CHAPTER 2

DESCRIPTION OF THE SERVICE AREA

2.1 DISTRICT BOUNDARIES

The existing corporate boundary and current service area of Valley View Sewer District are shown on Figure 2-1. As a general rule, the District anticipates corporate annexation of all areas to which it provides sewer service. The District endeavors to eventually establish consistency between its corporate boundary and service area. As indicated on Figure 2-1, the District provides service within the cities of SeaTac, Tukwila, Seattle, Burien, and in unincorporated King County. The District's boundary generally extends from the Seattle city limits at South Cambridge and South Director Streets on the north; to South 176th and South 182nd Streets on the south; from 1st Avenue South and State Route 509 on the west; and to State Route 599 and Interstate Highway 5 on the east.

2.2 FUTURE SERVICE AREA

The anticipated future service area of the District is slightly larger than the District's corporate boundary. The future service area boundary has been determined to be the logical area which could be served by Valley View based on topography and the distance to existing system facilities.

2.3 INTERLOCAL AGREEMENTS

Valley View Sewer District maintains interlocal agreements with several adjacent agencies, as well as with King County Wastewater Treatment Division (KCWWTD), as summarized in Table 2-1. Copies of interlocal agreements are maintained at the District's office and can be made available for review to any party interested.

TABLE 2-1: SUMMARY OF INTERLOCAL AGREEMENTS

Agreement With	Date	Nature of Agreement
King County Wastewater Treatment Division	3/1/73	Rainier Vista - Sewage Disposal Agreement
King County Wastewater Treatment Division	3/19/87	Rainier Vista - Extension of Sewage Disposal Agreement
SW Suburban Sewer District	11/15/05	Service Boundary Agreement
King County Wastewater Treatment Division	8/1/66	Sewage Disposal Agreement
Port of Seattle	7/15/68	Sewage Disposal Agreement

Agreement With	Date	Nature of Agreement
Midway Sewer District & King County Wastewater Treatment Division	2/7/06	Sewer Service Area Agreement
City of Tukwila	5/22/75	Sewage Disposal Agreement
City of SeaTac	2/11/97	Agreement for Video Inspection Work
Port of Seattle		Developers Extension Agreement for AKART
City of Tukwila	04/16/2018	Sewer Service Agreement for the Loop Area
City of Tukwila	06/12/2017	Agreement to jointly construct along 42nd Ave South
Alderwood Water and Wastewater District	04/23/2018	Intergovernmental cooperative purchasing agreement
Note: All Interlocal Agreements are on file and available for review at the District Office		

2.4 SERVICE AREA CONFLICTS

There are no known service area conflicts between the District and neighboring purveyors. As mentioned previously, the District operates within the limits of the cities of Tukwila, Seattle, SeaTac and Burien. Service within these jurisdictions is expected to continue into the future. There are areas along the Districts eastern boundary, just west of Interstate 5, which could be served by either Valley View or the City of Tukwila. Because these areas are within the City of Tukwila and are currently unsewered, the City would have first right of refusal for extending facilities to serve the areas. It may be more practical, however, for Valley View to serve these potential connections. The City of Tukwila and Valley View Sewer District have had discussions in the past to determine the most logical service provider for these areas and when service is desired, and reasonable to construct, further discussions will occur.

2.4.1 Unsewered Areas

Areas of Valley View Sewer District are currently unsewered for various reasons. Some areas are simply undeveloped and could potentially be sewered, while others are not serviceable due to physical limitations of the land. It is not always economically practical to construct all facilities with the capability to provide full service under saturation conditions, especially when those conditions may take a long time or may never materialize. As development scenarios occur, sufficient capacity must be provided to accommodate expected development over the ensuing planning period.

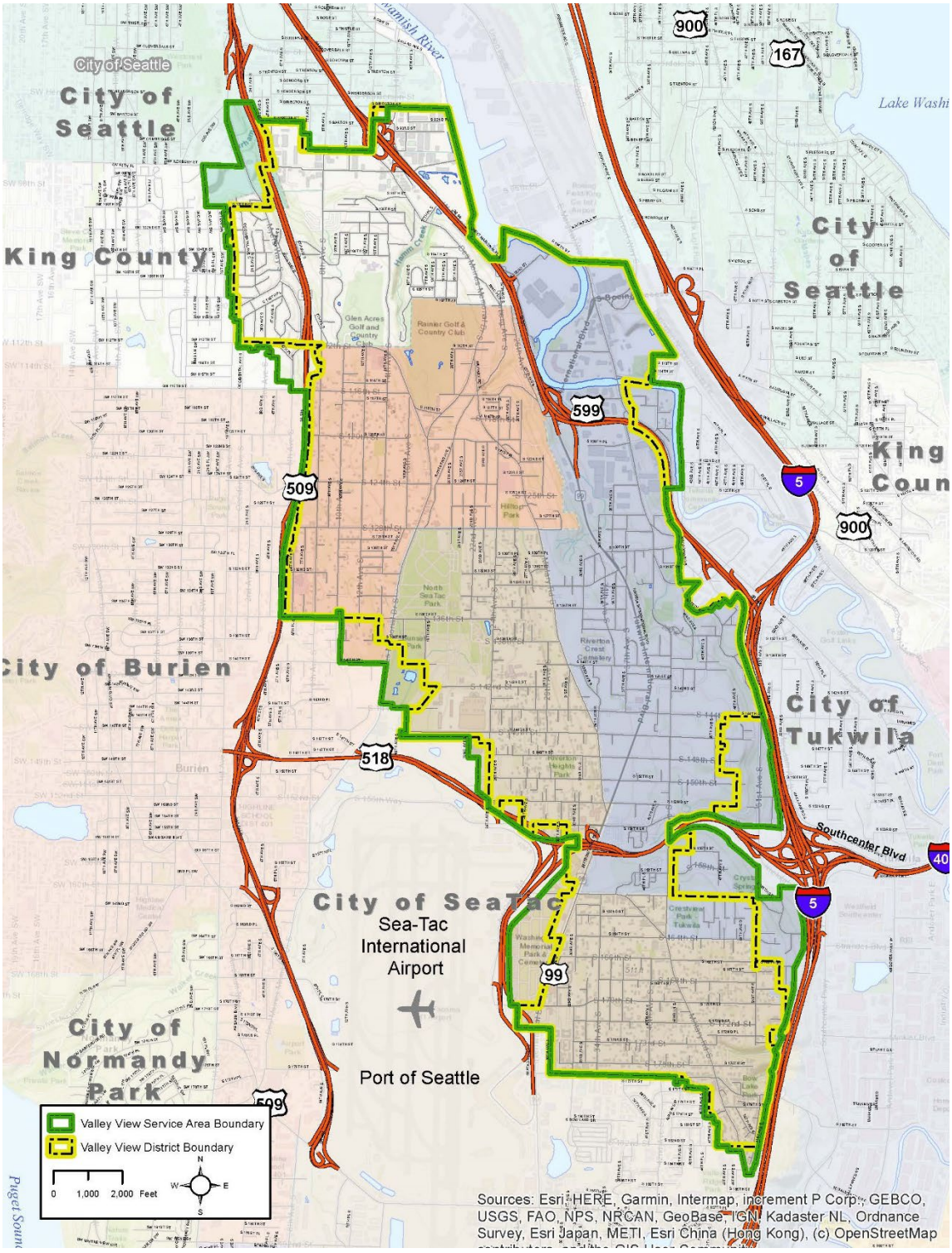

Figure 2-1	*Boundary Map*	20045
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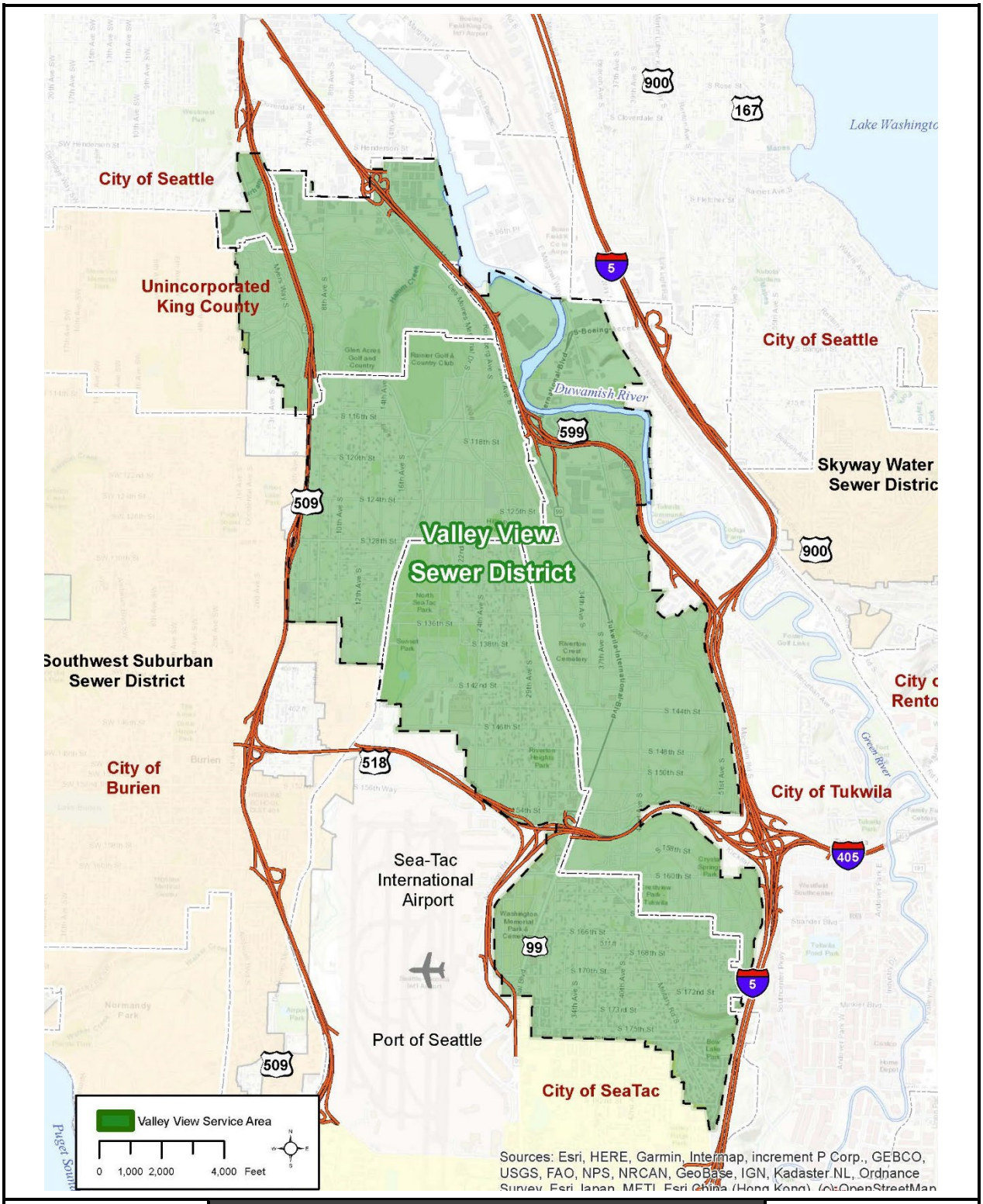

Figure 2-2	*Service Area Map*	20045
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2.5 PHYSICAL CHARACTERISTICS

2.5.1 Topography

Topography is a critical consideration for sewer utilities because the natural contours of the ground contributes (or inhibits) the ability of sewage to flow by gravity. Topography of the Valley View Sewer District service area is typical of that found in the Puget lowland and elevations range from over 500 feet in the southern portion of the District, to near sea level in the vicinity of the Duwamish River. The most predominant natural physical feature in the study area is the Duwamish River. The Duwamish River has been diked but not straightened and still exhibits the serpentine characteristics of a mature stream. The river valley typifies the last stage of development of an old valley: wide, flat bottom, broad meander belt and generally gentle slopes.

2.5.2 Drainage Basins

A natural drainage basin is an area that drains the surface runoff and river/stream discharge of a contiguous area. The natural drainage basin includes both the streams and rivers that convey water as well as the land surfaces from which water drains into those channels. The drainage basin acts like a funnel - collecting all the water within the area covered by the basin and channeling it into a waterway. Each drainage basin is separated topographically from adjacent basins. The direction and velocity of surface runoff and river/stream flow is directly related to the topography of the drainage basin.

The primary and sub-basins referred to in this plan are “man-made” drainage basins. The natural topography does play a role in the design of the man-made drainage basin in regards to the infrastructure. But the system does not have to flow in the same direction as the natural drainage basin flow. Pipe depth and pump stations enable the flow into the sewer infrastructure to go against the natural flow direction of the basin. The District has been divided into 11 primary drainage basins and 29 drainage sub-basins for the purpose of defining service for each area of the District. Drainage basins have been identified using topographic information as well as system specific characteristics, and are shown on Figure 4-1. Geographic descriptions, existing system information and recommended improvements for each drainage basin are presented in subsequent chapters of this Plan.

2.5.3 Geology and Soils

Soil conditions of the Valley View Sewer District are dominated by Quaternary deposits primarily composed of Vashon Drift in the uplands, and post glacial alluvial deposits in the Duwamish River bottom. Ten different soils series are found within the area, and these soils have either been formed directly from glacial deposits or from alluvial or lacustrine action.

Soil types occurring within the Valley View area are indicated in Table 2-2. In general, the soils in the study area are suited for urban development in the uplands and for agricultural uses in the lowlands. As indicated in Table 2-2, none of the soils present are considered suitable for septic drainfields.

TABLE 2-2: SOIL TYPES

Symbol	Soil Series	Potential for failure of Septic Drainfields.
AgB, AgD, AgC	Alderwood	Severe: Slow Substream permeability
Be	Beausite	Severe: Bedrock at a depth of 20 to 40"
InC	Indianola	Slight and Moderate: Moderate if slope is more than 8%; Possible pollution hazard
KpD	Kitsap	Severe: Very slow permeability
Pu	Puget	Severe: Slow permeability; Seasonal high water table
Py	Puyallup	Severe: Flood hazard
Rh	Riverwash	Severe: Flood hazard
Sk	Seattle	Severe: Seasonal high water table
Su	Sultan	Severe: Seasonal high water table; Flood hazard
Wo	Woodinville	Severe: Seasonal high water table; flood hazard
Source: King County Soil Survey		

2.5.4 Climate

The climate of the area is characteristic of the Seattle metropolitan area, which is strongly influenced by maritime masses originating over the Pacific Ocean and can generally be described as having mild, wet winters and warm, dry summers. Temperatures typically range from 34 to 49 degrees Fahrenheit in the winter months and 51 to 75 degrees Fahrenheit during the summer months. Rainfall in the area averages 35-40 inches annually. Climate effects sanitary sewer operations in the potential to increase inflow and infiltration during the wet season through precipitation. Climate effects sanitary sewer construction through the scheduling of projects as well as the construction techniques implemented during various times of the year.

2.5.5 Hydrology

The primary hydrologic feature in the study area is the Duwamish River, which flows through the northeastern portion of the District. WAC 173-201 designates the Duwamish as water quality Class B (good), which generally means that water quality shall meet or exceed requirements for most uses. Because of the close proximity to development and on-site sewage disposal systems, water quality is of concern. Other small tributaries within the District include Hamms Creek and several unnamed streams, which flow into the Duwamish.

2.5.6 Sensitive Areas

Sensitive areas such as streams, wetlands, steep slopes, floodplains and areas of erosion hazard do preside within the District's service boundaries. Specific information pertaining to sensitive areas is maintained by and can be obtained from King County or

the appropriate city within which the District operates. Sensitive areas are important considerations for projecting future development, assessing the site locations of projects, and utilizing specialized construction techniques as appropriate for project safety and environmental protection.

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