

1/14/79

Introduced by: Bernice Stern

Bill Reams

Mike Lowry

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77-369

ORDINANCE NO. 4035

AN ORDINANCE adopting a Sewerage General Plan for King County, amending the King County Comprehensive Plan, and repealing Ordinance 2168.

BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

SECTION 1. The "King County Sewerage General Plan" attached hereto is hereby adopted as an addendum to the King County Comprehensive Plan under the provisions of King County Code 20.12.030.

SECTION 2. As an amplification and augmentation of the Comprehensive Plan, the Sewerage General Plan shall supplement Chapter G, Utilities Development Policies, and shall prevail where conflicts, if any, may occur.

SECTION 3. Policy D-26 of the King County Comprehensive Plan, Chapter D, is hereby amended to read as follows:

"In areas where the allowed average residential density is not over one housing unit per gross acre, development should include the following improvements:

- a. type of street improvement dependent upon type of street and amount of potential traffic;
- b. improved walkways desirable at least on one side of the street;
- c. publicly approved water supply (may be privately owned);
- d. provision for adequate drainage (primarily surface drainage except for problem areas) and
- e. ~~((septic-tanks-(subject-to-health-department-approval-and-dependent-on-soil-conditions)-))~~ sanitary sewers or suitable alternative.

SECTION 4. Ordinance 2168 is hereby repealed.

INTRODUCED AND READ for the first time this 22nd day of May, 1977.

PASSED this 15th day of January, 1979.

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON

Ruby Chow
Chairman

ATTEST:

Dorothy M. Quinn DEPUTY
Clerk of the Council

APPROVED this 25th day of January, 1979.

[Signature]
King County Executive

King County Sewerage General Plan

As adopted by King County Ordinance No. 4955, passed on February 15, 1979.

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APPENDICES

Second printing, March 1979

* NOTE: Further adopted as a functional plan, implementing the 1985
County Comp. Plan by ORD 7178, SEC. 14. (KCC 20.12.160)
- However, parts of Chapt 6 are superceded.

CHAPTER 1 INTRODUCTION

1.1 Legal Authority for the Plan

The Sewerage General Plan is an element of the King County Comprehensive Plan, adopted under the County's general planning and regulatory authority as reflected in RCW 36.70, RCW Titles 56, 57 and 58, and the King County Charter. The plan will be used by King County in making land use decisions and reviewing sewer agency proposals.

In addition, the Sewerage General Plan has also been prepared to meet the requirements of RCW 36.94, the County Services Act. In accordance with these requirements, the plan has been considered by a Review Committee representing sewer agencies throughout the County and submitted to METRO Council for approval.

King County currently operates several small sewerage systems and also has significant sewer planning responsibilities relative to other sewer agencies in the County. These responsibilities include approval of sewer agency comprehensive plans pursuant to RCW 56.16 and KCC 13.24, water quality planning for the Snoqualmie Basin pursuant to Section 208 of PL92-500, and regional sewerage facility planning through County representation on the METRO Council. The Sewerage General Plan provides a general framework for King County in exercising its authority over the provision of sewer services as provided in these and other laws and regulations.

1.2 Scope and Purpose

The purpose of this plan is to coordinate the provision of sewer services with land use plans of incorporated cities and the County. The principle vehicle in the plan for accomplishing this objective is the designation of specific geographic areas, known as "local service areas", which represent the maximum area where sewer service may be provided. The plan also establishes an amendment process for updating and expanding the approved service areas in the future.

The Sewerage General Plan recognizes that sewer agencies in King County, including METRO, sewer districts, water districts, cities, and the County, are responsible for developing more detailed engineering plans showing interceptors and collector sewers to serve within the approved local service areas. It is intended that the clear delineation of local service areas in this plan will facilitate sewer agency planning for the established sewer service areas and will streamline King County's review and approval of these plans.

The Sewerage General Plan supports the land use policies of the County Comprehensive Plan, the Urban Centers Development Concept, which call for development clustered around urban centers and recognize the need for coordinating the provision of public facilities, utilities, and services for development. The local service areas of the plan are intended to promote development consistent with the Comprehensive Plan policies, which encourage development in areas with existing services and facilities and discourage development outside the "foreseeable urban area".¹ The local service area designations also reflect County Comprehensive Plan policies relating the density of residential development to appropriate levels of utility improvements.²

¹ County Comprehensive Plan (1964) Policy D-2, and Land Use Objective B of the Quality of Life Addendum.

² County Comprehensive Plan (1964) Policies D-24, D-25, and D-26, which are included in Appendix B.

1.3 Content and Organization

The required contents of the Sewerage General Plan are defined in RCW 36.94.010. Chapter 2 provides a general description of the existing major sewerage facilities in King County and establishes the regulations governing future extensions of such sewerage facilities. The approved Local Service Areas of the plan are established in Chapter 3. The following two chapters, Chapters 4 and 5, provide a discussion of engineering standards and financing methods to be considered in development of comprehensive plans for facilities to serve within the approved areas. In Chapter 6, the procedures and criteria for amending the Sewerage General Plan are established. Chapter 7 incorporates the engineering plan(s) for sewerage systems operated by King County under the provisions of RCW 36.94. The final chapter, Chapter 8, includes two series of maps which summarize: 1) the existing major sewerage facilities in King County and 2) the approved local service areas of the plan, as designated in Chapter 3 and through the amendment process.

CHAPTER 2 MAJOR SEWERAGE FACILITIES

The sewerage system in King County includes local collection sewers which feed trunk and interceptor sewers which, in turn, transport sewage to treatment plants for treatment, disinfection, and disposal, with effluent discharge to Puget Sound or rivers tributary to Puget Sound. The agencies providing these facilities include cities and towns, water and sewer districts, King County and METRO. This chapter provides a general description of the existing major sewerage facilities in King County and identifies those facilities which will require future amendments to this plan.

2.1 Treatment and Disposal Facilities.

Sewage treatment is the removal of small amounts of mineral and organic matter from wastewater flows to reduce the impact of effluent discharge on receiving waters. The level or degree of treatment refers to the amount and type of waste material removed. The level of sewage treatment required depends primarily upon the character of wastes collected, the character of receiving waters, and constraints set by regulatory agencies.

A "primary" level of treatment is provided at each treatment plant in King County which discharges effluent directly into Puget Sound. Primary treatment includes physical operations such as screening and sedimentation which removes the solids found in waste water. Influent BOD (biological oxygen demand) is reduced by about 1/3 through primary treatment.

"Secondary" treatment is currently provided at four sewage treatment plants discharging into rivers tributary to Puget Sound. Secondary treatment utilizes biological processes to remove dissolved and colloidal material from waste water. This level of treatment removes an additional 85% (approximately) of waste water BOD.

Following primary or secondary treatment, treated waste water is discharged through outfall facilities into receiving waters. Solid residues produced during sewage treatment, primarily sludge, are processed for disposal at each sewage treatment plant. Sludge is generally disposed in lagoons and land sites or treated for use as fertilizer. Sludge treatment and disposal operations for all of the METRO plants are centralized at the West Point Treatment Plant.

Sewage treatment and disposal facilities in King County are owned and operated by sewer districts, cities and METRO. At present, there are 15 sewage treatment plants providing waste water treatment in King County as shown on Map 1 in Chapter 8. The location, capacity, level of treatment, and receiving waters for each of these facilities are listed in Table 1 on page 6.

2.2 Trunk and Interceptor Sewers

Trunk and interceptor sewers are the major conduits through which wastewater is transported from local collection sewers to treatment plants for treatment disposal. Interceptors are generally large diameter pipes which flow parallel to a natural drainage channel, receiving wastewater discharges from a number of tributary sewers known as trunk sewers within the drainage area. Trunks and interceptors generally do not provide for direct connections to individual customers.

Wastewater is transported through the pipes by gravity flow wherever topography and/or trenching provides sufficient slope for proper velocities of flow. The relationship between pipe diameter and slope determines the sewer capacity for gravity sewers. In some cases, where excessive excavation would be required for gravity flow, pumping is utilized to transport sewage under pressure through pipes known as force mains. Another type of pressurized sewer, a siphon, is utilized to pass under obstacles such as stream beds and buried pipes. The existing major trunk and interceptor sewers in King County are shown on Map 1 in Chapter 8.

TABLE 1

TREATMENT AND DISPOSAL FACILITIES

FACILITY	OPERATING AGENCY	TREATMENT PLANT CAPACITY		EXISTING SERVICE AREA (acres)	LEVEL OF TREATMENT	RECEIVING WATER
		Average Dry Weather Flow (mgd)	Maximum Wet Weather Flow (mgd)			
1 Alki	METRO	10	30	5,500	Primary	Puget Sound
2 Carkeek Park	METRO	3.5	20	2,300	Primary	Puget Sound
3 Des Moines Creek	Des Moines S.D.	1.91	3.4	6,500	Primary	Puget Sound
4 Duvall	Town Duvall	.2	1.4	1,600	Secondary	Snoqualmie River
5 Enumclaw	City of Enumclaw	1.0	2.0	750	Secondary	Boise Creek (White River)
6 Lakota	Lakehaven S.D.	1.45	4.0	10,000	Primary	Puget Sound
7 Miller Creek	SW Suburban S.D.	3.82	5.13	6,000	Primary	Puget Sound
8 North Bend	City of N. Bend	.27	1.12	146	Primary (Sec. STP und. const.)	Snoqualmie
9 Redondo	Lakehaven S.D.	1.0	3.0	4,300	Primary	Puget Sound
10 Renton	METRO	72 / 36	190 / 96	43,000	Primary/ Secondary	Duwamish River
11 Richmond Beach	METRO	3.20	10	3,000	Primary	Puget Sound
12 Salmon Creek	SW Suburban	3.5	10.5	3,400	Primary	Puget Sound
13 Snoqualmie	Town of Snoqualmie	.57	1.0		Secondary	Snoqualmie River
14 Vashon	Vashon S.D.	.25	.465	965	Primary	Puget Sound
15 West Point	METRO	125.	325.	63,000	Primary	Puget Sound

2.3 Pumping Stations

As indicated in the previous section, pumping is necessary in a sewerage system wherever excessively deep excavation would be required to maintain gravity flow. The location of existing pumping stations associated with major trunk and interceptor sewers in King County is shown on Map 1, pages 40-47. Table 2 on pages 8-9 provides an inventory of these facilities.

2.4 Monitoring and Control Facilities.

There are two general types of monitoring and control programs in King County: (1) storage and diversion systems for waste water flows utilizing CATAD (Computer Augmented Treatment and Disposal); and (2) programs of monitoring sewage treatment plant influent, effluent, and receiving water quality to comply with regulatory agency requirements.

A. CATAD

Since METRO's interceptors and treatment plants do not always have sufficient capacity to handle both sewage and storm flows during heavy rainfall, it is sometimes necessary to overflow untreated combined flows into Lake Washington, the Duwamish River, or Puget Sound. The CATAD storage and diversion system is utilized by METRO to maximize storage within the sewerage systems and to select the point of overflow which will cause the least water quality impact.

The CATAD system consists of 17 regulator stations and 30 pumping stations which are controlled by a central computer. Each station is equipped to monitor rainfall and water levels within the sewerage system and to store waste water flows in upstream interceptors as necessary. Storage throughout the system is controlled by computer to minimize the number of combined sewer outflows and to select optimal locations for any necessary overflows.

TABLE 2

PUMPING STATIONS BY TREATMENT PLANT TRIBUTARY AREA

TREATMENT PLANT TRIBUTARY AREA	PUMPING STATION NUMBER	PUMPING FACILITY	OPERATING AGENCY	CAPACITY (mgd)
Alki Treatment Plant	A-1	63rd Ave. SW	METRO	47
	A-2	Murry Ave SW	"	28.6
	A-3	SW Barton S	"	13.4
	A-4	53rd Ave SW	"	8.5
Carkeek Park Treatment Plant	C-1	North Beach	Metro	3.5
Des Moines Treatment Plant	DM-1	7th Ave	Des Moines SD	
	DM-2	Lift Sta. #1	"	
	DM-3	Lift Sta. #2	"	
	DM-4	240th St.	"	
	DM-5	Pacific Hwy. S	"	
Lakota Treatment Plant	L-1	Dumas Bay	Lakehaven SD	
Miller Creek Treatment Plant	MC-1		SW Suburban SD	
	MC-2		"	
	MC-3		"	
	MC-4		"	
	MC-5		"	
	MC-6		"	
	MC-7		"	
Redondo Treatment Plant	RO-1	Redondo	Lakehaven SD	1.08
	RO-2	North Redondo	"	0.9
	RO-3	South Redondo	"	0.4

TABLE 2 (Continued)

TREATMENT PLANT TRIBUTARY AREA	PUMPING STATION NUMBER	PUMPING FACILITY	OPERATING AGENCY	CAPACITY (mgd)
Renton Treatment Plant	R-1	Interurban	METRO	
	R-2	Algona	"	
	R-3	Pacific	"	
	R-4	S. Mercer Is.	"	
	R-5	Sweyolocken	"	
	R-6	N. Mercer Is.	"	
	R-7	Mercer #6	"	
	R-8	Bellevue	"	
	R-9	Medina	"	
	R-10	Wilburton	"	
	R-11	Yarrow Bay	"	
	R-12	Kirkland	"	
	R-13	Juanita Heights	"	
	R-14	Juanita Bay	"	
	R-15	Heathfield	"	
	R-16	N. Mercer Is	"	
	R-17	LS #10	Cascade SD	5.75
	R-18	LS #11	"	4.6
	R-19	LS #5	"	.97
Richmond Beach Treatment Plant	RB-1	Richmond Beach	METRO	.58
	RB-2	Hidden Lake	"	4.2
West Point Treatment Plant	WP-1	Interbay	METRO	120
	WP-2	Duwamish	"	100
	WP-3	E. Marginal Way	"	42
	WP-4	S. Henderson St	"	7
	WP-5	W. Marginal Way	"	16.4
	WP-6	Rainier Ave	"	9
	WP-7	E. Lee St	"	1.2
	WP-8	E. Pine St	"	5.0
	WP-9	30th Ave. NE	"	12
	WP-10	Belvoir	"	10
	WP-11	Matthews Park	"	40
	WP-12	Kenmore	"	8
	WP-13	Woodinville	"	17.6
	WP-14	Hollywood	"	14.4

B. Compliance Monitoring

Compliance monitoring includes a broad range of sewage and water quality monitoring programs required to satisfy National Pollution Discharge Elimination System (NPDES) permits and other regulatory agency requirements. Data collected by METRO is submitted monthly to the Department of Ecology to assess METRO's compliance with permit requirements.

Water quality monitoring of receiving waters in King County takes place at monitoring sites shown in Figure 1 on page 11. Water samples are collected manually at most of the sites and tested for various water quality parameters. Three automatic monitoring facilities are maintained at sites along the Green and Duwamish Rivers. Influent and effluent streams of the Renton and West Point STPs and sludge discharge from West Point are monitored for heavy metals concentrations and other variables. Monitoring of the smaller METRO sewage treatment plants is conducted on a less frequent basis.

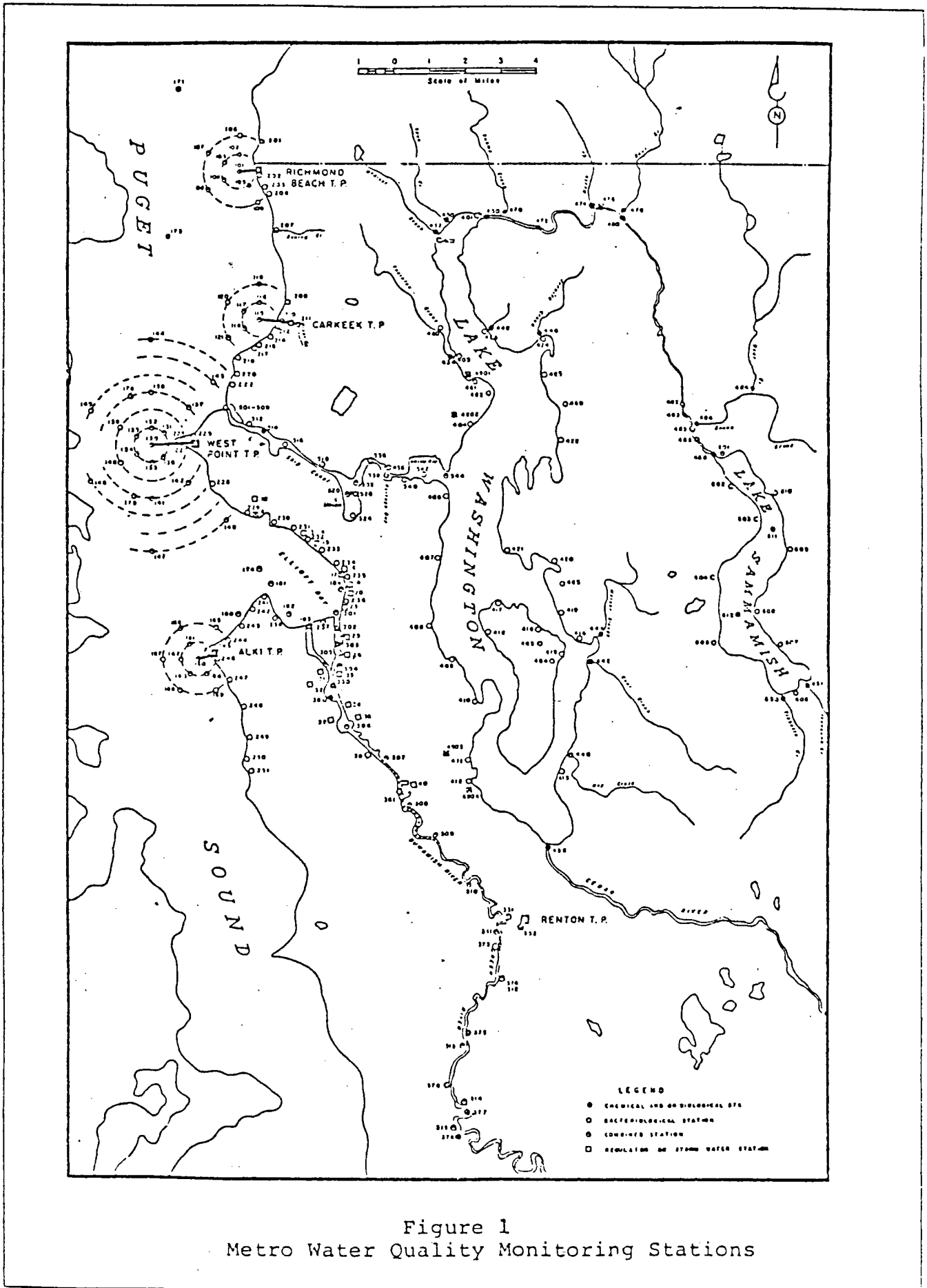


Figure 1
 Metro Water Quality Monitoring Stations

2.5 Facilities Requiring Plan Amendments

A. Sewage Treatment Plants

Approved sewage treatment facilities in King County are limited to those facilities which are identified in Table 1 on p. 6. Any new treatment plant or change in the location, capacity, level of treatment, or receiving waters of existing treatment facilities will require an amendment to this plan adopted in accordance with the procedures and criteria established in Chapter 6, except that the location, level of treatment and receiving waters for METRO facilities shall be as determined by the METRO Council.

B. County Operated Sewerage Facilities (see Chapter 7)

Comprehensive plans for County operated sewerage facilities will require an amendment to this plan adopted in accordance with the procedures and criteria established in Chapter 6.

C. Other Facilities

All other facilities, including interceptors, collection sewers, and pumping facilities, are approved at a general level for purposes of this plan through the designation of Local Service Areas (Chapter 3), and adoption of amendments to the Local Service Areas (Chapter 6). Such facilities will not require further amendment to this plan but shall be subject to all applicable state and local laws and regulations requiring sewer facility approval, including requirements for district comprehensive plan approval and METRO's sewer extension guidelines which are included in Appendix C and are hereby incorporated by reference. King County's review of sewerage facilities pursuant to such laws and regulations will be based upon the policies and local service areas of this plan.

Filing Requirement: All sewer agencies shall notify the King County Department of Planning and Community Development whenever a pumping facility, pressure sewer, or gravity sewer greater than 8 inches in diameter is constructed. The Department shall periodically update the Major Sewerage Facilities Map in Chapter 8 of this plan to reflect all existing interceptor sewers and major pumping stations.

CHAPTER 3 LOCAL SERVICE AREAS

This chapter establishes the approved Local Service Areas of the Sewerage General Plan and describes the criteria used in the initial designation of these areas.

3.1 Approved Local Service Areas

Local Service Areas are the principal mechanism in the Sewerage General Plan for coordinating sewer extensions with adopted land use plans of cities and the County. The Local Service Areas summarized on Map 2 in Chapter 8, are those areas which are authorized by this plan to receive sewer service. Sewer service to any properties outside the designated Local Service Areas, other than individual side sewer connections,³ is not permitted without an amendment to the plan adopted in accordance with the procedures and criteria established in Chapter 6.

For purposes of this plan, the designation of local service areas and adoption of amendments thereto shall also constitute approval of all interceptor sewers, pumping stations, and collector sewers necessary to serve within the approved areas. Such facilities will be reviewed at a more detailed level through existing procedures for review and approval of sewerage facilities as discussed in Section 2.5.

Local service areas represent the maximum area which could potentially be sewered consistent with local land use plans and policies. These areas will serve as the primary criteria for all required King County facility approvals, including approval of sewer agency comprehensive plans pursuant to KCC 13.24 and certification of sewerage facilities in accordance with METRO's sewer extension policies. In incorporated areas, it shall be the responsibility of the applicable city to insure that sewer extensions and pumping facilities are consistent with the local service areas of this plan.

³ Side sewer means a pipe which connects a single building to a sewerage system and is owned by the owner of that building rather than the sewer utility.

3.2 Designation of Local Service Areas

The local service areas initially designated in this plan represent at a minimum those areas and facilities which already exist. In unincorporated areas where community plans have been adopted, such plans were used as guides in designating expanded local service areas. Community plans have been adopted in four communities and are in the adoption process in three others. The last community with part of its area clearly within the urban area has a plan effort underway. Community plans for other communities are scheduled over the next few years. In order to protect the integrity of new community plans and those currently in the adoption or amendment process, limited local service areas are initially designated in this plan with the intent that amendments described in Chapter 6 will proceed concurrent with their adoption.

In incorporated areas, municipal comprehensive plans were used as guides in designating local service areas beyond existing facilities.

Specifically, local service areas in this plan were originally designated according to these factors:

1. For those lands in unincorporated areas addressed by the Federal Way Community Plan, Northshore Community Plan, Highline Community Plan, and Sea-Tac Communities Plan, the planned land uses requiring sewer service were identified using policies D-24, D-25, and D-26⁴ of the Comprehensive Plan and other applicable community plan policies. In addition, local service areas for these community plans were assigned to lands within the same subdrainage basin on those lands meeting Comprehensive Plan Policies D-24, D-25, and D-26 where slope or soil conditions would not support alternative on-site methods provided that sewers will serve only the planned land use and density of the community plan.

⁴ These policies are included in Appendix B.

2. For the remaining unincorporated area, the following lands are included as local service area:
 - a. land within 330 feet of existing sewers and within the subdrainage basin;
 - b. lands within ULID's which have been formed with facilities funded and under contract and lands which are designated for sewer service in proposed community plans where ULID petitions have been certified;
 - c. lands for which plats requiring sewer service have received preliminary or final approval subsequent to Ordinance 3579.
 - d. lands identified in Ordinance 3579, Exhibit A, as "urban sewer service areas".
 - e. Local service area boundaries were adjusted to include lands entirely surrounded by local service areas designated according to criteria (a) - (d) above.
 - f. Except where a Community Plan or Community Plan Revision has specifically recommended that an area not be served by sewers, existing plats which are made up of lots averaging 15,000 square feet or less in size are eligible for local sewer service.
3. Incorporated areas were generally included in local service areas consistent with municipal land use plans.
4. In recognition of the Countywide significance of agriculture lands, floodways, and wetlands, such areas are not included in any local service areas unless there is existing direct service to users.
5. The location of the specific boundary lines of the property line maps is on property boundaries where possible. The lines are adjusted to the nearest boundary where lots are less than one acre in size, and adjusted to either property lines or portions of sections where more than one acre is involved.

CHAPTER 4 DESIGN CRITERIA AND PRELIMINARY ENGINEERING

4.1 Engineering Plans

The implementation of this plan looks to sewer agencies for the next step in the planning and engineering process. This plan recognizes that the local sewer (or water) districts, cities and towns, and the County have the responsibility to design and operate local sewer facilities. Sewer agencies are responsible for developing engineering plans which indicate how service will be provided within the local service areas designated by this plan. This chapter provides general guidelines relating to design criteria and preliminary engineering of sewerage facilities.

4.2 Design Loadings

Sewage systems must be sized with sufficient capacity to handle the peak rate of flow for a given tributary area. In determining what the peak flow rates are, three variables need to be considered:

1. The average daily sewage flows from domestic and industrial sources;
2. The peaking factors which indicate the greatest volume of sewage which can be expected from a given area;
3. The additional flows which result from ground water infiltration and stormwater inflow.

Domestic Flow: Flows from domestic sources consist of sewage generated by both residential and commercial land uses. Generally, water consumption during the winter months has been found to be equivalent to the amount of sewage that can be expected from this source. It is quantified in the form of the average number of gallons generated per capita per day (gpcd).

Based on technical studies in this area, flow rates should fall in the range of 50-85 gpcd.

Industrial Flow: Two approaches may be used to predict the amount of industrial flow in the King County area. One is to assign 2,000 gallons of sewage flow per acre per day (gpad) for light industrial areas and heavy industrial areas greater than 1,000 acres in size. Heavy industrial areas less than 1,000 acres in size can use an average flow of 4,000 gpad. A second method may be used based on forecasts of employees working in various industries.

Groundwater Infiltration/Stormwater Inflow: Groundwater infiltration is the entrance of ground water into the sewerage collection system through cracks, pores, breaks, and defective joints in sewer piping. Stormwater inflow refers to direct flows of stormwater into sewer piping through hookups from stormwater collection facilities such as roof and footing drains. These two aspects of the total sewage-waste flow are measured in the form of number of gallons entering the system per acre per day (gpad).

Due to improvements in construction materials and practices in recent years, the amount of flow resulting from groundwater infiltration has been greatly reduced. Piping installed prior to 1960 can be expected to allow a maximum of 1200 gpad in sanitary systems during the winter months. On the other hand, systems constructed after 1960 exhibit a maximum of 600 gpad entering the system. Improved jointing procedures and the use of PVC pipe and other non-porous piping materials has greatly contributed to the reduction inflow from groundwater infiltration.

Stormwater inflow is due in large part to unauthorized hook-ups of storm drains. As enforcement of regulations by sewer utilities to prevent such hook-ups has become more widespread, flows from stormwater have been greatly reduced.

For older systems constructed prior to 1970, inflow carried a maximum of 2,000 gpad, whereas for the more recent systems, 500 gpad is the maximum amount expected to enter the system.

Peaking Factor: A peaking factor must be applied to average domestic and industrial flows in order to estimate the maximum allowance for both daily and seasonal fluctuation. Peaking factors are described in the following table and broken down according to the size of the tributary area.

LAND USE	<u>AREA IN ACRES</u>			
	0-100	100-1,000	1,000-5,000	5,000-10,000
Residential	4.0	3.0	2.2	1.9
Light Industry	3.2	2.7	2.0	-
Heavy Industry	2.5	2.2	1.7	-
Commercial	1.75	1.75	-	-

4.3 Lateral, Trunk and Interceptor Sewers

A number of types of materials are available for use in the construction of sewer piping. The data concerning infiltration/inflow is based upon the use of reinforced concrete pipe with rubber gasket joints. These two substances represent some of the more commonly used materials.

Factors which need to be considered in the selection of the most appropriate materials for piping are the life expectancy of the system; the resistance to scour; the friction coefficient; the presence of industrial wastes and resistance to acids, alkali, gases, and solvents; the strength to resist structural failure; the water tightness and ease of assembly of the joints; the availability of the sizes required; the ease and cost of handling and installation; and the cost of the materials. The following substances have been used: asbestos-cement, brick masonry, cast iron, unreinforced concrete, corrugated and welded steel, vitrified clay, polyvinyl chloride (PVC) and ductile iron.

4.4 Sewage Pumping Stations

Sewage pumping stations on trunk and interceptor sewers should be designed to handle the peak weather flows for a given tributary area. Centrifugal or mixed flow pumps are normally used, powered by variable speed electric motors. The number of pumps found at a particular station is a function of the range of flows for which collection is being provided. Pumps often are installed on an incremental basis to accommodate increased flows resulting from expanded development of an area.

Easy access to the wet and dry sides of a pumping station is necessary, as well as adequate ventilation to prevent condensation on equipment. Design requirements also call for the provision of control and metering devices and emergency power.

4.5 Treatment Facilities

In King County there are currently two levels of treatment in use, primary and secondary. Primary treatment consists of the following processes:

1. Screening and subsequent removal of large objects to prevent pumps and pipes from becoming clogged.
2. Grinding and shredding of sewage through the use of a comminuter.
3. Grit removal via passage through a grit chamber to allow for the settling of sand, grit, cinders, and small stones.
4. Chlorination of sewage effluent prior to entry into the receiving water body.

Secondary treatment includes all of the above steps, as well as the additional oxidation of the organic material to facilitate further decomposition. This oxidation procedure is usually accomplished by one of two methods: either by the activated-sludge process or the trickling-filters process. In addition, another pass through a set of sedimentation tanks follows the oxidation step.

Like pump stations, treatment works should be designed to allow for staged construction. Basic structures, such as buildings, inlet works, and all other facilities not readily enlarged, should be built to provide for the treatment of the ultimate peak flow. Other equipment should be constructed on incremental basis, sized initially to handle the current peak flow, and subsequently enlarged when the amount of sewage requires it.

Effluent discharge from sewage treatment facilities must meet both federal and state water pollution standards for the quality and quantity of effluent disposed. In the issuance of a National Pollution Discharge Elimination System permit (NPDES) by the regulatory agencies involved, allowable discharge quantities reflect one of two figures. They represent either the design capacity of a treatment plant or the highest estimated monthly average measured over the duration of time for which a permit is being issued, whichever is smaller. Accordingly, existing and proposed treatment systems in the county should have a design capacity large enough to accommodate this peak monthly average.

Various methods are available for the disposal of sewage sludge. Some of these methods involve dewatering the sludge before disposal, while others eliminate it in its raw untreated state. Sludge may be placed in sewage lagoons which eventually receive an earth cover, used as a soil conditioner, or incinerated, after which it is land filled.

As a result of amendments to the Federal Water Pollution Control Act, (PL-92-500), the Environmental Protection Agency is required to adopt regulations governing sludge disposal methods by the end of 1978. Following the promulgation of these regulations, disposal of sludge in a manner addressed by the regulations must follow the procedures described therein.

CHAPTER 5 FINANCING

5.1 Sewer agency comprehensive plans should indicate methods of financing and distributing the costs of proposed sewerage facilities. Such plans must demonstrate that the proposed sewerage facilities are financially feasible within existing local service areas and are not dependent upon a future expansion of the local service area.

5.2 Overview of Financing Methods

This chapter provides a summary of the most common methods of financing sewer system improvements and distributing their costs. Factors which influence the method of financing for a specific project include: the availability of state and federal grant funds, statutory limitations on bonding and taxing authority, revenue available to the utility, and the geographic area to be benefited by the improvement.

A. State and Federal Grant Programs:

1. Public Law 92-500, of the Federal Water Pollution Control Act Amendments of 1972, administered by the EPA, provides up to 75% of the construction costs for treatment plants, interceptor sewers, and sewer outfalls.
2. Washington State Referendum 26, administered by DOE, provides "Washington Futures" grants up to 15% of construction costs for projects funded under PL-92-500.
3. Other Federal agencies, including Housing and Urban Development (HUD), Farmers Home Administration (FHA) and Economic Development Administration (EDA), administer grant programs which provide limited funds for certain sewer construction projects.

B. Bonds

The sale of general obligation, revenue, and special assessment bonds is the most common method of financing sewer system improvements. Revenue bonding is most commonly used for collection systems. Payment of the debt service, including principal and interest on such bonds, is financed through a variety of revenues, taxes, and assessments available to the utility.

1. General obligation bonds are usually used to finance general facilities which benefit an entire jurisdiction. GO bonds are retired by ad valorem property taxes and other monies legally available for such payments. A vote of the people is required for city and county GO bond issues which exceed statutory debt limitations, and is always required for sewer and water districts.
2. Revenue bonds may be retired by a combination of operating revenues, connection and late-comer charges, and special property assessments established through utility local improvements districts (ULID). Revenue bonds are used to finance most sewer system improvements. A vote of the people is not required.
3. Local improvements district (LID) bonds may be sold by cities and towns for sewer improvements. These bonds are issued to cover the unpaid balance of LID assessments at the end of the assessment prepayment period. LID bonds are retired solely by LID assessments or an LID guarantee fund.

C. Ad Valorem Property Taxes

Ad valorem property taxes may be levied for sewer improvements. A vote of the people is always required for sewer and water district tax levies and for cities and counties when taxing in excess of constitutional limitations. Property taxes are usually applied to the

payment of general obligation bonds. In some cases income from property taxes may be applied toward operation and maintenance costs.

D. Special Assessments

1. Utility Local Improvements Districts (ULIDs) may be formed to establish property assessments based on special benefits received as a result of local improvements. ULID assessments collected by all agencies (other than King County) must be deposited in the Utilities Revenue Bond Redemption Fund.
2. Local Improvements Districts (LID) may only be formed by cities and towns for sewer purposes. LID assessments are paid directly into a construction fund during the assessment pre-payment period. Following the pre-payment period, LID assessments are applied solely to the redemption of LID bonds.

E. Monthly Service Charges

Monthly service charges may be collected from all customers receiving sewer service and from those to whom service is available. Service charges are fixed by the utility to cover the costs of operation and maintenance, METRO charges (if applicable), and a portion of the debt service on outstanding bonds.

F. Connection Fees

Connection fees are collected from new customers hooking up to an installed sewer facility. These fees provide for the actual costs of sewer connection and, in addition, may include "late-comer charges" to cover a portion of the original construction costs of the facility. An "inspection charge" is generally collected to cover costs of side sewer inspections.

G. Developer Extension

Developer extensions are sewer lines which are constructed or financed by a private entity and taken over by a sewer utility. Authorized under Chapter 35.91 RCW, developer extension contracts often provide that the developer is reimbursed for a portion of the sewer construction costs as other customers connect to the line.

CHAPTER 6
AMENDMENT PROCESS

6.1 Amendment Procedures

Amendments to this plan are required for:

- a. any change in the boundary of a local service area, other than boundary adjustments as described in Section 6.5 on page 36;
- b. any new sewage treatment facilities as specified in Section 2.5; and
- c. comprehensive plans for County operated sewerage facilities.

Such amendments may originate in a variety of ways but shall all be coordinated and reviewed by the King County Department of Planning and Community Development. The chart and step descriptions on the following page define the procedure for processing amendments to this plan.

AMENDMENT PROCESS

- Step 1 AMENDMENT REQUESTS
- Step 2 King County for (Public Notification)
Administration and Distribution
- Step 3 Step 3A or Step 3B
(90 All LSA amendments in unin- All LSA amendments in incor-
day corporated areas and all porated areas are submitted
limit) facilities amendments are sub- to the appropriate city for
mitted to the Review Committee land use certification.
for subcommittee assignment and
review.
- In addition, all facility amend-
ments within the Cedar-Green
Basin are submitted to METRO
for approval. (Facility amend-
ments include ONLY sewage
treatment plants and County-
operated facilities.)
- Step 4 King County for compilation, administration
and ordinance preparation
- Step 5 County Council for Public Hearing
& Adoption by Ordinance (Public Notification)
(See Amendment Criteria Sections 6.3, 6.4, 6.5)

Step 1. Proposed amendments to this plan may originate from the following and should be filed with the Department of Planning and Community Development:

- a. Sewer and Water Districts providing sewer service;
- b. Cities
- c. METRO
- d. King County

Step 2. The amendment process shall be administered by the Department of Planning and Community Development. Initial processing shall include preparation of appropriate notices and distribution of amendment proposals to reviewing entities, including members of the Review Committee. Notification shall also be sent to a newspaper of general circulation in the affected area and to any identified community organizations in the affected area. Request for comment shall be mailed to each city and district related to the sewer system in question. Notifications shall be completed within 14 days.

Step 3. All amendments are subject to either Step 3A or Step 3B below:

3A. All Local Service Area amendments in unincorporated areas and all facility amendments⁵ are submitted to the Review Committee. The Chairman shall appoint a Subcommittee for each request. Representatives from the following jurisdictions shall be included:

- a. King County
- b. METRO (for amendments located in Cedar-Green Basin)
- c. Applicant or directly impacted agency
- d. Next nearest contributing district or city
- e. Next nearest receiving district or city
- f. Any other jurisdiction or community organization which is potentially impacted by a proposed amendment and requests to serve on the Review Subcommittee.

⁵ Facility amendments include only sewage treatment plants and County-operated sewer facilities.

Written responses by interested jurisdictions, shall be submitted to the Subcommittee within 30 days of notification. In conducting its review, the Subcommittee shall consider the responses of all interested jurisdictions, community groups, property owners, and other individuals and shall compile a report of its findings:

The Subcommittee shall transmit this report together with its recommendation of approval or disapproval to King County not before 30 days and within 90 days of receipt of the amendment by the Review Committee. In addition, the subcommittee shall send notification of its recommendation to the applicant by certified mail. (For local service area amendments proposed by community plans, this step shall occur prior to County Council adoption of the community plan but following adoption of the plan by the applicable citizens' community plan committee).

Concurrent with Review Committee consideration, all proposed facility amendments located within the Cedar-Green Basin shall also be submitted to Metro for approval. Metro review of proposed amendments shall be limited to consideration of potential impacts to Metro facilities and shall be completed within 90 days. Failure to respond within 90 days shall constitute approval by Metro.

3B. Any requests for local service areas located within the incorporated boundaries of a city shall be submitted to that city for land use certification. The land use certification shall state that the proposed amendment is either consistent or not inconsistent with the adopted land use plans and policies of the city. If the city cannot so certify, it shall issue a written statement that the service or construction is not consistent with said adopted plans and policies, or that action on the application for certification must be deferred pending receipt of such additional specified information and data as may be reasonably required for the consideration of said application. Review and certification shall be completed within 90 days of the receipt of the application by the city or may be submitted as part of the amendment application. Failure to respond within 90 days shall be considered as approval.

Step 4. The Department of Planning and Community Development shall review the proposal and transmit a recommendation to the County Council together with the report of the Review Committee; provided that if any applicable city certifies that a request is not consistent with adopted land use plans or policies (Step 3B) or if METRO disapproves a proposed facility (Step 3A), the requested amendment shall be returned to the applicant agency with such explanation. The Department shall complete its review and transmit its recommendation to the County Council no later than 30 days from completion of Step 3(A-B) above.

Step 5. The County Council shall consider the proposed amendment at a public hearing. Notification of such hearing shall be advertised in a newspaper of general circulation in the affected area at least 10 days prior to the hearing date. The Council may adopt, reject, or modify the proposed amendment based on the criteria established in Sections 6.2, 6.3 and 6.4 of this chapter. (County Council adoption of a community plan which designates a local service area shall constitute an automatic local service area amendment to this plan).

It is intended that the amendment process shall take no more than six (6) months from submittal of the application to County Council action.

6.2 Amendment Criteria - Local Service Areas

This section describes the criteria to be applied by King County (see Steps 4 and 5) in reviewing proposed amendments to Local Service Areas.

→ *supereded - see ORD 7178, SEC 14: of COMP PLAN — Refer:*

A. County-Initiated Amendments in Unincorporated King County

King County will initiate local service area amendments to implement County land use plans and policies as follows:

1. Community Plans: — *see County Complan Policy F-316*

The main vehicle used in unincorporated King County to apply the philosophy, goals, objectives, and policies of the County Comprehensive Plan is the community planning process. Therefore, this process will be the principle method of expanding local service areas in unincorporated King County. During the development of or amendment to a community plan, alternative sewage disposal methods are considered in conjunction with the determination of proposed land use densities. In community plan areas where sewer service is determined to be the appropriate method of sewage disposal or is required by Comprehensive Plan Policy D-24 (See Appendix B), the community plan shall designate a local service area. The plan may indicate a phased expansion of the local service area to provide for coordination with other public services and facilities and to insure proper timing of development.

County Council adoption of a community plan which designates a local service area shall constitute an automatic local service area amendment to this plan. Local service areas designated in community plans proposed by a citizens' community plan committee shall be advisory only, until adopted by the County Council as provided in Step 5 of the amendment process (page 30). For these amendments, Review Committee consideration (Step 3A) shall occur prior to County Council adoption of the community plan, but following adoption of the plan by the applicable citizens' community plan committee.

In designating a local service area, the following factors should be considered:

- a. Comprehensive Plan Policies D-24, D-25, and D-26,⁶ relating alternative sewage disposal methods to planned land use densities.
- b. Presence of existing health hazards resulting from inadequate sewage disposal methods.
- c. Feasibility of on-site sewage disposal methods for planned land use densities.
- d. Potential adverse impacts of sewers to agricultural lands, floodplains, wetlands, and other sensitive areas.⁷
- e. Input from affected sewer agencies regarding the technical and financial feasibility of sewers within proposed local service areas.
- f. The location of sewer drainage basins.

Community plans should assign local service areas to areas which are planned for densities lower than those appropriate for sewers according to Policies D-24, D-25, and D-26⁸ where slope or soil conditions would not support alternative on-site systems, provided that the area can be served by connection to sewers within a local service area designated according to Policies D-24, D-25, and D-26 and that sewers will serve only the planned land use and density. The designation of an area for low density development should not be the sole criteria for excluding sewers.

⁶ These policies are included in Appendix B.

⁷ These terms are defined in the Glossary, Appendix A.

⁸ These policies are included in Appendix B.

2. Other County-Initiated Amendments

In addition to amendments through the community planning process, King County may initiate local service area amendments to implement county-wide land use policies. Additional amendments will be initiated by the County in response to continuing assessments of development activity and the current need for developable sewerable land in unincorporated King County. A continuing assessment of the supply of unconstrained sewerable land in relation to the need for such land will be conducted by King County. King County must maintain at least a 5-year supply of developable land within the unincorporated portion of the Local Service Area at all times.

B. Other amendments in unincorporated King County

Sewer agencies may request changes or additions to local service areas in unincorporated King County. However, the County initiated amendments described above are intended to be the primary means for implementing County land use policy and for responding to the need for developable sewerable land in unincorporated King County. Therefore, further expansion of local service areas in unincorporated King County must be based upon an overriding need for service resulting from an existing or potential health hazard.

Local service areas requested by sewer agencies in unincorporated King County may be adopted in accordance with the following factors:

1. a. The sewer district may request the County Council to consider the current need for developable sewerable land in unincorporated King County as discussed ^{COMPLAN Policy F-316a} in ~~Subsection~~ ~~6.2(a)(2) above~~ and may request the County to propose an amendment thereon; or

- b. The sewer agency must demonstrate that the amendment is necessary to solve an existing or potential health hazard and that alternative methods of sewage disposal are financially or technically infeasible; and
2. In considering the feasibility of sewers and alternative methods of sewage disposal, the County shall evaluate the potential impacts of providing sewer service to the problem area and where appropriate, consider measures to protect agricultural lands, floodplains, wetlands, and other sensitive areas.
3. In areas with adopted community plans, sewer service must be provided within the applicable community plan densities.

C. Incorporated Areas - City Amendments

Local service area amendments in incorporated areas may be initiated by a city or sewer agency. Such amendments will be approved by the King County Council if the applicable city certifies that the amendment is consistent with its land use plans and policies (see Step 3B), provided that King County may exclude lands identified as floodways, wetlands, or agricultural lands.⁹ Such amendments will not be subject to further review or procedures.

⁹ These terms are defined in the Glossary, Appendix A.

6.3 Amendment Criteria - Sewage Treatment Plants

This section describes the criteria to be applied by King County (see Steps 4 and 5) in reviewing proposed amendments for sewage treatment plants.

The factors to be evaluated in considering proposed sewage treatment plant amendments include: location and capacity of the facility, existing and potential service areas, level of treatment, financial feasibility, and alternatives to the facility. These factors will be analyzed in relation to existing Local Service Areas, population projections, and anticipated sewage disposal needs within the potential service area of the facility. Consideration of METRO Sewage treatment plant amendments will be limited to an analysis of the capacity and potential service area of the proposed facility. (As discussed in Section 2.5, the location, level of treatment, and receiving waters for METRO facilities shall be as determined by the METRO Council.)

6.4 Amendment Criteria - County Operated Sewerage Facilities

Plans for County operated sewerage facilities, as discussed in Chapter 7, may be adopted as amendments to this plan where:

- A. The facilities are proposed for service to an existing local service area; and
- B. The proposed facilities are financially feasible within existing local service areas and are not dependent upon a future expansion of the local service area.

~~6.5 Boundary Adjustments~~ *superseded: ORD 7178 SEC 14 & Comp. Plan -
- Refer: COUNTY COMPLAN Policy F-316.*

This section provides a simplified procedure to accommodate revisions to the local service area boundary line which may occur in conjunction with a development proposal (including short subdivisions) in unincorporated King County. Boundary adjustments will be reviewed by the Zoning & Subdivision Hearing Examiner and may be approved by the County Council if:

- A. The proposed development can be served by gravity sewer service into the existing local service area; and
- B. There is sufficient capacity within the sewer system to serve all of the unserved area it is capable of serving within the LSA as well as capacity to serve the area within the proposed LSA adjustment; and
- C. Either (1) for areas with an adopted community plan, the proposed development is not inconsistent with the policies of the community plan, or (2) where a proposed or revised community plan has been adopted by the applicable community plan committee, the policies of such plan shall be given substantial weight in considering the proposed development by the County Council, or (3) for areas where no community plan has been adopted by the Council since 1975 or adopted by a community plan committee, the proposed development is located within the same subdrainage basin and the applicant demonstrates that the proposed development individually and when combined with development which has already occurred in the area, will not have a significant adverse impact on future community planning for the area; and
- D. The proposed development site will not adequately support on-site disposal systems; and

- E. The following public services and facilities are adequate to serve the proposed development:
- (1) Transportation
 - (2) Water
 - (3) Schools
 - (4) Public Safety (police and fire)
 - (5) Parks; and
- F. Sewer service would not be made available to, or result in adverse impacts to agricultural lands, floodplains, wetlands or other sensitive areas¹⁰; and
- G. The proposed sewer extension will be financed by the developer; and
- H. An overall development plan for the site is presented.

In addition, boundary adjustments will be made for plats which receive final approval pursuant to K.C.C. 19.08.240.

Boundary Adjustment procedures:

- A. Notification that a proposed development contemplates an adjustment in the Local Service Area boundary shall be included in all public notices given for the proposed development.
- B. The County Council may authorize an adjustment in the Local Service Area boundary by Motion or Ordinance. This authorization will permit the applicant and/or sewer agency to seek all other approvals required to construct the sewer system, as well as permit the construction of the sewer system when those approvals are obtained. The authorized boundary adjustment shall not be recorded on the Local Service Area maps until final County approval for the development has been obtained.

¹⁰ These terms are defined in the Glossary, Appendix A.

CHAPTER 7
COUNTY-OPERATED SEWERAGE FACILITIES

Chapter 36.94 RCW specifically provides for counties to own and operate sewer systems. ~~King County currently owns and operates three sewer systems, one of which was established under the provisions of this Act.~~ Additional sewer systems may be added to the County's responsibilities. For each, a comprehensive plan for the proposed sewerage facilities will be processed as an amendment to this plan, according to the procedures and criteria established in Chapter 6. Such an amendment will provide preliminary engineering of proposed sewerage facilities and supporting analysis as required by RCW 36.94. New County sewerage systems shall be adopted as augmentations and additions to this element of the Comprehensive Plan and added as an item to this Chapter.

*superseded
by sewer
system
investment
Ord.*

~~CSS #1 Trend Sewer
Service Area~~

~~The Sewerage General Plan for Trend County Sewer Service Area, which was adopted by Ordinance No. 2707, is incorporated herein by reference.~~

*L needs to be formally cancelled or amended.
TREND Sewer Plan - see ORD. 7065 and 7365.*

CHAPTER 8

MAPS

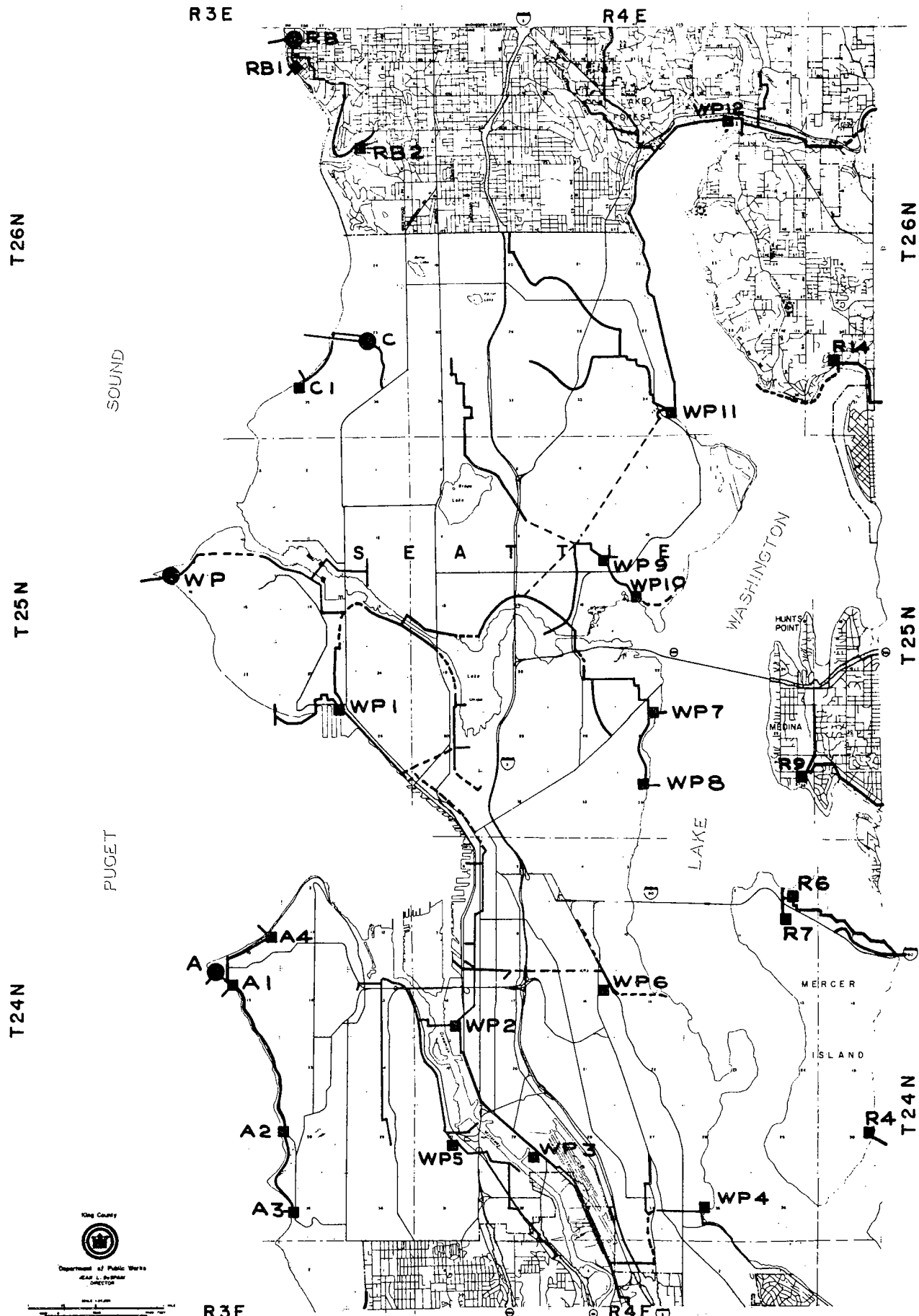
The maps contained in this chapter serve to identify the location and extent of the various elements presented in this plan.

Map 1: Major Sewerage Facilities

Map 1 (a-h) shows the location of existing major sewerage facilities including treatment and disposal facilities, interceptors and major trunks, and those pumping stations that are part of the interceptor and major trunk system.

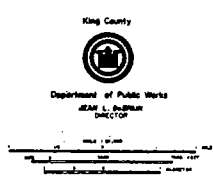
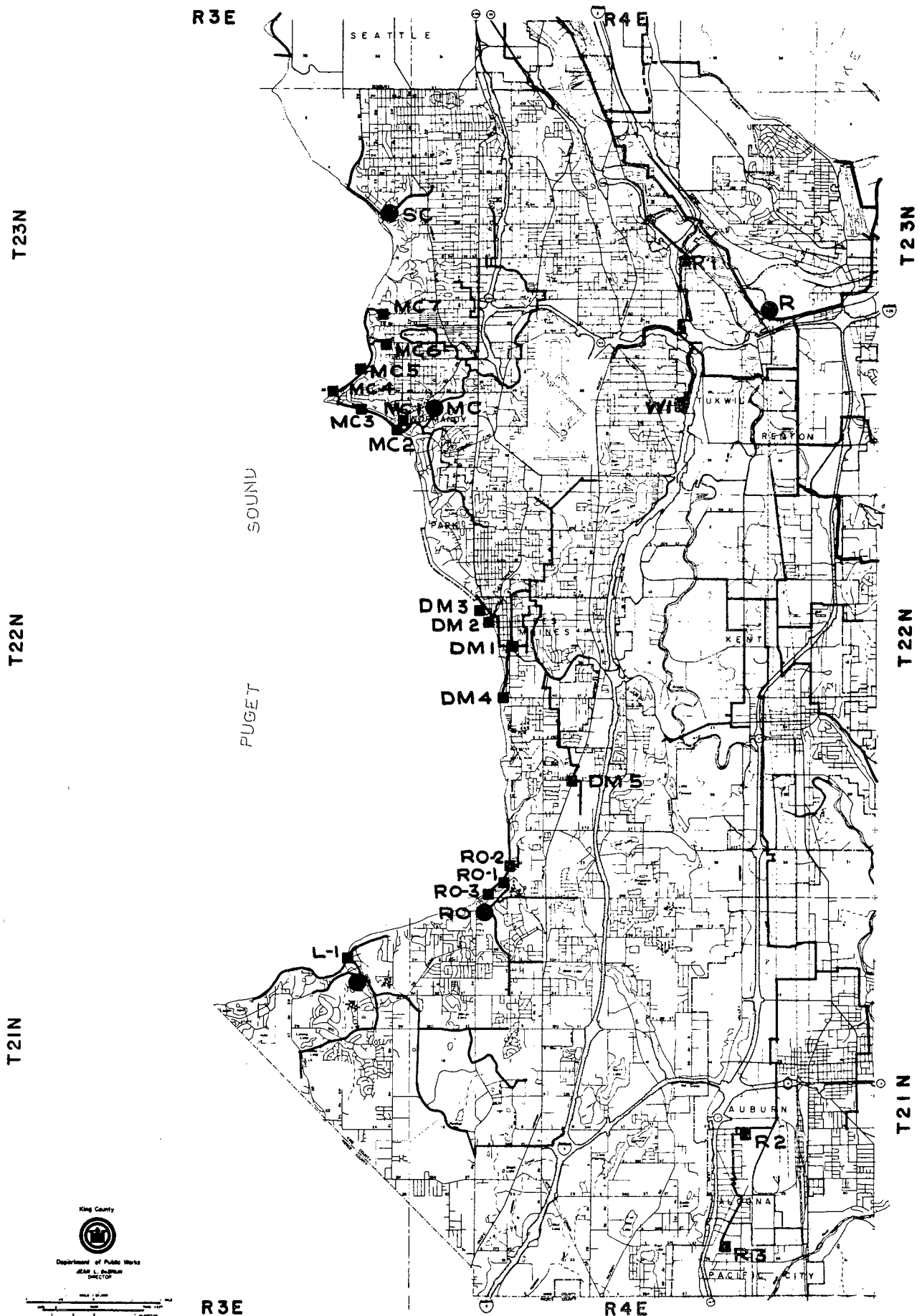
Map 2 Series: Local Service Areas

Map 2 (a-h) of local service areas is a summary of the official property line map series which is adopted as part of this plan. The Local Service Area maps shall not be used to exclude any property which otherwise meets all the criteria and policies of the Sewerage General Plan. In cases where Agricultural Lands of County-wide Significance, as defined in Appendix A, have been improperly designated as Local Service Areas, the policies and criteria of the plan shall govern.



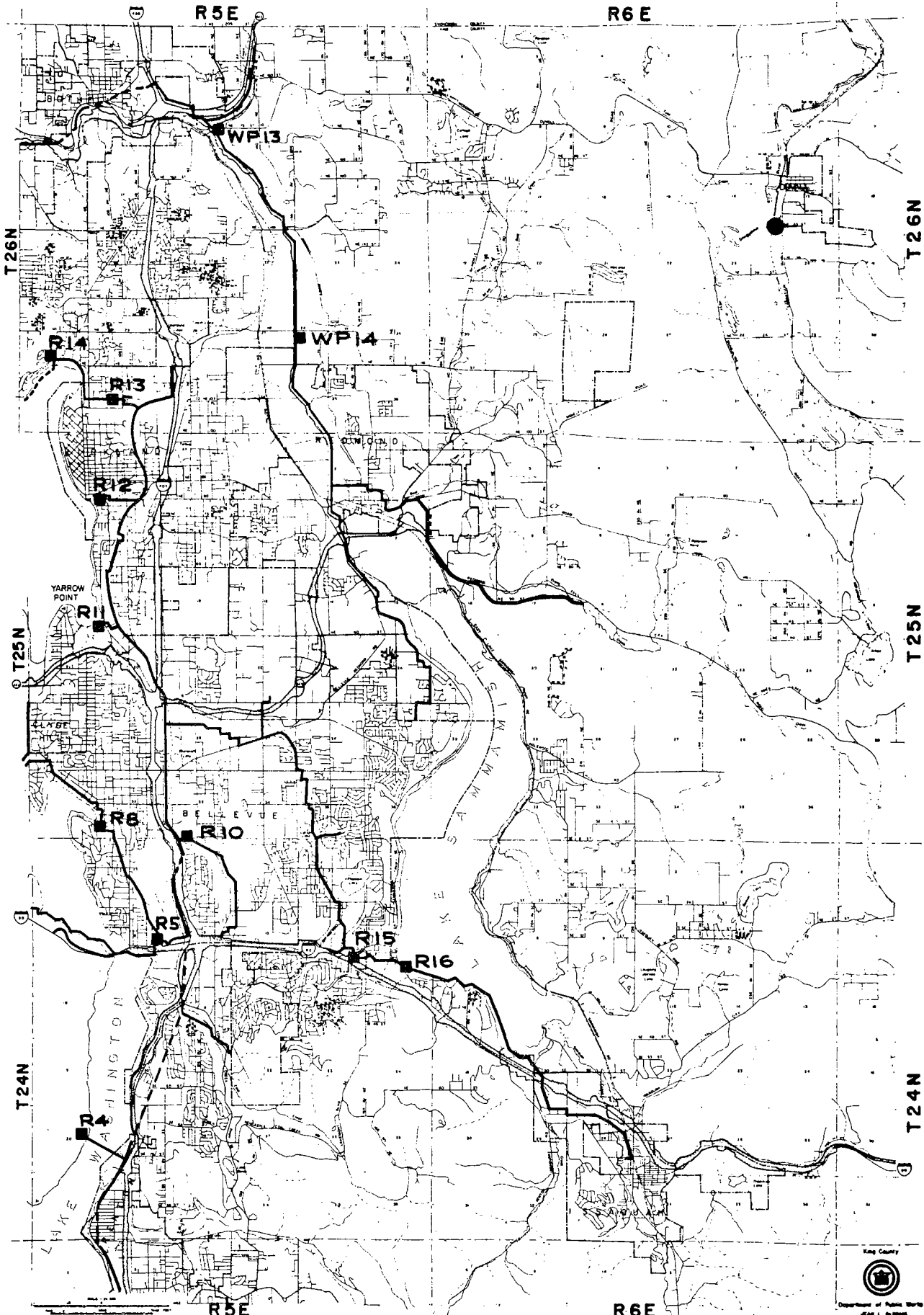
MAP 1 a : MAJOR SEWERAGE FACILITIES

- LEGEND:**
- MAJOR TRUNK OR INTERCEPTOR
 - - - INTERCEPTOR TUNNEL
 - A | ■ PUMPING STATION
 - A ● TREATMENT PLANT



MAP 1 b : MAJOR SEWERAGE FACILITIES

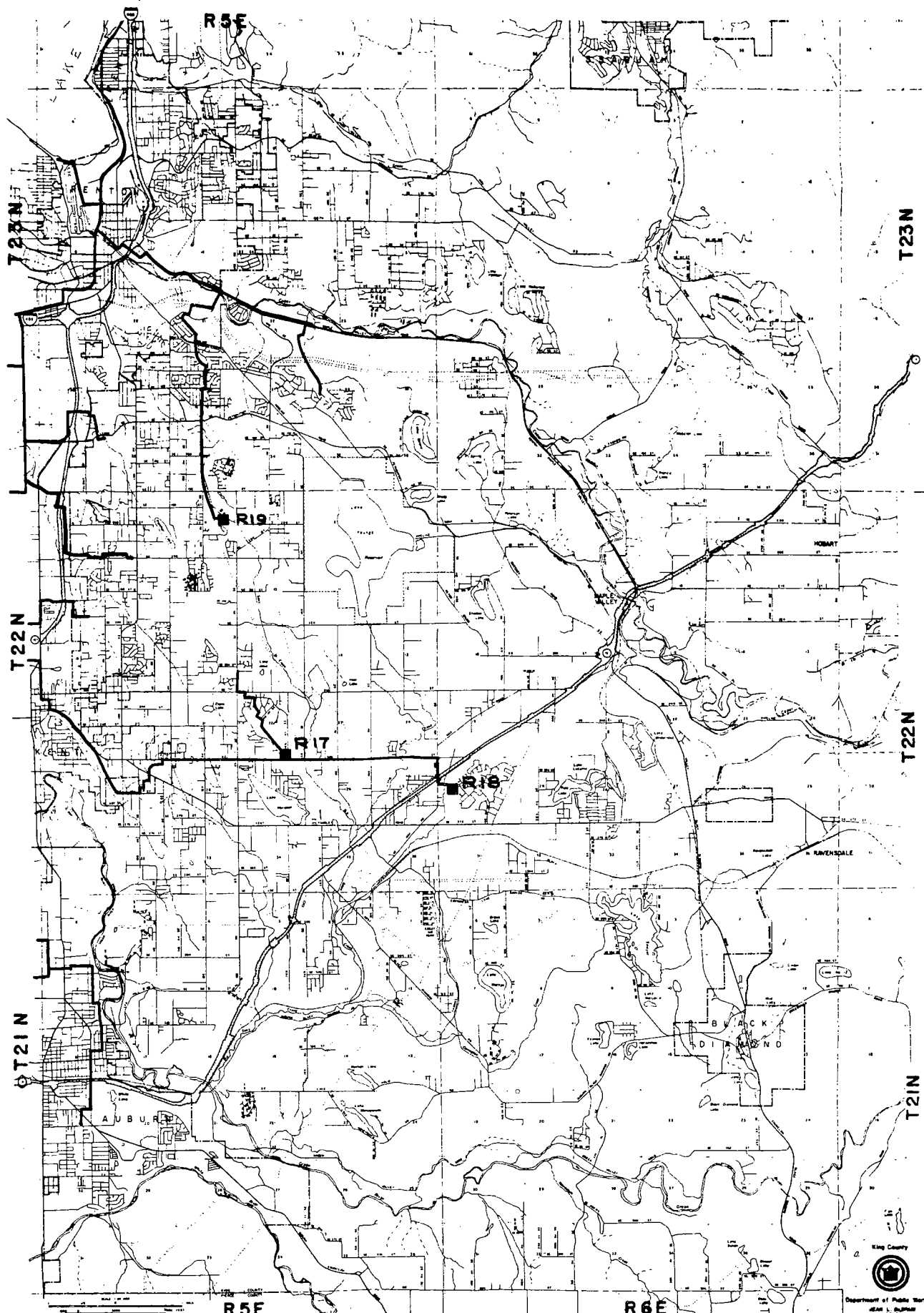
- LEGEND:**
- MAJOR TRUNK OR INTERCEPTOR
 - - - INTERCEPTOR TUNNEL
 - A □ PUMPING STATION
 - A ● TREATMENT PLANT



MAP 1c : MAJOR SEWERAGE FACILITIES

- LEGEND:**
- MAJOR TRUNK OR INTERCEPTOR
 - - - - INTERCEPTOR TUNNEL
 - A | ■ PUMPING STATION
 - A ● TREATMENT PLANT

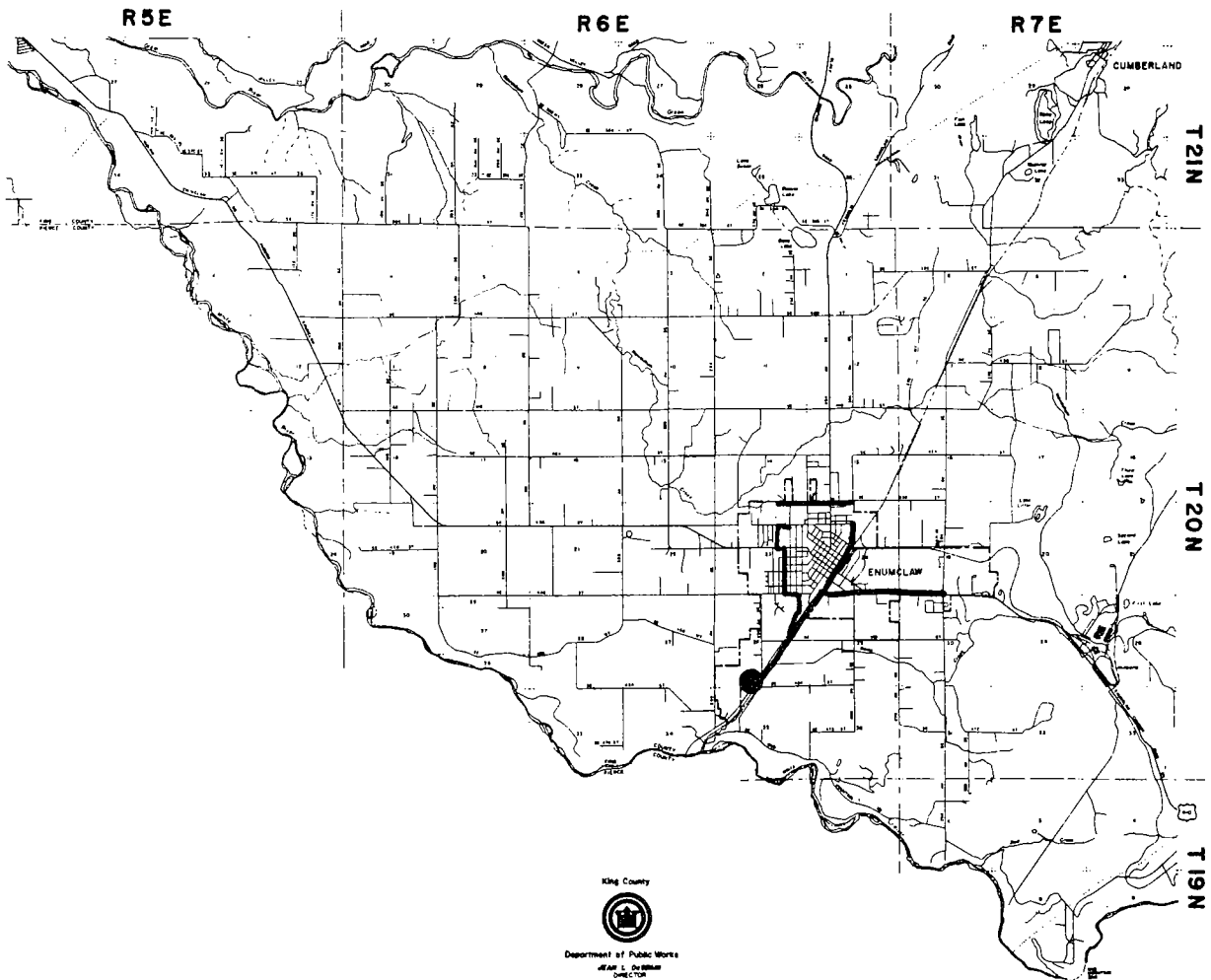
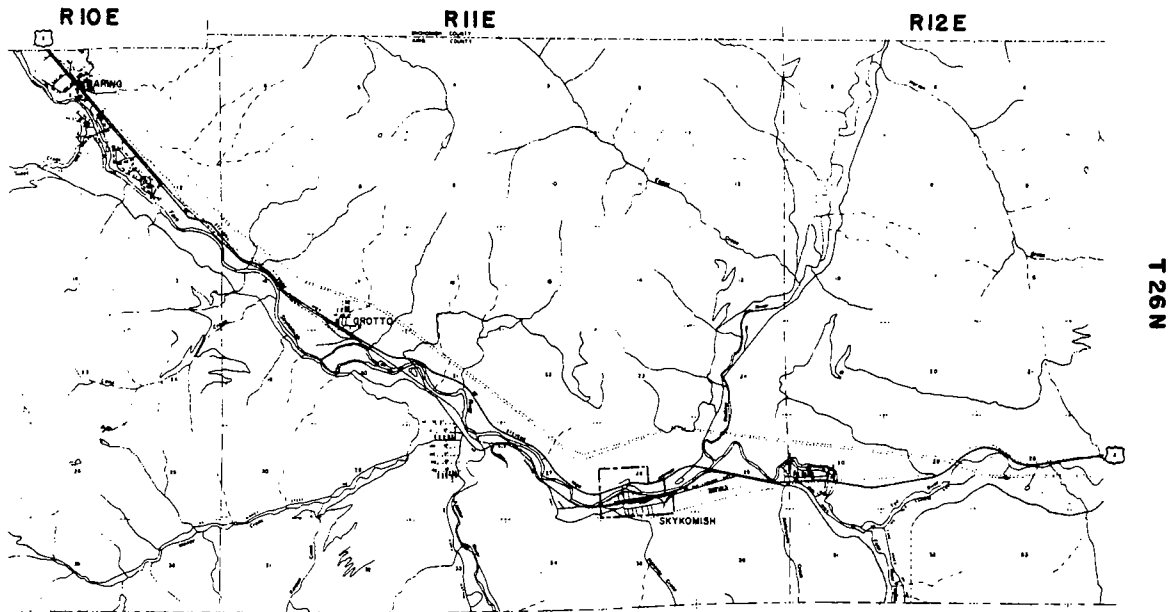




MAP 1 d : MAJOR SEWERAGE FACILITIES

- LEGEND:
- MAJOR TRUNK OR INTERCEPTOR
 - - - - INTERCEPTOR TUNNEL
 - A | ■ PUMPING STATION
 - A ● TREATMENT PLANT



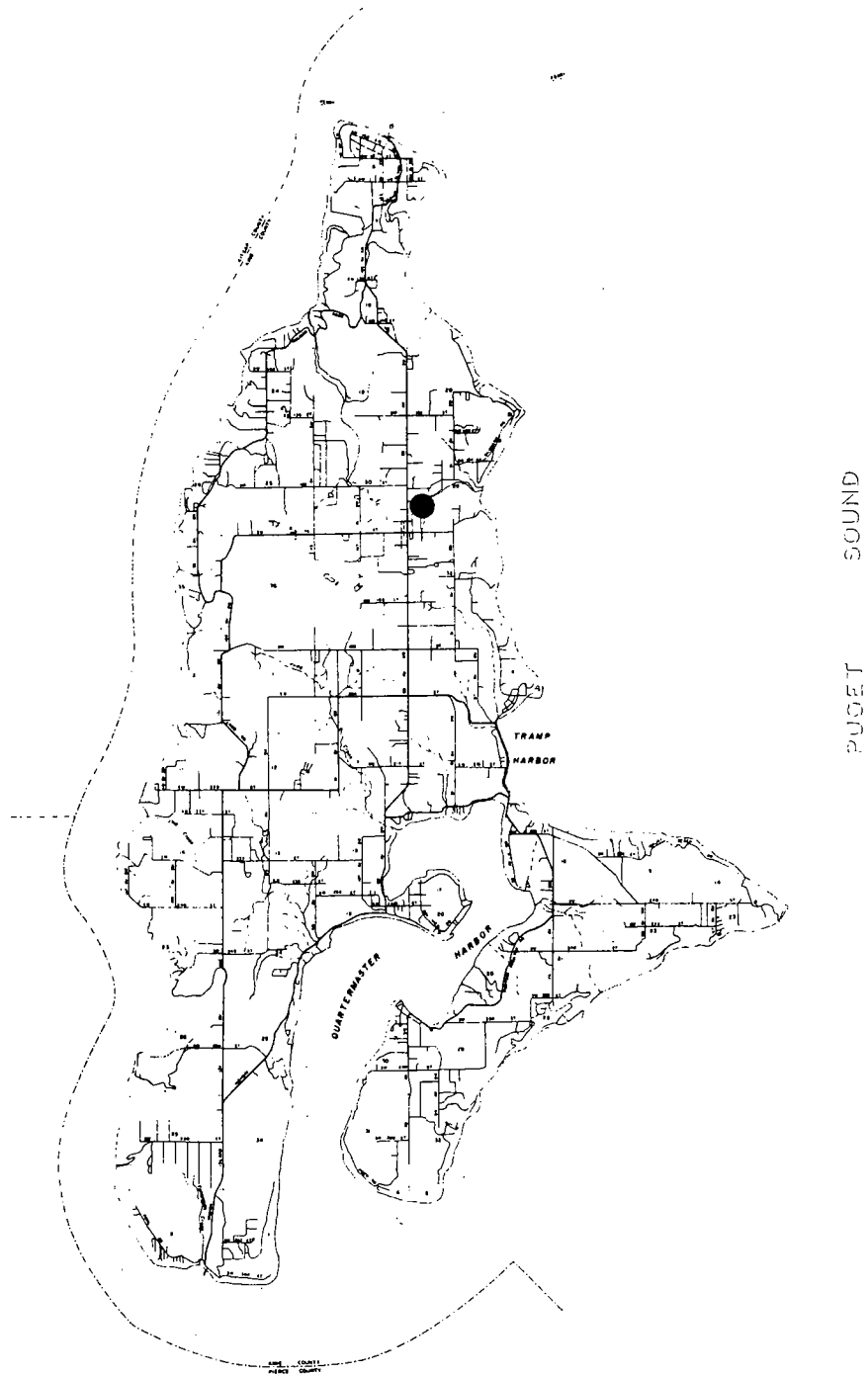


MAP 1 e : MAJOR SEWERAGE FACILITIES

LEGEND:

- | | |
|------------------------------|-----------------------|
| — MAJOR TRUNK OR INTERCEPTOR | A ■ PUMPING STATION |
| - - - INTERCEPTOR TUNNEL | A ● TREATMENT PLANT |

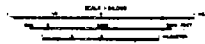
VASHON ISLAND



BLDG. & LAND DEV.
King County



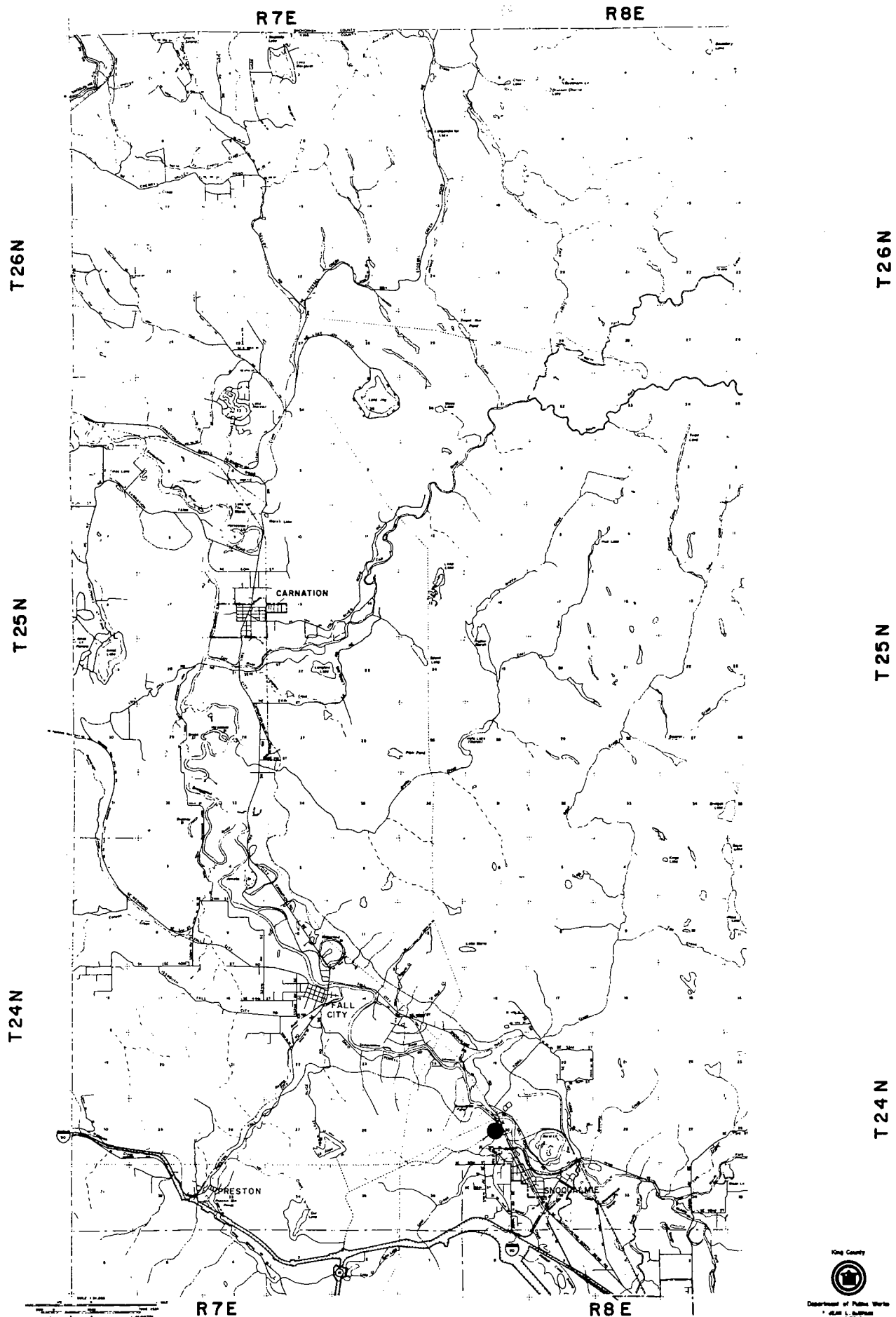
Department of Public Works
Alan J. Crumpler
DIRECTOR



MAP 1 f : MAJOR SEWERAGE FACILITIES

LEGEND:

- MAJOR TRUNK OR INTERCEPTOR
- INTERCEPTOR TUNNEL
- A ■ PUMPING STATION
- A ● TREATMENT PLANT



MAP 1g : MAJOR SEWERAGE FACILITIES

- LEGEND:**
- MAJOR TRUNK OR INTERCEPTOR
 - - - - INTERCEPTOR TUNNEL
 - AI ■ PUMPING STATION
 - A ● TREATMENT PLANT

King County
 Department of Public Works
 4500 L. Avenue
 98107

T23 N

T22 N

T21 N

T23 N

T22 N

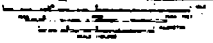
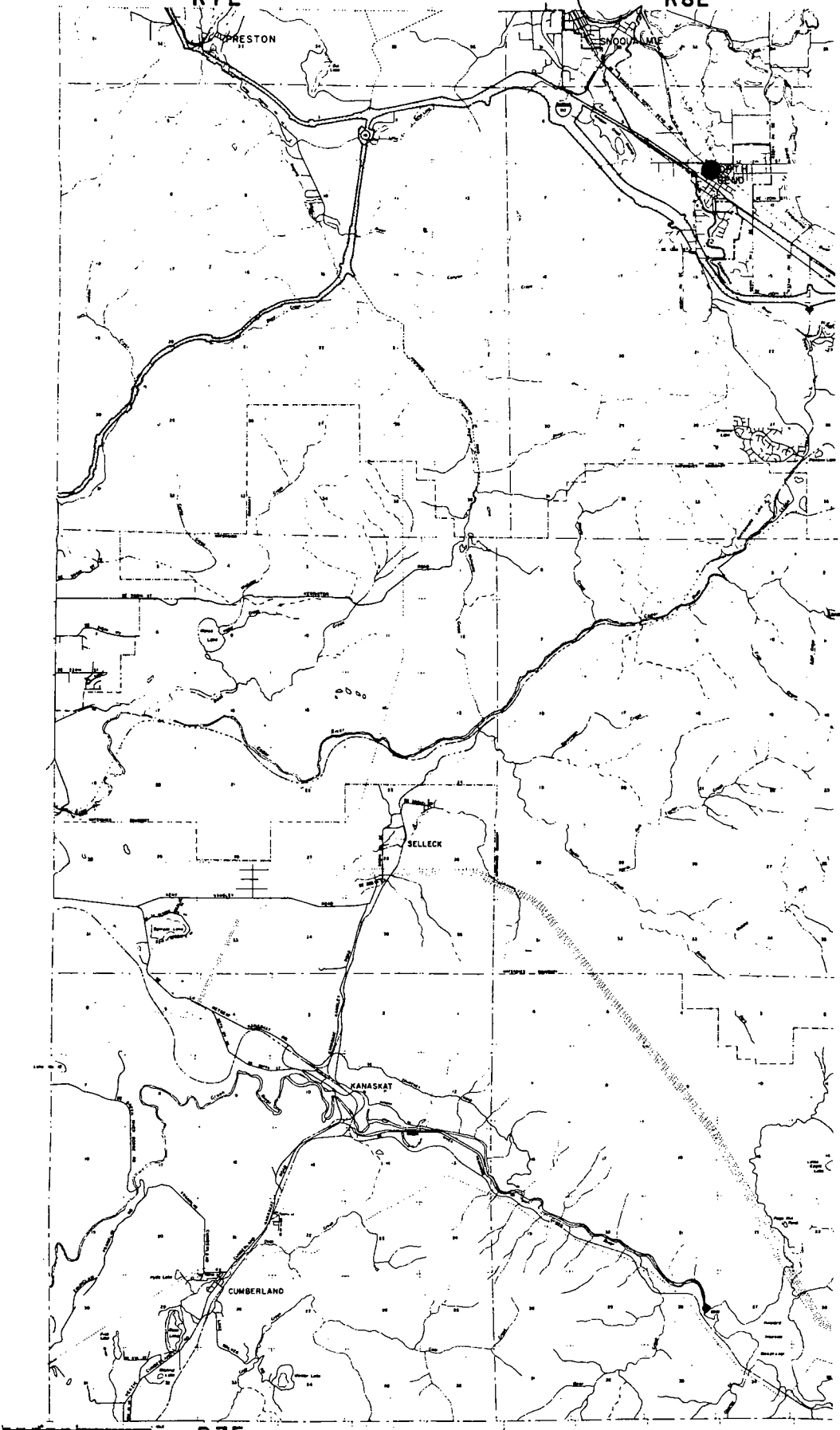
T21 N

R7E

R8E

R7E

R8E



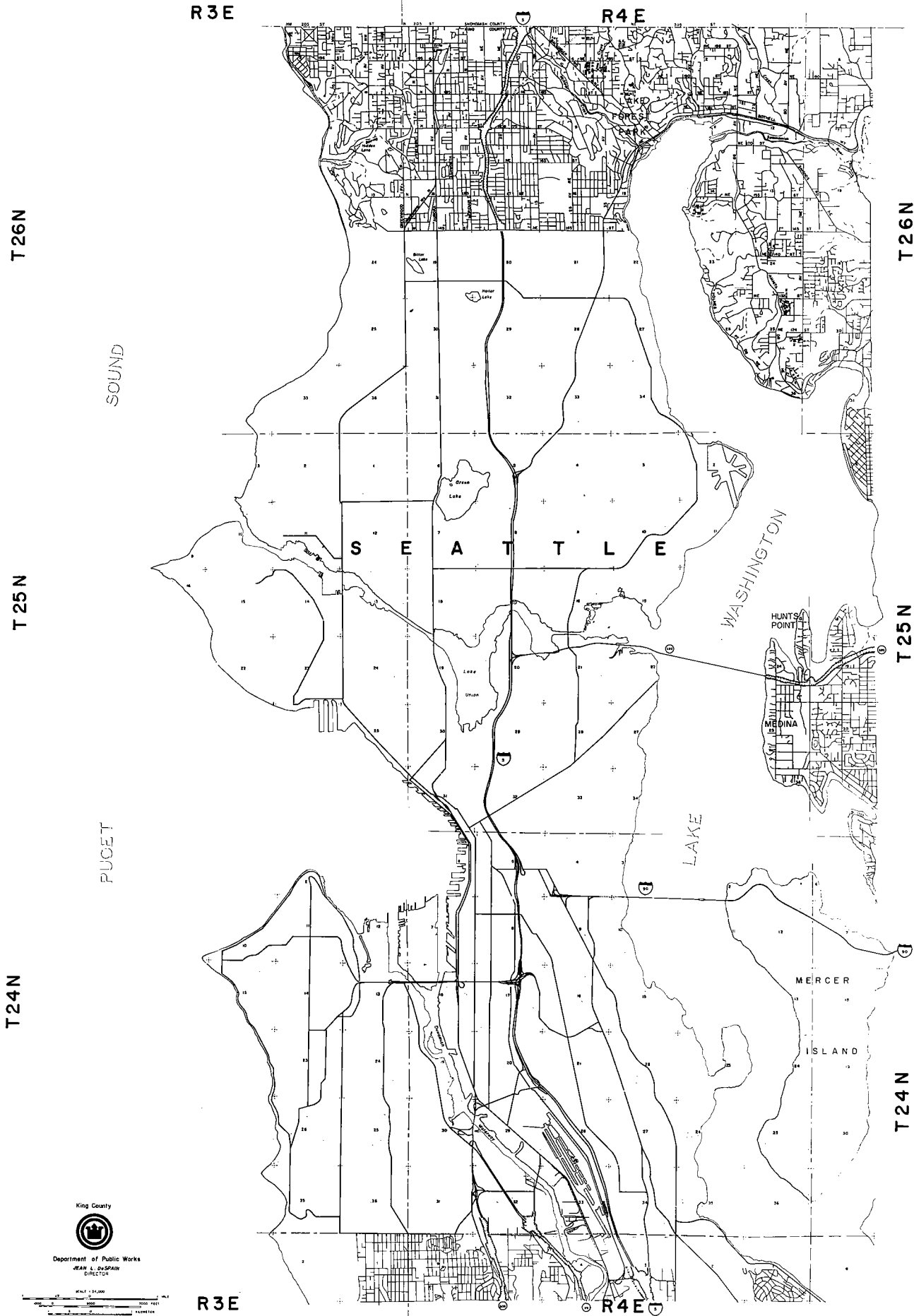
King County
 Department of Public Works
 CARL E. BOMER
 DIRECTOR

MAP 1 h : MAJOR SEWERAGE FACILITIES

LEGEND:

- MAJOR TRUNK OR INTERCEPTOR
- - - - INTERCEPTOR TUNNEL

- A ■ PUMPING STATION
- A ● TREATMENT PLANT



MAP 2 a SUMMARY : LOCAL SERVICE AREAS

T23N

T22N

T21N

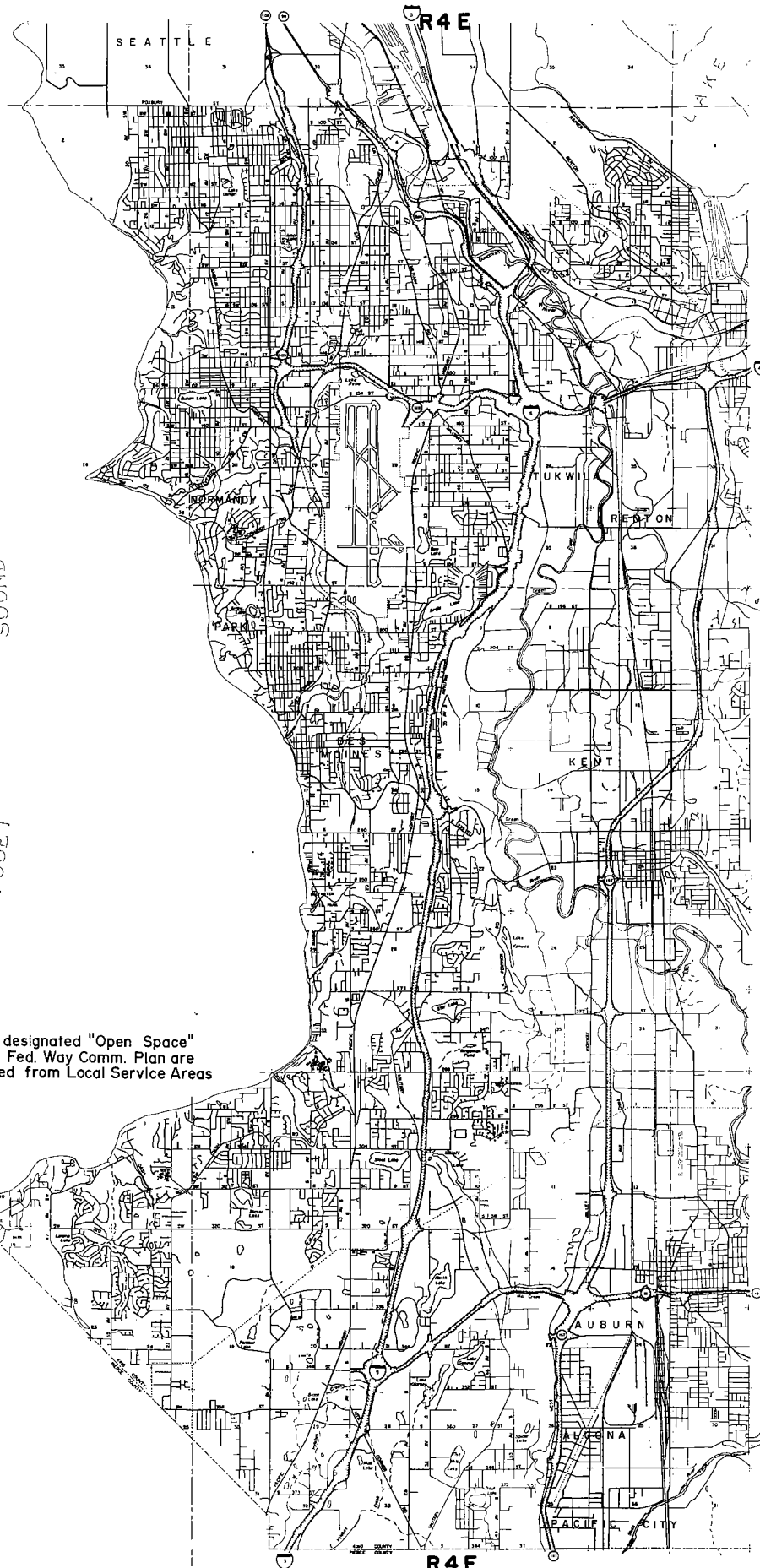
R3E

R4E

T23N

T22N

T21N

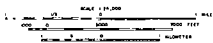


Areas designated "Open Space"
by the Fed. Way Comm. Plan are
excluded from Local Service Areas

King County



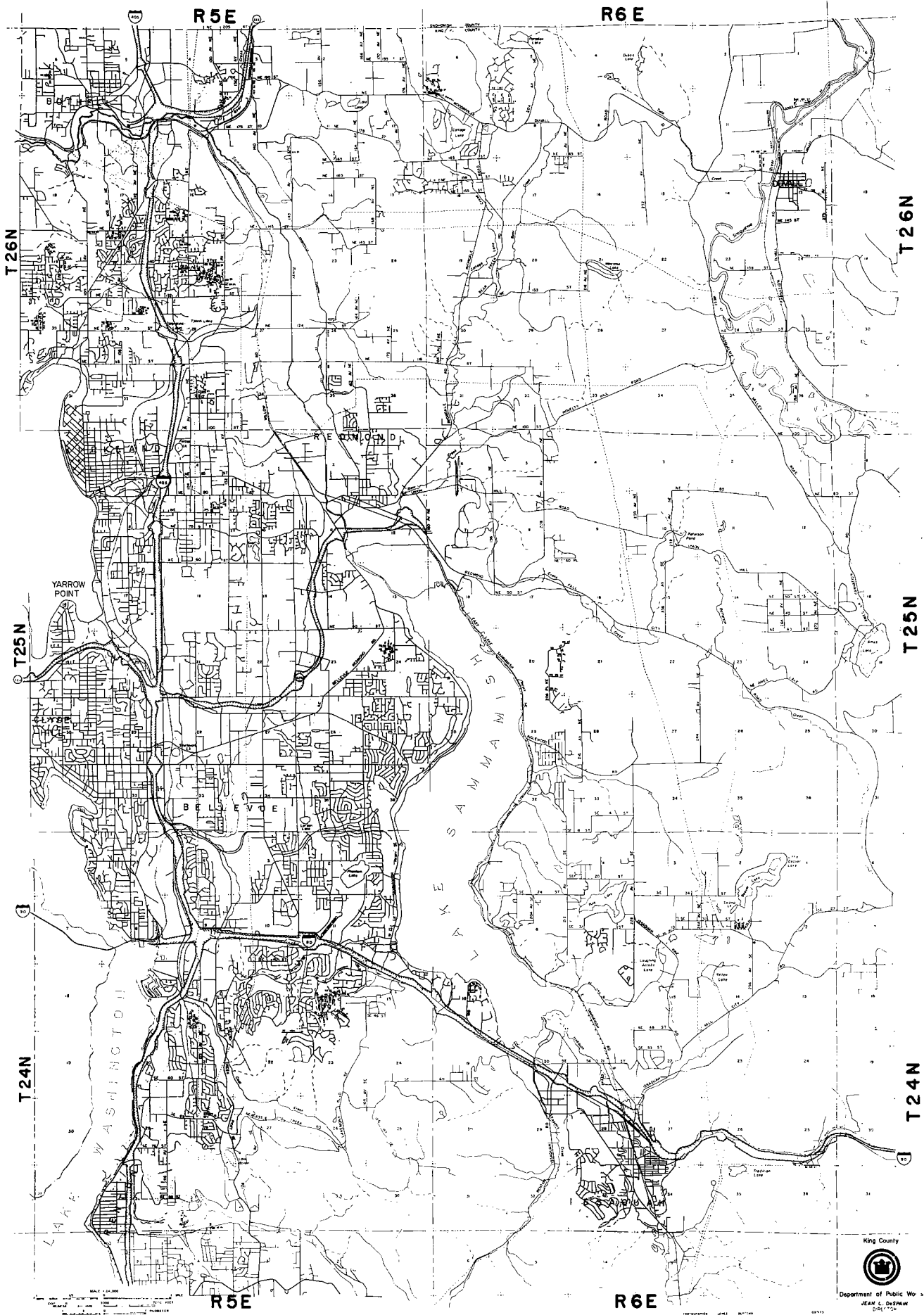
Department of Public Works
JEAN L. DUSPAIN
DIRECTOR



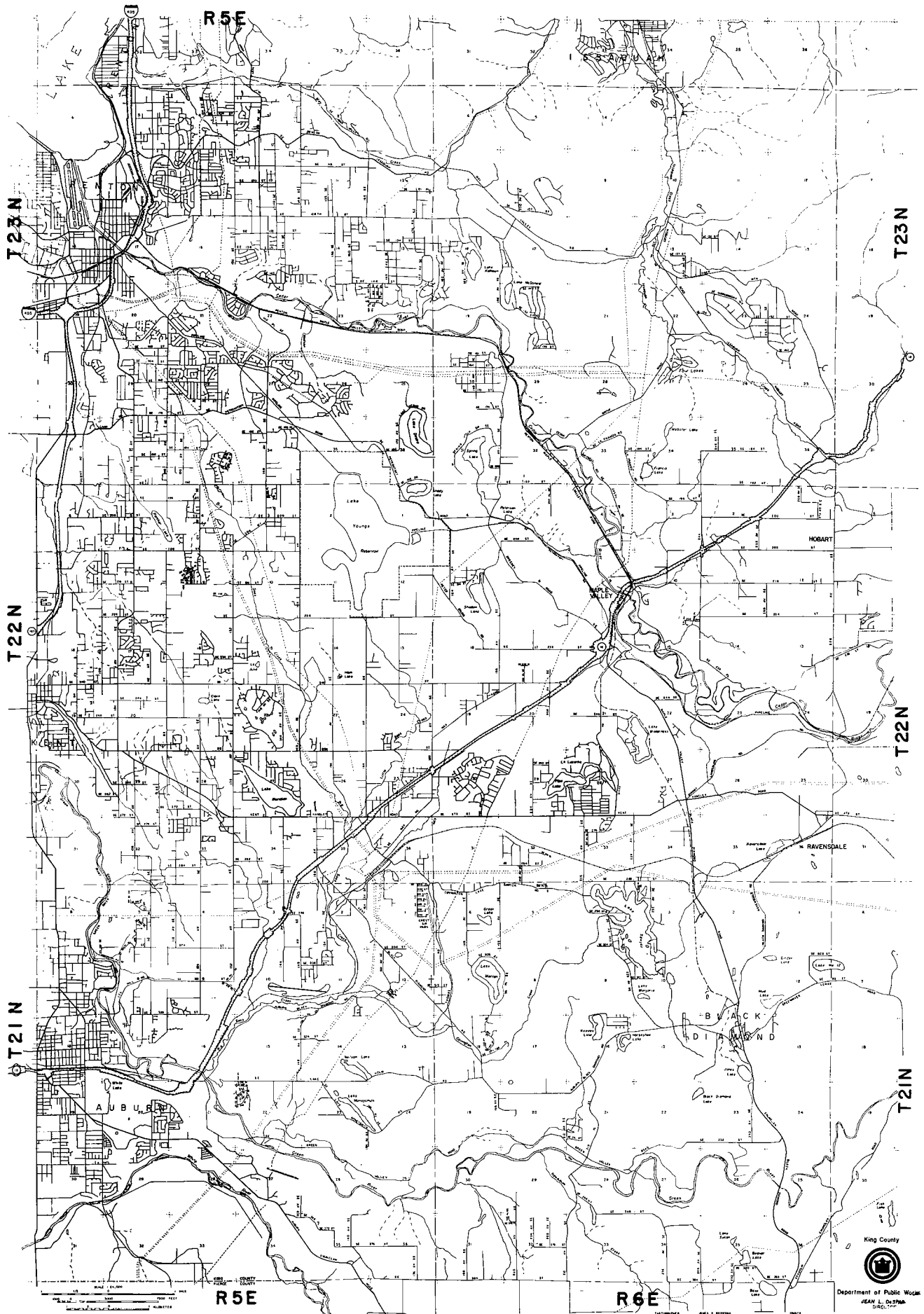
R3E

R4E

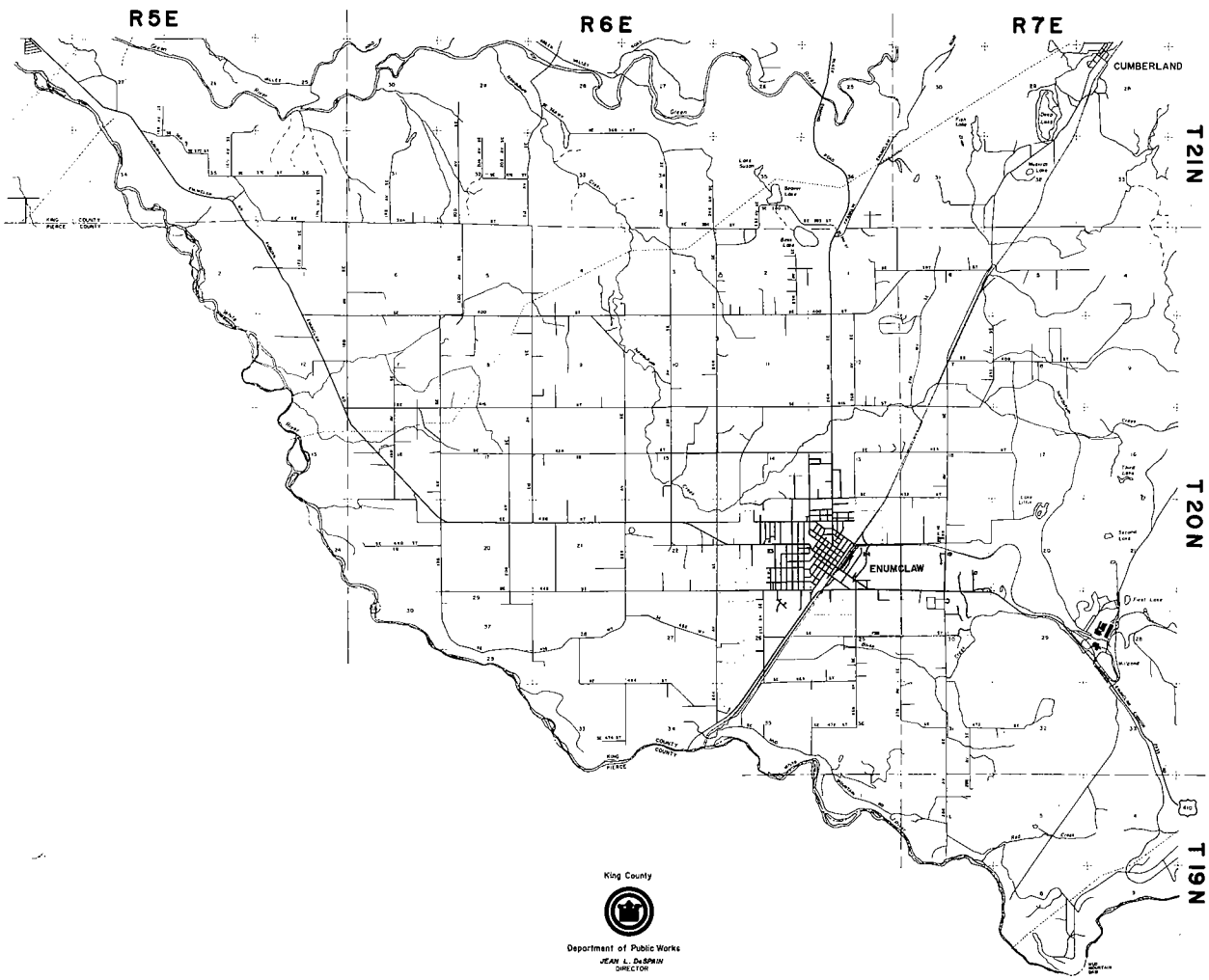
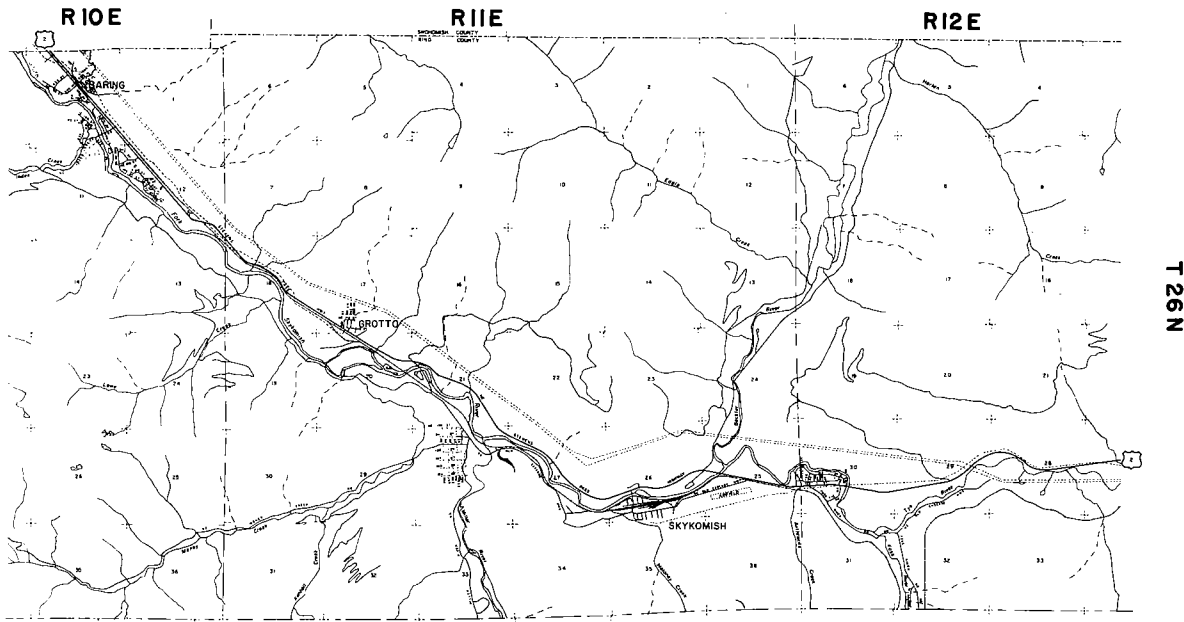
MAP 2 b SUMMARY : LOCAL SERVICE AREAS




MAP 2 c SUMMARY : LOCAL SERVICE AREAS



MAP 2 d SUMMARY : LOCAL SERVICE AREAS

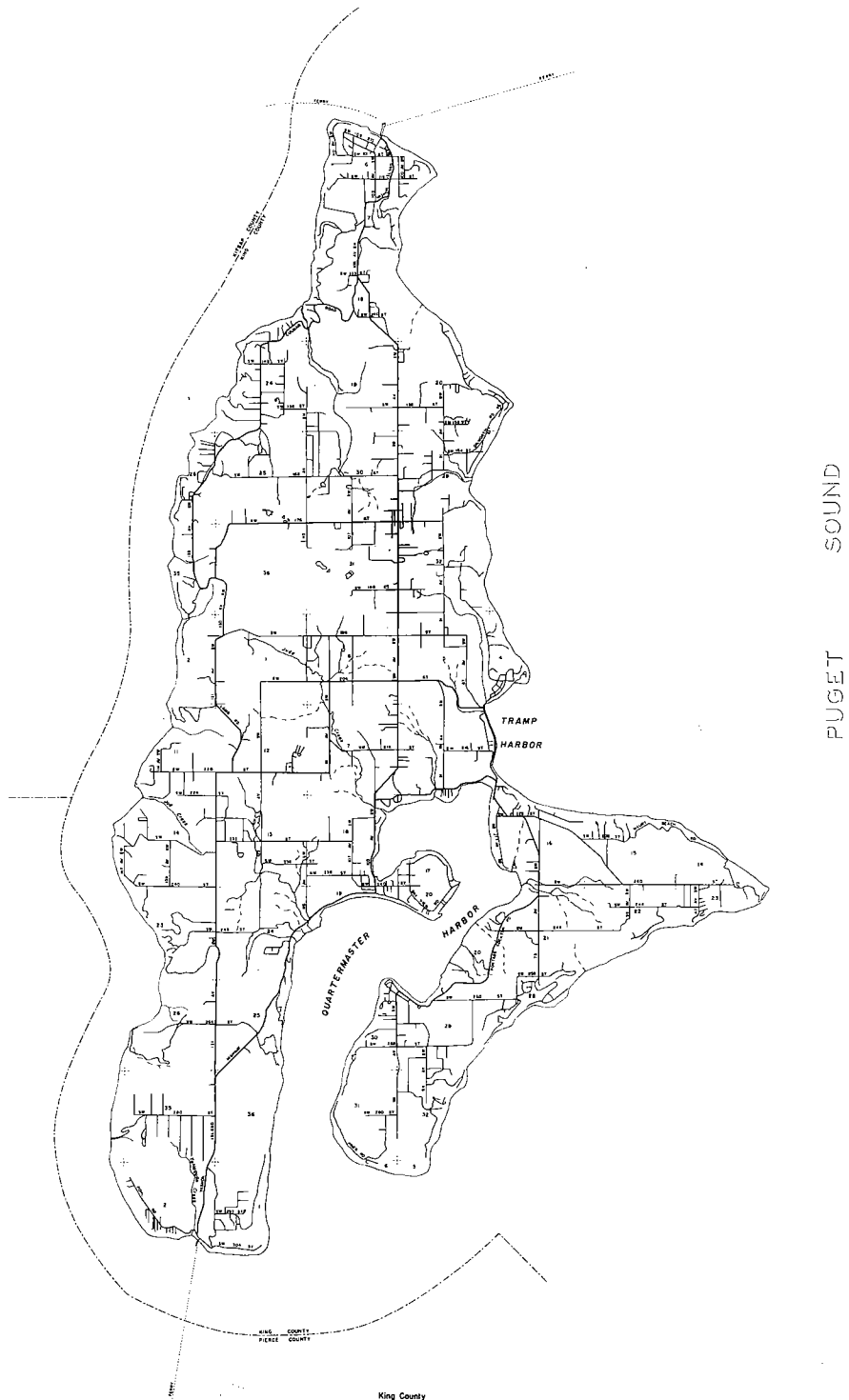



King County

 Department of Public Works
 JEAN L. DESPAIN
 DIRECTOR

SCALE 1:24,000
 0 100 200 300 400 500
 FEET
 0 100 200 300 400 500
 METERS

MAP 2 e SUMMARY : LOCAL SERVICE AREAS

VASHON ISLAND



King County

Department of Public Works
JEAN L. OLSPAW
DIRECTOR

SCALE 1:24,000
0 500 1000 FEET
0 1 2 MILES

R7E

R8E

T26N

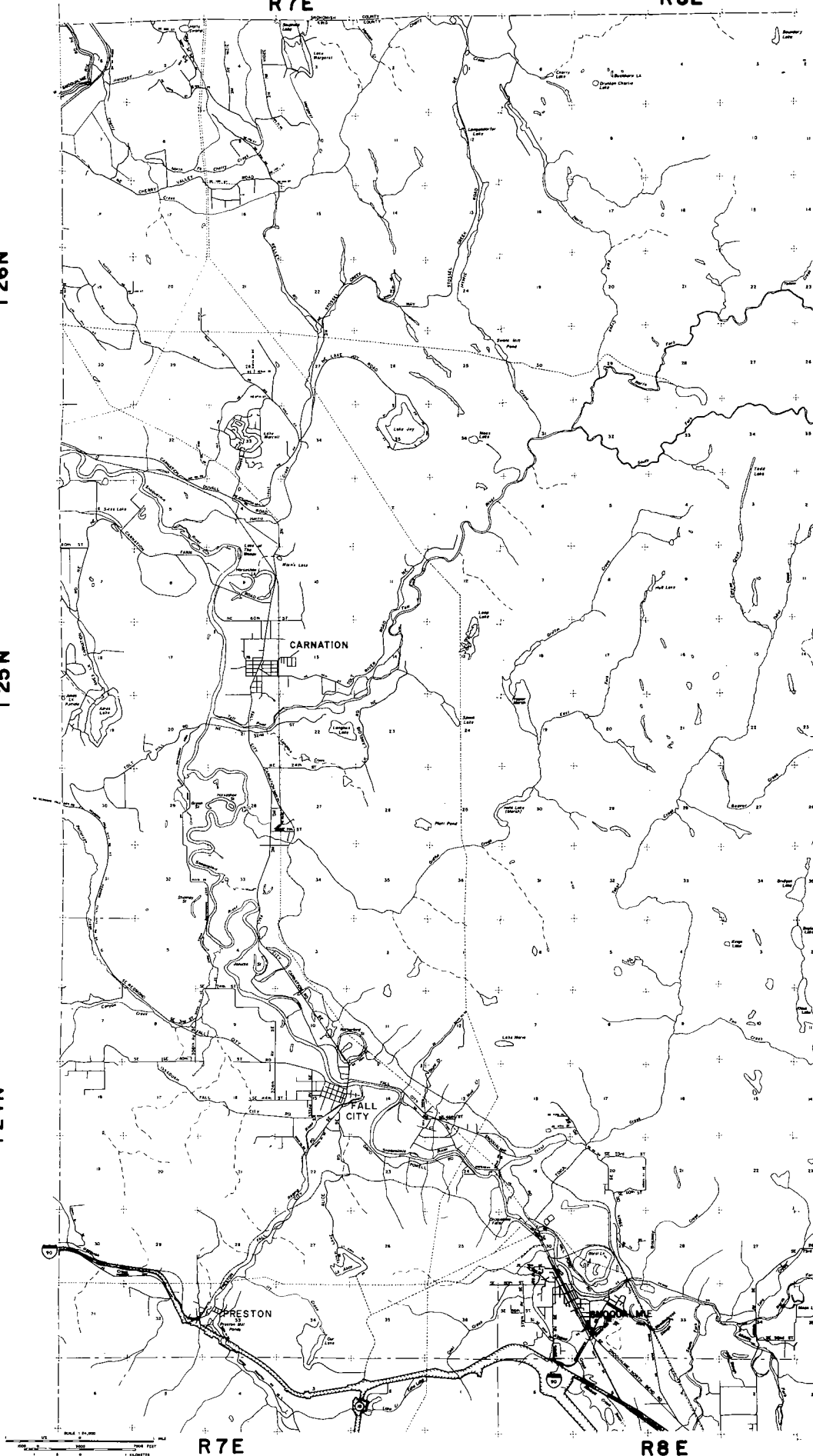
T26N

T25N

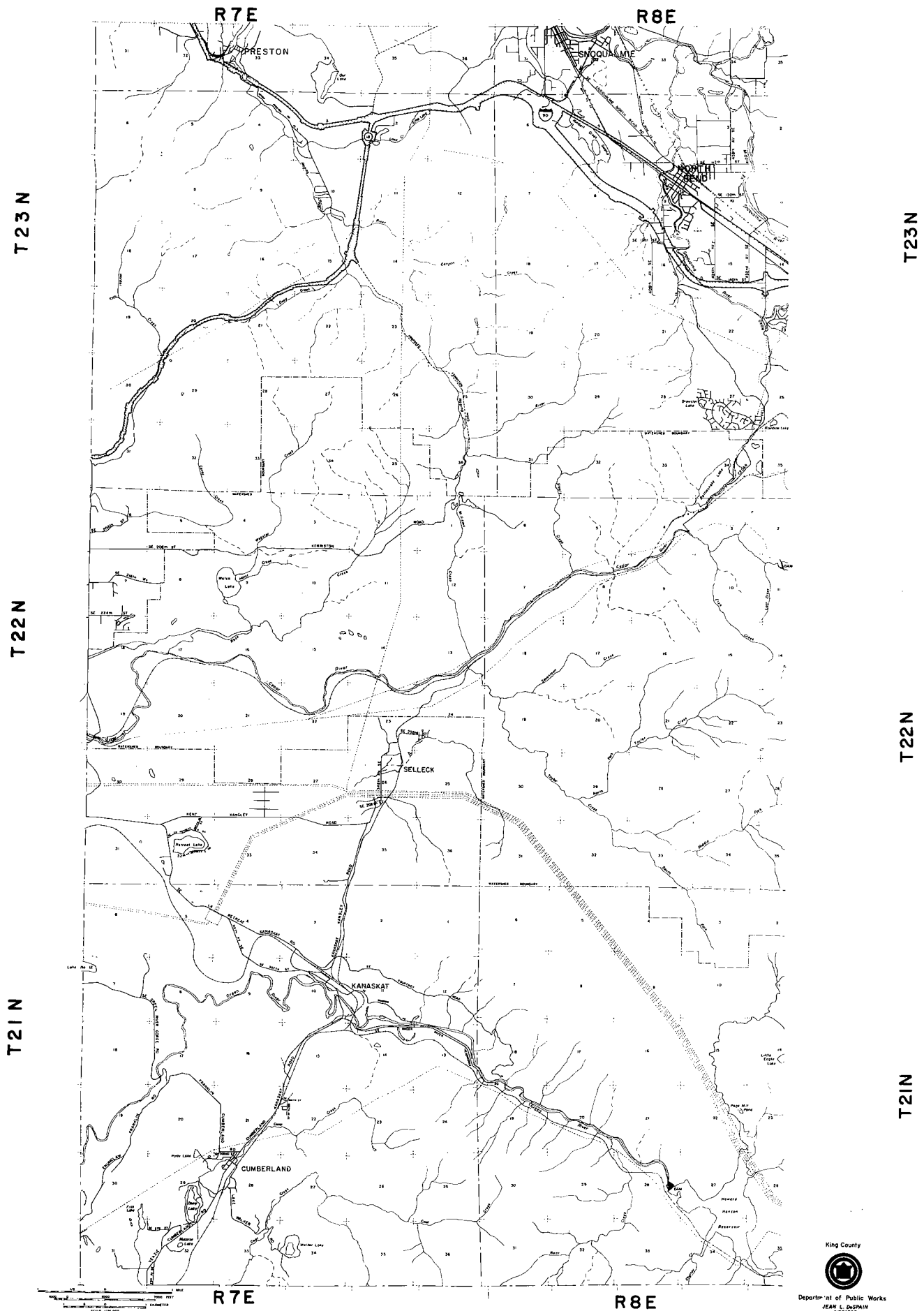
T25N

T24N

T24N



MAP 2 g SUMMARY : LOCAL SERVICE AREAS



T23 N

T23 N

T22 N

T22 N

T21 N

T21 N

R7E

R8E

R7E

R8E



King County
 Department of Public Works
 JEAN L. DUSPAIN
 DIRECTOR

MAP 2 h SUMMARY : LOCAL SERVICE AREAS

APPENDICES

- A. Glossary
- B. County Comprehensive Plan Policies D-24, D-25, and D-26.
- C. METRO Resolution 2933.

APPENDIX A
GLOSSARY

As used in the Sewerage General Plan, the following terms have the following meanings:

Agricultural lands: Lands in incorporated or unincorporated areas which meet the criteria for "Agricultural Lands of County Significance" established in King County Ordinance 3064, Attachment F.

Floodplain: That portion of a river or stream channel and adjacent lands which are subject to an "Intermediate Regional Flood". (A flood with a one percent chance of being exceeded in any given year, also referred to as the "100-year flood") (KCC 21.04.312)

Floodway: The regular channel plus that portion of the floodplain which has been defined as floodway and delineated on maps by any qualified person or agency described in KCC 21.04.313. In the absence of such maps, 'floodway' means the regular channel plus that portion of the floodplain which would contain deep or fast flowing water¹¹ during an intermediate regional flood, and is required to carry and discharge the flood waters.

Sensitive Areas: Areas with ecologically significant features or subject to natural hazards for development, including but not limited to floodplains, wetlands, seismic hazard areas, and areas subject to landslide hazard.

Wetlands: Lands which meet the criteria for "marshes, bogs, and swamps" established in WAC 173.22.040(3):

¹¹ As defined in KCC 21.04.312(b).

- a. Marsh - A low flat area on which the vegetation consists mainly of herbaceous plants such as cattails, bulrushes, tules, sedges, skunk cabbage, and other aquatic or semi-aquatic plant. Shallow water usually stands on a marsh, at least during a considerable part of the year. The surface is commonly soft mud or muck, and no peat is present.
- b. Bog - A depression or other undrained or poorly drained area containing, or covered with, peat (usually more than one layer) on which characteristic kinds of sedges, reeds, rushes, mosses, and other similar plants grow. In the early stages of development the vegetation is herbaceous and the peat is very wet. In middle stages the dominant vegetation is brush. In mature stages trees are usually the dominant vegetation, and the peat, at least near the surface, may be comparatively dry.
- c. Swamp - A swamp is similar to a marsh except that reeds and shrubs comprise the characteristic vegetation. Marshes and swamps merge into each other, and both tend to merge into bogs.

APPENDIX B

County Comprehensive Plan Policies D-24, D-25, and D-26.

Superseded by:

*See 1985 COMPLAN
pg 82-83
(Ch. 5.B)
Policies R-311-R-315*

Policy D-24 - see R-311

Areas where the allowed average residential density is three housing units per gross acre or greater should include the following minimum improvements:

- a. paved streets, curbs, and sidewalks;
- b. street lighting;
- c. underground drainage lines except where surface storm drainage facilities are deemed to be adequate;
- d. publicly approved water supply (normally publicly owned); and
- e. sanitary sewers or suitable alternatives on a temporary basis only.

Policy D-25 - see R-312

In areas where the allowed average residential density is not over two housing units per gross acre, development should include the following improvements:

- a. paved streets and improved walkways (specifications may be different from higher density areas);
- b. provision for adequate drainage (surface or underground dependent on need);
- c. publicly approved water supply (owned by public or community group); and
- d. sanitary sewers or suitable alternative.

Policy D-26 - see R-313

In areas where the allowed average residential density is not over one housing unit per gross acre, development should include the following improvements:

- a. type of street improvement dependent upon type of street and amount of potential traffic;
- b. improved walkways desirable at least on one side of the street;
- c. publicly approved water supply (may be privately owned);
- d. provision for adequate drainage (primarily surface drainage except for problem areas); and
- e. Sanitary sewers or suitable alternative.

APPENDIX C

RESOLUTION NO. 2933

A RESOLUTION of the Council of the Municipality of Metropolitan Seattle amending and supplementing the Municipality's Rules and Regulations for the disposal of sewage into the Metropolitan Sewerage System to add a certification procedure for connections and extensions.

WHEREAS, by Resolution No. 2315 adopted June 26, 1975, the Municipality established rules and regulations for the disposal of sewage into the Metropolitan Sewerage System and for the construction and use of local sewerage facilities, hereinafter referred to as the "Rules and Regulations"; and

WHEREAS, local sewer service through the construction of connections and extensions to the Metropolitan Sewerage System should be consistent with the adopted land use plans and policies of cities and counties; and

WHEREAS, the Municipality has developed procedures to ensure such consistency in response to land use concerns of local governments and as part of its areawide water quality planning for the Cedar-Green River Basins under Section 208 of PL 92-500; and

WHEREAS, it is necessary to amend and supplement the Rules and Regulations to implement such procedures;

NOW, THEREFORE, BE IT RESOLVED by the Council of the Municipality of Metropolitan Seattle as follows:

Section 1. The following new section entitled "Section 3 - CERTIFICATIONS FOR EXTENSIONS AND CONNECTIONS" is hereby added to the Rules and Regulations:

SECTION 3 - CERTIFICATIONS FOR EXTENSIONS AND CONNECTIONS

3-01 Requests for Extensions

A request by a Local Public Agency, person, state or federal agency for an extension to an existing Metro Interceptor or Trunk shall not be considered by Metro for funding of planning, design or construction, and agreements therefor shall not be considered for approval unless Metro's Executive Director has received written certification from the legislative bodies of all cities and counties which have zoning jurisdiction over:

- (1) Any portion of the area proposed by the requesting party to be served, or determined by Metro as being capable of being served, by such extension; and
- (2) Any other area in or through which the facility is proposed to be constructed;

which certification shall state that such service and construction is consistent with the adopted land use plans and policies of such local governments. If a city or county cannot so certify, it shall issue a written statement to the Executive Director that the service or construction is not consistent with said adopted plans and policies, or that action on the application for certification must be deferred pending receipt by the city or county of such additional, specified information and data as may be reasonably required for the consideration of said application.

3-02 Request for Connections

Requests by a Local Public Agency, person, state or federal agency for approval of a Local Public Sewer facility connection to an existing Metro Interceptor or Trunk shall be considered by Metro only if Metro's Executive Director has received a written certification as described in Section 3-01 provided, that a connection involving service by a Local Public Sewer facility which is located wholly within the boundaries of a city and has a potential service area contained wholly within such boundaries shall require only the written certification of that city.

3-03 Administration

The certification may be made by either the legislative body of the city or county or by such department or division thereof as the legislative body may designate. The issuance of the certification may be preceded by a reasonable analysis and consideration, by a city or county having zoning authority, of alternatives to the proposed connection or extension. If Metro's Executive Director has not received a certification or other statement from a city or county as described in Section 3-01 within ninety (90) days of receipt by a city or county of a written application for certification, said city or county shall be deemed, for purposes of this regulation only, to have certified the proposal as consistent with adopted land use plans and policies; provided, that if such certification has not been received by the Executive Director within sixty (60) days of receipt by a city or county of a written application for certification, the Executive Director shall notify the chief executive and chairman of the legislative body of said city or county of the certification deadline. The Executive Director of Metro is authorized to develop such additional rules, procedures and forms as may be required to implement this section, to notify Local Public Agencies, cities, counties and interested persons of the certification process, and to assist such Local Public Agencies, cities, counties and persons in compliance therewith. Any questions concerning the applicability or scope of certification requirements shall be referred to the Executive Director for final resolution. Nothing in this section shall preclude Metro from providing staff assistance to a Local Public Agency, city, county or state or federal agency concerning waterborne pollutant removal, water quality improvements or sewage disposal alternatives.

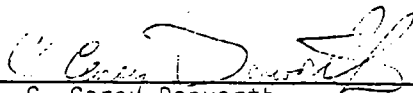
3-04 Legal Requirements

The provisions of Section 3-01 and Section 3-02 shall not apply where an extension of or connection to a Metro Interceptor or Trunk is required by formal order or directive of a state or federal agency with regulatory powers over said extension, connection or the Metropolitan Sewer System, or to the following Interceptor extensions: (1) That portion of the Phase I May Creek Interceptor System, as defined in the Environmental Protection Agency Project No. C-530749 Negative Declaration dated November 29, 1977, which includes the Honeydew Interceptor and a section of the May Creek Interceptor between existing Metro Manhole B and the confluence of May and Honey Creeks; (2) SLW 14 in the Comprehensive Plan, also known as the Madsen Creek trunk, and (3) GR 25 and GR 26 of the Comprehensive Plan, extending from 11th Avenue in Algona to Main Street in the City of Auburn. Copies of any formal orders or directives as referred to herein shall be immediately forwarded to every city and county and other Local Public Agencies within the Metropolitan Area.

Section 2. Sections 3 through 18 of the Rules and Regulations, as adopted by Resolution No. 2315 and as amended by Resolution No. 2698, are hereby renumbered as Sections 4 through 19.

Section 3. This Resolution shall take effect on April 6, 1978.

ADOPTED by the Council of the Municipality of Metropolitan Seattle at a regular meeting thereof held on the 6th day of April, 1978.


C. Carey Donworth
Chairman of the Council

ATTEST:


Carl A. Johansen
Clerk of the Council

1/14/79

Introduced by: Bernice Stern
Bill Reams
Mike Lowry
Gary Grant

77-369

ORDINANCE NO. 4025

AN ORDINANCE adopting a Sewerage General Plan for King County, amending the King County Comprehensive Plan, and repealing Ordinance 2168.

BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

SECTION 1. The "King County Sewerage General Plan" attached hereto is hereby adopted as an addendum to the King County Comprehensive Plan under the provisions of King County Code 20.12.030.

SECTION 2. As an amplification and augmentation of the Comprehensive Plan, the Sewerage General Plan shall supplement Chapter G, Utilities Development Policies, and shall prevail where conflicts, if any, may occur.

SECTION 3. Policy D-26 of the King County Comprehensive Plan, Chapter D, is hereby amended to read as follows:

"In areas where the allowed average residential density is not over one housing unit per gross acre, development should include the following improvements:

- a. type of street improvement dependent upon type of street and amount of potential traffic;
- b. improved walkways desirable at least on one side of the street;
- c. publicly approved water supply (may be privately owned);
- d. provision for adequate drainage (primarily surface drainage except for problem areas) and
- e. (~~septic tanks (subject to health department approval and dependent on soil conditions)~~) sanitary sewers or suitable alternative.

SECTION 4. Ordinance 2168 is hereby repealed.

INTRODUCED AND READ for the first time this 22nd day of July, 1977.

PASSED this 15th day of January, 1979.

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON

Ruby Chow
Chairman

ATTEST:

Dorothy M. Quinn DEPUTY
Clerk of the Council

APPROVED this 25th day of January, 1979.

[Signature]
King County Executive