Introduced by: Chris Vance

Proposed No.: 94-774

ordinance no. **11615**

AN ORDINANCE adopting Title 9 relating to surface water management, and amending it to be consistent with and implement the comprehensive plan as required by the Washington State Growth Management Act; amending Ordinance 2281 Section 5, as amended and K.C.C. 9.04.050; Ordinance 7590 Section 5, as amended and K.C.C. 9.08.040; and Ordinance 9163 Section 1 and Section 3, as amended and K.C.C. 9.04.010 and K.C.C. 9.04.030.

PREAMBLE:

For the purpose of effective land use planning and regulation, the King County Council makes the following legislative findings:

- 1. King County has adopted the 1994 King County Comprehensive Plan, to meet the requirements of the Washington State Growth Management Act (GMA).
- 2. The GMA also requires King County to adopt development regulations to implement and be consistent with its Comprehensive Plan by December 31, 1994.
- 3. The changes to the King County Surface Water Management Code (Title 9 of the King County Code) contained in this Ordinance are needed to bring Title 9 into conformance with the 1994 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.

BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

SECTION 1. This Title is hereby enacted to be consistent with and implement the comprehensive plan in accordance with RCW 36.70A. The county recognizes that many actions undertaken pursuant to Title 9, as amended, may impact treaty fishing rights of federallyrecognized tribes. In order to honor and prevent interference with these treaty fishing rights and to provide for water quality and habitat preservation, the county shall provide notice to any federally-recognized tribes whose treaty fishing rights would be affected by an action undertaken pursuant to this title, including but not limited to: development of wetlands, stream and river banks, lakeshore habitat of water bodies, or development directly or indirectly affecting anadromous bearing water bodies, including the promulgation of plans, rules, regulations or ordinances implementing the provisions of this title, whether or not review of such actions is required under the State Environmental Policy Act (SEPA) RCW 43.21C.

SECTION 2. Ordinance 9163, Section 1, and K.C.C. 9.04.010 are amended to read as follows:

clerk 12/20/94

Purposes. The council finds this chapter is necessary in order to promote the public health, safety and welfare by providing for the comprehensive management of surface and storm waters and erosion control, especially that which preserves and utilizes the many values of the county's natural drainage system including open space, fish and wildlife habitat, recreation, education and urban separation. The council also finds that King County shall conduct programs to reduce flooding, erosion, and sedimentation; prevent and mitigate habitat loss; enhance groundwater recharge; and prevent water quality degradation through the implementation of ((which implement)) comprehensive and thorough permit review, construction inspection, enforcement, and maintenance in order to promote the effectiveness of the requirements contained in this chapter.

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SECTION 3. Ordinance 9163, Section 2, and K.C.C. 9.04.020 are hereby amended to read as follows:

Definitions.

- "Basin" means ((for the purpose of this document)) a drainage area which drains either to the Cedar, Green, Snoqualmie, Skykomish or White rivers, or the drainage areas which drain directly to Puget Sound.
- "Basin Plan" means a plan and all implementing regulations and procedures including but not limited to capital projects, public education activities, and land use management adopted by ordinance for managing surface and storm water management facilities and features within individual subbasins.
- "Bond" means a surety bond, cash deposit or escrow account, assignment of savings, irrevocable letter of credit or other means acceptable to or required by the manager to guarantee that work is completed in compliance with the project's engineering plan and in compliance with all King County requirements.
- "Closed depression" means an area of King County which is low-lying and either has no, or such a limited, surface water outlet that during storm events the area acts as a retention basin, ((holding water that has a surface area of more than five thousand square feet at overflow)) with more than five thousand square feet at overflow elevation.
 - "Department" means the department of public works.
- "Design storm" means a rainfall (or other precipitation) event or pattern of events for use in analyzing and designing drainage facilities.
- "Development" means ((for the purposes of this document)) any activity that requires a permit or approval, including but not limited to a building permit, grading permit, shoreline substantial development permit, conditional use permit, ((unclassified)) special use permit, zoning variance or reclassification, ((planned unit development,)) subdivision, short subdivision, ((master plan)) urban planned development, building site plan, commercial site development permit or right-of-way use permit.
- "Development engineer" means the building and land development division employee authorized to oversee the review, conditioning, inspection and acceptance of right-of-way use permits, road and drainage projects constructed pursuant to permits administered by the division. The development engineer or designee shall be a professional civil engineer registered and licensed under the laws of the State of Washington.
- I. "Director" means the director of the department of public works or the director's designee.

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- "Division" means the building and land development division J. of the department of parks, planning and resources or its successor agency.
- "Drainage" means the collection, conveyance, containment, K. and/or discharge of surface and storm water runoff.
- "Drainage facility" means the system of ((collection))collecting, conveying and storing surface and storm water runoff. Drainage facilities shall include but not be limited to all surface and storm water conveyance and containment facilities including streams, pipelines, channels, ditches, swamps, lakes, wetlands, closed depressions, infiltration facilities, retention/detention facilities, erosion/sedimentation control facilities and other drainage structures and appurtenances, both natural and ((manmade))constructed.
- "Drainage review" means an evaluation by building and land development division staff of a proposed project's compliance with the drainage requirements in the Surface Water Design Manual.
- "Erosion/sedimentation control" means any temporary or permanent measures taken to reduce erosion, control siltation and sedimentation, and ensure that sediment-laden water does not leave the site.
- "Infiltration facility" means a drainage facility designed to use the hydrologic process of surface and storm water runoff soaking into the ground, commonly referred to as percolation, to dispose of surface and storm water runoff.
- Ρ. "Impervious surface" means a hard surface area which either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development, and/or a hard surface area which 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, roofs ((tops)), walkways, patios, driveways, parking lots, ((or)) storage areas, ((concrete or asphalt paving, gravel roads,)) areas which are paved, graveled or made of packed or oiled earthen materials, ((and oiled, macadam)) or other surfaces which similarly impede the natural infiltration of surface and storm water. Open, uncovered retention/detention facilities shall not be considered as impervious surfaces for the purposes of this ((document))chapter.
- "Improvement" means streets (with or without curbs or gutters) sidewalks, crosswalks, parking lots, water mains, sanitary and storm sewers, drainage facilities, street trees and other appropriate items.
- "Manager" means the manager of the building and land development division of the department of parks, planning and resources or its successor agency, or his/her designee.

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- "Master Drainage Plan" means a comprehensive drainage control plan intended to prevent significant adverse impacts to the natural and man made drainage system, both on and off-site.
- "Multifamily/commercial retention/detention facility" means a retention/detention facility which is not a subdivision retention/detention facility as defined in this chapter.
- "Preapplication" for the purposes of this chapter refers to the meeting(s) and/or form(s) used by applicants for some development permits to present initial project intentions to the Preapplication does not mean application. division.
- "Professional civil engineer" means a person registered with the State of Washington as a professional engineer in civil engineering.
- W. "Project" means the proposed action of a permit application or an approval which requires drainage review.
- "Retention/detention facility" means a type of drainage facility designed either to hold water for a considerable length of time and then release it by evaporation, plant transpiration and/or infiltration into the ground; or to hold runoff for a short period of time and then release it to the surface and storm water management system.
- "Runoff" means water originating from rainfall and other precipitation that is found in drainage facilities, rivers, streams, springs, seeps, ponds, lakes and wetlands as well as shallow ground water.
- Z. "Shared Facility" means a drainage facility designed to meet one or more of the requirements of K.C.C. 9.04.050 for two or more separate projects contained within a basin as defined in K.C.C. 9.04.020. Shared facilities usually include shared financial commitments for those drainage facilities.
- "Site" means the portion of a piece of property that is directly subject to development.
- ((AA))BB. "Subbasin" means a drainage area which drains to a water course or water body named and noted on common maps and which is contained within a basin as defined in K.C.C. 9.04.020.
- ((BB))CC. "Subdivision retention/detention facility" means a retention/detention facility which is both located within or associated with a short or formal plat subdivision containing only single family or duplex residential structures located on individual lots and which is required to handle excess runoff generated by development of an area of which two-thirds or more is designated for single family or duplex residential structures located on individual lots.

((CC))DD. "Surface and storm water" means water originating from rainfall and other precipitation that is found in drainage facilities, rivers, streams, springs, seeps, ponds, lakes and wetlands as well as shallow ground water.

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((DD))EE. "Surface and storm water management system" means drainage facilities and any other natural features which collect, store, control, treat and/or convey surface and storm water.

 $((EE))_{EF}$. "Surface Water Design Manual" means the manual (and supporting documents as appropriate) describing surface and storm water design and analysis requirements, procedures and which has been formally adopted by rule under the procedures specified in K.C.C. 2.98. The Surface Water Design Manual is available from the division permit center.

((FF))GG. "Water quality swale" means an open vegetated drainage channel intended to optimize water quality treatment of surface and storm water runoff by following the specific design criteria described in the Surface Water Design Manual.

((GG))HH. "Wetponds" and "wetvaults" mean drainage facilities for water quality treatment that contain a permanent pool of water, usually four feet in depth, that are filled during the initial runoff from a storm event. They are designed to optimize water quality by providing retention time (on the order of a week or more) in order to settle out particles of fine sediment to which pollutants such as heavy metals absorb, and to allow biologic activity to occur that metabolizes nutrients and organic pollutants. For wetvaults, the permanent pool of water is covered by a lid which blocks sunlight from entering the facility, limiting photo-dependent biologic activity.

SECTION 4. Ordinance 9163, Section 3, as amended and K.C.C. 9.04.030 are amended to read as follows:

Drainage review - when required.

- PERMITS. A drainage review is required for any proposed project requiring one of the King County permits or approvals listed in K.C.C. 9.04.030.B which would:
- Add more than five thousand square feet of new impervious surface; or
- Construct or modify a drainage system that ((G))collects and concentrates surface and storm water runoff from ((a))an on-or off-site drainage area of more than five thousand square feet; or
- Contain or ((abut)) be adjacent to a floodplain, stream, lake, wetland or closed depression, or a sensitive area as defined in K.C.C. ((21.54)) 21A.24 (Sensitive Areas) excluding seismic, coal mines, and volcanic hazard areas.
- The following King County permits and approvals will be required to have a drainage review if the project involves the planned actions listed in K.C.C. 9.04.030.A:

Administrative subdivision (short plat); 1 2 Clearing; 3 Commercial building; ((1))3.4 ((2))4.Commercial Site Development; 5 Conditional use; ((3))5.6 Formal subdivision (plat); ((4))6.7 ((5))7.Grading; 8 ((6. Master plan development;)) 9 ((7. Planned unit development;)) 10 Residential building; 11 9. Right-of-way use; 12 10. Shoreline substantial development; 13 ((11. Administrative subdivision (short plat);)) 14 $((\frac{12}{12}))$ 11. Special use; 15 12. Urban Planned Development 16 ((13. Unclassified use;)) 17 ((14))13. Zoning reclassification; and/or 18 ((15))14. Zoning variance. 19 SECTION 5. Ordinance 2281, Section 5, as amended, and K.C.C. 20 9.04.050 are amended to read as follows: 21 Drainage review - requirements. 22 CORE REQUIREMENTS. Every permit or approval application 23 with drainage review required by K.C.C. 9.04.030 must meet each of 24 the following core requirements which are described in detail in 25 the Surface Water Design Manual: 26 Core Requirement #1: Discharge at the natural location. discharge from a project site must occur at the natural location 27 28 and/or produce no significant adverse impact, as described in the 29 Surface Water Design Manual. 30 Core Requirement #2: Off-site analysis. All projects must 31 identify the upstream tributary drainage area and perform a downstream analysis. Levels of analysis required depend on the 32 33 problems identified or predicted. At a minimum, a level one 34 analysis as described in the Surface Water Design Manual must be 35 submitted with the initial permit application. 36 Core Requirement #3: Runoff control. All projects shall 37 provide runoff controls to control the quantity and quality of 38 runoff from the project by limiting the peak rates of runoff from 39 design storm events to the pre-developed peak rates based on the 40 project site's existing runoff conditions. The design volume, when 41 detention facilities are required by the Surface Water Design 42 Manual to meet the standard runoff control performance curve for the two- and ten-year, twenty-four hour duration design storm 43 events, shall be increased by a thirty percent factor for safety. 44 45 This factor of safety shall be reviewed as new research is

completed to evaluate its effectiveness

Project runoff resulting from more than five thousand square feet of impervious surface, and subject to vehicular use or storage of chemicals, shall be treated prior to discharge from the project site by biofiltration measures as specified in the Surface Water Design Manual.

Core Requirement #4: Conveyance system. All conveyance systems for projects must be analyzed, designed and constructed for existing tributary off-site flows and developed on-site flows from the project.

Core Requirement #5: Erosion/sedimentation control plan. All engineering plans for projects that involve modification or significant impact to existing drainage facilities and/or construction of new drainage facilities must include a plan to control erosion and sedimentation during construction and to permanently stabilize soil at the site.

Core Requirement #6: Maintenance and operation. Maintenance of all drainage facilities constructed or modified by a project is the responsibility of the property owner as described in the Surface Water Design Manual, except King County performs maintenance of drainage facilities constructed for formal plat subdivisions and some short plat subdivisions, two years after final plat recording following an inspection by the department.

Core Requirement #7: Bonds and liability. All drainage facilities for projects (except downspout roof drain infiltration systems) must comply with the bond and liability requirements of K.C.C. 9.04.100.

B. SPECIAL REQUIREMENTS. In addition to the core requirements, engineering plans must also meet any of the following special requirements which apply to the project and which are described in detail in the Surface Water Design Manual:

Special Requirement #1: Critical drainage area. If a project lies within an area designated by public rule as a "critical drainage area," then the project drainage ((review)) and engineering plans shall be prepared in accordance with the special critical drainage area requirements that have been formally adopted by public rule. Copies of all designated critical drainage area public rules (including critical drainage area maps) are available for reference from the division permit center;

Special Requirement #2: Compliance with an existing master drainage plan. If a project lies within an area covered by an approved master drainage plan as listed at the division permit center, then the project drainage ((review)) and engineering plans shall be prepared in accordance with any special requirements of the master drainage plan. Copies of all master drainage plans are available for reference from the division permit center;

Special Requirement #3: Conditions requiring a master drainage plan. If a project:

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Is ((a master planned)) an urban planned development as described in an adopted community plan; or

Is a subdivision that will eventually have more than one hundred single family lots and encompasses a contiguous drainage sub-basin of more than two hundred acres; or

- Is a commercial building permit, commercial site development or formal subdivision ((or planned unit development)) that will eventually construct more than fifty acres of impervious surface; or
- Will clear an area of more than five hundred acres within a contiquous drainage sub-basin; then a master drainage plan shall be prepared as specified in the Surface Water Design Manual. master drainage plan process should proceed coincidentally with the State Environmental Policy Act (SEPA) process. Approval of the master drainage plan is required before permit approval.

Special Requirement #4: Adopted basin or community plans. a project lies within an area included in an adopted basin or community plan, then the project drainage ((review)) and engineering plans shall be prepared in conformance with the special requirements of the adopted basin or community plan. Copies of all adopted basin and community plans are available for reference from the division permit center;

Special Requirement #5: Shared Facility Drainage Plans. If a project lies within an area covered by an approved shared facility drainage plan, then the project drainage and engineering plans shall be prepared in accordance with any special requirements of the shared facility drainage plan. Copies of all adopted shared facility drainage plans are available for reference from the division permit center;

Special Requirement #6: Lake Management Plans. If a project lies within an area designated by public rule as a "lake management plan" then the project drainage and engineering plans shall be prepared in accordance with the special lake management plan requirements that have been formally adopted by public rule. Copies of all designated lake management plan public rules (including lake management plan area maps) are available for reference from the division permit center;

Special Requirement #((5))7: Special water quality controls. If a project will construct more than one acre of impervious surface that will be subject to vehicular use or storage of chemicals and:

a. Proposes to discharge runoff directly to a regional facility, receiving water body, lake, wetland, or closed depression to provide the runoff control consistent with Core Requirement #3; or

b. The runoff from the project will discharge into a Type 1 or 2 stream, or Type 1 wetland within one mile from the project site; then a wetpond meeting the standards as specified in the Surface Water Design Manual shall be employed to treat a project's runoff prior to discharge from the project site. A wetvault or water quality swale may be used when a wetpond is not feasible.

Special Requirement #((6))8: Coalescing plate oil/water separators. If a project will construct more than five acres of impervious surface that will be subject to petroleum storage or transfer, or high vehicular (more than twenty five hundred vehicle trips per day) or heavy equipment use, storage or maintenance, then a coalescing plate or equivalent oil/water separator shall be employed to treat a project's runoff prior to treatment by a wetpond, wetvault, or water quality swale, and/or discharge from the project site.

Special Requirement $\#((7))\underline{9}$: Closed depressions. If a project will discharge to an existing closed depression either on or off the site that has greater than five thousand square feet of surface area at potential overflow, then the project's drainage ((review)) and engineering plans must meet the requirements for closed depressions as specified in the Surface Water Design Manual;

Special Requirement $\#((8))\underline{10}$: Use of lakes, wetlands or closed depressions for runoff control. If a project proposes to use a lake, wetland, or closed depression for runoff controls required by Core Requirement #3, then the project must meet the requirements of K.C.C. ((21.54)) 21A.24 (Sensitive Areas) for such use, include special water quality controls, and observe the limits on any increases to the floodplain as specified in the Surface Water Design Manual;

Special Requirement #((9))11: Delineation of one hundred year floodplain. If a project contains or abuts a stream, lake, wetland or closed depression, then the one hundred year floodplain boundaries (and floodway if available based on an approved floodplain study as specified in the Surface Water Design Manual) shall be delineated on the site improvement plans and profiles and on any final plat maps prepared for the project;

Special Requirement #((10))12: Flood protection for Type 1 and 2 streams. If a project contains or abuts a Type 1 or 2 stream (as defined in the Surface Water Design Manual) that has an existing flood protection facility or involves construction of a new, or modification of existing flood protection facility, then the flood protection facility shall be analyzed and/or designed as specified in the Surface Water Design Manual and in the Federal Emergency Management (FEMA) regulations (44 CFR).

Special Requirement #((11))13: Geotechnical analysis and report. If a project includes construction of a pond for drainage control or an infiltration system (excluding a roof downspout system) above a steep slope (as defined in the Surface Water Design Manual) within two hundred feet from the top of the steep slope or on a slope with a gradient steeper than fifteen percent, or construction of earth fill/bank armor for flood protection facilities, then a geotechnical analysis and report shall be prepared and stamped by a geotechnical professional civil engineer that shall address at a minimum the analysis described in the Surface Water Design Manual;

Special Requirement $\#((\frac{12}{2}))\underline{14}$. Soils analysis and report. If the soils underlying a project have not been mapped, or if the existing soils maps are in error or not of sufficient resolution to allow the proper engineering analysis of the proposed site to be performed, then a soils analysis and report shall be prepared and stamped by a professional civil engineer with expertise in soils to verify and/or map the underlying soils by addressing at a minimum the analysis described in the Surface Water Design Manual.

- C. VARIANCES FROM REQUIREMENTS. Where application of the provisions of this section may deny reasonable use of a property, or where alternate facility designs or methods will produce a compensating or comparable result which will achieve an equivalent level of safety, function, appearance, environmental protection, and maintainability, based upon sound engineering judgment, the core and special requirements contained in the section and/or other requirements in the Surface Water Design Manual may be proposed for a variance.
- 1. A variance may be proposed provided that the resulting development shall be subject to all of the remaining terms and conditions of this chapter and provided that granting the variance will:
- a. Produce a compensating or comparable result which is in the public interest, and
- b. Meet the objectives of safety, function, appearance, environmental protection and maintainability based upon sound engineering judgment.
- 2. Granting any variance which would be in conflict with the requirements of any other King County division will require review and concurrence with that division.
- 3. Variance requests shall be processed in accordance with procedures specified in the Surface Water Design Manual.
- 4. Proposed variances to the core and special requirements must be approved prior to permit approval and construction.
- 5. The applicant may appeal the denial of a variance request by following the appeal procedures as specified in the Surface Water Design Manual.

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SECTION 6. Ordinance 7590, Section 5, as amended and K.C.C. 9.08.040 are amended to read as follows:

Purpose. It is the finding of the county that the Surface Water Management Program is necessary in order to promote public health, safety and welfare by establishing and operating a comprehensive approach to surface and storm water problems which would reduce flooding, erosion and sedimentation, prevent and mitigate habitat loss, enhance groundwater recharge and prevent water quality degradation. This comprehensive approach includes the following elements: basin planning, land use regulation, construction of facilities, maintenance, public education, and provision of surface and storm water management services. It is the finding of the county that the most cost effective and beneficial approach to surface and storm water management is through preventative actions and protection of the natural drainage In approaching surface and storm water problems the system. Surface Water Management Program shall give priority to methods which provide protection or enhancement of the natural surface water drainage system over means which primarily involve construction of new drainage facilities or systems. The purpose of the rates and charges established herein is to provide a method for payment of all or any part of the cost and expense of surface and storm water management services or to pay or secure the payment of all or any portion of any issue of general obligation or revenue bonds issued for such services. These rates and charges are necessary in order to promote the public health, safety and welfare by minimizing uncontrolled surface and storm water, erosion, and water pollution; to preserve and utilize the many values of the county's natural drainage system including water quality, open space, fish and wildlife habitat, recreation, education, urban

separation and drainage facilities; and to provide for the 1 2 comprehensive management and administration of surface and storm 3 water. SECTION 7. Should any section, subsection, paragraph, 4 sentence, clause or phrase of this ordinance or its application to 5 any person or circumstance be declared unconstitutional or invalid 6 for any reason, such decision shall not affect the validity of the 7 remaining portion of this ordinance or its application to other 8 9 persons or circumstances. INTRODUCED AND READ for the first time this 28 10 November, 19 94. 11 PASSED by a vote of \mathcal{A} to \mathcal{O} this 12 ecember, 1994. 13 14 KING COUNTY COUNCIL 15 KING COUNTY, WASHINGTON 16 17 18 ATTEST: 19 20 21 Clerk of the Council 22 day of December, 1994 APPROVED this 23 24 25 26 King County Executive 27 28 29 Attachments: 30 None