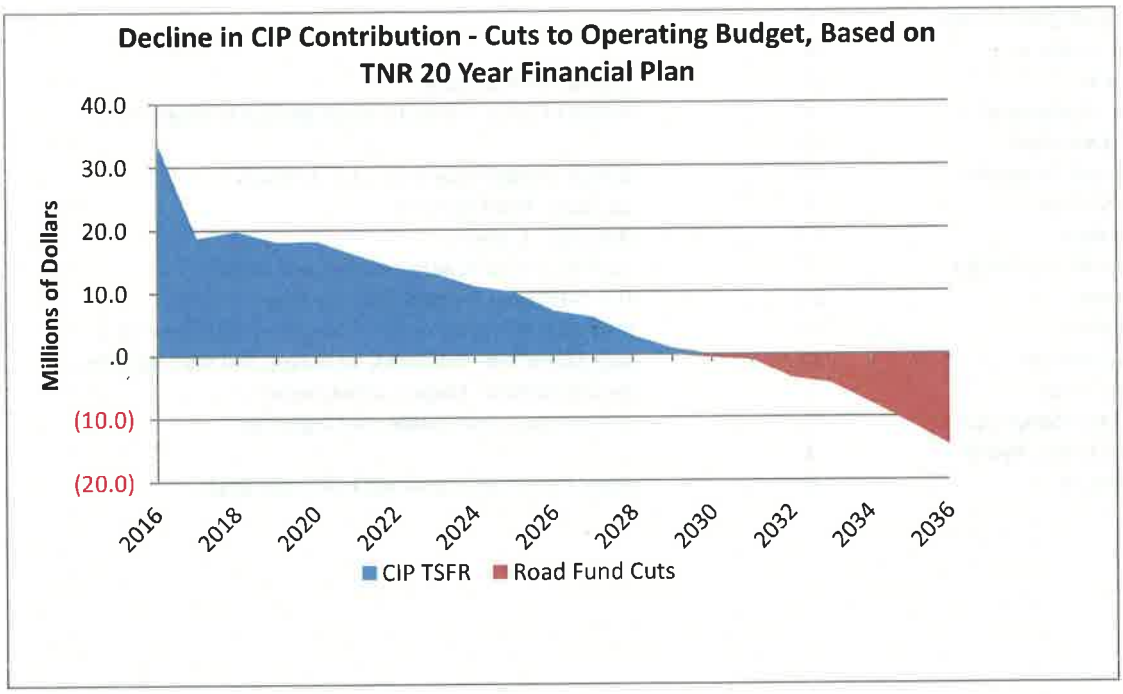
Funded Capital Costs	**2016 - 2035**
Overlay	140,000,000
Safety	59,501,000
Facilities	20,000,000
Total Capital Costs	219,501,000
Calculation of Shortfall for TNR projects	
Forecasted Revenue	289,349,991
Less: Capital Costs	(219,501,000)
Funds Available	69,848,991
Shortfall to fund 2016 TNR	(981,851,009)

Total revenue needs are $1.05 billion, expressed in constant 2016 dollars and totaled through the year 2035. The TNR shortfall is calculated by subtracting the projected costs from projected revenues for the 20 year TNR period, 2016-2035.

The total project costs that can be funded in this period are approximately $70 million of the identified 2016 TNR however, when considering cash flow and the cost of Road Services' operating budget, projections show that there are insufficient revenues to fund capital projects after 2030. This is illustrated in the graph below.

Allocation of Funds Available	
Asset Category	**2016 - 2035 Allocation**
Bridge	31,043,998
Capacity	0
Drainage	36,217,998
Guardrail	2,587,000
HAL / HARS	0
Intersection Priority Array	0
ITS	0
Non Motorized	0
Reconstruction	0
VRS Hotspot	0
Total Needs	69,848,991

The allocation of available funding for the 20 year period was made to asset categories that align with Road Services' strategic priorities of safety, regulatory compliance and preservation. In addition, completion of Roads' drainage inventory assessment will most likely increase costs and allocations for that asset category. Existing funding for the Roads Capital Improvement Project (CIP) list from the County Road Fund declines steadily and reaches zero in 2030.



NEEDS LIST for the Transportation Needs Report 2016

Needs are divided into twenty-three Map Areas. The Map Area Number is for use with the map atlas.
The Needs List is sorted alphabetically in the following order:

	Map Area	Map Area Number
1	Carnation	14
2	Covington/Black Diamond	10
3	Cumberland	18
4	Duvall	13
5	East Enumclaw	19
6	East Federal Way	5
7	East North Bend	22
8	East Renton/Lake Youngs	9
9	Kent/Des Moines	4
10	Mount Si	21
11	Newcastle/Issaquah	8
12	North Enumclaw	11
13	North Fork Snoqualmie	20
14	North Vashon	1
15	Ravensdale	17
16	Redmond/Sammamish	7
17	Skykomish	23
18	Snoqualmie	15
19	South Enumclaw	12
20	South Vashon	2
21	Tiger Mountain/Hobart	16
22	White Center/Skyway	3
23	Woodinville	6

Legend for Needs List:
Product Family - From the Road Services Strategic Plan

Bridge - Bridge replacements and repairs
Capacity - Road widening
Drainage - Culverts
Guardrail - Guardrail installation and repair
ITS - Intelligent Transporation Systems
Intersection Priority Array - Intersection improvements
Non Motorized - Sidewalks, walkways, and road shoulders
Reconstruction - Major roadway repairs
VRS Hotspot - Vulnerable road segments

Note: Project costs updated in January 2016

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Map Area: Carnation (14)					
Corridor: NE Ames Lake Rd					
OP-RD-4	NE Ames Lake Rd: Union Hill Rd to State Route 202	Realign and widen lanes	Traffic Control Devices	Intersection Priority Array	$ 9,990,000
Corridor: NE Tolt Hill Rd					
OP-RD-37	NE Tolt Hill Rd: From Tolt Hill Bridge to 500 feet west of State Route 203	Reconstruct roadway	Roadway	Reconstruction	$ 1,780,000
RC-32	Tolt Hill Rd: From Tolt Hill Bridge to State Route 203	Armor shoulders to reduce washouts during floods	Roadside	VRS Hotspot	$ 104,000
Corridor: NE Union Hill Rd					
ITS-11	NE Union Hill Rd: From 238th Ave NE to NE Ames Lake Rd	Cameras, speed warning system, vehicle detection	Traffic Control Devices	ITS	$ 200,000
Corridor: West Snoqualmie Val Rd NE					
RC-15-1	West Snoqualmie Valley Rd NE: From NE 80th St to Ames Lake Carnation Rd NE	Reconstruct roadway	Roadway	Reconstruction	$ 10,100,000
Corridor: Misc.					
BR-2133A	Sikes Lake Trestle: 284th Ave NE at Sikes Lake, about 0.5 mile east of State Route 202	Replace bridge	Bridges and Structures	Bridge	$ 9,610,000
BR-257Z	Horseshoe Lake Creek Bridge: 310th Ave NE at Horseshoe Lake Creek	Replace bridge	Bridges and Structures	Bridge	$ 2,190,000
BR-916A	West Snoqualmie River Road Bridge: West Snoqualmie River Road over a slough to the Snoqualmie River	Replace bridge	Bridges and Structures	Bridge	$ 1,580,000
GR-11S	East Ames Lake Dr NE: From W Ames Lake Dr NE to W Ames Lake Dr NE	Construct guardrail	Roadside	Guardrail	$ 23,600
GR-15-10	NE Tolt River Rd: From Carnation city limits to NE 80th St	Construct guardrail	Roadside	Guardrail	$ 1,440,000
GR-15-18	SE 24th St / Lake Langlois Rd: From State Route 203 to end of road	Construct guardrail	Roadside	Guardrail	$ 1,710,000
GR-15-30	310th Ave NE / NE 60th St: From NE Carnation Farm Rd to State Route 203	Construct guardrail	Roadside	Guardrail	$ 650,000
GR-15-37	NE 100th St: From W Snoqualmie Valley Rd NE to 284th Ave NE	Construct guardrail	Roadside	Guardrail	$ 792,000
GR-80	West Snoqualmie River Rd SE: From SE 24th St to NE Tolt Hill Rd	Construct guardrail	Roadside	Guardrail	$ 102,000
ITS-25	W Snoqualmie River Rd SE: From SE 24th St to NE Tolt Hill Rd and State Route 203	Cameras, vehicle detection, pavement sensors	Traffic Control Devices	ITS	$ 521,000
RC-18	West Snoqualmie River Rd NE: From NE Tolt Hill Rd to SE 24th St	Armor shoulders to reduce road washouts	Roadside	VRS Hotspot	$ 385,000
RC-34	284th Ave NE: From NE 100 St to NE Carnation Farm Rd	Armor shoulders to reduce road washouts	Roadside	VRS Hotspot	$ 216,000
RC-36	NE 80th St: From West Snoqualmie Valley Rd NE to Ames Lake-Carnation Rd	Armor shoulders to reduce road washouts	Roadside	VRS Hotspot	$ 1,580,000
RC-38	NE 100th St: From West Snoqualmie Valley Rd to 284th Ave NE	Armor shoulders to reduce road washouts	Roadside	VRS Hotspot	$ 706,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Map Area: Covington/Black Diamond (10)					
Corridor: Kent Black Diamond Rd SE					
BR-30860X	Berrydale OX Bridge: Kent Black Diamond Rd SE over the railroad, at SE 292nd St (Jenkins Creek)	Replace bridge	Bridges and Structures	Bridge	$ 10,100,000
DR-15-17	Kent Black Diamond Rd SE & SE 292nd St at Jenkins Creek	Replace undersized culvert	Drainage	Drainage	$ 1,160,000
Corridor: SE 216th St					
NM-5049	SE 216th St: From SE 276th Ave SE to Maxwell Rd SE	Provide nonmotorized facility	Roadside	Non Motorized	$ 1,310,000
OP-INT-95	SE 216th Way & Dorre Don Way	Construct turn lanes	Traffic Control Devices	Intersection Priority Array	$ 376,000
Corridor: SE 216th Way					
RC-129	SE 216th Way: From State Route 169 to 244th Ave SE	Reconstruct roadway 1.13 miles	Roadway	Reconstruction	$ 2,270,000
Corridor: SE 240th St					
DR-10	SE 240th St & 172nd Ave SE at Little Soos Creek	Replace undersized culvert with a bridge structure	Drainage	Drainage	$ 1,720,000
NM-4041	SE 240th St: From 156th Ave SE to 172nd Ave SE	Widen walkway	Roadside	Non Motorized	$ 29,300
NM-5068	SE 240th St: From 148th Ave SE to 164th Ave SE	Provide nonmotorized facility	Roadside	Non Motorized	$ 726,000
NM-5069	SE 240th St: From 164th Ave SE to 180th Ave SE	Provide nonmotorized facility	Roadside	Non Motorized	$ 726,000
Corridor: SE Covington-Sawyer Rd					
OP-RD-41	SE Covington-Sawyer Rd: From Thomas Rd to 216th Ave SE	Realign roadway	Traffic Control Devices	Intersection Priority Array	$ 9,990,000
RC-6	SE Covington-Sawyer Rd: From Covington city limits to 216th Ave SE	Road rehabilitation (pavement treatment)	Roadway	Reconstruction	$ 1,750,000
Corridor: SE Petrovitsky Rd					
IPA-26	SE Petrovitsky Rd & Sweeney Rd SE	Construct traffic signal with turn lanes	Traffic Control Devices	Intersection Priority Array	$ 900,000
SW-13	SE Petrovitsky Rd & Sweeney Rd SE	Construct roundabout or north and east turn lanes	Traffic Control Devices	Intersection Priority Array	$ 1,690,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Corridor: Misc.					
DR-9	164th Ave SE & SE 225th St	Replace failing culvert	Drainage	Drainage	$ 1,110,000
GR-15-38	184th Ave SE / Peter Grubb Rd: From SE Lake Youngs Rd to SE 224th St	Construct guardrail	Roadside	Guardrail	$ 757,000
GR-88	156th Ave SE: From SE 240th St to SE 251st St/Covington city limits	Construct guardrail	Roadside	Guardrail	$ 385,000
IPA-33	164th Pl SE & SE Covington-Sawyer Rd	Construct turn lane and traffic signal	Traffic Control Devices	Intersection Priority Array	$ 1,650,000
NM-0202	195th Ave SE: From E Lake Morton Dr SE to SE 320th St	Construct asphalt shoulder (west side)	Roadside	Non Motorized	$ 96,800
NM-4033	164th Ave SE: From SE 224th St to SE 240th St	Widen pathway and improve lighting	Roadside	Non Motorized	$ 104,000
NM-5034	168th Ave SE: From Kent-Black Diamond Rd SE to SE Auburn Black Diamond Rd	Provide nonmotorized facility	Roadside	Non Motorized	$ 873,000
NM-5050	Sweeney Rd SE/SE Petrovitsky: From 196th Ave SE to SE 232nd St	Provide nonmotorized facility	Roadside	Non Motorized	$ 1,210,000
NM-9980	168th Way SE & Covington Creek	Widen bridge and construct sidewalk (east side)	Roadside	Non Motorized	$ 66,400
SW-56	164th Ave SE & SE 240th St	Construct roundabout	Traffic Control Devices	Intersection Priority Array	$ 1,460,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Map Area: Cumberland (18)					
Corridor: SE 400th Way					
NM-5010	SE 400th Way: From SE 400th St to SE 392nd St	Reconstruct roadway 2.18 miles	Roadway	Reconstruction	$ 2,010,000
Corridor: SE Green River Headworks Rd					
OP-INT-72	Cumberland Kanaskat Rd SE & SE Greenriver Headworks Rd	Reconstruct intersection with signal improvements	Traffic Control Devices	Intersection Priority Array	$ 90,600
Corridor: Veazie-Cumberland Rd SE					
DR-15-11	284th Ave SE/Veazie-Cumberland Rd SE & North Fork Newaukum Creek	Replace failing culvert	Drainage	Drainage	$ 822,000
NM-5007	Veazie-Cumberland Rd SE: From SE 384th St to SE 416th St	Provide nonmotorized facility	Roadside	Non Motorized	$ 1,490,000
Corridor: Misc.					
BR-3035A	Coal Creek Bridge: SE Lake Walker Rd at Coal Creek 1.5 mile southeast of Veazie-Cumberlund Rd SE	Replace bridge	Bridges and Structures	Bridge	$ 3,230,000
GR-15-32	292nd Ave SE/SE 416th St: From SE 392nd St to 284th Ave SE	Construct guardrail	Roadside	Guardrail	$ 1,080,000
GR-15-33	278th Way SE: From SE 392nd St to SE 416th St	Construct guardrail	Roadside	Guardrail	$ 857,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Map Area: Duvall (13)					
Corridor: Misc.					
BR-5032	Stossel Creek Bridge: Stossel Creek Rd NE at Stossel Creek, about 6.2 miles northeast of Kelly Rd NE	Replace bridge	Bridges and Structures	Bridge	$ 2,560,000
BR-5034A	Lake Joy Bridge: NE Lake Joy Dr & 346th Pl NE	Replace bridge	Bridges and Structures	Bridge	$ 2,000,000
DR-15-12	NE Lake Joy Rd & Cherry Creek. North of NE Moss Lake Rd	Replace undersized culvert	Drainage	Drainage	$ 1,690,000
DR-4	NE 106th St & 314th Ave NE	Replace failing culvert	Drainage	Drainage	$ 563,000
DR-5	NE 195th St & Margaret Creek. West of 327th Ave NE	Replace failing culvert	Drainage	Drainage	$ 563,000
GR-15-23	NE Lake Joy Rd: From Kelly Rd NE to W Lake Joy Dr NE	Construct guardrail	Roadside	Guardrail	$ 982,000
GR-15-24	Mountain View Rd NE / 318th Ave NE: From NE Cherry Valley Rd to end of road	Construct guardrail	Roadside	Guardrail	$ 645,000
GR-94	NE 124th St: From State Route 203 to end of road (286th Ave NE)	Construct guardrail	Roadside	Guardrail	$ 725,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Map Area: East Enumclaw (19)					
Corridor: Misc.					
DR-3	SE 440th St at the 27000 block	Replace failing culvert	Drainage	Drainage	$ 563,000
GR-103	SE 432nd St: From Enumclaw city limits to 284th Ave SE	Construct guardrail	Roadside	Guardrail	$ 339,000
GR-15-15	286th Ave SE/288th Ave SE: From SE 464th St to SE 480th St	Construct guardrail	Roadside	Guardrail	$ 537,000
GR-86	284th Ave SE: From SE Mud Mountain Rd to SE 451st St	Construct guardrail	Roadside	Guardrail	$ 537,000
NM-5008	SE 432nd St: From 284th Ave SE to Enumclaw city limits	Provide nonmotorized facility	Roadside	Non Motorized	$ 969,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Map Area: East Federal Way (5)					
Corridor: 28th Ave					
NM-4066	28th Ave S: From S 349 St to S 360th St	Construct walkway	Roadside	Non Motorized	$ 323,000
Corridor: 51st Ave S					
SW-21	51st Ave S & S 316th St	Construct roundabout or left-turn lanes	Traffic Control Devices	Intersection Priority Array	$ 1,690,000
Corridor: Military Rd S					
IPA-25	Miltary Rd S & S 360th St	Construct roundabout or signal with turn lanes	Traffic Control Devices	Intersection Priority Array	$ 1,690,000
NM-5014	Military Rd S: From Peasley Canyon Way S to State Route 161	Provide nonmotorized facility	Roadside	Non Motorized	$ 9,670,000
Corridor: Peasley Canyon Rd S					
ITS-8	S Peasley Canyon Rd: From Military Rd S to Peasley Canyon Way S	Upgrade signal equipment and coordinate timing	Traffic Control Devices	ITS	$ 2,570,000
Corridor: Peasley Canyon Way					
RC-42	Peasley Canyon Way S: From S Peasely Canyon Rd to Military Rd S	Construct retaining wall to prevent slides	Bridges and Structures	VRS Hotspot	$ 664,000
Corridor: S 321st St					
OP-INT-100	S 321st St: From S Peasley Canyon Rd to 46th Pl S	Reconstruct 321st St approach; expand turn lanes	Traffic Control Devices	Intersection Priority Array	$ 2,250,000
SW-73	46th Pl S & S 321st St	Counstruct roundabout or signalalized intersection	Traffic Control Devices	Intersection Priority Array	$ 2,480,000
Corridor: S 360th St					
OP-RD-48	S 360th St: From State Route 161 to 28th Ave S	Construct a two-way left turn lane	Traffic Control Devices	Intersection Priority Array	$ 4,750,000
Corridor: SE Auburn Black Diamond Rd					
RC-138	SE Auburn Black Diamond Rd: From SE Green Valley Rd to SE Lake Holm Dr	Reconstruct roadway 0.23 miles	Roadway	Reconstruction	$ 367,000
RC-139	SE Auburn Black Diamond Rd: From SE Lake Holm Rd to 148th Way SE	Reconstruct roadway 2.18 miles	Roadway	Reconstruction	$ 4,850,000
Corridor: SE Lake Holm Rd					
RC-140	SE Lake Holm Rd: From SE Auburn Black Diamond Rd to 147th Ave SE	Reconstruct roadway 1.64 miles	Roadway	Reconstruction	$ 2,530,000
Corridor: Misc.					
BR-3015	Patton Bridge: SE Green Valley Rd at Green River, about 1.5 miles southeast of Highway 18	Replace bridge	Bridges and Structures	Bridge	$ 25,100,000
NM-4067	32nd Ave S: From S 360th St to S 368th St	Construct walkway	Roadside	Non Motorized	$ 323,000
RC-137	SE Auburn Black Diamond Rd: From Highway 18 to SE Green Valley Rd	Reconstruct roadway 0.18 miles	Roadway	Reconstruction	$ 330,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Map Area: East North Bend (22)					
Corridor: Misc.					
GR-15-3	437th Ave SE: From Cedar Falls Way SE to SE 150th St	Construct guardrail	Roadside	Guardrail	$ 99,700
GR-78	SE Middle Fork Rd: From North Bend city limits to 496th Ave SE	Construct guardrail	Roadside	Guardrail	$ 15,800
OP-RD-39	SE Mount SI Rd: From 452 AVE SE to 800' E	Realign roadway	Traffic Control Devices	Intersection Priority Array	$ 502,000
OP-RD-54	SE Middle Fork Rd: From 496th Ave SE to 476th Ave SE	Reconstruct roadway	Roadway	Reconstruction	$ 4,760,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Map Area: East Renton/Lake Youngs (9)					
Corridor: 140th Ave SE					
ITS-23	SE 204th Way / 140th Ave SE: From 137th Ave SE to SE 192nd St	Cameras, vehicle detection, synchronize signals	Traffic Control Devices	ITS	$ 4,400,000
SW-81	SE 140th Ave SE & SE 200th St	Construct left-turn lanes	Traffic Control Devices	Intersection Priority Array	$ 1,690,000
Corridor: 154th Pl SE					
ITS-19	154th Pl SE / SE 142nd Pl: From State Route 169 to 156th Ave SE	Cameras, pavement sensors, speed warning system	Traffic Control Devices	ITS	$ 237,000
OP-RD-25	154 PL SE / SE 142 PL: From SE Jones Rd to 156th Ave SE (Renton city limits)	Construct congestion relief measures	Roadway	Capacity-Major	$ 5,270,000
Corridor: 164th Ave SE					
ITS-34	164th Ave SE: From SE 128th St to SE May Valley Rd	Cameras, vehicle detection, communications system	Traffic Control Devices	ITS	$ 1,840,000
Corridor: 196th Ave SE					
RC-50	196th Ave SE: From SE 162nd St to SE 170th St	Construct a retaining wall to prevent slides	Bridges and Structures	VRS Hotspot	$ 1,120,000
Corridor: Cedar Grove Rd SE					
BR-83D	Issaquah Creek Bridge: Cedar Grove Rd SE at Issaquah Creek, about 0.5 mile north of SE 156th	Replace bridge	Bridges and Structures	Bridge	$ 3,040,000
Corridor: Issaquah Hobart Rd SE					
BR-1384A	Fifteen Mile Creek Bridge: Issaquah Hobart Rd SE at Fifteenmile Creek, south of SE May Valley Rd	Replace bridge	Bridges and Structures	Bridge	$ 8,230,000
CP-15-2	Issaquah Hobart Rd SE: From Issaquah city limits to Cedar Grove Rd SE	Construct congestion relief measures	Roadway	Capacity-Major	$ 29,600,000
ITS-15	Issaquah Hobart Rd SE: From Cedar Grove Rd SE to Highway 18	Cameras, message signs, weather stations	Traffic Control Devices	ITS	$ 851,000
OP-INT-124	Issaquah-Hobart Rd SE & SE May Valley Rd	Construct roundabout	Traffic Control Devices	Intersection Priority Array	$ 2,580,000
RC-118	Issaquah Hobart Rd SE: From S Issaquah city limits to SE May Valley Rd	Reconstruct roadway 1.86 miles	Roadway	Reconstruction	$ 1,030,000
RC-119	Issaquah Hobart Rd SE: From SE May Valley Rd to Cedar Grove Rd SE	Reconstruct roadway 0.98 mile	Roadway	Reconstruction	$ 2,750,000
RC-120	Issaquah Hobart Rd SE: From SE 156th St to Cedar Grove Rd SE	Reconstruct roadway 1.2 miles	Roadway	Reconstruction	$ 2,360,000
RC-121	Issaquah Hobart Rd SE: From SE 156th St to Highway 18	Reconstruct roadway 2.27	Roadway	Reconstruction	$ 4,050,000
Corridor: SE 128th St					
GR-15-5	SE 128th St: From Renton city limits (158th Ave SE) to 175th Ave SE	Construct guardrail	Roadside	Guardrail	$ 597,000
ITS-28	SE 128th St: From 158th Ave SE to SE May Valley Road	Cameras, vehicle detection, synchronize signals	Traffic Control Devices	ITS	$ 5,280,000
OP-RD-21	SE 128th St: From Patriot Way SE to 168th Ave SE	Improve sight distance and construct turn lanes	Traffic Control Devices	Intersection Priority Array	$ 1,480,000
Corridor: SE 204th Way					
BR-3109B	Lake Youngs Way Bridge: SE Lake Youngs Way at Big Soos Creek, 0.3 miles northeast of SE 208th St	Replace bridge	Bridges and Structures	Bridge	$ 2,000,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Corridor: SE May Valley Rd					
BR-493C	Fifteen Mile Creek Bridge: SE May Valley Rd at Fifteenmile Creek, west of Issaquah Hobart Rd SE	Replace bridge	Bridges and Structures	Bridge	$ 4,170,000
ITS-29	SE May Valley Rd: From State Route 900 to Issaquah Hobart Rd SE	Cameras, vehicle detection, road weather sensors	Traffic Control Devices	ITS	$ 346,000
OP-RD-22	SE May Valley Rd: From SE 128th Way to Issaquah Hobart Rd SE	Widen travel lanes	Traffic Control Devices	Intersection Priority Array	$ 9,320,000
OP-RD-26	SE May Valley RD: From State Route 900 to SE 128th Way	Improve sight distance	Traffic Control Devices	Intersection Priority Array	$ 7,800,000
Corridor: SE Petrovitsky Rd					
CP-15	140th Ave SE & SE Petrovitsky Rd	Construct congestion relief measures	Roadway	Capacity-Major	$ 17,400,000
CP-15-4	SE Petrovitsky Rd: From 151st Ave SE to SE 184th St	Construct congestion relief measures	Roadway	Capacity-Major	$ 10,300,000
IPA-1	SE Petrovitsky Rd: From 140th Ave SE to 143rd Ave SE	Street lighting for existing turn lanes and tapers	Traffic Control Devices	Intersection Priority Array	$ 412,000
ITS-24	SE Petrovitsky Rd: From 151st Ave SE to Highway 18	Cameras, vehicle detection, weather station	Traffic Control Devices	ITS	$ 10,200,000
OP-INT-106	SE Petrovitsky Rd & SE 192nd St	Construct southeast bound left turn lane	Traffic Control Devices	Intersection Priority Array	$ 886,000
RC-3	SE Petrovitsky Rd: From 134th Ave SE to 143rd Ave SE	Road reconstruction	Roadway	Reconstruction	$ 3,690,000
Corridor: Misc.					
BR-1741A	Issaquah Creek Bridge: 252nd Ave SE at Issaquah Creek, south of Issaquah Hobart Rd SE	Replace bridge	Bridges and Structures	Bridge	$ 8,030,000
BR-3109A	Soos Creek Bridge: SE 216th St at Big Soos Creek, about 0.3 mile east of 132nd Ave SE	Replace bridge	Bridges and Structures	Bridge	$ 2,380,000
BR-3202	Maxwell Road Bridge: 225th Ave SE/Maxwell Rd SE cattle crossing	Replace bridge	Bridges and Structures	Bridge	$ 1,470,000
BR-83B	Issaquah Creek Bridge: SE 156th St at Issaquah Creek, east of Cedar Grove Rd SE	Replace bridge	Bridges and Structures	Bridge	$ 2,250,000
DR-15-3	229th Dr SE & McDonald Creek, north of SE 139th Ct	Construct scour mitigation measures	Drainage	Drainage	$ 255,000
GR-15-14	SE 208th St: From 244th Ave SE to 276th Ave SE	Construct guardrail	Roadside	Guardrail	$ 1,110,000
GR-15-19	236th Ave SE / 235th Ave SE: From SE 196th St to SE Norvydan Rd	Construct guardrail	Roadside	Guardrail	$ 586,000
GR-15-35	SE 156th St: From SE Cedar Grove Rd to Issaquah Hobart Rd SE	Construct guardrail	Roadside	Guardrail	$ 375,000
GR-15-36	SE Mirrormont Dr: From Issaquah Hobart Rd SE to Tiger Mountain Rd SE	Replace jersey barrier with guardrail	Roadside	Guardrail	$ 1,110,000
GR-15-8	SE 127th St: From SE May Valley Rd to 206th Pl SE	Construct guardrail	Roadside	Guardrail	$ 425,000
NM-5038	SE 208th St: From 148th Ave SE to Kent city limits	Provide nonmotorized facility	Roadside	Non Motorized	$ 362,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Map Area: Kent/Des Moines (4)					
Corridor: 148th Ave SE					
BR-3108	Soos Creek Bridge: 148th Ave SE at Soos Creek, about 0.2 mile north of SE 240th	Replace bridge	Bridges and Structures	Bridge	$ 2,450,000
SW-20	148th Ave SE & SE 224th St	Construct roundabout and modify approach grades	Traffic Control Devices	Intersection Priority Array	$ 2,810,000
Corridor: Military Rd S					
CP-5	Military Rd S: From S 272nd St to S Star Lake Rd	Construct congestion relief measures	Roadway	Capacity-Major	$ 7,040,000
Corridor: S 272nd St					
OP-INT-120	40th Ave S & S 272nd St	Add turn lanes on 272nd, rebuild traffic signal	Traffic Control Devices	Intersection Priority Array	$ 2,810,000
Corridor: S 277th St					
BR-3126	S 277th St Bridge: Mullen Slough, west of State Route 167	Replace bridge	Bridges and Structures	Bridge	$ 2,470,000
CP-15-6	S 277th St & 55th Ave S / S Star Lake Rd	Construct congestion relief measures	Traffic Control Devices	Capacity-Major	$ 3,680,000
DR-2	S 277th St & 55th Ave S	Drainage improvement to reduce property flooding	Drainage	Drainage	$ 563,000
Corridor: S 288th St					
IPA-3	S 288th St: From Federal Way city limits (I-5) to Auburn city limits (51st Ave S)	Restripe road from 4 to 3 lanes, modify the signal	Traffic Control Devices	Intersection Priority Array	$ 955,000
Corridor: West Valley Hwy N					
DR-15-10	West Valley Hwy N, 1300 Ft S of S 277th	Install box culvert by trenching	Drainage	Drainage	$ 694,000
Corridor: Misc.					
BR-3109	Soos Creek Bridge: SE 224th St at Soos Creek, about 0.3 mile east of 132nd Ave SE	Replace bridge	Bridges and Structures	Bridge	$ 2,000,000
DR-15-9	Green River Rd S & 94th Pl S	Replace failing culvert	Drainage	Drainage	$ 1,230,000
GR-15-29	S 282nd St: From 46th Ave SE to 48th Ave SE	Construct guardrail	Roadside	Guardrail	$ 67,200
GR-15-39	94th Pl S: From Kent city limits to Green River Rd	Construct guardrail	Roadside	Guardrail	$ 527,000
NM-4042	38th Ave S: From S 304th St to S 308th St	Pave shoulders (east side)	Roadside	Non Motorized	$ 104,000
NM-5015	Green River Rd: From Kent city limits (S 259th St) to Kent city limits (S 277th St)	Provide nonmotorized facility	Roadside	Non Motorized	$ 10,600,000
NM-9970	34th Ave S: From S 288th St to S 298th St	Construct sidewalk (west side)	Roadside	Non Motorized	$ 607,000
NM-9971	36th Pl S/ S 294 St/ 45 Pl S: From S 298th St to S 288th St	Construct sidewalk (west side)	Roadside	Non Motorized	$ 927,000
RC-24	S 304th St: From 32nd Ave S to 37th Ave S	Armor shoulders to reduce road washouts	Roadside	VRS Hotspot	$ 241,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Map Area: Mount Si (21)					
Corridor: Misc.					
BR-122N	Tate Creek Bridge: SE 73rd St at Tate Creek, west of 440th Ave SE	Replace bridge	Bridges and Structures	Bridge	$ 6,020,000
RC-8	N Fork Rd SE: From 428th Ave SE to Lake Hancock Rd	Road reconstruction and drainage infrastructure	Roadside	Reconstruction	$ 185,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Map Area: Newcastle/Issaquah (8)					
Corridor: Misc.					
GR-15-34	169th Ave SE/SE Licorice Way: From SE 112th St to end of road (173rd Ave SE)	Construct guardrail	Roadside	Guardrail	$ 938,000
OP-RD-24	SE May Valley Rd: From Renton city limits (148th Ave SE) to State Route 900	Widen travel lanes	Traffic Control Devices	Intersection Priority Array	$ 19,900,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Map Area: North Enumclaw (11)					
Corridor: 244th Ave SE					
NM-5012	244th Ave SE: From Enumclaw city limits (SE 436th) to SE 400th St	Provide nonmotorized facility	Roadside	Non Motorized	$ 10,600,000
Corridor: SE Auburn Black Diamond Rd					
DR-15-16	SE Auburn Black Diamond Rd at Krisp Creek	Replace undersized culvert	Drainage	Drainage	$ 1,130,000
IPA-12	SE Auburn Black Diamond Rd & 190th Ave SE	Realign intersection	Traffic Control Devices	Intersection Priority Array	$ 773,000
ITS-27	SE Auburn Black Diamond Rd: From Kent Black Diamond Rd SE to SE Lake Holm Rd	Vehicle detection/flasher system, slide detection	Traffic Control Devices	ITS	$ 174,000
Corridor: SE Lake Holm Rd					
OP-RD-44	SE Lake Holm Rd: From East Lake Holm Dr SE to 170th Pl SE	Construct congestion relief measures	Roadway	Capacity-Major	$ 1,050,000
Corridor: Thomas Rd SE					
OP-INT-97	Thomas Rd SE & Kent Black Diamond Rd SE	Realign intersection	Traffic Control Devices	Intersection Priority Array	$ 912,000
Corridor: Misc.					
BR-3020	Green Valley Rd Bridge: SE Green Valley Rd, about 5.5 miles east of Highway 18	Replace bridge	Bridges and Structures	Bridge	$ 2,820,000
BR-3022	Green Valley Rd Bridge: SE Green Valley Rd, about 6.7 miles east of Highway 18	Replace bridge	Bridges and Structures	Bridge	$ 2,820,000
BR-3030	SE 380th St Bridge: SE 380th St & SE 383rd Way, about 1 mile west of State Route 169	Replace bridge	Bridges and Structures	Bridge	$ 2,000,000
GR-15-28	SE 384th St/ SE 383rd St/ SE 380th St: From 244th Ave SE to State Route 169	Construct guardrail	Roadside	Guardrail	$ 957,000
RC-142	SE Green Valley Rd: From 243rd Ave SE to State Route 169	Reconstruct roadway 1.3 miles	Roadway	Reconstruction	$ 2,210,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Map Area: North Fork Snoqualmie (20)					
Corridor: Misc.					
BR-364A	Deep Creek Bridge: North Fork Rd SE, about 13.7 miles north of North Bend	Replace bridge	Bridges and Structures	Bridge	$ 3,590,000
RC-19	North Fork Rd SE & N Fork Snoqualmie River	Construct retaining wall to prevent slides	Bridges and Structures	VRS Hotspot	$ 104,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Map Area: North Vashon (1)					
Corridor: SW Cove Rd					
RC-58	Crescent Dr SW: From Westside Highway SW to SW Cove Road	Reconstruct roadway	Roadway	VRS Hotspot	$ 692,000
Corridor: Vashon Hwy SW					
SW-96	Vashon Highway SW & SW Cemetery Rd	Construct roundabout	Traffic Control Devices	Intersection Priority Array	$ 1,690,000
Corridor: Westside Hwy SW					
RC-56	Westside Highway SW: From Crescent Dr SW to McIntyre Rd SW	Reconstruct roadway	Roadway	VRS Hotspot	$ 553,000
Corridor: Misc.					
DR-8	SW 171st St & 93rd Ave SW (Gorsuch Creek)	Replace failing culvert	Drainage	Drainage	$ 957,000
NM-0106	SW Bank Rd: From 97 Pl SW to Beall Rd SW	Construct asphalt shoulder (south side)	Roadside	Non Motorized	$ 705,000
NM-0203	Vashon Hwy SW: From SW 177th St to 98th Pl SW	Construct sidewalk (east and south sides)	Roadside	Non Motorized	$ 96,800
NM-15-9	SE Cemetery Rd/ Beall Rd SW: From 107th Ave SW to SW 184th St	Construct asphalt pathway	Roadside	Non Motorized	$ 954,000
NM-5054	SW Bank Rd: From 107th Ave SW to Vashon Hwy SW	Provide nonmotorized facility	Roadside	Non Motorized	$ 726,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Map Area: Ravensdale (17)					
Corridor: 276th Ave SE					
RC-127	276th Ave SE: From SE 216th St to SE Summit Landsburg Rd	Reconstruct roadway 2.59 miles	Roadway	Reconstruction	$ 5,150,000
Corridor: Landsburg Rd SE					
RC-128	Landsburg Rd SE: From SE Summit Landsburg Rd to SE Kent Kangley Rd	Reconstruct roadway 1.27 miles	Roadway	Reconstruction	$ 2,250,000
Corridor: Retreat Kanaskat Rd					
OP-INT-92	SE Kent-Kangley Rd & Retreat Kanaskat Rd	Realign intersection and install turn lanes	Traffic Control Devices	Intersection Priority Array	$ 1,440,000
RC-136	Retreat Kanaskat Rd: From SE Kent Kangley Rd to Cumberland Kanasket Rd SE	Reconstruct roadway 3.04 miles	Roadway	Reconstruction	$ 4,950,000
Corridor: SE 216th St					
RC-130	SE 216th St: From 244th Ave SE to 276th Ave SE	Reconstruct roadway 2.0 miles	Roadway	Reconstruction	$ 3,110,000
Corridor: SE Kent-Kangley Rd					
IPA-22	SE Kent-Kangley Rd & Landsburg Rd SE	Roundabout or traffic signalization w turn lanes	Traffic Control Devices	Intersection Priority Array	$ 900,000
RC-132	SE Kent-Kangley Rd: From Kent city limits to Landsburg Rd SE	Reconstruct roadway 1.14 miles	Roadway	Reconstruction	$ 2,730,000
RC-133	SE Kent Kangley Rd: From Landsburg Rd SE to Retreat Kanaskat Rd	Reconstruct roadway 1.18 miles	Roadway	Reconstruction	$ 2,750,000
Corridor: SE Ravensdale Way					
NM-5051	Black Diamond-Ravensdale Rd SE: From State Route 169 to SE Kent-Kangley Rd	Provide nonmotorized facility	Roadside	Non Motorized	$ 2,620,000
RC-135	SE Ravensdale Way: From SE Kent-Kangley Rd to 268th Ave SE	Reconstruct roadway 0.6 miles	Roadway	Reconstruction	$ 930,000
Corridor: Misc.					
GR-11	SE 309th St: From Cumberland-Kanasket Rd SE to SE 310th St	Construct guardrail	Roadside	Guardrail	$ 134,000
GR-15-25	SE 224th St: From 244th Ave SE to 276th Ave SE	Construct guardrail	Roadside	Guardrail	$ 1,050,000
GR-95	SE Courtney Rd: From Kanasket-Kangley Rd to end of route	Construct guardrail	Roadside	Guardrail	$ 15,800
RC-15-3	SE Summit Landsburg Rd: From Kent city limits (244th Ave SE) to Landsburg Rd SE	Reconstruct roadway	Roadway	Reconstruction	$ 3,910,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Map Area: Redmond/Snammish (7)					
Corridor: 208th Ave NE					
OP-INT-113	208th Ave NE & NE Union Hill Rd	Construct southbound right turn lane	Traffic Control Devices	Intersection Priority Array	$ 1,690,000
Corridor: 238th Ave					
SW-51	238th Ave NE & NE 63rd PL	Construct roundabout	Traffic Control Devices	Intersection Priority Array	$ 1,460,000
Corridor: NE Union Hill Rd					
CP-15-1	NE Union Hill Rd: From 196th Ave NE to 208th Ave NE	Construct congestion relief measures	Roadway	Capacity-Major	$ 11,300,000
DR-15-2	NE Union Hill Rd & 225th Ave NE	Replace failing culvert	Drainage	Drainage	$ 1,510,000
ITS-20	NE Union Hill Rd: From 196th Ave NE to 238rd Ave NE	Cameras, speed warning system, vehicle detection	Traffic Control Devices	ITS	$ 4,050,000
OP-RD-5	NE Union Hill Rd: From 208th Ave NE to 238th Ave NE	Construct congestion relief measures	Roadside	Capacity-Major	$ 7,070,000
RC-116	NE Union Hill Rd: From 238th Ave NE to 258th Ave NE	Reconstruct roadway 1.5 miles	Roadway	Reconstruction	$ 2,060,000
RC-44	NE Union Hill Rd: From 196th Ave NE to 206th Pl NE	Construct retaining wall to stabilize slope	Bridges and Structures	VRS Hotspot	$ 187,000
RC-51	NE Union Hill Rd: From 229th Pl NE to 238th Ave NE	Construct retaining wall to stabilize slope	Bridges and Structures	VRS Hotspot	$ 2,550,000
Corridor: Misc.					
BR-578A	Evans Creek Bridge: 196th Ave NE & State Route 202 at Evans Creek	Replace bridge	Bridges and Structures	Bridge	$ 1,580,000
DR-7	NE 40th St & 26th Ave NE (Dry Creek)	Replace failing culvert	Drainage	Drainage	$ 563,000
GR-15-27	NE 50th St: From 196th Ave NE to Sahalee Way NE	Construct guardrail	Roadside	Guardrail	$ 435,000
RC-35	NE 50th St: From 214th Ave NE to State Route 202	Armor shoulders to reduce road washouts	Roadside	VRS Hotspot	$ 83,300

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Map Area: Skykomish (23)					
Corridor: NE Old Cascade Highway					
RC-57	NE Old Cascade Highway at Miller River	Permanent road end closure improvements	Roadway	Reconstruction	<Null>
Corridor: Misc.					
BR-509A	Baring Bridge: Index Creek Rd over the South Fork Skykomish River, west of Highway 2	Replace bridge	Bridges and Structures	Bridge	$ 17,200,000
GR-15-12	NE Old Cascade Hwy: From State Route 2 to Skykomish city limits	Construct guardrail	Roadside	Guardrail	$ 407,000
RC-55	NE Money Creek Rd & Money Creek	Construct retaining wall to prevent slides	Bridges and Structures	VRS Hotspot	$ 831,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Map Area: Snoqualmie (15)					
Corridor: Preston Fall City Rd SE					
DR-15-14	Preston Fall City Rd SE & SE 47th St	Replace undersized and failing culvert	Drainage	Drainage	$ 844,000
ITS-14	Preston Fall City Rd SE: From I-90 to State Route 202	Cameras, road sensors, weather station	Traffic Control Devices	ITS	$ 6,660,000
OP-INT-88	Preston Fall City Rd SE & SE 43rd St	Realign intersection	Traffic Control Devices	Intersection Priority Array	$ 783,000
RC-15-4	Preston Fall City Road: From the 7600 block to 7800 block	Reconstruct roadway	Roadway	Reconstruction	$ 3,440,000
Corridor: SE High Point Way					
IPA-27	SE 82nd St/ SE High Point Way & SE 82nd St	Construct a roundabout	Traffic Control Devices	Intersection Priority Array	$ 3,500,000
Corridor: Misc.					
BR-1086B	Coal Creek Bridge: 378th Ave SE at Coal Creek	Replace bridge	Bridges and Structures	Bridge	$ 1,470,000
BR-1239A	Upper Preston Bridge: Upper Preston Rd SE at Echo Lake Creek, north of SE 110th St	Replace bridge	Bridges and Structures	Bridge	$ 4,060,000
BR-249B	C.W. Neal Road Bridge: Neal Rd SE, about 1.5 mile south of State Route 203	Replace bridge	Bridges and Structures	Bridge	$ 1,470,000
BR-249C	C.W. Neal Road Bridge: Neal Rd SE, about 0.3 mile south of State Route 203	Replace bridge	Bridges and Structures	Bridge	$ 1,580,000
BR-61B	Fish Hatcher Bridge: SE Fish Hatchery Rd, about 0.8 mile southwest of State Route 202	Replace bridge	Bridges and Structures	Bridge	$ 1,580,000
BR-99L	Kimball Creek Bridge: SE 76th St at Kimball Creek, 0.5 mile west of State Route 202	Replace bridge	Bridges and Structures	Bridge	$ 2,940,000
DR-15-15	SE 55th St & W Lake Alice Rd SE	Replace culvert	Drainage	Drainage	$ 1,690,000
GR-121	Upper Preston Rd SE: From 312th Ave SE to under I-90 overpass	Construct guardrail	Roadside	Guardrail	$ 22,500
GR-15-11	SE 48th St: From 317th Pl SE to 328th Ave SE	Construct guardrail	Roadside	Guardrail	$ 382,000
GR-15-20	356th Dr SE/ 364th Way SE: From State Route 203 to end of road (SE 27th St)	Construct guardrail	Roadside	Guardrail	$ 1,050,000
GR-28	SE David Powell Rd: From Preston-Fall City Rd SE to end of route	Construct guardrail	Roadside	Guardrail	$ 222,000
GR-98	Fish Hatchery Rd/ 372nd Ave SE: From State Route 202 to State Route 202	Construct guardrail	Roadside	Guardrail	$ 1,150,000
RC-15-5	Upper Preston Rd: From SE 97th St to SE 97th St	Stabilize downhill side and improve drainage	Roadside	VRS Hotspot	$ 2,680,000
RC-17	SE 24th St: From 309th Ave SE to W Snoqualmie River Rd SE	Armor shoulders to reduce road washouts	Roadside	VRS Hotspot	$ 385,000
RC-40	Neal Rd SE: From State Route 203 to State Route 203	Armor shoulders to reduce road washouts	Roadside	VRS Hotspot	$ 1,330,000
RC-7	Neal Rd SE: From State Route 203 to State Route 203	Reconstruct road at re-occurring sinkhole	Roadway	Reconstruction	$ 459,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Map Area: South Enumclaw (12)					
Corridor: 244th Ave SE					
BR-3068	Newaukum Creek Bridge: 244th Ave SE at Newaukum Creek, 0.2 mile north of SE 436th St	Replace bridge	Bridges and Structures	Bridge	$ 2,430,000
Corridor: Misc.					
BR-3055A	Boise X Connection Bridge: SE Mud Mountain Dam Rd at Boise Creek, south east of State Route 410	Replace bridge	Bridges and Structures	Bridge	$ 2,020,000
GR-104	196th Ave SE: From SE 400th St to SE 456th St	Construct guardrail	Roadside	Guardrail	$ 18,000
GR-15-31	SE 424th St: From 196th Ave SE to State Route 169	Construct guardrail	Roadside	Guardrail	$ 2,370,000
GR-92	228th Ave SE: From SE 400th St to SE 452nd St	Construct Guardrail	Roadside	Guardrail	$ 665,000
GR-96	SE 456th Way: From 196th Ave SE to 228th Ave SE	Construct guardrail	Roadside	Guardrail	$ 434,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Map Area: South Vashon (2)					
Corridor: Dockton Rd SW					
GR-15-40	Dockton Rd SW: From SW Ellisport Rd to SW 222nd St	Construct guardrail along seawall	Roadside	Guardrail	$ 528,000
RC-10	Dockton Rd SW: From SW Ellisport Road to Portage Way SW	Replace failing seawall	Bridges and Structures	VRS Hotspot	$ 37,700,000
Corridor: SW Quartermaster Dr					
GR-15-42	SW Quartermaster Dr: From Monument Rd SW to Dockton Rd SW	Construct guardrail along seawall	Roadside	Guardrail	$ 343,000
Corridor: Vashon Hwy SW					
GR-15-41	Vashon Hwy SW Seawall: From SW 240th Pl to 115th Ave SW	Construct guardrail along seawall	Roadside	Guardrail	$ 417,000
NM-9975	SW Tahlequah Rd near Tahlequah Ferry Dock	Construct asphalt shoulder (south side)	Roadside	Non Motorized	$ 222,000
RC-15	Vashon Hwy SW: From 115th Ave SW to SW 240th Pl	Replace seawall	Roadway	VRS Hotspot	$ 18,800,000
Corridor: Misc.					
DR-15-13	Chautauqua Beach Rd SW & Ellisport Creek	Replace undersized and failing culvert	Drainage	Drainage	$ 1,130,000
RC-54	SW Govenors Lane Ln: From 99th Ave SW to 96th Ave SW	Replace failing seawall	Bridges and Structures	VRS Hotspot	$ 3,360,000
RC-59	Kingsbury Rd SW: From SW 234th St to 80th Ave SW	Roadway reconstruction	Roadway	VRS Hotspot	$ 692,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Map Area: Tiger Mountain/Hobart (16)					
Corridor: 276th Ave SE					
DR-15-18	276th Ave SE at Carey Creek	Replace failing and undersized culvert	Drainage	Drainage	$ 3,840,000
RC-125	276th Ave SE: From Highway 18 to SE 200th St	Reconstruct roadway 1.18 miles	Roadway	Reconstruction	$ 1,630,000
RC-126	276th Ave SE: From SE 200th St to SE 216th St	Reconstruct roadway 1.0 miles	Roadway	Reconstruction	$ 1,830,000
Corridor: Misc.					
BR-909B	Clough Creek Bridge: 415th Way SE & SE 141st St	Replace bridge	Bridges and Structures	Bridge	$ 1,580,000
GR-15-16	SE 131st St: From 409th Ave SE to 415th Way SE	Construct guardrail	Roadside	Guardrail	$ 77,700
GR-57	SE 208th St: From 276th Ave SE to end of route	Construct Guardrail	Roadside	Guardrail	$ 461,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Map Area: White Center/Skyway (3)					
Corridor: 68th Ave S					
RC-41	68th Ave S: From State Route 900 to Renton city limits	Construct retaining walls for slope stabilization	Bridges and Structures	VRS Hotspot	$ 2,620,000
Corridor: 80th Ave S					
NM-4012	80th Ave S: From S 114th St to S 118th St	Improve and widen shoulder (West Side)	Roadside	Non Motorized	$ 37,100
Corridor: Myers Way S					
ITS-26	1st Ave S, SW 100th St to SW 112th St	Cameras, vehicle detection, sync signals	Traffic Control Devices	ITS	$ 1,150,000
Corridor: Rainier Ave S					
ITS-33	Rainier Ave S: From Seattle city limits to Renton city limits	Cameras, vehicle detection, sync signals	Traffic Control Devices	ITS	$ 2,760,000
Corridor: Renton Ave S					
IPA-35	Renton Ave S: From 74th Ave S to 75th Ave S	Construct sidewalk along south side	Roadside	Non Motorized	$ 1,010,000
IPA-36	Renton Ave S: From 76th Ave S to 78th Ave S	Construct sidewalk along south side	Roadside	Non Motorized	$ 1,010,000
ITS-12	Renton Ave S: From Seattle city limits (S 112th St) to Renton city limits (S 130th St)	Cameras, vehicle detection, sync signals, fiber	Traffic Control Devices	ITS	$ 5,740,000
Corridor: S 132nd St					
GR-15-6	S 132nd St: From State Route 900 to S Langston Rd	Construct guardrail	Roadside	Guardrail	$ 509,000
NM-15-2	S 132nd St: From S Langston Rd to S 133rd St	Construct sidewalk	Roadside	Non Motorized	$ 690,540
NM-15-4	S 133rd St: From State Route 900 to S 132nd St	Complete sidewalk segments	Roadside	Non Motorized	$ 949,280
Corridor: SW 112th St					
NM-4077	SW 112th St: From 16th Ave SW to 10th Ave SW	Improve walkway	Roadside	Non Motorized	$ 258,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Corridor: Misc.					
DR-15-4	S 96th St: From 4th Ave S to 10th Ave S	Construct drainage improvements (slip line)	Drainage	Drainage	$ 1,440,000
DR-15-5	S 96th St: From 4th Ave S to 10th Ave S	Construct drainage improvements (slip line)	Drainage	Drainage	$ 1,910,000
DR-15-6	S 96th St: From 4th Ave S to 10th Ave S	Construct drainage improvements (slip line)	Drainage	Drainage	$ 2,920,000
DR-6	60th Ave S/S Langston Rd: From S 129th St to S 124th St	Replace undersized culvert	Drainage	Drainage	$ 563,000
GR-15-2	S 123rd St: From S 124th St to S 125th St	Construct guardrail	Roadside	Guardrail	$ 120,000
GR-15-7	21st Ave SW: From SW 100th St to SW 106th St	Construct guardrail	Roadside	Guardrail	$ 197,000
GR-15-9	W Marginal Pl S: From Tukwila city limits to S 95th St	Construct guardrail	Roadside	Guardrail	$ 529,000
IPA-37	S 114th St: From Cornell Ave S to 80th Ave S	Construct sidewalk	Roadside	Non Motorized	$ 1,350,000
IPA-38	S 126th St: From 76th Ave S to 78th Ave S	Construct sidewalk along south side	Roadside	Non Motorized	$ 563,000
NM-0004	76th Ave S: S 114th St to S 116th St	Construct asphalt walkway	Roadside	Non Motorized	$ 88,900
NM-0302	1st Ave SW: From SW 108th St to SW 112th St	Construct sidewalk (west side)	Roadside	Non Motorized	$ 96,800
NM-15-1	S Langston Rd: From 64th Ave S to S 132nd St	Construct sidewalk	Roadside	Non Motorized	$ 1,156,000
NM-15-10	14th Ave SW: SW 110th St to SW 114th St	Improve east sidewalk. Enclose ditches	Roadside	Non Motorized	$ 37,100
NM-15-3	S 120th St: From Beacon Ave S to 68th Ave S	Construct sidewalk	Roadside	Non Motorized	$ 1,632,000
NM-15-5	84th Ave S: From Rainier Ave S to S 124th St	Construct sidewalk	Roadside	Non Motorized	$ 3,060,000
NM-15-6	S 120th Pl: From 68th Ave S to Skyway Park	Construct sidewalk	Roadside	Non Motorized	$ 748,000
NM-15-7	S 123rd St: From S 125th St to S 124th St	Construct sidewalk	Roadside	Non Motorized	$ 1,632,000
NM-15-8	81st Pl S/S 124th St: From SE side of middle school to 84th Ave S	Construct sidewalk	Roadside	Non Motorized	$ 1,088,000
NM-5017	SW 102nd St: From 8th Ave SW to 17th AVE SW	Provide nonmotorized facility	Roadside	Non Motorized	$ 169,000
NM-5018	SW 104th St: From 15th Ave SW to 17th Ave SW	Provide nonmotorized facility	Roadside	Non Motorized	$ 70,900
NM-5020	8th Ave SW: From SW 108th St to SW 100th St	Provide non-motorized facility	Roadside	Non Motorized	$ 896,580
NM-5021	76th Ave S: From S 124th St to S 128th St	Provide nonmotorized facility	Roadside	Non Motorized	$ 104,000
NM-9920	28th Ave SW: From SW Roxbury St to SW 102nd St	Construct asphalt shoulder (east side)	Roadside	Non Motorized	$ 215,000
NM-9922	SW 112th St: From 16th Ave SW to 26th Ave SW	Construct asphalt shoulder (south side)	Roadside	Non Motorized	$ 563,000

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Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
NM-9930	SW 112th St: From 1st Ave S to 4th Ave SW	Construct sidewalk (north side)	Roadside	Non Motorized	$ 163,000
NM-9936	75th Ave S / S 122nd St: From Renton Ave S to 80th Ave S	Construct sidewalk (south side)	Roadside	Non Motorized	$ 401,000
NM-9937	S 120th St: From 76th Ave S to 80th Ave S	Construct sidewalk (south side)	Roadside	Non Motorized	$ 246,000
NM-9938	78th Ave S: From S 120th St to S 124th St	Construct sidewalk (east side)	Roadside	Non Motorized	$ 246,000
NM-9939	76th Ave S: From S 120th St to S 124th St	Construct sidewalk (east side)	Roadside	Non Motorized	$ 252,000
OP-INT-79	87th Ave S: From Stevens Ave NW/Taylor Pl NW to S 123rd Pl	Realign intersection	Traffic Control Devices	Intersection Priority Array	$ 844,000
OP-RD-12	8th Ave S: From Seattle city limits to Burien city limits (S 112th St)	Construct congestion relief measures	Roadway	Capacity-Major	$ 3,810,000
OP-RD-14	6th Ave S: From Myers Way S to 5th Ave S	Construct congestion relief measures	Roadway	Capacity-Major	$ 2,800,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Map Area: Woodinville (6)					
Corridor: 197th Ave NE					
GR-15-1	204th Ave NE: From NE Woodinville Duvall Rd to Snohomish County line	Construct guardrail	Roadside	Guardrail	$ 1,110,000
NM-5001	204th Ave NE/NE 198th St/197th Ave: From NE Woodinville Duvall Rd to Snohomish County line	Provide nonmotorized facility	Roadside	Non Motorized	$ 691,000
Corridor: Avondale Rd NE					
CP-15-5	Avondale Rd NE: From NE 133rd St to NE Woodinville Duvall Rd	Construct congestion relief measures	Roadway	Capacity-Major	$ 22,300,000
OP-INT-99	Avondale Road NE & NE 165th St	Turn lanes, replace traffic signal	Traffic Control Devices	Intersection Priority Array	$ 2,480,000
RC-151	Avondale Rd NE: From NE 133rd St to NE Woodinville Duvall Road	Reconstruct roadway	Roadway	Reconstruction	$ 4,990,000
Corridor: NE 124th St					
IPA-23	162nd Pl NE & NE 124th St	Left-turn lanes on NE 124th St and traffic signal	Traffic Control Devices	Intersection Priority Array	$ 2,270,000
Corridor: NE 128th St					
ITS-16	NE 124th Way/NE 128th St: From Remond city limits to Avondale Road NE	Cameras, vehicle and flood detection	Traffic Control Devices	ITS	$ 3,290,000
OP-RD-52	NE 128th St/Avondale Rd NE/NE 132nd St: 181st Ave NE to NE 133rd St	Construct congestion relief measures	Traffic Control Devices	Capacity-Major	$ 35,400,000
Corridor: NE 132nd St					
BR-240A	Cottage Lake Creek Bridge: NE 132nd St at Cottage Lake Creek, east of Avondale Rd NE	Replace bridge	Bridges and Structures	Bridge	$ 1,910,000
Corridor: NE 133rd St					
333A	Bear Creek Bridge: NE 133rd St at Bear Creek, east of Bear Creek Rd NE	Replace bridge	Bridges and Structures	Bridge	$ 2,190,000
Corridor: NE Novelty Hill Rd					
CP-15-8	NE Novelty Hill Rd: From 243rd Ave NE to W Snoqualmie Valley Rd NE	Construct congestion relief measures	Roadway	Capacity-Major	$ 81,800,000
ITS-35	NE Novelty Hill Rd: From 208th Ave NE to West Snoqualmie Valley Road	Upgrade, interconnect and synchronize signals	Traffic Control Devices	ITS	$ 506,000
CP-8	Novelty Hill Rd: From 197th Pl NE to 234th Pl NE	Construct congestion relief measures	Traffic Control Devices	Capacity-Major	$ 38,400,000

Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Corridor: NE Woodinville Duvall Rd					
BR-1136B	Woodinville-Duvall Road Bridge: NE Woodinville Duvall RD 0.3 mile west of State Route 203	Replace bridge	Bridges and Structures	Bridge	$ 54,400,000
BR-1136C	Woodinville-Duvall Road Bridge: NE Woodinville Duvall Rd 0.6 mile west of State Route 203	Replace bridge	Bridges and Structures	Bridge	$ 6,940,000
BR-1136D	Woodinville-Duvall Road Bridge: NE Woodinville Duvall Rd 0.8 mile west of State Route 203	Replace bridge	Bridges and Structures	Bridge	$ 5,870,000
BR-1136E	Woodinville-Duvall Road Bridge: NE Woodinville Duvall Rd 0.9 mile west of State Route 203	Replace bridge	Bridges and Structures	Bridge	$ 4,810,000
CP-12	Woodinville-Duvall Rd: 171st Ave NE to Avondale Rd NE	Construct congestion relief measures	Roadway	Capacity-Major	$ 11,900,000
CP-15-7	NE Woodinville Duvall Rd & 194th Ave NE	Construct congestion relief measures	Roadway	Capacity-Major	$ 1,960,000
CP-16	NE Woodinville Duvall Rd: From Avondale Rd NE to 194th Ave NE	Construct congestion relief measures	Roadway	Capacity-Major	$ 9,220,000
IPA-40	NE Woodinville-Duvall Rd & West Snoqualmie Valley Rd NE	Intersection and drainage improvements	Traffic Control Devices	Intersection Priority Array	$ 3,440,000
NM-5002	NE Woodinville Duvall Rd: From Avondale Rd NE to Duvall city limits	Provide nonmotorized facility	Roadside	Non Motorized	$ 18,000,000
RC-43	NE Woodinville Duvall Rd: From Old Woodinville-Duvall Rd to W Snoqualmie Valley Rd NE	Construct retaining wall to stabilize slope	Bridges and Structures	VRS Hotspot	$ 581,000
ITS-13	NE Woodinville Duvall Rd: From 212th Ave NE to Duvall city limits	Cameras, data stations, message signs	Traffic Control Devices	ITS	$ 4,200,000
Corridor: West Snoqualmie Val Rd NE					
CP-15-3	W Snoqualmie Valley Rd: From NE 124th St to NE Novelty Hill Rd	Construct congestion relief measures	Roadway	Capacity-Major	$ 6,830,000
ITS-18	W Snoqualmie Valley Rd NE: From NE Woodinville Duvall Road to Ames Lake Carnation Rd NE	Vehicle detection, flood detection, cameras	Traffic Control Devices	ITS	$ 742,000
OP-INT-122	NE 124th St & West Snoqualmie Valley Rd NE	Construct turn pockets and replace signal	Traffic Control Devices	Intersection Priority Array	$ 2,700,000
RC-113	West Snoqualmie Valley Rd NE: From NE 124th St and NE Novelty Hill Rd	Reconstruct roadway 0.28 mile	Roadway	Reconstruction	$ 455,000
RC-150	West Snoqualmie Valley Rd NE: From Snohomish County line to NE Woodinville Duvall Rd	Construct retaining wall to prevent slides	Bridges and Structures	VRS Hotspot	$ 3,640,000
RC-39	West Snoqualmie Valley Rd NE: From NE 124th St to Ames Lake Carnation Rd NE	Construct retaining wall to prevent slides	Bridges and Structures	VRS Hotspot	$ 3,900,000

King County Road Services: Transportation Needs Report 2016 Project List
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Project Number	Project Location	Project Scope	Product Family	Category	Est. Cost
Corridor: Misc.					
BR-480A	Bear Creek Bridge: NE 116th St at Bear Creek, east of Avondale Rd NE	Replace bridge	Bridges and Structures	Bridge	$ 1,580,000
BR-5011	Walter Shults Bridge: NE 106th St at Lower Bear Creek , east of Avondale Rd NE	Replace bridge	Bridges and Structures	Bridge	$ 1,740,000
DR-15-1	185th Ave NE, north of NE 179th St	Elevate roadway 1.5' and replace culvert	Drainage	Drainage	$ 455,000
DR-15-7	NE 124th St & 162nd Pl NE	Replace failing culvert	Drainage	Drainage	$ 494,000
DR-15-8	NE 124th St: From 570 Ft W of 164th Ave NE	Replace failing culvert	Drainage	Drainage	$ 648,000
GR-15-13	148th Ave NE: 140th Pl NE to NE 172nd St	Construct guardrail	Roadside	Guardrail	$ 533,000
GR-15-17	Mink Rd NE: From Bear Creek Rd NE to NE Woodinville Duvall Rd	Construct guardrail	Roadside	Guardrail	$ 901,000
GR-15-21	NE Redmond Rd: From NE Novelty Hill Rd and 204th Ave NE	Construct guardrail	Roadside	Guardrail	$ 717,000
GR-15-22	222nd Way NE: From NE Woodinville Duvall Rd and NE 194th St	Construct guardrail	Roadside	Guardrail	$ 358,000
GR-15-26	232nd Ave NE: From NE 133rd St to Old Woodinville Duvall Rd	Construct guardrail	Roadside	Guardrail	$ 1,460,000
GR-15-4	236th Ave NE: From NE Woodinville Duvall Rd to NE 184th St	Construct guardrail	Roadside	Guardrail	$ 214,000
NM-5026	172nd Ave NE: From NE 134th Pl to NE 125th St	Construct neighborhood pathway	Roadside	Non Motorized	$ 503,000
NM-5027	171st/174th Ave NE: From NE Woodinville Duvall Rd to NE 172nd Pl	Provide nonmotorized facility	Roadside	Non Motorized	$ 581,000
OP-INT-81	155th Ave NE & NE 146th Pl	Reconstruct intersection to improve sight distance	Traffic Control Devices	Intersection Priority Array	$ 902,000
OP-RD-18	NE 172 Pl / NE 172nd Pl NE: From 164th Ave NE to 174th Ave NE	Reconstruct roadway	Roadway	Reconstruction	$ 3,120,000
OP-RD-45	232nd Ave NE: From NE 142nd Pl to Old Woodinville Duvall Rd	Reconstruct roadway	Roadway	Reconstruction	$ 4,480,000
OP-RD-7	NE 165th St: From 179th Pl NE to 183rd Pl NE	Reconstruct roadway	Roadway	Reconstruction	$ 6,380,000
OP-RD-9	NE Old Woodinville-Duvall Rd: From NE Woodinville-Duvall Rd to NE Woodinville-Duvall Rd	Reconstruct roadway	Roadway	Reconstruction	$ 5,470,000
RC-48	NE 146th Pl: From Woodinville city limits to 155th Ave NE	Construct retaining wall to stabilize slope	Bridges and Structures	VRS Hotspot	$ 138,000

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BR-1136B	28	6
BR-1136C	28	6
BR-1136D	28	6
BR-1136E	28	6
BR-122N	13	21
BR-1239A	21	15
BR-1384A	9	9
BR-1741A	10	9
BR-2133A	1	14
BR-240A	27	6
BR-249B	21	15
BR-249C	21	15
BR-257Z	1	14
BR-3015	7	5
BR-3020	15	11
BR-3022	15	11
BR-3030	15	11
BR-3035A	4	18
BR-3055A	22	12
BR-3068	22	12
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BR-3126	12	4
BR-3202	10	9
BR-333A	27	6
BR-364A	16	20
BR-480A	29	6
BR-493C	10	9
BR-5011	29	6
BR-5032	5	13
BR-5034A	5	13
BR-509A	20	23
BR-578A	19	7
BR-61B	21	15
BR-83B	10	9
BR-83D	9	9
BR-909B	24	16
BR-916A	1	14
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CP-15-2	9	9
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CP-15-4	10	9
CP-15-5	27	6
CP-15-6	12	4
CP-15-7	28	6
CP-15-8	27	6
CP-16	28	6
CP-5	12	4
CP-8	27	6
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DR-15-11	4	18
DR-15-12	5	13
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DR-15-14	21	15
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DR-15-2	19	7
DR-15-3	10	9
DR-15-4	26	3
DR-15-5	26	3
DR-15-6	26	3
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DR-15-9	12	4
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DR-3	6	19
DR-4	5	13
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DR-6	26	3
DR-7	19	7
DR-8	17	1
DR-9	3	10
GR-103	6	19
GR-104	22	12
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GR-115	1	14

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GR-15-12	20	23
GR-15-13	29	6
GR-15-14	10	9
GR-15-15	6	19
GR-15-16	24	16
GR-15-17	29	6
GR-15-18	1	14
GR-15-19	10	9
GR-15-2	26	3
GR-15-20	21	15
GR-15-21	29	6
GR-15-22	29	6
GR-15-23	5	13
GR-15-24	5	13
GR-15-25	18	17
GR-15-26	29	6
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GR-15-30	1	14
GR-15-31	22	12
GR-15-32	4	18
GR-15-33	4	18
GR-15-34	14	8
GR-15-35	11	9
GR-15-36	11	9
GR-15-37	1	14
GR-15-38	3	10
GR-15-39	12	4
GR-15-4	29	6
GR-15-40	23	2
GR-15-41	23	2
GR-15-42	23	2
GR-15-5	9	9
GR-15-6	25	3
GR-15-7	26	3
GR-15-8	11	9
GR-15-9	26	3
GR-28	21	15
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GR-88	3	10
GR-92	22	12
GR-94	5	13
GR-95	18	17
GR-96	22	12
GR-98	21	15
IPA-1	10	9
IPA-12	15	11
IPA-22	18	17
IPA-23	27	6
IPA-25	7	5
IPA-26	2	10
IPA-27	21	15
IPA-3	12	4
IPA-33	3	10
IPA-35	25	3
IPA-36	25	3
IPA-37	26	3
IPA-38	26	3
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ITS-14	21	15
ITS-15	9	9
ITS-16	27	6
ITS-18	28	6
ITS-19	9	9
ITS-20	19	7
ITS-23	9	9
ITS-24	10	9
ITS-25	1	14
ITS-26	25	3
ITS-27	15	11
ITS-28	9	9
ITS-29	10	9
ITS-33	25	3
ITS-34	9	9
ITS-35	27	6
ITS-8	7	5

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NM-0106	17	1
NM-0202	3	10
NM-0203	17	1
NM-0302	26	3
NM-15-1	26	3
NM-15-10	26	3
NM-15-2	25	3
NM-15-3	26	3
NM-15-4	25	3
NM-15-5	26	3
NM-15-6	26	3
NM-15-7	26	3
NM-15-8	26	3
NM-15-9	17	1
NM-4012	25	3
NM-4033	3	10
NM-4041	2	10
NM-4042	12	4
NM-4066	7	5
NM-4067	7	5

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NM-5001	27	6
NM-5002	28	6
NM-5007	4	18
NM-5008	6	19
NM-5010	4	18
NM-5012	15	11
NM-5014	7	5
NM-5015	12	4
NM-5017	26	3
NM-5018	26	3
NM-5020	26	3
NM-5021	26	3
NM-5026	29	6
NM-5027	29	6
NM-5034	3	10
NM-5038	11	9
NM-5049	2	10
NM-5050	3	10
NM-5051	18	17
NM-5054	17	1
NM-5068	2	10

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NM-9920	26	3
NM-9922	26	3
NM-9930	26	3
NM-9936	26	3
NM-9937	26	3
NM-9938	26	3
NM-9939	26	3
NM-9970	12	4
NM-9971	12	4
NM-9975	23	2
NM-9980	3	10
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OP-INT-106	10	9
OP-INT-113	19	7
OP-INT-120	12	4
OP-INT-122	28	6
OP-INT-124	9	9
OP-INT-72	4	18
OP-INT-79	26	3
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OP-INT-95	2	10
OP-INT-97	15	11
OP-INT-99	27	6
OP-RD-12	26	3
OP-RD-14	26	3
OP-RD-18	29	6
OP-RD-21	9	9
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OP-RD-39	8	22
OP-RD-4	1	14
OP-RD-41	2	10
OP-RD-44	15	11
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OP-RD-48	7	5
OP-RD-5	19	7
OP-RD-52	27	6
OP-RD-54	8	22

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OP-RD-9	29	6
RC-10	23	2
RC-113	28	6
RC-116	19	7
RC-118	9	9
RC-119	9	9
RC-120	9	9
RC-121	9	9
RC-125	24	16
RC-126	24	16
RC-127	18	17
RC-128	18	17
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RC-130	18	17
RC-132	18	17
RC-133	18	17
RC-135	18	17
RC-136	18	17
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RC-138	7	5
RC-139	7	5

King County Road Services: Transportation Needs Report 2016
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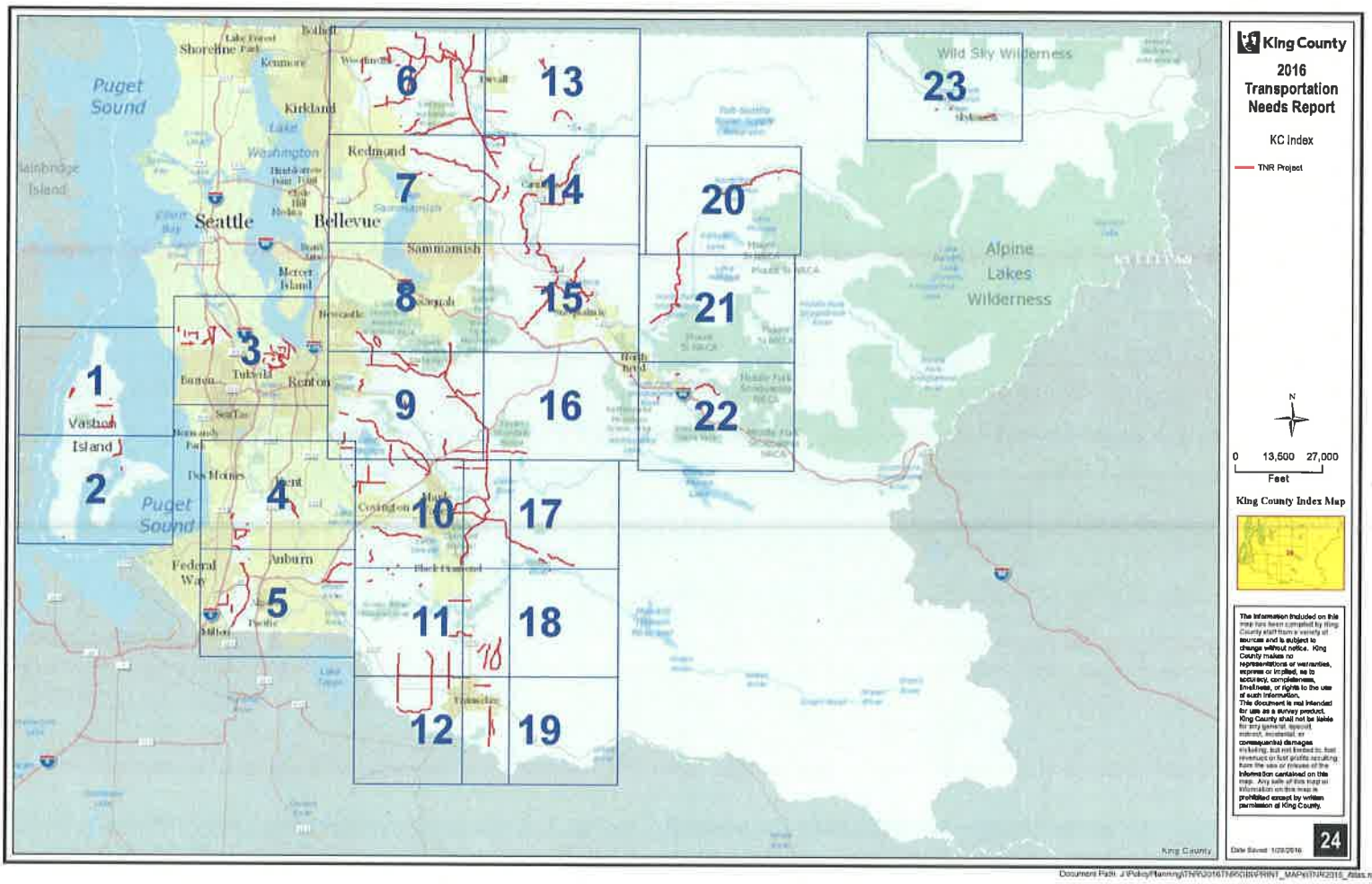
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RC-140	7	5
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RC-34	1	14
RC-35	19	7
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RC-38	1	14
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RC-42	7	5

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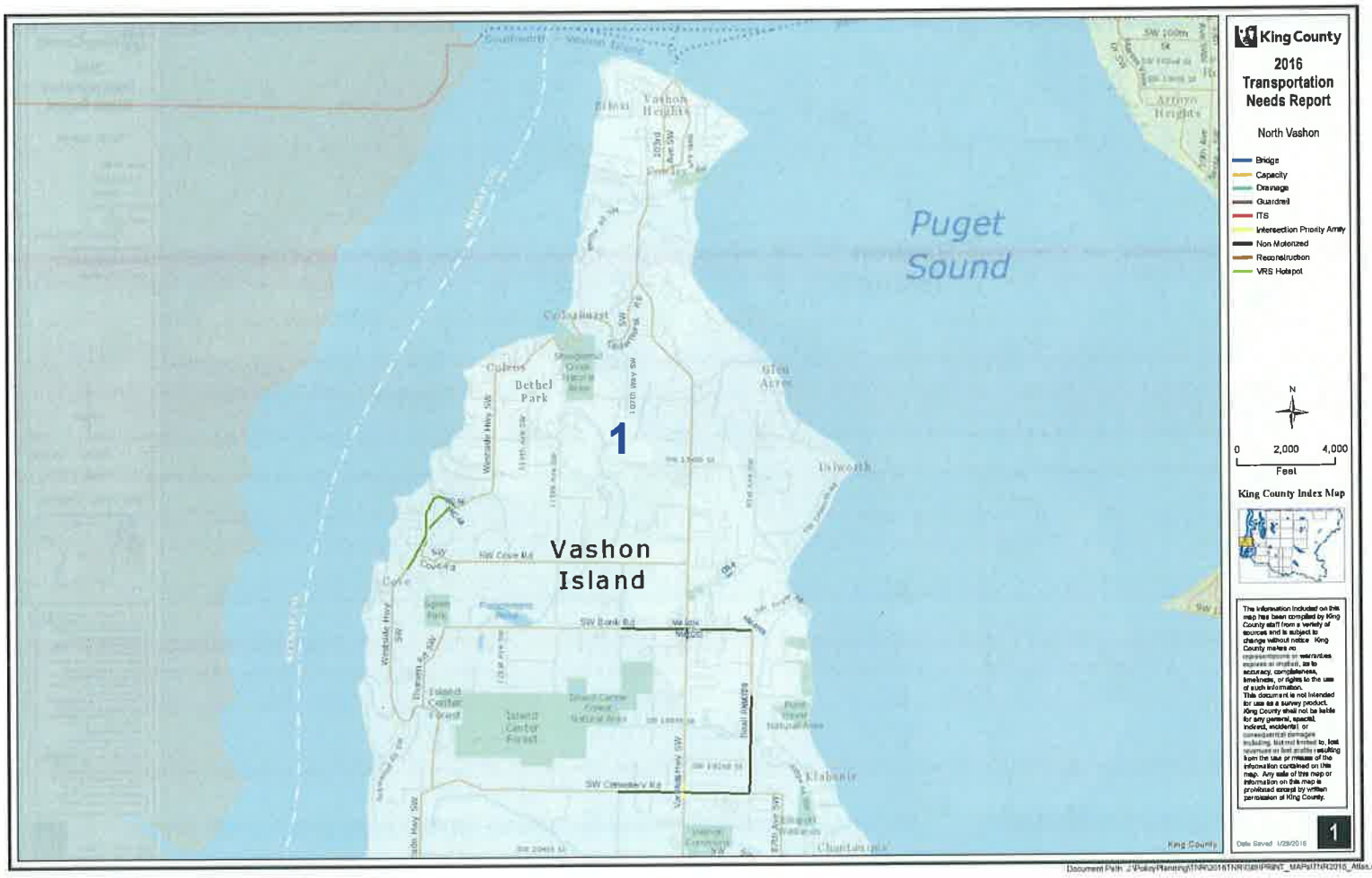
Project Number	Page Number	Map Area Number
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RC-44	19	7
RC-48	29	6
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RC-54	23	2
RC-55	20	23
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RC-57	20	23
RC-58	17	1
RC-59	23	2
RC-6	2	10
RC-7	21	15
RC-8	13	21
SW-13	2	10
SW-20	12	4
SW-21	7	5
SW-51	19	7
SW-56	3	10

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SW-81	9	9
SW-96	17	1



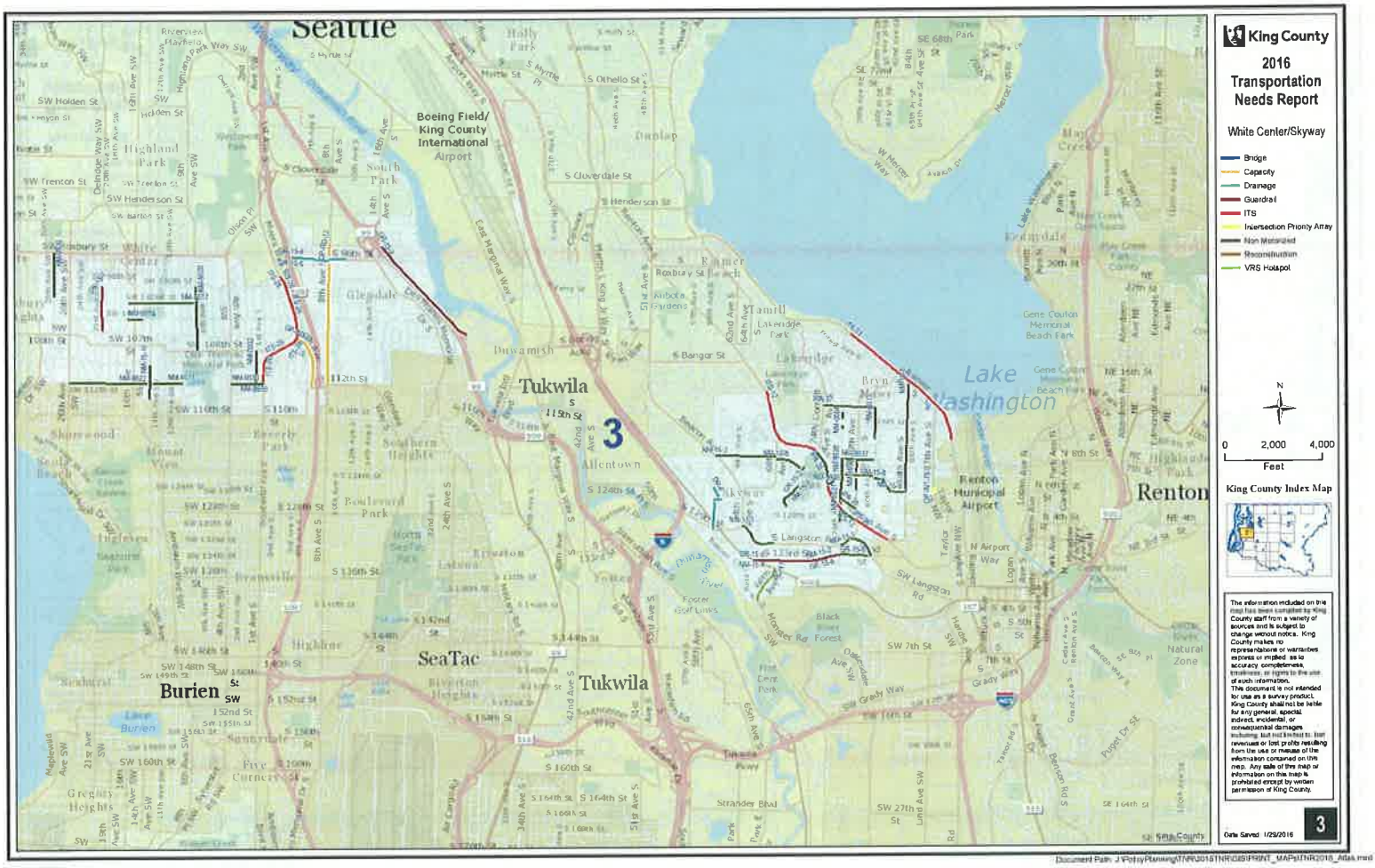
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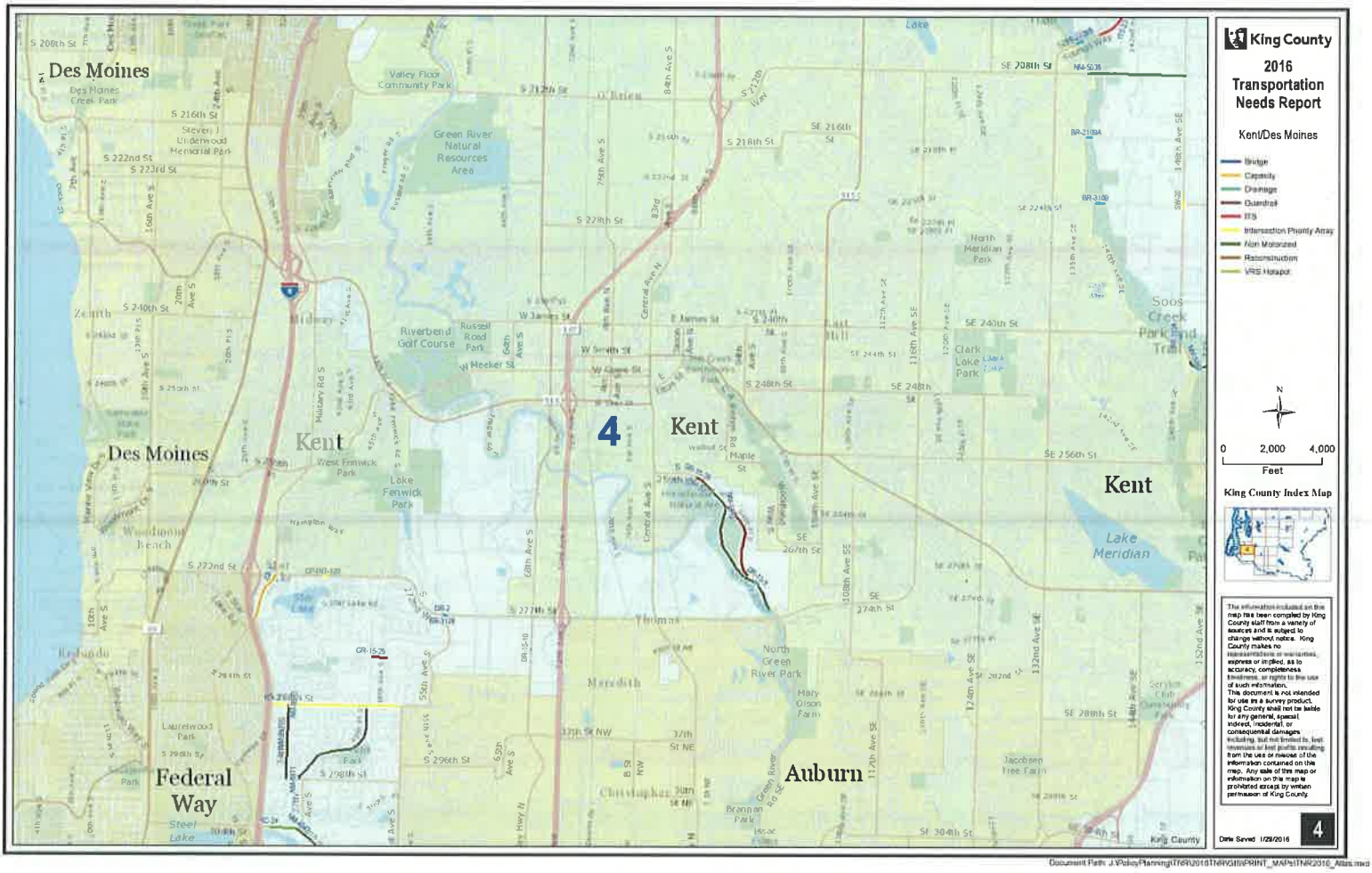


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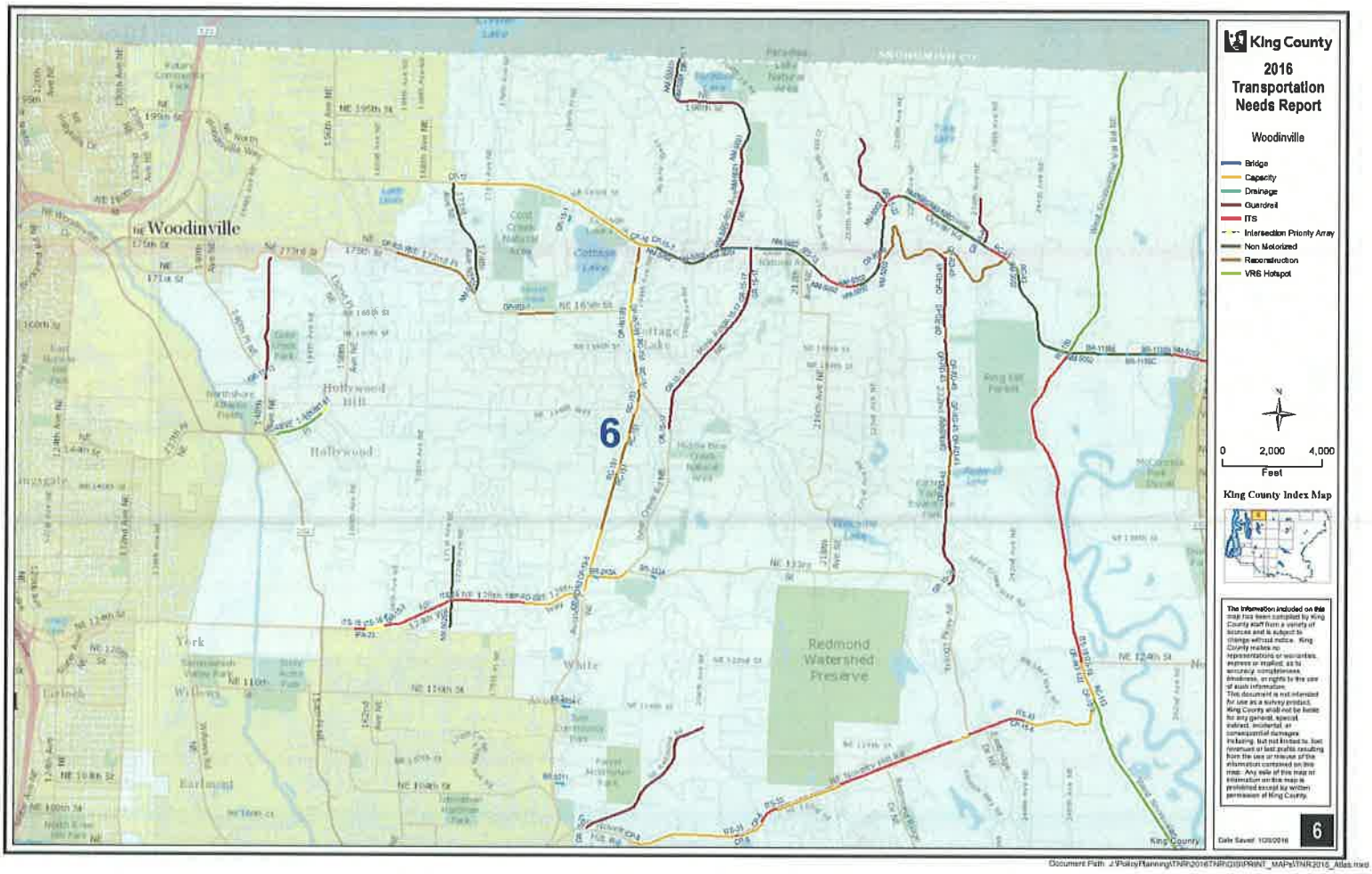

King County
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White Center/Skyway
Bridge
Capacity
Drainage
Guardrail
ITS
Intersection Priority Array
Non Motorized
Reconstruction
VRS Hotspot
N
0
2,000
4,000
Feet
King County Index Map
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Date Saved: 1/25/2016
3
Seattle
Boeing Field/
King County
International
Airport
Tukwila
S 112th St
3
Allentown
Lake Washington
Renton
Renton
Municipal
Airport
SeaTac
Tukwila
Burien
Lake
Burien
Duwamish
Glendale
Highland
Park
White
Center
Shorewood
Beverly
Park
Boulevard
Park
Southern
Heights
Riverton
Heights
Foster
Golf Links
Black
River
Forest
Fire
Creek
Park
Gene Coulon
Memorial
Beach Park
Lakeridge
Park
Renton
Highlands
Natural
Area
Strander Blvd
Tukwila
Pkwy
Grady Way
SW 7th St
S 180th St
S 160th St
S 152nd St
S 144th St
S 142nd St
S 136th St
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S Cloverdale St
S Henderson St
S Othello St
S Myrtle St
S Holden St
SW Trenton St
SW Henderson St
S Langston Rd
N Airport Way
Interurban Ave S
Southcenter Blvd
Andover Park W
Andover Park E
Macadam Rd S
Tukwila Pkwy
Gene Coulon Memorial Beach Park
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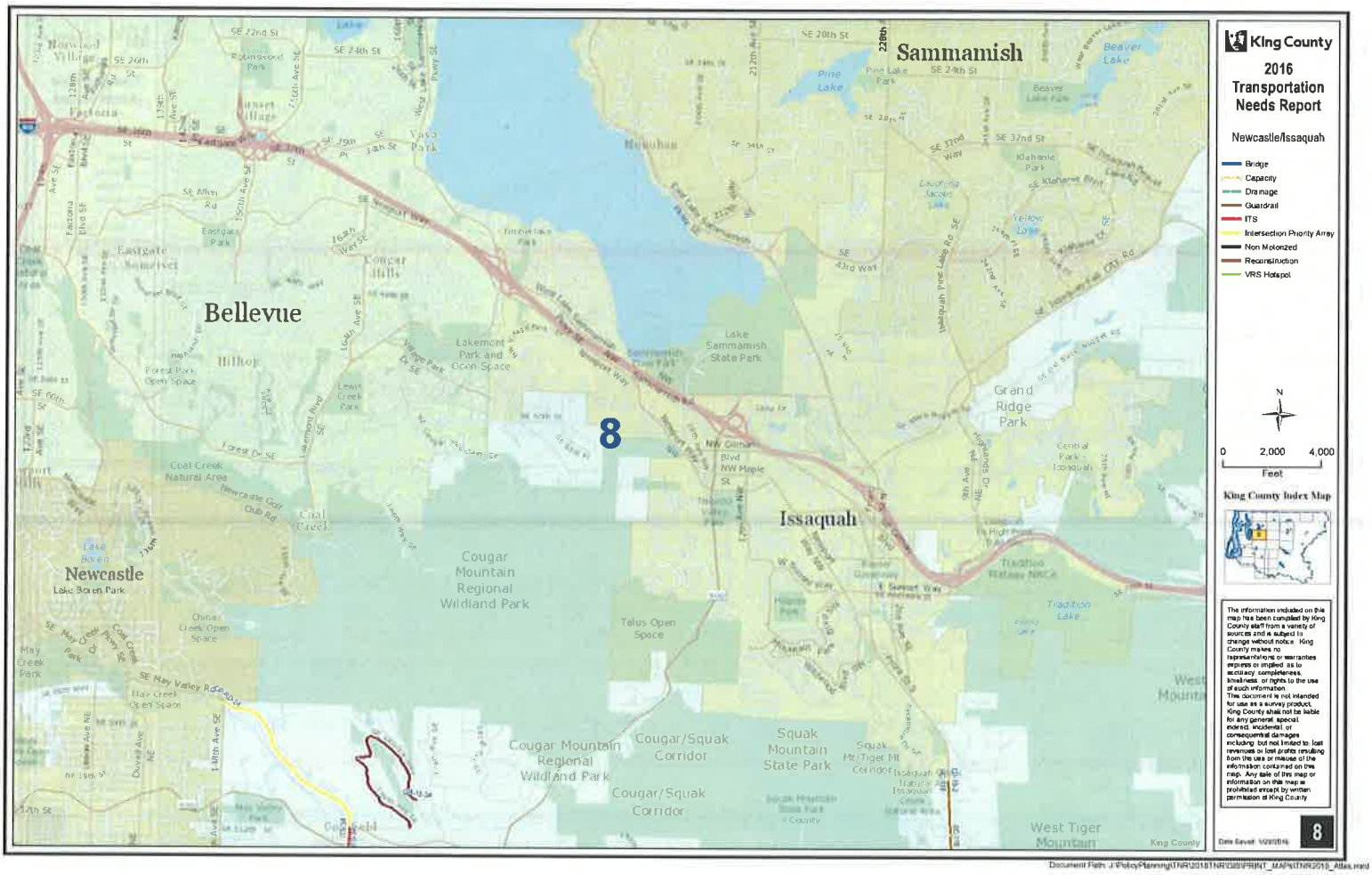
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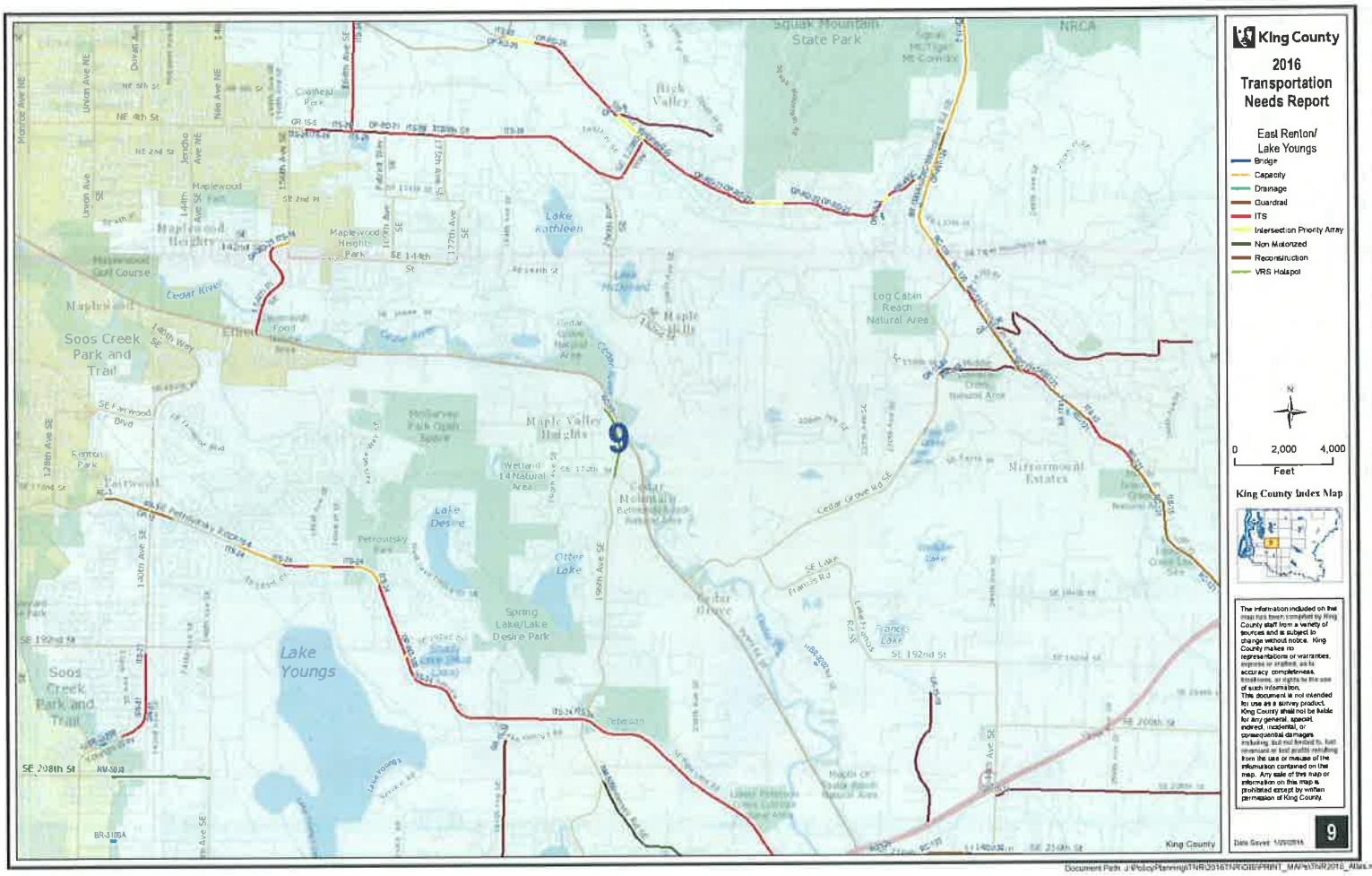
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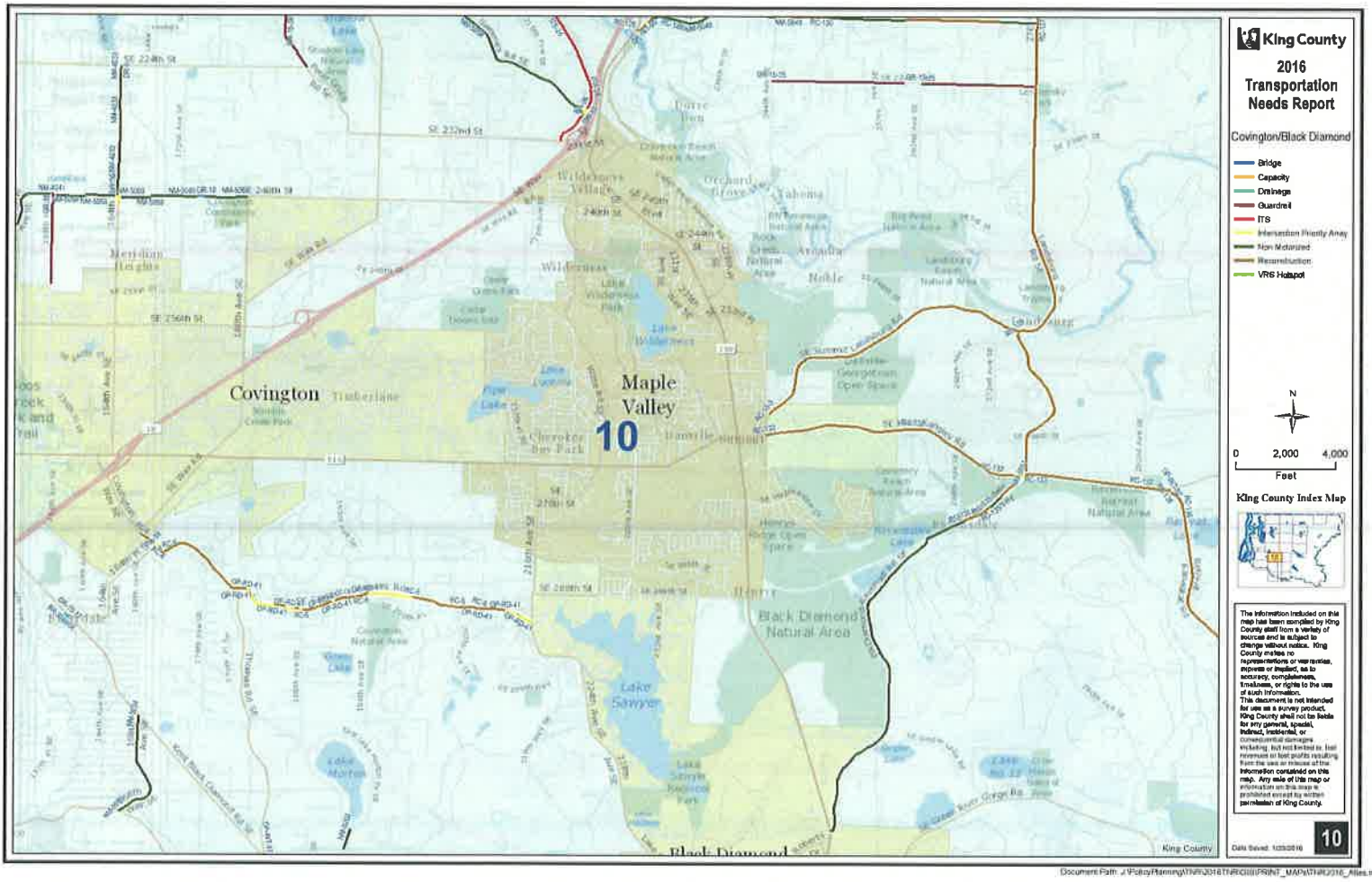


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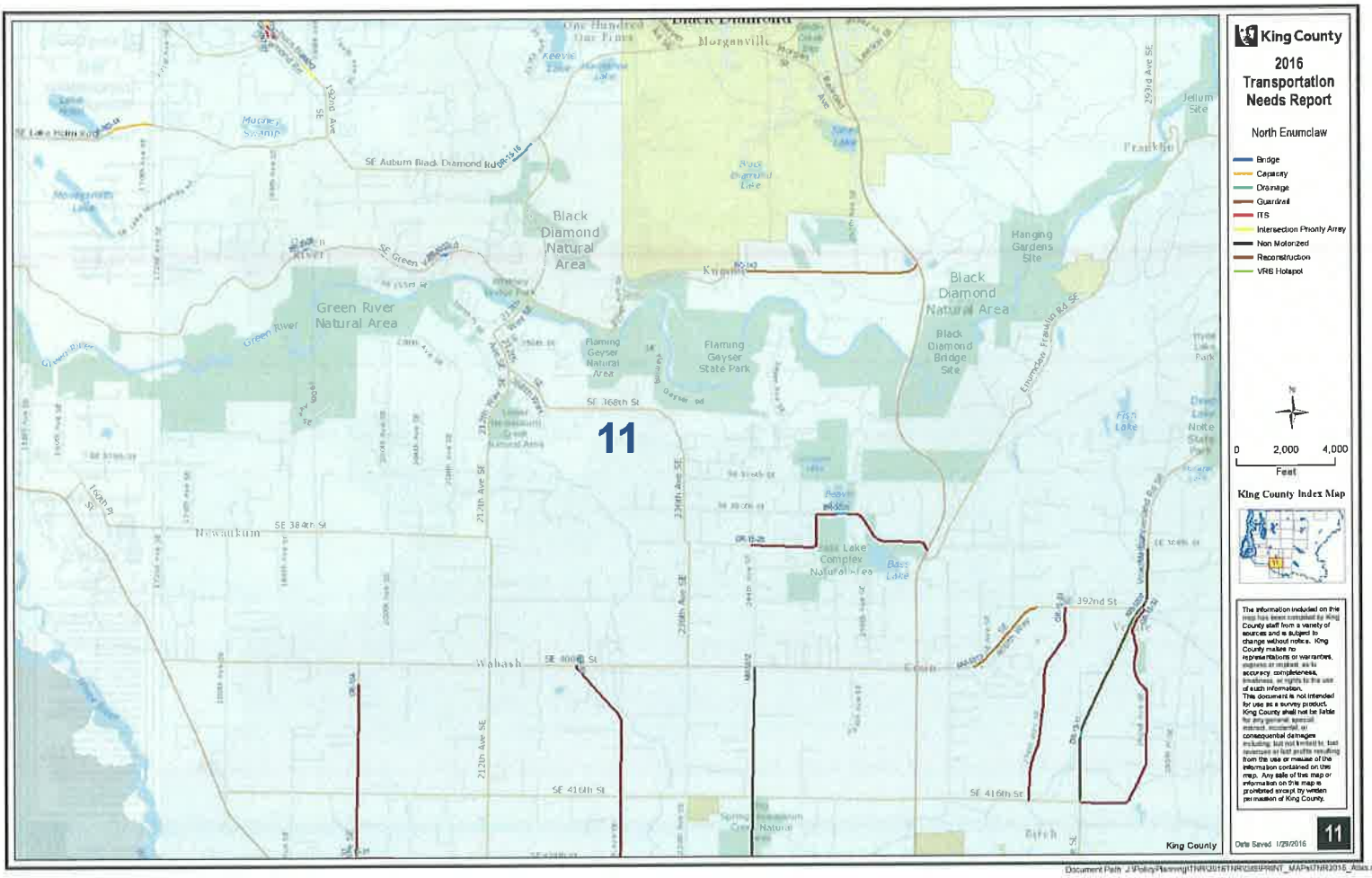


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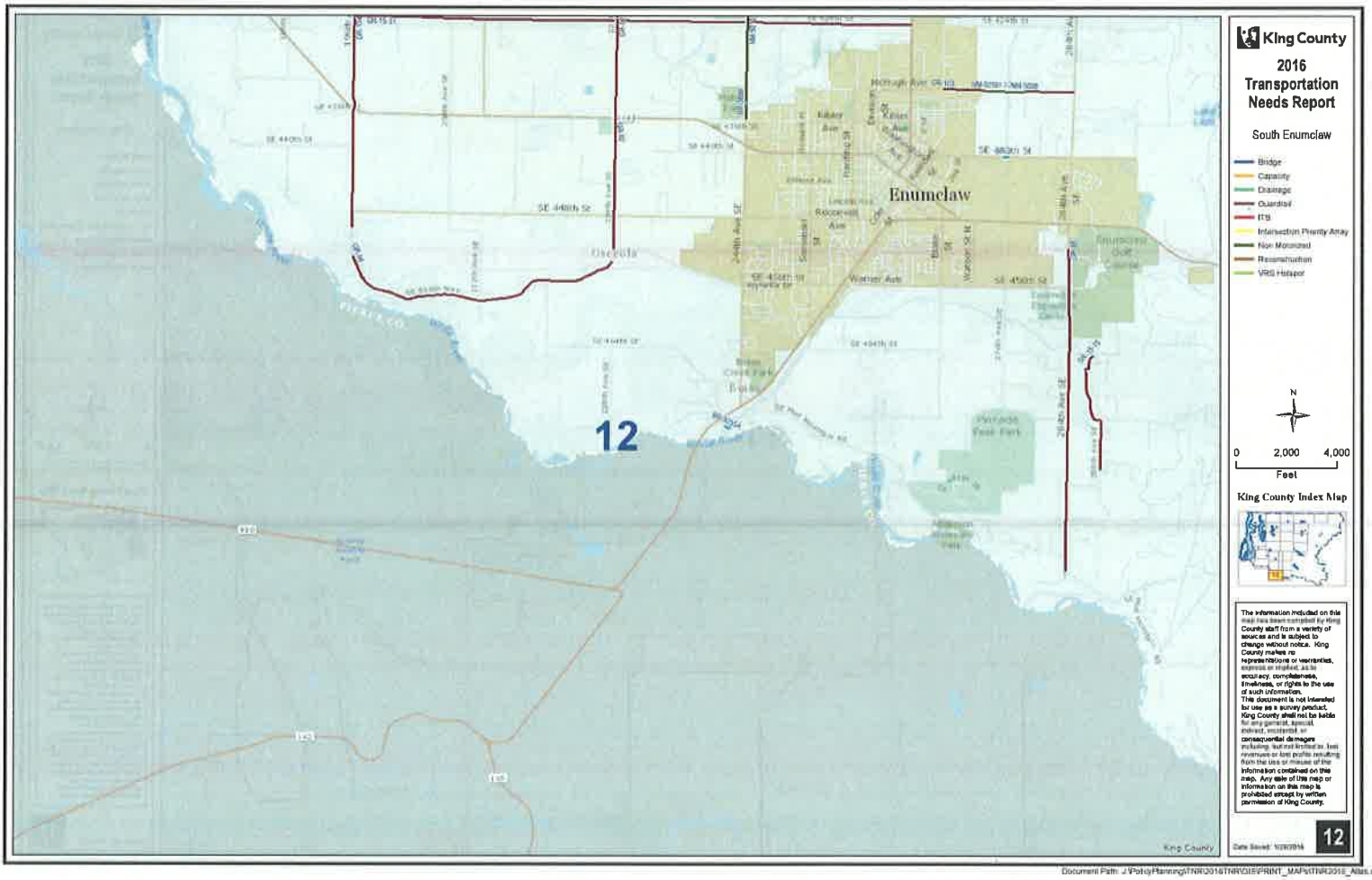

King County
2016
Transportation
Needs Report
East Renton/
Lake Youngs
Bridge
Capacity
Drainage
Guardrail
ITS
Intersection Priority Array
Non Motorized
Reconstruction
VRS Hotspot
N
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2,000
4,000
Feet
King County Index Map
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Date Saved: 1/20/2016
9
Squak Mountain State Park
NRCA
Soos Creek Park and Trail
Maple Valley Heights
Lake Kathleen
Lake Desire
Otter Lake
Lake Youngs
Spring Lake/Lake Desire Park
Log Cabin Reach Natural Area
Cedar Grove Rd SE
SE 208th St
SE 192nd St
King County
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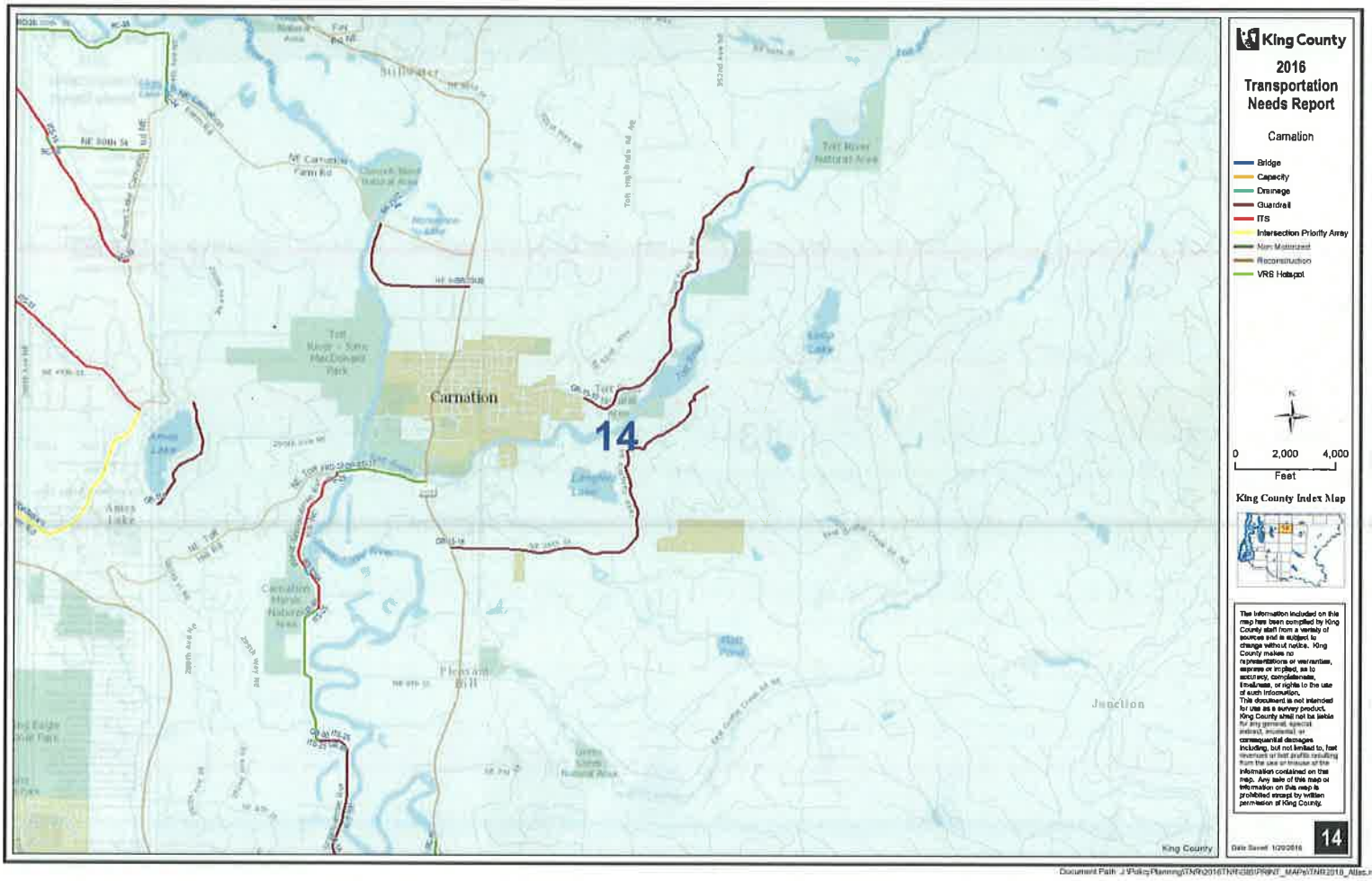


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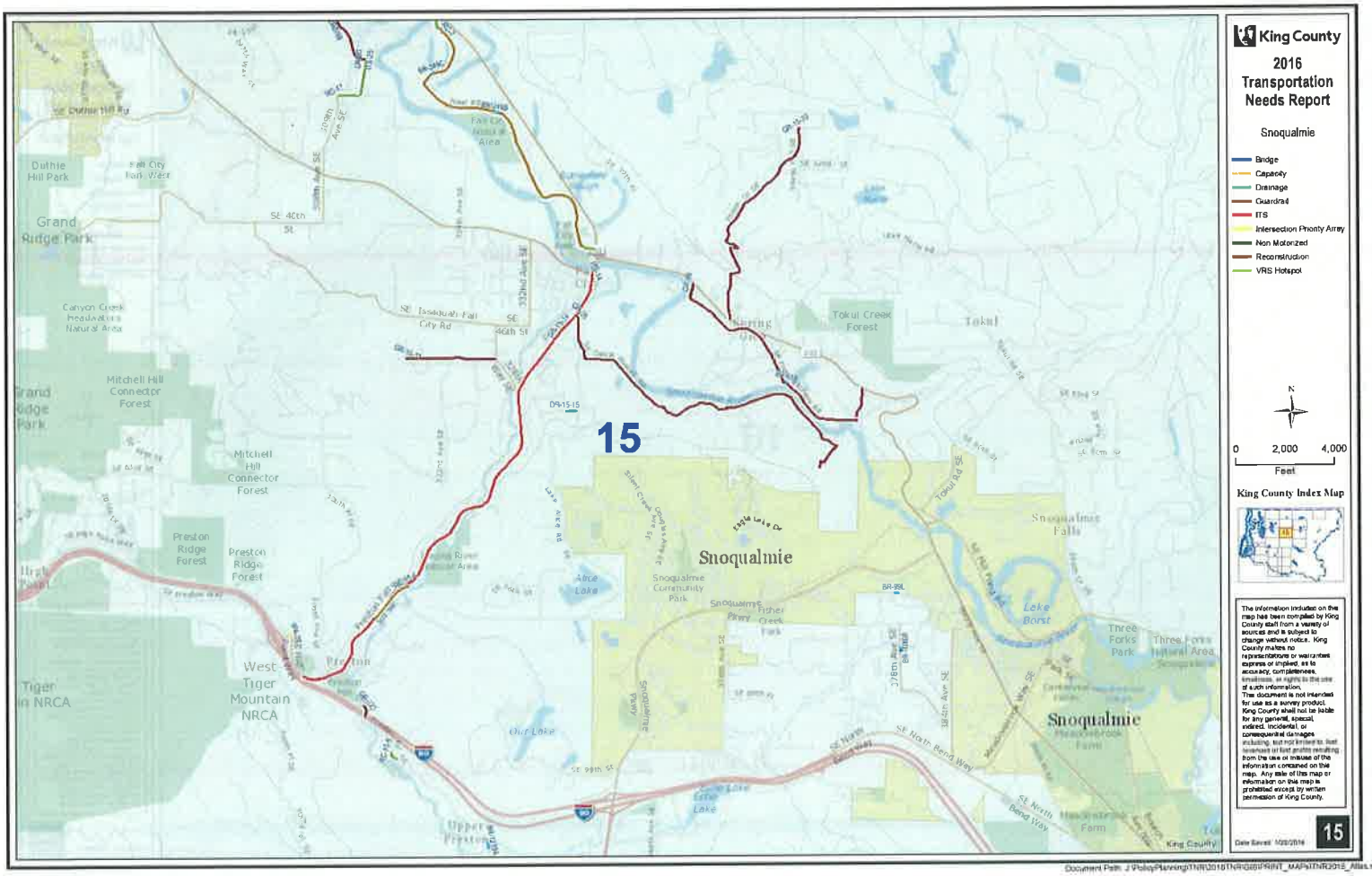


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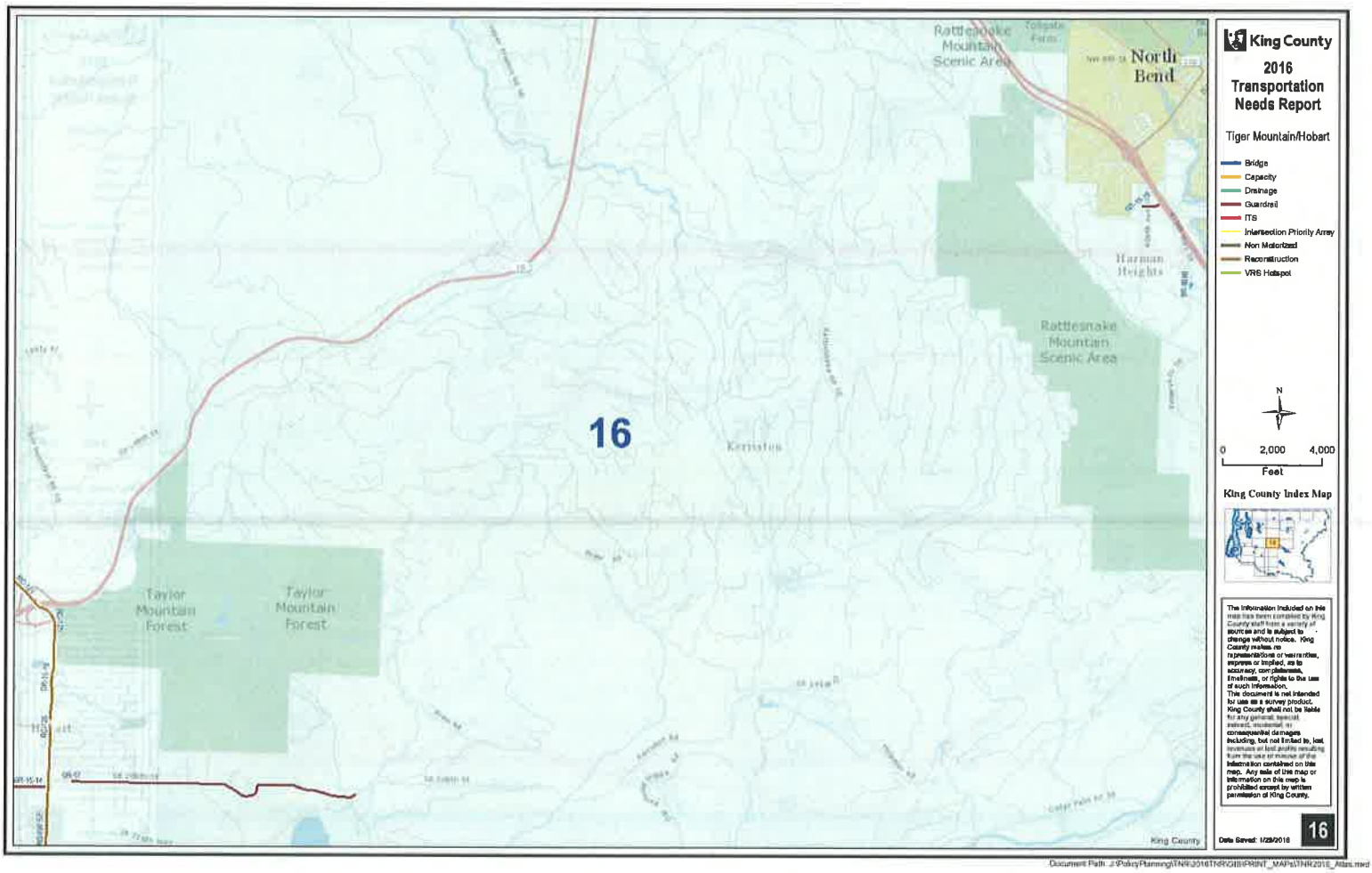

King County
2016
Transportation
Needs Report
Duvall
Bridge
Capacity
Drainage
Guardrail
ITS
Intersection Priority Area
Non Motorized
Reconstruction
VRS Hotspot
N
0
2,000
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Feet
King County Index Map
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King County
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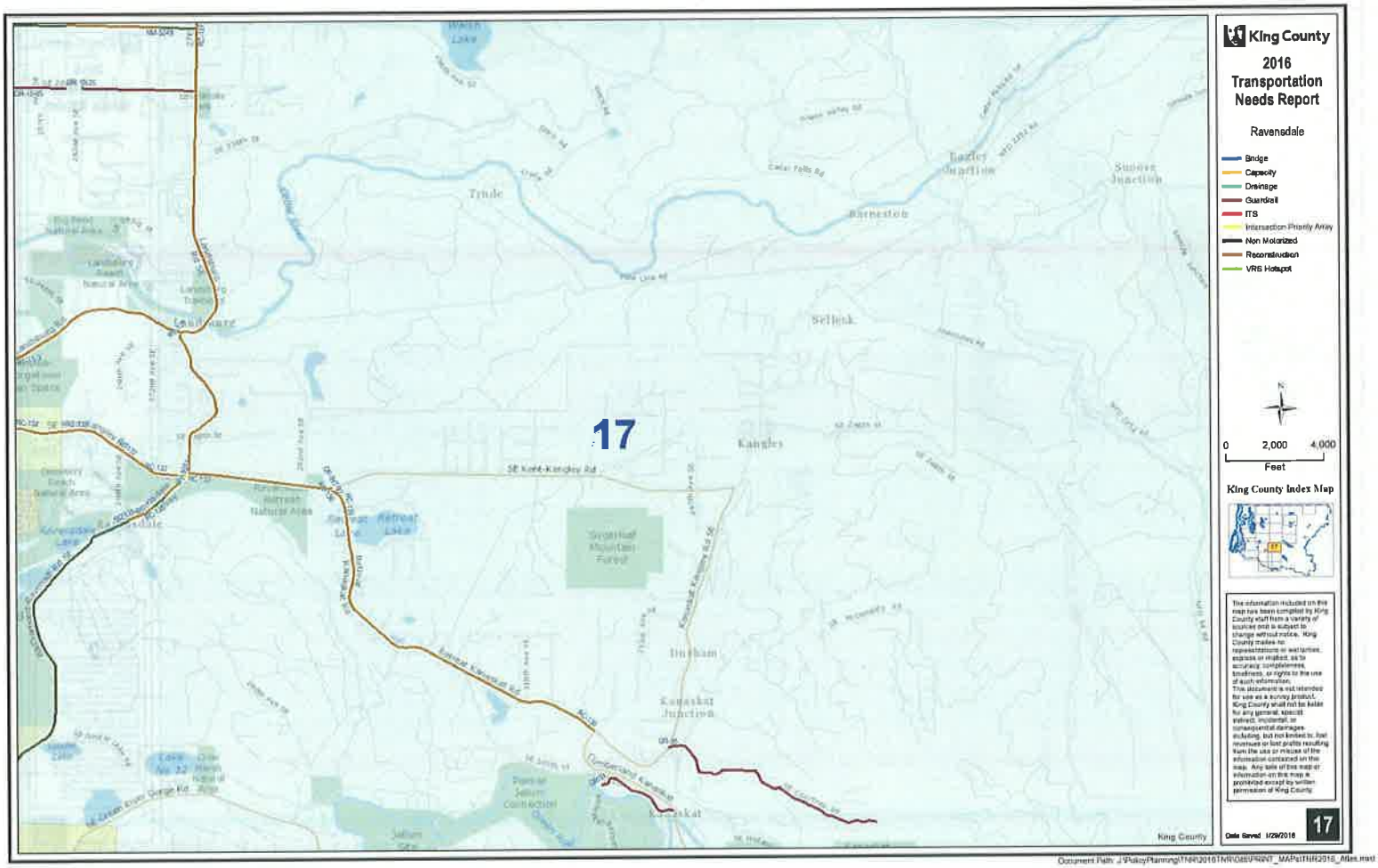
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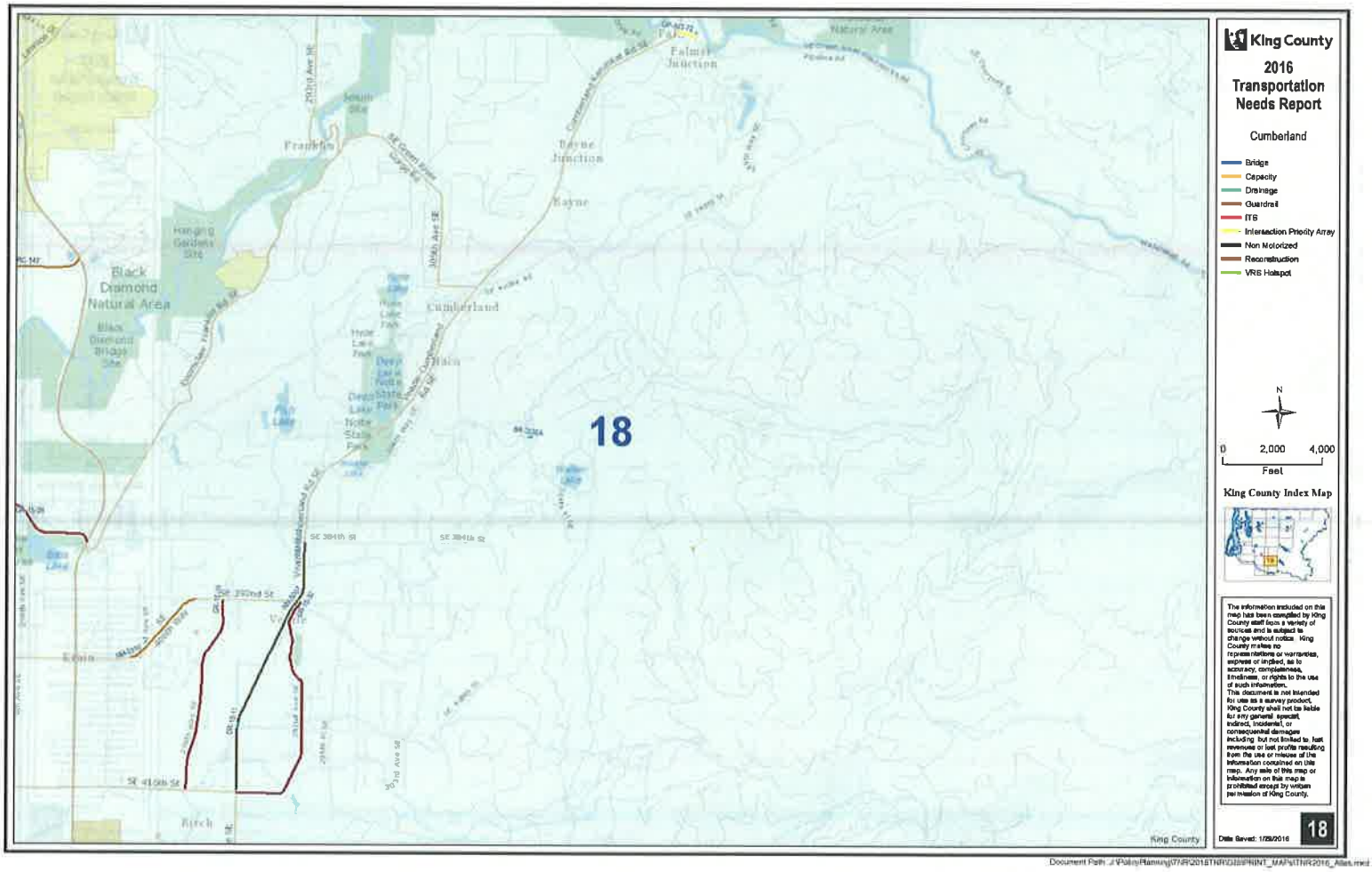
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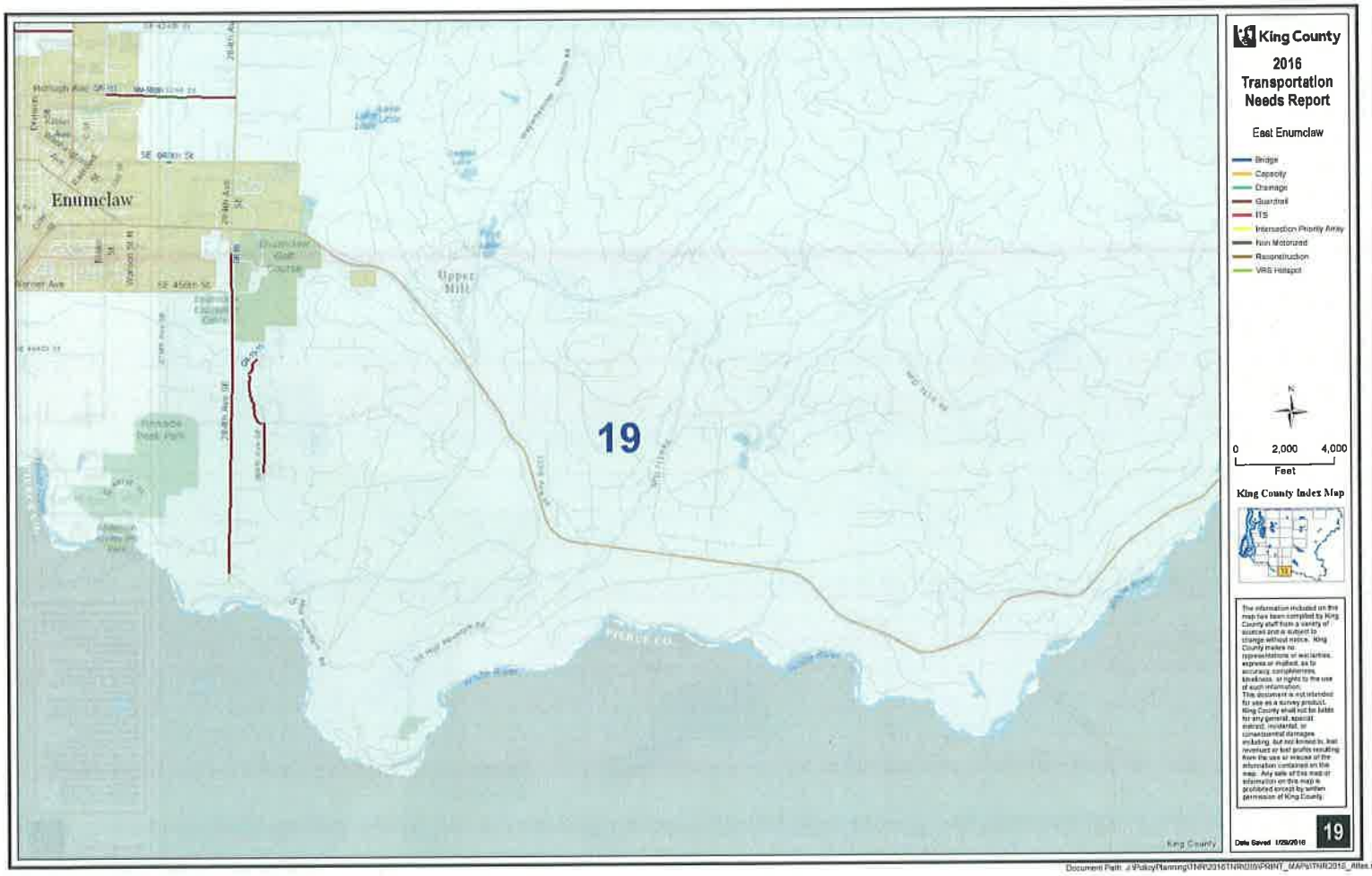
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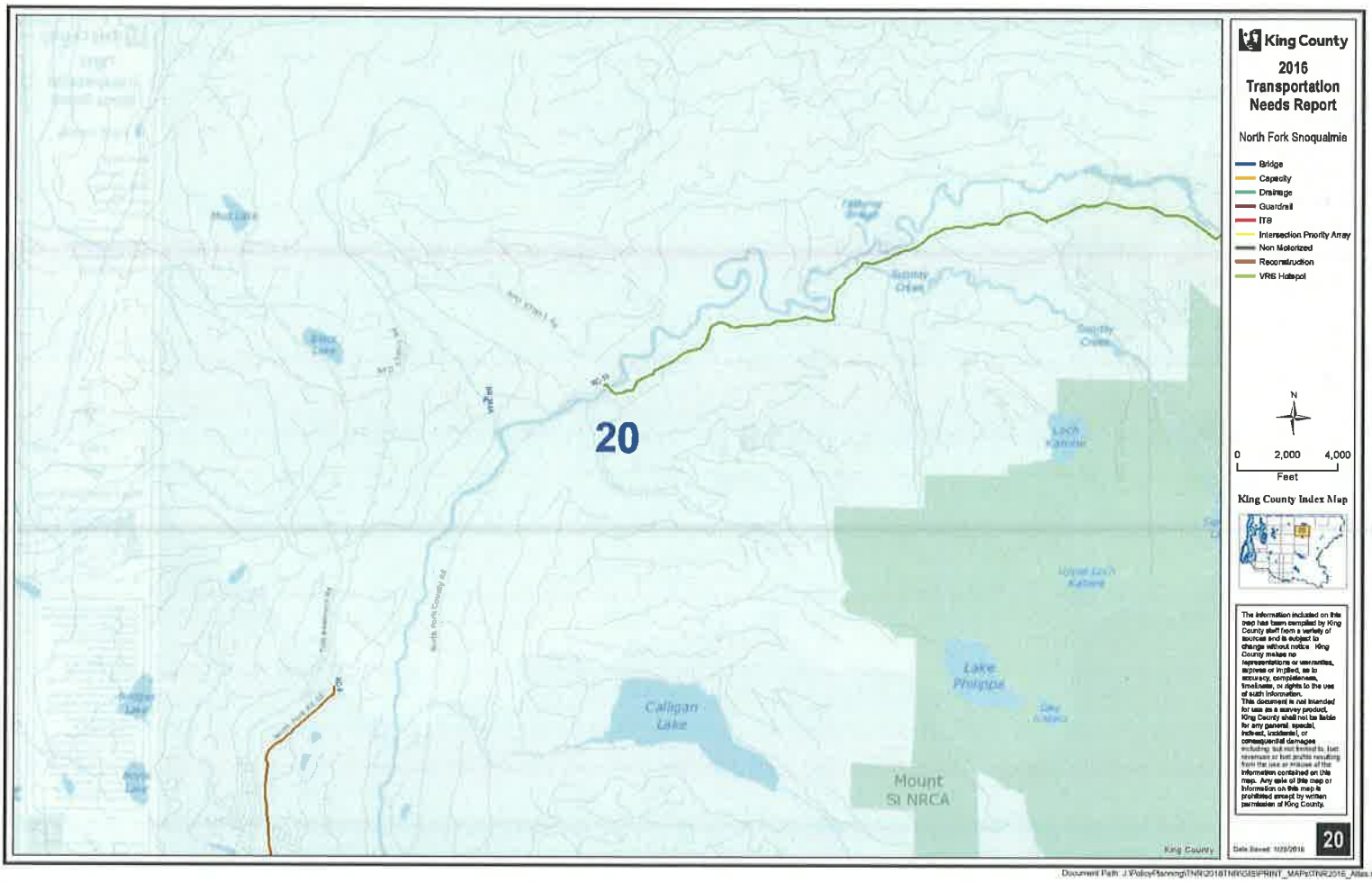
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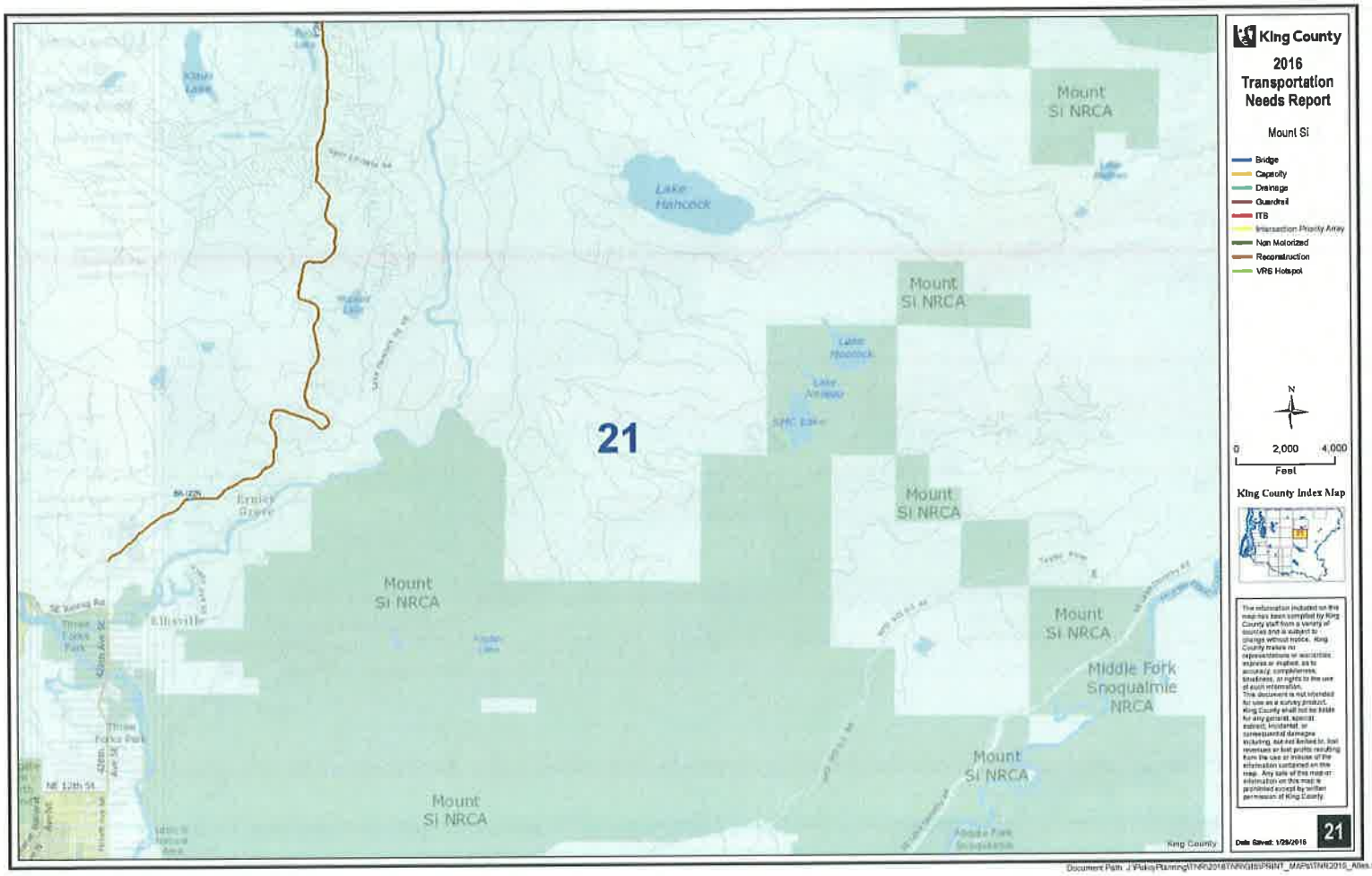
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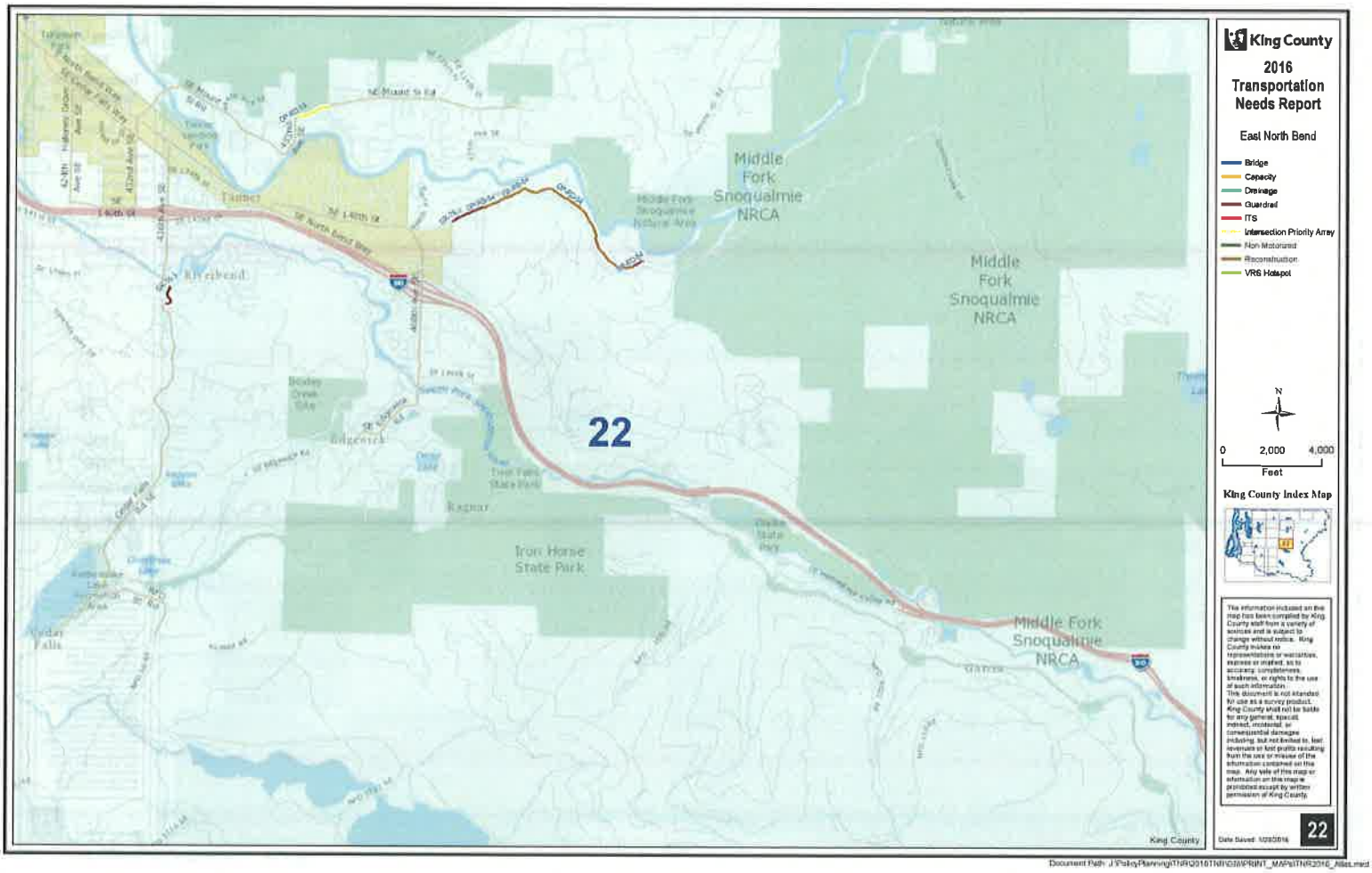
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Wild Sky Wilderness
Wild Sky Wilderness
Wild Sky Wilderness
23
Skykomish
King County
2016 Transportation Needs Report
Skykomish
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Attachment G to Ordinance 18427
Technical Appendix C2 to 2016 Comprehensive Plan

King County

2016
King County Comprehensive Plan Update

TECHNICAL APPENDIX C2:

REGIONAL TRAILS NEEDS REPORT

November 22, 2016

Regional Trails Needs Report

The King County Regional Trail System is one of the nation's most extensive multi-use off-road systems, with over 175 miles of trails for bicycling, hiking, walking, and other activities. This developing network provides extensive opportunities for recreation and non-motorized mobility and commuting throughout King County. The following **Regional Trails Needs Report** contains a list of future projects in broad programmatic categories. Each project contains project title, general description, project status and preliminary cost estimates. The **Regional Trails Needs Report** is a component of the King County Comprehensive Plan's Chapter 7: Parks, Open Space and Cultural Resources.

A. Project Map



B. Project Listing

REGIONAL TRAILS NEEDS REPORT
Projects Listing Summary (July 2015)

Listing Number	RTNR Identification Number	Project Title	Project Type	Comment/Status	UGA Relationship	Regional Transportation Plan Status [1]	Approximate Distance (Miles)	Prelim. Total Cost Est. (Low) (2015 - $M)[2][3]	Prelim. Total Cost Est. (High) (2015 - $M)[2][3]
Regional Trails System - Legacy Projects									
1	ERC-RB	**Eastside Rail Corridor Trail (ERC),** Mainline Renton-Bellevue	Regional Trail	Planning/Design/Construction of paved regional trail, south terminus to approximately Interstate 90.	Inside UGA	Programmed	6.2	21.7	31.0
2	ERC-B	**Eastside Rail Corridor Trail (ERC),** Mainline Bellevue Segment	Regional Trail	Planning/Design/Construction of paved regional trail, Interstate 90 to approximately NE 8th Street.	Inside UGA	Programmed	2.7	9.5	13.5
3	ERC-NB	**Eastside Rail Corridor Trail (ERC),** Mainline North Bellevue Segment	Regional Trail	Planning/Design/Construction of paved regional trail, approximately NE 8th Street to south Kirkland city boundary.	Inside UGA	Programmed	2.4	8.4	12.0
4	ERC-W	**Eastside Rail Corridor Trail (ERC),** Mainline Woodinville	Regional Trail	Planning/Design/Construction of paved regional trail, 132nd Place NE in Kirkland to near Sammamish River in Woodinville.	Inside UGA	Programmed	3.4	11.9	17.0
5	ERC-Spur	**Eastside Rail Corridor Trail (ERC),** Woodinville-Redmond Spur	Regional Trail	Planning/Design/Construction of paved regional trail, Mainline Woodinville to NE 124th Street.	Inside UGA	Programmed	3.0	10.5	15.0
6	L2S-2	**Lake to Sound Trail,** Segment A	Regional Trail	Design/Construction - Black River Forest Segment; Naches Ave to Green River Trail	Inside UGA	Programmed	1.0	3.5	5.0
7	L2S-4	**Lake to Sound Trail,** Segment B	Regional Trail	Design/Construction - Des Moines Memorial Drive (DMMD), Burien and SeaTac	Inside UGA	Programmed	1.5	5.1	7.3
8	L2S-5/6	**Lake to Sound Trail,** Segment C	Regional Trail	Design/Construction - DMMD to Des Moines Creek @ S. 200th	Inside UGA	Programmed	2.4	8.4	12.0
9	L2S-1a	**Lake to Sound Trail,** Segment D	Regional Trail	Design/Construction - West Renton Downtown	Inside UGA	Programmed	1.5	5.3	7.5

REGIONAL TRAILS NEEDS REPORT
Projects Listing Summary (July 2015)

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10	L2S-1b	**Lake to Sound Trail,** Segment E	Regional Trail	Design/Construction - East Renton Downtown	Inside UGA	Programmed	0.5	1.8	2.5
11	L2S-3	**Lake to Sound Trail,** Segment F	Regional Trail	Design/Construction - Tukwila and SeaTac - Green R. Trail to SeaTac Airport	Inside UGA	Programmed	1.0	3.5	5.0
							25.6	**89.4**	**127.8**
High Priority Non-Legacy Projects with design and/or construction is programmed in the 2014 - 2019 Capital Improvement Program									
12	ELS-2-Sa	**East Lake Sammamish Trail,** South Sammamish A	Regional Trail	Continues design /construction of paved master-planned ELST from south Sammamish city boundary to SE 33rd Street in Sammamish.	Inside UGA	Programmed	1.3	4.6	6.5
13	ELS-2-Sb	**East Lake Sammamish Trail,** South Sammamish B	Regional Trail	Continues development of paved master-planned ELST from SE 33rd Street to Inglewood Hill Road	Inside UGA	Programmed	3.4	11.9	17.0
14	ELS-2-S-IH	**East Lake Sammamish Trail,** Parking - Inglewood Hill [4]	Regional Trail Gateway	Design/construction of new parking lot to serve ELST	Inside UGA	N/A	N/A	4.9	4.9
15	ELS-2-S-33	**East Lake Sammamish Trail,** Parking - SE 33rd Street [4]	Regional Trail Gateway	Design/construction of new parking lot to serve ELST	Inside UGA	N/A	N/A	4.5	4.5
16	GC-2	**Green to Cedar Rivers Trail,** North	Regional Trail	Design/construct Green-to-Cedar Rivers Trail - Retrofit: Paved and Equestrian Trail - Cedar River Trail to Kent-Kangley Rd	Inside UGA	Programmed	3.3	11.6	16.5
17	GC-1	**Green to Cedar Rivers Trail,** South	Regional Trail	Design/construct paved and soft surface trail from Kent-Kangley Road south to Flaming Geyser State Park along RR corridor and other alignments.	Inside and Outside UGA	Programmed	8.1	28.4	40.5

REGIONAL TRAILS NEEDS REPORT
Projects Listing Summary (July 2015)

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18	MC-1-12	**Mobility Connections,** Priority bicycle/pedestrian projects linking RTS to designated Urban Centers and Transit: up to 12 priority projects may be identified and potentially implemented as a high priority. [5]	Mobility Connection	Design/construct bicycle/pedestrian mobility connections in public right-of-way linking regional trails with urban centers and transit stations. Projects to be determined.	Inside UGA	N/A	Varies	12.0	24.0
19	L2S-7	**Lake to Sound Trail,** Segment G	Regional Trail	Design/Construction - Downtown Renton to south terminus of the ERC. Newly-proposed project has yet to be included in regional transportation plan.	Inside UGA	Update to Plan	1.9	6.7	9.5
20	GR-6	**Green River Trail,** North Extension (Green to Duwamish)	Regional Trail or In-Road Route	Design/construct Green R. Trail to Seattle to connect with Duwamish Trail. Trail may require in-road ROW development due to highly constrained ROW.	Inside UGA	Programmed	1.8	6.3	9.0
21	SC-2	**Soos Creek Trail,** Phase 5 (192nd - Petrovitsky)[4]	Regional Trail	Design/construct paved trail from SE 192nd St to Petrovitsky Road.	Inside UGA	Programmed	1.2	9.0	9.0
22	SNO-2	**Snoqualmie Valley Trail,** Snoqualmie Mill Gap [3]	Regional Trail	Design/construct soft surface trail through historic Snoqualmie Mill Site to fill gap in Snoqualmie Valley Trail. Reinig Road to Tokul Road. May include bridging Reinig Road.	Inside UGA	Programmed	2.2	6.2	9.3
23	FH-1	**Foothills Trail,** South	Regional Trail	Design/construct paved and soft surface trail between Enumclaw and White River along historic RR corridor parallel to Boise Creek.	Outside UGA, but connects UGAs within King and Pierce Counties (Enumclaw, Buckley)	Programmed	1.1	3.9	5.5

REGIONAL TRAILS NEEDS REPORT
Projects Listing Summary (July 2015)

Listing Number	RTNR Identification Number	Project Title	Project Type	Comment/Status	UGA Relationship	Regional Transportation Plan Status [1]	Approximate Distance (Miles)	Prelim. Total Cost Est. (Low) (2015 - $M)[2][3]	Prelim. Total Cost Est. (High) (2015 - $M)[2][3]
24	FH-2	**Foothills Trail**, White River Bridge	Regional Trail Bridge	Design/construct regional trail bridge over White River extending from the south terminus of Foothills Trail in King County to Pierce County.	Outside UGA, but connects UGAs within King and Pierce Counties (Enumclaw, Buckley)	Programmed	N/A	6.9	6.9
							24.3	**116.6**	**163.1**
Tier 3 Priority									
25	SR-3	**Sammamish River Trail,** Redmond Improvement (Widening)	Regional Trail Upgrade	Upgrade (widen and improve) existing paved trail in Redmond from NE 116th Street to Marymoor Park. The project would continue and complete the previous SRT widening program.	Inside UGA	New	1.0	3.5	5.0
26	SC-3a	**Soos Creek Trail,** Phase 6 - Petrovitsky Crossing [4]	Regional Trail Grade Separated Crossing	Design/construct grade separated crossing of Petrovitsky Road.	Inside UGA	Programmed	N/A	5.1	5.1
27	SC-3b	**Soos Creek Trail,** Phase 6 - Renton Park Segment	Regional Trail	Design/construct paved regional trail, Renton Park - Petrovitsky to Lindburgh HS.	Inside UGA	Programmed	0.8	2.7	3.8
28	SC-3c	**Soos Creek Trail,** Phase 6 – Lindburgh to CRT	Regional Trail	Design/construct paved regional trail, Lindburgh HS to Cedar River Trail.	Inside UGA	Programmed	2.0	6.8	9.8
29	GR-1	**Green River Trail,** Phase 2	Regional Trail	Design/construct paved trail south of SE 259th Street in Kent.	Inside UGA	Programmed	0.5	1.8	2.5
30	I-R	**Interurban Trail (South),** Redevelopment	Regional Trails Redevelopment	Plan/design/construct redeveloped paved trail to replace existing trail; Green River Trail in Tukwila to 3rd Street in Pacific. May be undertaken in multiple phases.	Inside UGA	Update to Plan	14.8	51.8	74.0

REGIONAL TRAILS NEEDS REPORT
Projects Listing Summary (July 2015)

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31	SC-4	**Soos Creek Trail,** Phase 7	Regional Trail	Design/construct paved and soft surface regional trail; southern terminus of existing Soos Creek Trail near SE 266th Street to Covington Way/Kent-Kangley Road.	Inside UGA	Unprogrammed	0.8	2.8	4.0
32	SR18	**SR18 Trail** (Segments)	Regional Trail	Design/construct paved and soft surface regional trail. Project may be developed in distinct segments.	Inside and Outside UGA	Programmed	25.0	87.5	125.0
33	SNO-1	**Snoqualmie Valley Trail,** Phase 4 (North Extension) [3]	Regional Trail	Design/construct extension of soft surface trail from Duvall to Snohomish County to link with Snohomish Co regional trails.	Outside UGA	Unprogrammed	3.2	9.0	13.6
							48.0	**170.9**	**242.7**
Tier 4 Priority									
34	CS-1	**Cedar-Sammamish Trail**	Regional Trail	Design and construct a paved trail between the Cedar River Trail and Issaquah. Project would intersect Cedar River Trail at 154th Pl SE near Renton and continue north to existing trail at intersection of 17th Ave NW at Newport Way NW in Issaquah.	Inside and outside UGA	Programmed	5.6	19.6	28.0
35	ELS-1	**East Lake Sammamish Trail - North**	Regional Trail	Design and construct extension of paved trail from NE 70th St in Redmond to Bear Creek Parkway through the SR-520 interchange and across Bear Creek.	Inside UGA	Programmed	1.0	3.5	5.0

REGIONAL TRAILS NEEDS REPORT
Projects Listing Summary (July 2015)

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36	PS-1	**Preston Snoqualmie Trail Extension**	Regional Trail	Design and construct extension of existing trail to Snoqualmie past Snoqualmie Falls on historic RR line along north side of Snoqualmie Ridge using up to three trestles/bridges. Trail will co-locate with operating scenic RR near falls.	Inside and outside UGA	Update to Plan	1.1	3.9	5.5
37	SR-1-S	**W Sammamish River Trail (Soft-Surface) South Phase - Leary Way to NE 124th Street [3]**	Regional Trail	Design and construct a soft surface trail along the west side of the Sammamish R. parallel with existing paved trail.	Inside and outside UGA	Programmed	3.1	8.7	13.1
38	SR-1-N	**W Sammamish River Trail (Soft-Surface) North Phase - NE 124th to 102nd Ave NE in Bothell[3]**	Regional Trail	Design and construct a soft surface trail on west side of Sammamish R. between NE 124th Street at Redmond to 102nd Ave NE. Portion in Bothell uses abandoned RR corridor	Inside and outside UGA	Programmed	5.4	15.1	22.9
39	GR-3	**Green River Trail Phase 3**	Regional Trail	Design and construct and extension of the paved trail south between Kent and Auburn along the Green River; trail will be located between existing Green River Trail in Kent and S 277th Street in Auburn.	Connects UGAs	Programmed	2.7	9.5	13.5
40	GR-2.2	**Green River 2.2 (259th St SE)**	Regional Trail	Design and construct a missing link in the trail along S 259th Street in Kent from the interurban Trail (South) to Green River Trail Phase 2 project site.	Inside UGA	Programmed	0.3	1.1	1.5

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Projects Listing Summary (July 2015)

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41	GR-4	**Green River Trail Phase 4**	Regional Trail	Design and construct paved trail through central Auburn; may require new bridge across the Green River near Brannan Park that would be a separate project (not included in project scope and cost estimate).	Inside UGA	Programmed	4.7	16.5	23.5
42	GR-2	**Green River Bridge** [5]	Regional Trail Bridge	Design and construct a new river bridge between Central Place S and 86th Ave S to extend the trail; project contingent upon using "Horse Neck" route for Green River Phase 3.	Inside UGA	Update to Plan	N/A	2.7	2.7
43	EP-2	**East Plateau Trail - Klahanie to Soaring Eagle Park**	Regional Trail	Design and construct a paved trail from Klahanie at Issaquah-Beaver Lake Road to Soaring Eagle Park via Duthie Hill Park and Trossachs community.	Inside and outside UGA	Programmed	2.6	7.3	11.0
44	SC-6	**Soos Creek Trail to Lake Youngs Trail** [3]	Regional Trail and On-Road	Project would be a short on-road and off-road link between Soos Creek Trail and Lake Youngs Trail at SE 148th Ave via SE 216th Street and crossing a powerline corridor. Off-road segment would be soft surface. Trail would require in-road designation and limited improvements through powerline area.	Outside UGA	Unprogrammed	0.7	2.5	3.5
							27.2	**90.1**	**130.3**

Regional Trail - Planned

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45	PS-3	**Snoqualmie Regional Connector**	Regional Trail	Design and construct a paved and soft surface regional trail link between Preston-Snoqualmie and Snoqualmie Valley trails by constructing trail between trail at Tokul Tunnel and SR-202/SE Stearns Road.	Inside UGA	Unprogrammed	0.8	2.6	3.8
46	I-1-P	**Interurban Trail Extension - Pacific (Partnership)**	Regional Trail	Design and construct connection to Pierce Co through City of Pacific (Partnership). Paved trail would link south end of existing Interurban Trail with the City of Sumner.	Inside UGA	Unprogrammed	1.4	4.7	6.8
47	EP-1	**Laughing Jacobs Creek Trail Segment**	Regional Trail	Design and construct missing link in trail system along Laughing Jacobs Creek near SE 43rd Way through Providence Point area. Paved trail would link ELST with East Plateau Trails and Klahanie.	Inside UGA	Unprogrammed	0.5	1.8	2.5
48	FH-4	**Foothills Trail (Enumclaw Plateau) Trail - Central**	Regional Trail	Design and construct north segment of trail from Enumclaw to Nolte State Park along abandoned railroad corridor. Trail would be paved and soft surface and use a historic RR corridor.	Outside UGA	Unprogrammed	4.7	16.5	23.5
49	FH-5	**Foothills (Enumclaw Plateau) Trail - North**	Regional Trail	Design and construct north segment of trail from Nolte State Park to Kanaskat near Kanaskat-Palmer State Park. Trail would be paved and soft surface and use a historic RR corridor and bridge to cross the Green River.	Outside UGA	Unprogrammed	4.3	15.1	21.5

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50	LK-1	**Landsburg-Kanaskat Trail**	Regional Trail	Design and construct extension of the Cedar River Trail corridor east from Landsburg to Kanaskat as a paved and soft surface trail.	Outside UGA	Unprogrammed	8.3	29.1	41.5
51	PP-1	**Puget Power Trail - East Segment**	Regional Trail	Design and construct extension of existing Puget Power Trail as a paved and soft surface trail to Redmond Ridge (Redmond-to-Redmond segment). Project would extend roughly from McWhirter Park to Novelty Hill Road along powerline.	Connects UGAs	Unprogrammed	2.0	7.0	10.0
52	TP-3.2	**Tolt Pipeline Trail and Bridge - Snoqualmie River**	Regional Trail and Bridge	Design and construct a bicycle/ped crossing of the Snoqualmie River and trail segment across the floodplain from W Snoqualmie Valley Rd to the Snoqualmie Valley Trail on the east side of the valley. Paved and /or soft-surface trail would follow pipeline alignment across river valley.	Outside UGA	Unprogrammed	N/A	3.9	3.9
53	TR-1	**Tolt River Trail**	Regional Trail	Design and construct extension of trail along the Tolt River northeast of Carnation to Moss Lake. Paved and soft-surface.	Outside UGA	Unprogrammed	6.5	22.8	32.5
54	I-1-E	**Interurban Trail Extension - Edgewood (Partnership)**	Regional Trail	Design and construct a paved trail to Pierce Co through City of Edgewood along historic Interurban route toward Milton. Project would start at Interurban Trail at 3rd Ave SW and cross under SR167 in-road then southwest along abandoned rail line to Milton.	Inside UGA	Unprogrammed	2.4	8.4	12.0

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55	TP-3.1	**Tolt Pipeline Trail - West Valley Connector**	Regional Trail and Possible Drive Connection	Design and construct paved and soft surface trail between the Tolt Pipeline Trail and W Snoqualmie Valley Rd. Steep terrain.	Outside UGA	Not in Plan	0.9	2.5	3.8
56	LYCR-1	**Lake Youngs to Cedar River Trail (Soft-Surface)[3]**	Regional Trail	Design and construct a soft surface trail from the east side of Lake Youngs Trail to Cedar River or Green-to-Cedar Rivers trails along a SPU water pipeline corridor roughly following Petrovitsky Rd.	Outside UGA	Programmed	4.1	11.5	17.4
57	GR-5	**Green River Trail Phase 5 (Upper)**	Regional Trail	Project would extend trail east within Green River Valley south of Auburn to Flaming Geyser State Park. Trail would intersect with future Soos Creek Trail (Phase 8) and Green-to-Cedar Rivers Trail. Paved and soft-surface.	Outside UGA	Programmed	8.1	28.4	40.5
58	PS-2	**Snoqualmie River Bridge**	Regional Trail Bridge or Co-Location with Road Bridge	Project would construct a new trail bridge over Snoqualmie River east of Snoqualmie Falls near SR 202 Bridge at junction of PST and Snoqualmie Regional Connector. Bridge would likely be located at east end of Preston-Snoqualmie Trail adjacent to existing highway bridge. Co-location with road bridge may be explored.	Inside UGA	Programmed	N/A	1.6	1.6
							43.9	**155.7**	**221.2**

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Regional Trail - Long-Range Planned									
59	CR-1	**Cedar River Trail Retrofit: Paved and Equestrian Trail**	Regional Trail Redevelopment	Project would extend paved and soft surface trail along existing trail alignment from existing paved trail in Maple Valley to Landsburg Trailhead Park at Landsburg Rd SE. Equestrian component would be integral component.	Part Inside UGA	Update to Plan	5.0	17.5	25.0
60	SC-5	**Soos Creek Trail Phase 8 (SR18-GRT)[4]**	Regional Trail or On-Road Facility	Project would extend trail as in-road facility (e.g., cycle track or other in-road) and/or off-road trail from 156th Pl SE at Kent-Kangley Rd to Green Valley Trail near SE Green Valley Rd. Preferred alignment utilizes Soos Creek Valley. Interim alignment uses alternative in-road and off-road segments. Paved	Outside UGA	Programmed	4.6	16.1	23.0
61	TP-2	**Tolt Pipeline Trail - Trail Paving**	Regional Trail Redevelopment	Project would pave the existing Tolt Pipeline Trail alignment creating a paved and soft surface trail. Would be completed with approval from SPU. Project would likely be completed in phases from west to east starting at Norway Hill or in segments with greatest use potential.	Part in UGA, connects UGAs	Update to Plan	10.4	36.4	52.0

REGIONAL TRAILS NEEDS REPORT
Projects Listing Summary (July 2015)

Listing Number	RTNR Identification Number	Project Title	Project Type	Comment/Status	UGA Relationship	Regional Transportation Plan Status [1]	Approximate Distance (Miles)	Prelim. Total Cost Est. (Low) (2015 - $M)[2][3]	Prelim. Total Cost Est. (High) (2015 - $M)[2][3]
62	SNO-3	**Snoqualmie Valley Trail Paving - SnoCo boundary to Rattlesnake Lake**	Regional Trail Redevelopment	Project would create a paved and soft surface trail over the length of the existing Snoqualmie Valley Trail from Snohomish County line north of Duvall to Rattlesnake Lake southeast of North Bend to create a fully multi-use facility. Project may be completed in phases.	Part in UGA	Update to Plan	34.2	119.7	171.0
63	CR-2	**Cedar River Trail - Landsburg to Cedar Falls [7]**	Regional Trail	Potential project would develop a new paved and soft surface trail between Cedar River Trail at Landsburg and Snoqualmie Valley Trail at Rattlesnake Lake. Project would enter SPU's Cedar River Watershed. As a result, a change in current land use would be necessary before project could be undertaken.	Outside UGA	Unprogrammed	12.0	42.0	60.0
							66.2	**231.7**	**331.0**

	Approx. Distance	Low Estimate	High Estimate
RTS Legacy Projects	**25.6**	**89.4**	**127.8**
High Priority Non-Legacy Projects	**24.3**	**116.6**	**163.1**
Tier 3	**48.0**	**170.9**	**242.7**
Tier 4	**27.2**	**90.1**	**130.3**
Planned	**43.9**	**155.7**	**221.2**
Long-Range Planned	**66.2**	**231.7**	**331.0**
Total All Projects (Miles)($M)	**235.2**	**854.4**	**1,216.1**

Table Notes

1. Project current status in Transportation 2040 (PSRC).
2. Preliminary total project cost estimates at $3.5M to $5M per unit mile paved trail completed. May not include costs of at-grade intersection improvements (e.g., signalization) or grade-separated facilities (e.g., bridges or tunnels). Cost estimates include construction plus design, permitting, mitigation, administration, and other soft costs. Estimates are subject to revision based on additional information.
3. Preliminary total project cost estimates range at $2.8M to $4.24M per unit mile soft-surface (gravel aggregate) completed. May not include costs of at-grade intersection improvements (e.g., signalization) or grade-separated facilities (e.g., bridges or tunnels). Cost estimates include construction plus design, permitting, mitigation, administration, and other soft costs. Estimates are subject to revision based on additional information.
4. Estimate based on most current project scoping.
5. Mobility Connections estimated at $1.0M - $2.0M per project.
6. Estimate based on continuation of existing project.
7. The connection would utilize an alignment through Seattle's Cedar River Watershed and is not feasible at this time due to water resource security issues. A change in use by the City of Seattle would necessarily predate the development of such a regional trail facility.
8. Project prioritization is based on Parks' understanding of each project's connectivity, aesthetics/scenic value, timing or relationship to other projects, geographical equity, public support, and expectations for urban center connections/equity and social justice.

C. For More Information

Contact the Department of Parks and Natural Resources at 206-296-0100.

10. Eastside BNSF Trails appear in this listing but have not been prioritized. No cost estimates have been determined.

Attachment H to Ordinance 18427
Technical Appendix D to 2016 Comprehensive Plan

King County

2016
King County Comprehensive Plan Update

TECHNICAL APPENDIX D

GROWTH TARGETS AND THE URBAN GROWTH AREA

Technical Appendix D

Growth Targets and the Urban Growth Area

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I. Abstract

This appendix provides an analysis of growth trends in order to review the size and location of the King County Urban Growth Area (UGA). The appendix discusses the factors that contribute to review of the drawing of the UGA to accommodate projected population growth by 2022 pursuant to the state Growth Management Act (GMA). The relevant information for this study came from reports of the various technical committees assigned to provide data for the UGA, the Countywide Planning Policies, the Environmental Impact Statements of the Countywide Planning Policies and the King County Comprehensive Plan, the Buildable Lands amendment to the GMA, the *VISION 2040* plan of the Puget Sound Regional Council, and a review of the work of other jurisdictions developing similar policies throughout the country.

Appendix D was originally prepared in 1994 and updated in 2004, 2008 and 2012. This Appendix D-2016 supplements the original with new information. The analysis was updated in 2004 and 2008 to reflect four changes since 1994:

- Growth of population, housing units and jobs in the years since 1994;
- New population forecasts prepared by Washington State in early 2002 and 2007;
- The King County Buildable Lands Report, completed in 2002 and 2007 pursuant to the 1997 Buildable Lands amendment to the GMA; and
- New principles for allocating growth, specifically that each jurisdiction accommodate a share of the forecasted growth and that population and job growth should be in balance.

This 2016 Appendix incorporates the original Appendix D by reference, but does not address issues already covered by the original, such as delineation of the UGA. Therefore, it supplements but does not replace Appendix D. This revised Appendix describes modifications to the assumptions and methodology used to extend the original growth targets beyond 2012.

In 2002, 2007 and 2014, King County and its cities compiled land supply, land capacity and density data and submitted an evaluation report under the Buildable Lands amendment to the GMA. This report contained current measures of land capacity, revised to represent adopted plans and zoning throughout King County's UGA. This updated, more accurate land Supply information was combined with the updated land Demand information from State forecasts, in order to review the size and adequacy of the UGA.

The King County UGA is sized to adequately accommodate projected growth while also accounting for unpredictable circumstances that could alter the calculated supply of buildable land or the number of households needed to accommodate projected population growth. The location of the UGA takes in areas of the County that already have urban services or have solid commitments for urban services, and as a result, would be inconsistent with the criteria for rural land. The most recent Buildable Lands information, completed in 2007 and updated in 2014, affirms the adequacy of the existing UGA to accommodate all of the county's projected growth through 2031 and beyond. This is true both for the entire Urban Growth Area and for the unincorporated portions of the UGA.

In 2015, the state Department of Commerce acknowledged that the 2012 King County Comprehensive Plan satisfies the GMA requirement for a 2015 plan update, including the growth targets contained in the 2012 Comprehensive Plan that allocate housing and job growth through 2031. As such, the 2016 Update is subject to the rules applicable to an annual comprehensive plan amendment. The GMA does not require the county to complete another comprehensive plan update until 2023.

II. Background

The Countywide Planning Policies established a framework Urban Growth Area (UGA) for King County. King County designated a final UGA in its 1994 Comprehensive Plan based on this framework. Each city within King County is responsible for determining, through its comprehensive plan, land use within its borders, including accommodating the broad range of residential and nonresidential uses associated with urban growth. King County is responsible for establishing land use in the unincorporated portion of the UGA through its comprehensive plan.

Key factors used in setting the UGA include population forecasts, growth targets, and land capacity. **Population forecasts** are predictions about future behavior based on past trends. **Growth targets** are a jurisdiction's policy statement on how many net new housing units it intends to accommodate in the future based on population forecasts and the expected size of the average **household. Land capacity** is derived from an estimate of vacant land plus the redevelopment potential of land already partially developed or underutilized. **Discount factors** are applied to the estimate of land capacity to account for probable constraints to actually developing the land.

Forecasts are useful as an indicator of the potential future demand for land. Targets follow the development of specific goals and objectives for future growth and, under the GMA, they must be supported by commitment of funds, incentives, and regulations. Discounted capacity is a realistic estimate of how much growth may be accommodated in a geographic area.

Under the GMA, each county is required to accommodate 20 years of population growth. Counties are to establish UGAs "within which urban growth shall be encouraged and outside of which growth can occur only if it is not urban in nature" (RCW 36.70A.110(1)). Further based on OFM population projections, the GMA requires the UGA to "include areas and densities sufficient to permit the urban growth that is projected to occur in the county for the succeeding twenty-year period" (RCW 36.70A.110(2)). As part of the county's planning, it must accommodate housing and employment growth targets, including institutional and other nonresidential uses. As specified in RCW 36.70A.110(1), all cities are places for urban growth and, by law, must be included within the Countywide UGA. In addition, unincorporated areas may be included within the UGA "only if such territory already is characterized by urban growth or is adjacent to territory already characterized by urban growth". Each UGA also shall include greenbelt and open space areas (RCW 36.70A.110(2)).

Several GMA goals, such as those dealing with affordable housing, economic development, open space, recreation, and the environment, have an important bearing on these UGA requirements. These goals need to be balanced with those which encourage efficient urban growth and discourage urban sprawl.

The so-called "concurrency" goal for public facilities and services directs jurisdictions to ensure that "those public facilities and services necessary to support development shall be adequate to serve the development at the time the development is available for occupancy without decreasing current service levels below locally established minimum standards" (RCW 36.70A.020(12)). Ensuring adequate land for industrial and commercial development and providing enough land to allow for choices in where people live will help advance economic development and maintain housing affordability. If the UGA is adequately sized, then pressures to develop on environmentally constrained land and on areas set-aside for open space are reduced. These factors must be balanced with the goal of reducing urban sprawl when determining the UGA.

III. Size of the Urban Growth Area

A. Growth to be Accommodated

1. Projected Countywide Household Growth

The Growth Management Act (GMA), adopted in 1990, requires Washington State counties to accommodate forecasted growth, to allocate that growth among their jurisdictions and to designate Urban and Rural areas. In King County, the allocation takes the form of "growth targets" for household/housing unit and job growth over a 20-year or 25-year Growth Management period. The first set of growth targets was enacted by King County through the Countywide Planning Policies in 1994. For the period 1992 to 2012, the targets specified a range of household and job growth each city and the unincorporated area were expected to accommodate. These targets allowed King County jurisdictions collectively to accommodate the 293,100 additional people forecasted for the period 1992 to 2012. The growth targets were updated in 2002 to guide growth for the period 2001 – 2022, and again in 2010 for the 2006 – 2031 planning horizon.

The GMA requires a ten-year update of Growth Management plans. During the period since the first set of targets were adopted, six new cities have incorporated in King County, and other cities have annexed large areas. By the time of the 2000 Census, King County had 173,000 more residents than in 1994. Furthermore, in 2002 and again in 2007, the Washington State Office of Financial Management (OFM) released a new set of population forecasts for whole counties, out to 2030.

It is important to note that the 2002, 2007 and 2012 OFM forecasts ratified the accuracy of earlier forecasts, of the adopted targets, and of the 1994 delineation of the Urban Growth Area (UGA). King County population growth since 1994 has tracked well against OFM's forecasts which were the basis for the 1994 Comprehensive Plan targets and UGA. Therefore, no radical change to the targets is necessary – only an extension to accommodate additional years of growth.

Land use decisions are more closely dependent on the expected growth in households and dwelling units than on simple population forecasts. As a result, the OFM population forecast of an additional 469,000 people between 2006 and 2031 must be translated into a number of additional households in order to be meaningful for purposes of land use planning. Household size is an estimate of the number of people expected to live in each dwelling unit and is used to calculate how many new households will be needed to accommodate the expected increase in population. The paragraphs below explain how analysis of forecasts and household sizes resulted in the translation of the OFM population forecast into new household and job growth targets for 2031.

The Growth Management Planning Council (GMPC), made up of elected officials representing King County jurisdictions, appointed a committee of planning directors and other city and county staff to plan methodology and develop new targets, for both the 2002 and post-2007 target updates. The committee's methodology grew out of two principles: that each jurisdiction would take a share of the County's required growth, and there would be an earnest attempt to balance household and job growth in broad clusters of jurisdictions.

The methodology began by removing "group quarters" (institutional) population from consideration, since such population does not constitute households living in housing units. The methodology also removed Rural areas from consideration as locations of growth. This assumed Rural areas will gain only a small share of total household growth – four percent of total growth, later reduced to three percent – consistent with recent trends. Remaining steps of the methodology focused on the Urban Growth Area, in order to accommodate the projected growth there. See Summary of Methodology below.

Table A		Population 2006		Population 2031		25-year Change	Notes
Total Population		1,835,000		**2,304,300**	+	**469,300**	a.
less Group Qtrs.	-	38,000	-	57,500	-	19,500	b.
= Pop. in HHolds		1,797,000		**2,246,800**		**449,800**	
divided by HHsize		2.36		2.26		-0.19	c.
= households		761,400		994,000	+	**232,600**	
+ vacancy rate		4.8%		4.3%			d.
= housing units		799,800		1,038,400	+	**238,600**	
less Rural		48,000		53,400		5,400	e.
= Urban housg units		751,800		985,000	+	**233,200**	f.

Notes:

a. Source of countywide population forecast: OFM Dec 2007, and Vision 2040.

b. Group quarters (institutional population) forecasted to increase approx 50%.

c. Average household size forecasted to decrease moderately.

d. Vacancy rates, currently high, forecasted to return to historical averages.

e. Rural areas are projected to take 3% of countywide population growth

f. Urban housing units to allocate: + **233,200** housing units over 25 years 2006-2031.

All numbers are rounded.

Sources: US Census, OFM, King County Targets Committee, and King County PSB.

2. Allocation of Population, Housing and Job Growth within King County

New OFM and PSRC Forecasts and New Policy Guidance from Vision 2040

Washington State's Office of Financial Management released new population projections in 2007, which showed King County growing at a faster rate than previously forecasted. OFM projected one-third more growth by 2022 than its 2002 forecast had predicted. Overall, for the extended planning period, the county is expected to grow by about 469,000 people between 2006 and 2031 to a total population of 2.3 million. OFM provides a range of forecasts from high to low, but King County has used the medium or what OFM deems the "most likely" forecast number. The medium forecast for King County in 2030 is about 2,263,000 persons.

Employment forecasts released by PSRC in 2006 showed growth in the county, over this same 25-year period, of about 490,000 jobs to a total of about 1.7 million jobs in 2031. This is also an increase over the earlier employment targets which, over a somewhat shorter period, anticipated a 22-year increase of 289,000 jobs in King County.

In 2008, the Puget Sound Regional Council adopted *VISION 2040*, a growth management, transportation, and economic development strategy for the 4-county region. With *VISION 2040*, the PSRC has amended its Multicounty Planning Policies (MPPs) to address coordinated action around a range of policy areas, including development patterns and the distribution of growth. King County also updated the Countywide Planning Policies in 2012 to address the policy guidance contained in the newly updated MPPs.

VISION 2040 also contains a Regional Growth Strategy that provides substantive guidance for planning for the roughly 1.7 million additional people and 1.2 million additional jobs expected in the region between 2000 and 2040. The strategy retains much of the discretion that counties and cities have in setting local targets, while calling for broad shifts in where growth locates within the region. It establishes six clusters of jurisdictions called "regional geographies" – four types of cities defined by size and status in the region and two unincorporated types, urban and rural.[1] In comparison to previous trends, the Strategy calls for:

- ***Increasing*** the amount of growth targeted to cities that contain regionally designated urban centers (to include both **Metropolitan Cities** and **Core Cities**)
- ***Increasing*** the amount of growth targeted to other **Larger Cities**
- ***Decreasing*** the amount of growth targeted to **Urban unincorporated** areas, **Rural** designated unincorporated areas, and to many **Small Cities**
- Achieving a greater ***jobs-housing balance*** within the region by shifting projected population growth into King County and shifting forecasted employment growth out of King County.

New Growth Targets, 2006 – 2031

To guide the required update of comprehensive plans, the GMPC approved a new set of housing and job growth targets for each King County jurisdiction, covering the 25-year period 2006 – 2031. These were adopted in 2010, re-adopted with the Countywide Planning Policies in 2012, and are still in effect. The new updates to the targets, based on the 2007 population projections from OFM and the requirements and policy framework contained in *VISION 2040*, provide substantive guidance to cities so they can update their 20-year comprehensive plans. New growth targets extend the countywide planning period horizon to 2031, 20 years beyond the originally-slated 2011 comprehensive plan update deadline. The new targets are organized by the Regional Geography categories in *VISION 2040*. This new geography *replaces* the 4 planning subareas—SeaShore, East County, South County, and Rural Cities—which provided a framework for allocating the targets in the earlier CPPs. Where the previous targets foster jobs-housing balance in the 4

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[1] Under *VISION 2040*, King County jurisdictions are clustered in six "regional geographies":
- Metropolitan Cities: Seattle, Bellevue
- Core Suburban Cities: Auburn, Bothell, Burien, Federal Way, Kent, Kirkland, Redmond, Renton, SeaTac, Tukwila
- Larger Suburban Cities: Des Moines, Issaquah, Kenmore, Maple Valley, Mercer Island, Sammamish, Shoreline, Woodinville
- Small Cities: Algona, Beaux Arts, Black Diamond, Carnation, Clyde Hill, Covington, Duvall, Enumclaw, Hunts Point, Lake Forest Park, Medina, Milton, Newcastle, Normandy Park, North Bend, Pacific, Skykomish, Snoqualmie, Yarrow Point
- Urban Unincorporated King County: all unincorporated within Urban Growth Area
- Rural Unincorporated King County: rural- and resource-designated areas outside UGA.

subareas, the new target approach aims to achieve improved balance at the county level and within jurisdictions classified by Regional Geographies.

These new growth targets for King County move toward achieving the desired pattern of growth laid out in *VISION 2040*, while recognizing the long-term nature of the regional land use goals and the many challenges involved in moving away from past growth patterns.

Summary of Methodology

In 2009, a committee of policy and technical staff from the county and cities convened to develop updated growth targets as a collaborative effort. The committee prepared a set of draft working targets for large areas—the county as a whole and Regional Geographies—then began the process of allocating the Regional Geography growth numbers to each individual jurisdiction. The methodology used to generate the draft targets included the following steps and factors:

- **Establish target time frame.** The year 2031 was established as the target horizon year, giving cities a full 20-year planning period from the original GMA update deadline of 2011. The year 2006 was used as a base year because of the availability of complete data, including Buildable Lands estimates. Notably, the proposed target ranges did not account for annexations since 2006.

- **Establish county total for population growth.** Assuming the 4-county region as a whole plans for the mid-range projection of population, King County gets 42% of the region-wide population growth through 2031, consistent with *VISION 2040*. The result: growth of 567,000 people between 2000 and 2031 to a total population of 2,304,000. This number represents a small shift of population to King County from other counties, compared with OFM projections.

- **Establish county total for job growth.** Using the PSRC forecast of employment for the region, King County gets 58% of the regional employment growth through 2031, consistent with *VISION 2040*. The result: growth of 441,000 jobs between 2000 and 2031 to a total of 1,637,000 jobs. This number represents a shift of about 50,000 jobs out of King County to the other three counties in the region compared with earlier forecasts.

- **Allocate population to Regional Geographies** within the county, based closely on *VISION 2040*, but also accounting for factors such as recent growth trends and anticipated annexation of major PAAs.

- **Convert population to total 2031 housing units.** Housing units are the element that jurisdictions can regulate and monitor. Also, *VISION 2040* calls for housing unit targets for each regional geography and jurisdiction. This is a change from the previous King County CPPs, which set targets for households. Total housing stock needed in 2031 was calculated based on the following assumptions:
  - assumed group quarter (institutions) rates, 2.5% of the year 2031 population;
  - assumed future average household size, 2.26 persons per household, a decline of 0.14 persons per household from the 2000 Census;
  - assumed vacancy rates to convert households into housing units, a countywide average of 4.3%.

  Each of the assumptions was adjusted to fit the demographic and housing market differences between Regional Geographies.

- **Calculate housing growth need within Regional Geographies.** As a final step, the base year (2006) housing stock was subtracted from the total 2031 units to determine the net additional new housing units needed by 2031 in each Regional Geography.

- **Allocate employment growth to Regional Geographies** within the county, based closely on *VISION 2040*, and also accounting for employment changes since 2000.

The results of this process are shown in the tables below.

Table 1: Population by County

	Population	Population	Reg'l Growth Strategy	Population Change
Year:	*2000*	*2030*	*2000-2040*	*2000-2031*
King	1,737,000	2,263,000	42.3%	**567,360**
Snohomish	606,000	950,100	26.1%	349,510
Pierce	700,800	1,050,900	23.0%	307,970
Kitsap	232,000	314,600	8.7%	116,760
Region	3,275,800	4,578,600	100%	1,341,600

Table 2: Jobs by County

	Jobs	Jobs	Share of Job Growth	Job Change
Year:	*2000*	*2030*	*2000-2040*	*2000-2031*
King	1,196,043	1,664,780	57.7%	441,372
Snohomish	217,673	350,001	20.1%	153,754
Pierce	261,695	367,248	17.1%	130,805
Kitsap	84,632	115,649	5.1%	39,012
Region	1,760,043	2,497,678	100%	764,943

Table 3: Population and Housing by Regional Geography in King County

	Share of Pop Growth	25-Year Pop. Change	Group Quarters Share	Persons per Household	Vacancy Rate	Housing Units Needed
Regional Geography			*2031*	*2031*	*2031*	*2006-2031*
Metro Cities	44%	**206,100**	4.5%	2.035	4.7%	**103,100**
Core Sub Cities	30%	**139,700**	1.5%	2.260	4.4%	**72,900**
Larger Sub Cities	13%	**62,200**	1.9%	2.450	3.6%	**29,000**
Smaller Sub Cities	5%	**22,700**	0.5%	2.540	3.0%	**10,800**
Uninc Urban	5%	**25,300**	0.5%	2.600	3.0%	**18,100**
Rural	3%	13,000	0.5%	2.800	5.0%	5,400
King County Total	100%	**469,000**	2.5%	2.26	4.3%	**239,200**
UGA only:						**233,800**

Table 4: Jobs by Regional Geography in King County

Data:	Share of Future Job Growth	Total New Jobs	Adjusted for 2000-06 growth	Total New Jobs		Share of Job Growth
Year:	*2000-2040*	*2000-2031*		*2006-2031*		*2006-2031*
Metro Cities	45.2%	199,700	-	**199,700**		46.5%
Core Sub Cities	37.8%	166,700	-	**166,700**		38.8%
Larger Sub Cities	10.4%	45,700	3,000	**42,700**		9.9%
Smaller Sub Cities	3.2%	14,000	4,400	**9,600**		2.2%
Uninc Urban	2.7%	12,100	1,500	**10,600**		2.5%
Rural	0.7%	3,200	3,600	-		-
King County Total	100.0%	441,400				
UGA Only:		**438,200**		**429,300**		100.0%

Allocate housing units and jobs to individual jurisdictions. Within each Regional Geography, staff met to develop a proposed range of draft targets for housing and jobs for each jurisdiction. Criteria that were used to inform the allocation included the following:

- Countywide Planning Policies, including previous targets for the 2001-2022 planning period
- Data from the 2007 Buildable Lands Report, including development trends and land capacity
- Current population, jobs, and land area
- Local policies, plans, zoning and other regulations
- Local factors, such as large planned developments, and opportunities and constraints for future residential and commercial development
- "Fair share" distribution of the responsibility to accommodate future growth
- Location within the county.

The results of this process ultimately became Table DP-1, which was reproduced on page D-14 of Technical Appendix D to the 2012 Comprehensive Plan.

In November 2015, the GMPC approved a technical adjustment to Table DP-1 to account for recent annexations to Bellevue, Bothell, Sammamish and Tukwila. Annexations shift the potential-annexation-area target from unincorporated King County to the annexing city. The revised Table DP-1, effective through January 2, 2016, is reproduced on page D-14 of this Technical Appendix.

See table of adjusted 2006-2031 targets on page D-15. The table shows 25-year household growth targets for each city and for unincorporated areas within the UGA. Unincorporated Urban targets add to only 11,140 housing units, less than 5% of the urban area total housing target. Most of the Urban growth is expected to occur in cities. In addition, the adopted targets provide for annexation of the remaining Urban area by specifying the number of households in potential annexation areas (PAAs). These numbers are shown as "PAA housing target" in the table. As cities annex territory, the responsibility to accommodate that specific share of growth goes with the annexation, and shifts from unincorporated target into a city target. Before 2031, all of King County is expected to be within city limits except for designated Rural and Resource areas.

In 2012, Washington State OFM released a new set of population forecasts. The 2012 forecast was so similar to OFM's 2007 forecast (within 1% in 2030) that revision of the targets was deemed unnecessary, given GMA guidance to plan within a broad range of forecasted population growth.

3. Allocation of Projected Household Growth to Cities and Unincorporated King County

The urban area 2006-31 growth target of 233,000 housing units was allocated to each of King County's 39 cities and to the County's Urban unincorporated area by the Countywide Planning Policies.[2] These targets are *estimates* of the number of new housing units that jurisdictions expect to receive and plan for during the period. The targets for each of the cities and the unincorporated area are intended as a guide with some flexibility to reflect the limited capability of individual jurisdictions to determine their precise levels of growth. It is essential that each jurisdiction adopt policies and regulations that allow the jurisdiction to accommodate that targeted amount.

The allocation of households to jurisdictions is connected to the allocation of estimated future jobs. Although not required by the GMA, the Countywide Planning Policies included a 25-year employment target in addition to the housing target and also allocated the employment target to the cities and unincorporated King County. The Countywide employment growth target of 429,000 (Table 4) was based on job forecasts prepared by the Puget Sound Regional Council and was allocated to the cities and the county based upon factors listed above. The cities' housing targets are tied in part to their employment targets because of the relationship between household and employment growth and the need to support Urban Centers while balancing local employment opportunities in activity centers and neighborhoods in the urban area.

Targets represent a commitment by the jurisdiction to accommodate growth. The Countywide Planning Policies require jurisdictions to plan for their targeted growth and to adopt a regulatory framework and the necessary infrastructure funding to achieve the targeted growth. The way each jurisdiction achieves its targets is within its discretion. It is the responsibility of each jurisdiction to determine how best to plan for its growth targets. The jurisdictions impose a variety of regulatory measures, appropriate to their area, to achieve their goals. It is the responsibility of King County to implement its growth targets through zoning decisions and other policies in the unincorporated areas.

Under this methodology, new cities are treated the same way as annexations. In this way, the entire Urban unincorporated allocation can be distributed among the annexing and new cities as they absorb unincorporated communities over time. The Rural target allocation remains in unincorporated King County because it is not annexed or incorporated. Annexations to six Rural Cities are not subject to these adjustments because their target allocation already includes their UGA expansion area.

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2 King County Countywide Planning Policies, Policy DP-12. King County Council Ordinance No. 17486, December 3, 2012.

B. Land Capacity in the UGA

1. Countywide

King County is required by the GMA to ensure sufficient land is available to accommodate the expected number of households within the planning horizon. Most of the anticipated growth will occur in the UGA, including cities and unincorporated Urban areas. Estimating land capacity involves more than adding up all vacant and potentially redevelopable land in the county. Land capacity is an estimate of the amount of buildable land that is likely to be actually developable; that means taking the base, or raw, number and subtracting out land that is unbuildable due to environmental and other constraints.

A 1997 amendment to the GMA required King County and its cities to measure "Buildable Land" capacity, to verify that the Urban Growth Area has sufficient land capacity to accommodate our targeted growth. The Buildable Lands amendment requires rigorous analysis of land capacity, using a methodology ensuring that the capacity measurement is realistic, not theoretical. The factors for calculating land capacity must reflect the actual densities of development achieved by the jurisdiction in the previous five years. King County and its cities followed these requirements, fully discounting for critical areas, future rights-of-way, public purpose lands and a market factor. The market factor recognizes that, for market reasons, some buildable lands may not be developed during the time horizon of the analysis.

In 2007, using this methodology, King County jurisdictions conducted an updated inventory of land supply (measured in acres) and land capacity (measured in housing units and jobs that can be accommodated) as of 2006. The 2007 Buildable Lands Evaluation Report (BLR), published in September, 2007, concluded that the King County UGA contains more than 21,900 acres of land suitable for residential growth. The UGA can accommodate more than 289,000 new housing units. This capacity is sufficient to absorb the 2006-2031 target of 233,000 new housing units. Furthermore, each of the Regional Geographies had sufficient capacity to accommodate their growth targets.

The same exacting methodology was carried out in the most recent buildable lands analysis. The 2014 Buildable Lands Report found a similar surplus of capacity in the King County UGA. As of 2012, the entire King County UGA has an estimated residential capacity of 417,300 additional housing units, more than twice the remaining target of 177,600 housing units. Each of the Regional Geographies has sufficient capacity to absorb targeted growth. The 2014 BLR also reported that the UGA has capacity for more than 658,000 jobs, 60% more than the remaining job target of 410,600 jobs. All the city Regional Geographies have a surplus of job capacity. These are measures of current capacity, based on plans and zoning currently (2012) in place, estimated using the rigorous methodology and criteria in the Buildable Lands amendment, RCW 36.70A.215. The 2007 and 2014 Buildable Lands Reports affirm that there exists sufficient capacity in the King County UGA to accommodate the entire county's growth forecast through 2031. This includes capacity for residential uses and non-residential uses including institutional, commercial and industrial uses. Based on this updated information, it is clear that no change to the UGA is necessary.

2. Unincorporated King County

The Buildable Lands Evaluation Reports measured land capacity in each of King County's five Urban Regional Geographies and by individual jurisdiction. Detailed information is available from those Reports, incorporated here by reference.
(see http://your.kingcounty.gov/budget/buildland/bldlnd07.htm and
http://www.kingcounty.gov/depts/permitting-environmental-review/codes/2014-KC-Buildable-Lands-Report.aspx).

Unincorporated Urban King County as a whole can accommodate more than 12,700 new housing units, only three percent of the Urban King County total, but sufficient to accommodate the remaining unincorporated Urban target of 7,970 housing units. As unincorporated Urban areas are annexed to cities, the associated targets shift to the city, so that by the end of the planning period, the unincorporated Urban target will dwindle to near zero.

The 2014 Buildable Lands Report measured an employment capacity in unincorporated King County of just over 6,900 jobs, slightly less than the remaining urban unincorporated target of 7,700 jobs. Under the GMA, VISION 2040 and the Countywide Planning Policies, cities are designated and intended to accommodate almost all employment growth in the county. Prior to planning under the GMA, unincorporated King County absorbed a large share of the county's residential and job growth. Since beginning to plan under the GMA, the county's growth has shifted almost entirely into the cities. However, a commensurate share of urban unincorporated growth targets did not shift into the cities. Annexations transferred more capacity than target into annexing cities, leaving residual unincorporated targets that are out of balance with actual capacity. Bearing in mind that the UGA as a whole does have sufficient capacity for commercial and industrial growth, the small shortfall in urban unincorporated job capacity is a technical issue that will be addressed as further annexations occur.

IV. Conclusion

This Appendix provides updates to the Appendix D of the 2012 Comprehensive Plan. In 2015, the state Department of Commerce acknowledged that the 2012 Comprehensive Plan satisfies the GMA requirement for King County to update a comprehensive plan by June 2015. The Countywide Planning Policies, also adopted in 2012, affirmed the growth targets for King County and its cities for the period 2006 – 2031. Those targets remain in effect, and they guide cities and the county in preparing comprehensive plan updates. Therefore, this Appendix augments the 2012 Appendix D to explain how analysis of projected growth and capacity in the UGA led to the current 2006 – 2031 growth targets.

King County's first set of growth targets, covering the period from 1992 – 2012, was based on Washington State OFM's 1992 population forecast. The county's actual population growth tracked well against the 1992 forecast. In 2002, 2007 and 2012, OFM published revised forecasts which were used to update growth targets to cover the 2001 – 2022 planning period, then the 2006 – 2031 period. King County's population growth has continued to track the OFM predictions well.

In 2007, OFM released a population forecast to 2030 that formed the basis for updating King County growth targets in 2009. King County officials responded with an extensive process to update the growth targets again, based on the 2007 forecast. This update was conducted as part of the revisions made to the Countywide Planning Policies, which were recommended by the Growth Management Planning Council, adopted by King County in 2012, and ratified by the cities

in 2013. The update also incorporated guidance from the Puget Sound Regional Council's *VISION 2040* plan, which calls for focusing housing and job growth into cities with major Urban Centers. King County's current growth targets, covering the period 2006 – 2031, were restructured from a subarea orientation to fit six "Regional Geographies" outlined by *VISION 2040*. In compliance with *VISION 2040*, these new targets direct most growth (74% of housing, 85% of jobs) into two "Metropolitan Cities" and 10 "Core Suburban Cities", each with a major Urban Center. Within unincorporated King County, the targets provide for modest growth in Urban areas and very limited growth in Rural and Resource areas.

Data from the 2010 US Census confirm that King County's population growth comports with OFM's 2007 forecast. Land capacity data from the 2007 and 2014 Buildable Lands Report, together with updated development plans of the county's major cities, confirm that King County's Urban Growth Area continues to be appropriately sized in order to accommodate growth expected through the year 2031, and that the UGA has sufficient capacity to accommodate forecasted residential and non-residential growth including institutional, commercial and industrial uses. However, in accordance with both county's Comprehensive Plan policies and the Countywide Planning Policies, the Urban Growth Area may be adjusted if a countywide analysis determines that the current Urban Growth Area is insufficient in size and additional land is needed to accommodate the housing and employment growth targets, including institutional and other non-residential uses, and there are no other reasonable measures, such as increasing density or rezoning existing urban land, that would avoid the need to expand the Urban Growth Area.

King County Growth Targets Update: Revised Table DP-1
Table for inclusion in Countywide Planning Policies, June 2011 –adjusted 2015

Regional Geography City / Subarea	Housing Target	PAA Housing Target	Employment Target	PAA Emp. Target
	Net New Units	Net New Units	Net New Jobs	Net New Jobs
	2006-2031	2006-2031	2006-2031	2006-2031
Metropolitan Cities				
Bellevue	17,290		53,000	
Seattle	86,000		146,700	
Total	**103,290**		**199,700**	
Core Cities				
Auburn	9,620		19,350	--
Bothell	3,810	810	5,000	0
Burien	4,440		5,610	
Federal Way	8,100	2,390	12,300	290
Kent	9,270	90	13,280	210
Kirkland	8,570	0	20,850	0
Redmond	10,200	640	23,000	--
Renton	14,835	3,895	29,000	470
SeaTac	5,800		25,300	
Tukwila	4,850	50	17,550	0
Total	**79,495**		**170,590**	
Larger Cities				
Des Moines	3,000		5,000	

Regional Geography City / Subarea	Housing Target	PAA Housing Target	Employment Target	PAA Emp. Target
	Net New Units	Net New Units	Net New Jobs	Net New Jobs
	2006-2031	2006-2031	2006-2031	2006-2031
Issaquah	5,750	110	20,000	
Kenmore	3,500		3,000	
Maple Valley**	1,800	1,060	2,000	
Mercer Island	2,000		1,000	
Sammamish	4,180	350	1,800	
Shoreline	5,000		5,000	
Woodinville	3,000		5,000	
Total	**28,230**		**42,800**	
Small Cities				
Algona	190		210	
Beaux Arts	3		3	
Black Diamond	1,900		1,050	
Carnation	330		370	
Clyde Hill	10		--	
Covington	1,470		1,320	
Duvall	1,140		840	
Enumclaw	1,425		735	
Hunts Point	1		--	
Lake Forest Park	475		210	
Medina	19		--	
Milton	50	90	160	
Newcastle	1,200		735	
Normandy Park	120		65	
North Bend	665		1,050	
Pacific	285	135	370	
Skykomish	10		--	
Snoqualmie	1,615		1,050	
Yarrow Point	14		--	
Total	**10,922**		**8,168**	
Urban Unincorporated				
Potential Annexation Areas	8,760		970	
North Highline	820		2,170	
Bear Creek Urban Planned Dev	910		3,580	
Unclaimed Urban Unincorp.	650		90	
Total	**11,140**		**6,810**	
King County UGA Total	**233,077**		**428,068**	

* King County Growth Management Planning Council, adopted October 2009 and ratified by cities in 2010. These were re-adopted with the countywide planning policies in 2012 and ratified in 2013.

Targets base year is 2006. PAA / city targets have been adjusted to reflect annexations through 2016.

Regional Geography City / Subarea	Housing Target	PAA Housing Target	Employment Target	PAA Emp. Target
	Net New Units	Net New Units	Net New Jobs	Net New Jobs
	2006-2031	2006-2031	2006-2031	2006-2031

** Target for Maple Valley PAA is contingent on approval of city-county joint plan for Summit Place.

Attachment I to Ordinance 18427
Technical Appendix R to 2016 Comprehensive Plan

King County

2016
King County Comprehensive Plan Update

TECHNICAL APPENDIX R:

PUBLIC OUTREACH FOR THE DEVELOPMENT OF THE 2016 COMPREHENSIVE PLAN

November 22, 2016

Overview

The ***2016 Comprehensive Plan Update*** included a strong and on-going public engagement process; the process is summarized below by phases.

Phase 1: Scoping and Development of Public Review Draft. This process included the following components:

- Meetings with community groups, interested parties, County Commissions, the Planning Directors groups, and others in multiple stages of the update process in 2015.

• King County Planning Directors (2/26) – 30 attendees	• Four Creeks/Tiger Mountain CSA Open House (5/12) – 40 attendees
• Greater Maple Valley UAC (3/1) – 10 attendees	• Maple Valley CSA Open House (5/19) – 70 attendees
• Skyway-West Hill Technical Advisory Committee (3/13) – 15 attendees	• West Hill/Skyway CSA Open House (5/21) – 35 attendees
• Four Creeks/Tiger Mountain CSA (3/18) – 10 attendees	• SE King County/Green Valley CSA Open House (6/2) – 85 attendees
• Bear Creek / Sammamish CSA Open House (4/13) – 16 attendees	• Rural Forest Commission (7/9) – 15 attendees
• Snoqualmie Valley/NE King County CSA Open House (4/21) – 52 attendees	• Greater Maple Valley UAC (8/24) – 8 attendees
• North Highline/White Center CSA Open House (April 23) – 25 attendees	• Agricultural Commission (9/17) – 20 attendees
• Vashon-Maury Island CSA Open House (4/28) – 32 attendees	• King County Planning Directors (10/22) – 30 attendees
• Fairwood/Renton CSA Open House (5/5) – 55 attendees	• Rural Forest Commission (11/12) – 15 attendees

  Approximately 560 residents and stakeholders attended these meetings.

- Stakeholders were informed that comments would be accepted throughout the process, rather than solely during public comment period. This led to a significant amount of early public comments which allowed some issues to be resolved and included in the Public Review Draft.
- Attended and presented at all of the Community Service Area Open Houses; these meetings allowed the Comprehensive Plan to be presented at high-level to a much wider audience. At these meetings, names were added to the email list.

- Updates to the Comprehensive Plan website to make commenting and joining an e-mail list easier; the email list grew to over 500 contacts.
- Distributed a series of "eNewsletters" that helped those on the e-mail list remained informed of milestones in the update process. This included every group listed in the Adopted Scope of Work through Motion 14351, all the email contacts from the 2012 Comprehensive Plan update list, contacts for community weekly newspapers, contacts provided by the Office of Equity and Social Justice in the Executive's Office, and others.

Phase 2: Development of Executive Recommended Plan. This process included the following components:

- Placed advertisements in community papers advertising Community Meetings; six community meetings were held and were attended by almost 300 participants in late 2015 and early 2016. Meetings were held as follows:

Vashon-Maury Island (Nov. 9) – 10 attendees	Snoqualmie Valley – Bear Creek – Sammamish Area (Dec. 2) –110 attendees
Four Creeks – Maple Valley (Nov. 17) – 15 attendees	Vashon-Maury Island (follow-up Meeting on Dec. 14) –40 attendees
West Hill / North Highline/ Urban Annexation Areas (Nov. 19) – 35 attendees	East Cougar Mountain Potential Annexation Area (Jan. 28) – 70 attendees

- Provided a 2 month public comment period between November 6, 2015 and January 6, 2016. This comment period was extended to solicit public comment on an Area Zoning and Land Study that began late in the process, and this comment period went from January 27 to February 3, 2016.
- During these periods, nearly 90 comment letters/emails/comment cards were submitted, containing hundreds of individual comments that were used in the development of the draft Plan.

Combined, over 850 stakeholders participated in the development of the Public Review Draft and Executive Recommended Plan for the 2016 King County Comprehensive Plan Update.

Phase 3: Council review of and updates to Executive Recommended Plan, and adoption of 2016 Comprehensive Plan. This process has included and/or is anticipated to include the following components:

- Distribution of newsletters to dedicated Comprehensive Plan email list (649 subscribers as of November, 2016) to inform the public of Comprehensive Plan committee briefings, schedule updates, news, and public comment opportunities.
- Utilization of the Council's Comprehensive Plan website to provide:
  - Opportunity to sign-up for the Comprehensive Plan email list,
  - Ability to submit written online public testimony, and
  - Up-to-date information on the schedule, committee agendas and staff reports, news, proposed Comprehensive Plan and land use amendments, and public hearing notices.

- Issuance of press releases to media outlets to provide updates on public comment opportunities.
- Inclusion of Comprehensive Plan committee briefing dates and public comment opportunities in "Coming Up At Council" media email list (print, broadcast, and social media).
- Written communication with Docket proponents regarding public comment opportunities.
- Briefings with County Commissions and community groups, as requested.
- A public comment period from time of transmittal (March 1, 2016) through adoption (December, 2016), including:
    - Receipt of written comments via letters, emails, or online testimony.
    - Verbal testimony in committee and before the full Council, as follows:

March 15 at Transportation, Economy and Environment Committee	June 28 at special Transportation, Economy and Environment Committee
April 5 at Transportation, Economy and Environment Committee	July 5 at Transportation, Economy and Environment Committee
April 6 at special Committee of the Whole evening Town Hall in Ravensdale	August 16 at Transportation, Economy and Environment Committee
May 3 at Transportation, Economy and Environment Committee	August 24 at special Transportation, Economy and Environment Committee
May 17 at Transportation, Economy and Environment Committee	September 6 at Transportation, Economy and Environment Committee
May 31 at Transportation, Economy and Environment Committee	September 20 at Transportation, Economy and Environment Committee
June 7 at Transportation, Economy and Environment Committee	November 28 publicly advertised formal public hearing at full Council
June 21 at Transportation, Economy and Environment Committee	

- Inclusion of received written comments in the published committee packets as part of the Comprehensive Plan staff reports.
- State Environmental Policy Act (SEPA) review and public comment period prior to final adoption at the full Council.
- Published advertisement in newspapers for formal public hearing prior to final adoption at full Council.
- Mailed notice of public hearing to property owners adjacent to parcels proposed for land use designation and zoning changes prior to final adoption at full Council.

Attachment K to Proposed Ordinance 2016-0155
September 1, 2016

Addendum to Vashon Town Plan

The previous adopted zoning on page 92 of the Vashon Town Plan for parcel 2923039148 is amended with the following:

ZONING

1. Remove P-suffix condition VS-P24 from parcel 2923039148.

2. Add P-suffix condition VS-Pxx to parcel 2923039148 as follows:

   "Development restricted to housing designated for low income."