

## **SECTION 2**

### **BASIC PLANNING DATA**

#### **2.1 GENERAL**

This section of the Plan provides an overview of the sewer service area in terms of service area and corporate boundaries, jurisdictional issues, and physical features. The planning area for this document is the "future service area" as established and approved in the 1999 Lakehaven Utility District Comprehensive Wastewater Plan and subsequent amendments thereto.

#### **2.2 SERVICE AREA CHARACTERISTICS**

Lakehaven Utility District's current direct sewer service area consists of 34 square miles of land located in the southwestern most part of King County Washington. The service area generally extends from 56th and 59th Avenues South on the east to the King - Pierce County boundary, to Puget Sound on the west, from South 272nd Street on the north and to the Pierce County line on the south.

In addition to the direct service area, Lakehaven Utility District provides wastewater treatment and disposal service to areas beyond the corporate limits. This occurs in specific isolated areas to the north of Lakehaven, where flows are received from Midway Sewer District and may be received from other neighboring utilities if appropriate for provision of economical and efficient service. The District recently entered into an agreement that will serve the City of Edgewood to receive flows from the sanitary sewer system proposed to serve the City core and scheduled for completion in 2010. Additional agreements for treatment and disposal may be entered into as capacity is available or improvements to Lakehaven's existing conveyance and treatment facilities are made.

##### **2.2.1 Existing Corporate and Service Area Boundaries**

Lakehaven's corporate boundary and sewer service area boundary are shown on Figure 2-1 and together with areas currently served by the District, represents the planning area for this document. The boundaries are a result of growth within and around the District, developer extensions, annexations, and agreements with neighboring providers of wastewater service. There are slight differences in these two boundaries, especially in the eastern and southern portions of Lakehaven, where the corporate boundary varies from the sewer service boundary. Differences between service area and corporate boundaries are primarily due to the fact that portions of Lakehaven were at one time designated as outside of the Local Service Area established by King County. This designation restricted the past possibility of planning for or providing sanitary sewer service to these areas.

Adoption of the state Growth Management Act (GMA) mandated the adoption of Countywide Planning Policies which revisited the designation of areas which are to be



provided with urban level of services, such as sanitary sewer service. Countywide Planning Policies for King County, and subsequent plans and policies, have eliminated the Local Service Area designation and replaced it with Urban Growth Area (UGA) designations. Lakehaven's entire corporate boundary is within the UGA and, as such, planning for service to the entire corporate boundary is both appropriate and necessary. Lakehaven is able to provide wastewater collection and treatment services to all customers within its corporate boundary, as well as adjacent areas. Service to areas outside its current corporate and/or service area boundaries may require negotiation of interlocal agreements with adjacent service providers. As noted earlier, Lakehaven Utility District has entered into an agreement with the City of Edgewood for collection, treatment, and disposal of wastewater. Additional information regarding this agreement is provided in Appendix B.

Through incorporations and annexations by cities within the sewer service area, Lakehaven's corporate boundary now includes all or portions of ten jurisdictions (see Figure 3-1). Lakehaven's corporate sewer service boundary includes portions of the: Federal Way, Des Moines, Kent, Auburn, Pacific, Edgewood, Milton, Tacoma and unincorporated portions of King and Pierce Counties. With the exception of the City of Pacific, these entities either do not provide wastewater utility service, or are unable to serve areas that are currently served by Lakehaven. During the course of the planning process, the City of Pacific provided information indicating a potential service area overlap between Lakehaven and Pacific. The potential overlap is associated with interlocal agreements between the City of Pacific and King County for conveyance of wastewater within the City's corporate boundary to King County. As indicated on Figures 2-1 and 3-1, Lakehaven's corporate and service area boundaries include a small portion of the City of Pacific's existing corporate boundary and potential annexation area. These areas are unsewered. Although this Plan addresses Lakehaven serving the area upon request from the property owners, coordination and discussion with the City of Pacific is required prior to service extensions to the potential overlap area. The City and Lakehaven recently completed similar negotiations to establish water service areas and anticipate a mutually agreed upon sewer service area boundary.

A summary of the interlocal agreements and franchises governing operation of the sewer utility within these jurisdictions is provided in Section 2.3 and Appendix B.

### **2.2.2 Future Service Area Boundary**

Lakehaven's sewer service area will expand as development requiring extension of public sanitary sewer service occurs. It is anticipated that the sanitary sewer service area will eventually extend to Lakehaven's corporate boundary in areas where there is no conflict with adjacent service providers. Exceptions to this include the potential service area overlap with Pacific identified in paragraph 2.2.1; an area in the eastern portion of Lakehaven to be served by the City of Auburn; and, an area in the northwestern portion of the District currently served by Midway Sewer District.



In addition, adjustments may be required from time to time to provide efficient service at a reasonable cost. Such direct service area adjustments will be accomplished between the neighboring service providers as development occurs and requests for service dictate. Sections 6 and 9 provide analysis of rerouting flows to Lakehaven's treatment plants.

Lakehaven currently has an agreement for collection, treatment, and disposal of wastewater from the City of Edgewood and has received inquiries from other jurisdictions regarding the availability of capacity and ability of Lakehaven to receive addition flows for treatment and disposal. Lakehaven's wholesale treatment service area may be expanded in the future as areas which would be best served by Lakehaven's treatment plants are identified and conveyance, treatment and disposal capacity is either determined available or is constructed. As discussed in further detail in Chapters 9 and 10, sufficient capacity may be available to accommodate flows from other jurisdictions in order to relieve potential capacity issues in adjacent systems. Additional analysis and negotiation with neighboring jurisdictions would be required prior to acceptance of wastewater flows from other agencies.

### **2.2.3 Adjacent Service Providers**

Neighboring wastewater utility providers are shown on Figure 2-1. The area north of Lakehaven is served by Midway Sewer District, which has its own wastewater treatment plant. The cities of Kent, Auburn, Algona, and Pacific are located northeast and east of Lakehaven, and rely on the King County-Metro system for treatment and disposal of wastewater from their service areas. Pierce County and Tacoma are located south of Lakehaven and provide wastewater treatment and disposal service to their customers. Currently, Lakehaven relies on its connections with Pierce County, King County-Metro, and Midway Sewer District for treatment and disposal of flows from small areas around the perimeter of Lakehaven. Additional discussion regarding flow to adjacent systems is contained in the collection system analysis and recommended improvements sections of this Plan (Sections 6 and 7).

## **2.3 INTERLOCAL AGREEMENTS**

Lakehaven Utility District maintains franchises and interlocal agreements that assist in determining the area currently and proposed for public sanitary service. Key recent interlocal agreements used in development of this Plan are discussed in appropriate Sections throughout the Plan and a complete list of interlocal agreements related to the wastewater collection and treatment within and adjacent to Lakehaven's service area is provided in Appendix B.

## **2.4 SERVICE AREA GOALS AND POLICIES**

Lakehaven's affirmed mission statement is to provide high quality collection and treatment of wastewater that meets or exceeds all applicable State and Federal standards at the



lowest long-term reasonable cost, consistent with industry standards. The following goals and policies support fulfillment of the mission statement and development of the sanitary sewer system.

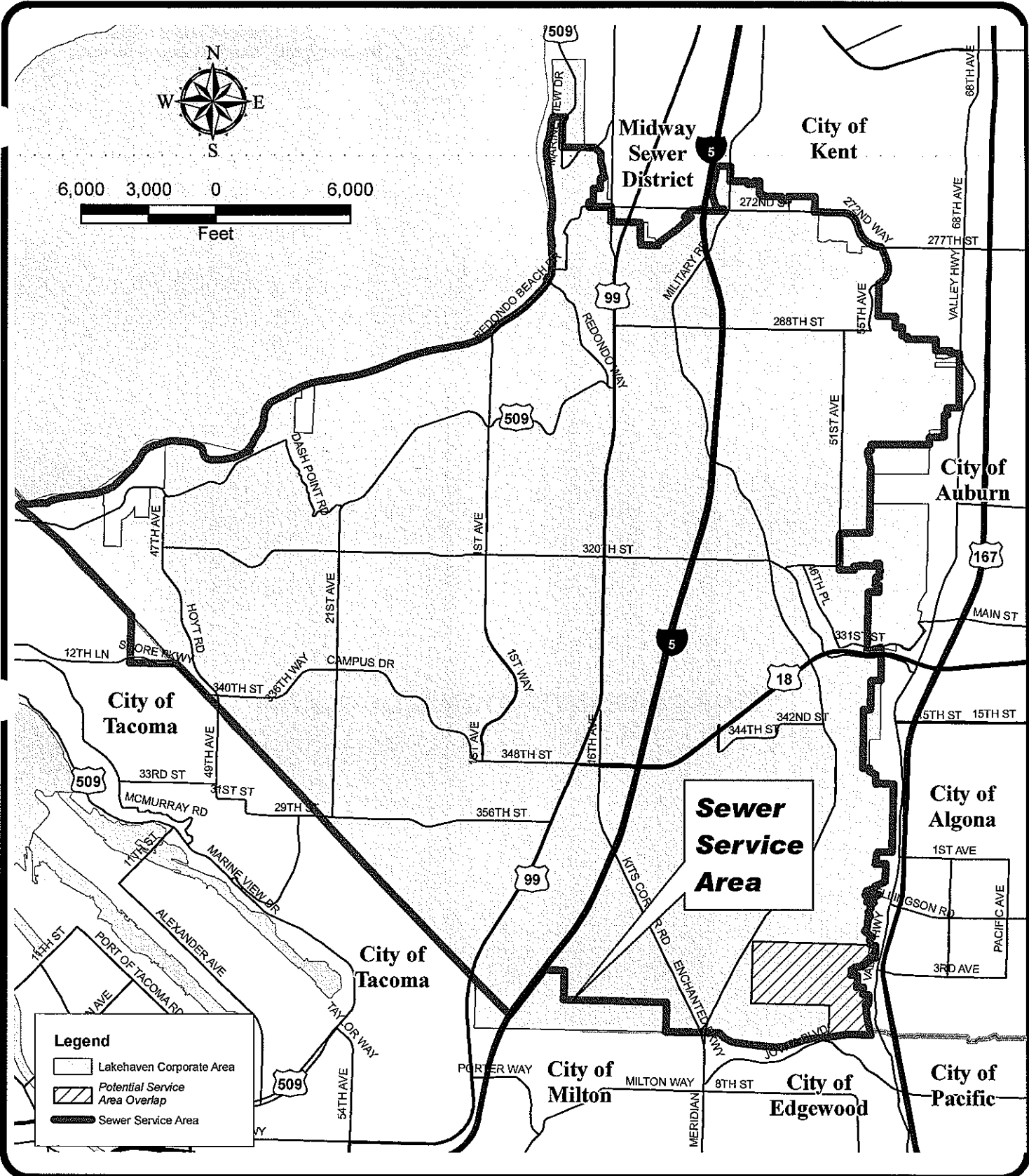
- Ensure that an appropriate level of service is provided to all areas within Lakehaven's corporate and sewer service boundaries.
- Provide a properly planned wastewater collection and treatment system that is environmentally sound and adequately protects the public health and welfare while at the same time protecting ground water and surface water resources.
- Provide and maintain facilities that are essential for the provision of continuous and uninterrupted service without backups, overflows or leakage.
- Provide wastewater collection and treatment facilities consistent with the adopted land use plans of the respective governmental agencies having jurisdiction over the service area.
- Provide sufficient capacity in the wastewater collection and treatment systems to accommodate the existing and projected wastewater flows.
- Require existing and new connections to the system to comply with Lakehaven's "Sewer Use Rules" governing the quality and quantity of wastewater entering the system.
- Provide a means for residents within the service area that are currently utilizing on-site disposal systems to connect to Lakehaven's system when appropriate.
- Provide wastewater collection and treatment services to new customers without interrupting or diminishing existing service levels.
- To the extent that it is cost effective and practical, minimize District-owned pump stations and maximize use of gravity trunks, mains and service connections.
- Provide wastewater treatment in a manner that is consistent with the Washington State Department of Ecology's policies for improving the quality of Puget Sound receiving waters.
- Provide a solids handling process that converts solids produced by wastewater treatment operations into a reusable product.



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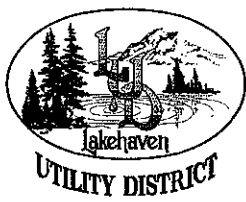
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Lakehaven Utility District  
 Comprehensive Wastewater System Plan  
**FIGURE 2-1**  
**SEWER SERVICE AREA AND**  
**ADJACENT SEWER PURVEYORS**



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## **2.5 PHYSICAL FEATURES OF THE SERVICE**

Lakehaven Utility District is situated between Puget Sound and the Green River Valley, in southwestern King County. Primary physical features of the service area are identified in the following paragraphs.

### **2.5.1 Topography**

Topography within Lakehaven is a result of past glacial activity which, combined with subsequent erosion, has created a plateau with rolling terrain and small streams draining from the plateau to Puget Sound and the surrounding valleys. Elevations range from 500 feet in the upland plateau to sea level along the shores of Puget Sound, with an average elevation of between 300 and 400 feet. Steep slopes occur along the western portion of Lakehaven adjacent to the Sound and along the eastern District boundary, adjacent to the Green River Valley. These slopes form a natural boundary for the provision of gravity flow sanitary sewer service.

### **2.5.2 Geology and Soils**

Consideration of geology and soils is important because these factors can provide an indication of the specific issues that must be addressed in the design and construction of new facilities and can assist in determining the anticipated performance of on-site disposal systems in the area. Despite Lakehaven's "urban" designation and current regulations that limit the ability to construct new septic tank and drainfield systems, it is estimated that there are as many as 6,500 existing on-site disposal systems within the corporate area (approximately 20% of Lakehaven's service area). An understanding of geology and soil conditions in the area will assist in estimating the expected life of these facilities. Several hydrogeological studies have been prepared for Lakehaven in the past and indicate that glacial till and recessional outwash blanket most of the study area. Glacial till, which occurs in much of the upland area, has poor to marginal soil conditions for effective drainfield operation. Soil permeability and shallow water table conditions also limit the feasibility of drainfields in the area.

### **2.5.3 Surface Water**

As mentioned previously, Lakehaven borders Puget Sound along its western boundary, where effluent from its two wastewater treatment plants is discharged in accordance with existing NPDES permits. Other significant surface water bodies in the area are identified in Table 2-1.

**TABLE 2-1**  
**LAKEHAVEN UTILITY DISTRICT**  
**SIGNIFICANT SURFACE WATER BODIES WITHIN THE STUDY AREA**

| Name              | Approximate Acreage | Approx. Surface Water Elevation |
|-------------------|---------------------|---------------------------------|
| Bingaman Pond     | 1.8                 | 286                             |
| Brook Lake        | 0.6                 | 195                             |
| Easter Lake       | 11.0                | 450                             |
| Fishers Pond      | 6.5                 | 290                             |
| Five Mile Lake    | 38.5                | 373                             |
| Jeane Lake        | 9.8                 | 195                             |
| Lake Dolloff      | 19.8                | 397                             |
| Lake Geneva       | 29.3                | 368                             |
| Lake Killarney    | 31.1                | 368                             |
| Lorene Lake       | 8.0                 | 195                             |
| Mirror Lake       | 17.4                | 299                             |
| Mud Lake          | 2.8                 | 210                             |
| North Lake        | 54.2                | 392                             |
| Panther Lake      | 11.9                | 240                             |
| Spider Lake       | 3.8                 | 380                             |
| Star Lake         | 34.2                | 324                             |
| Steel Lake        | 48.8                | 430                             |
| Trout Lake        | 18.5                | 325                             |
| Weyerhaeuser Lake | 9.0                 | 360                             |

OTHER CREEKS/STREAMS/BODIES OF WATER:

- Hylebos Wetlands
- Hylebos Creek
- Lakota Creek
- Mill Creek

Coldbrook Creek (may also be known as Jobs Creek)

**Note:**

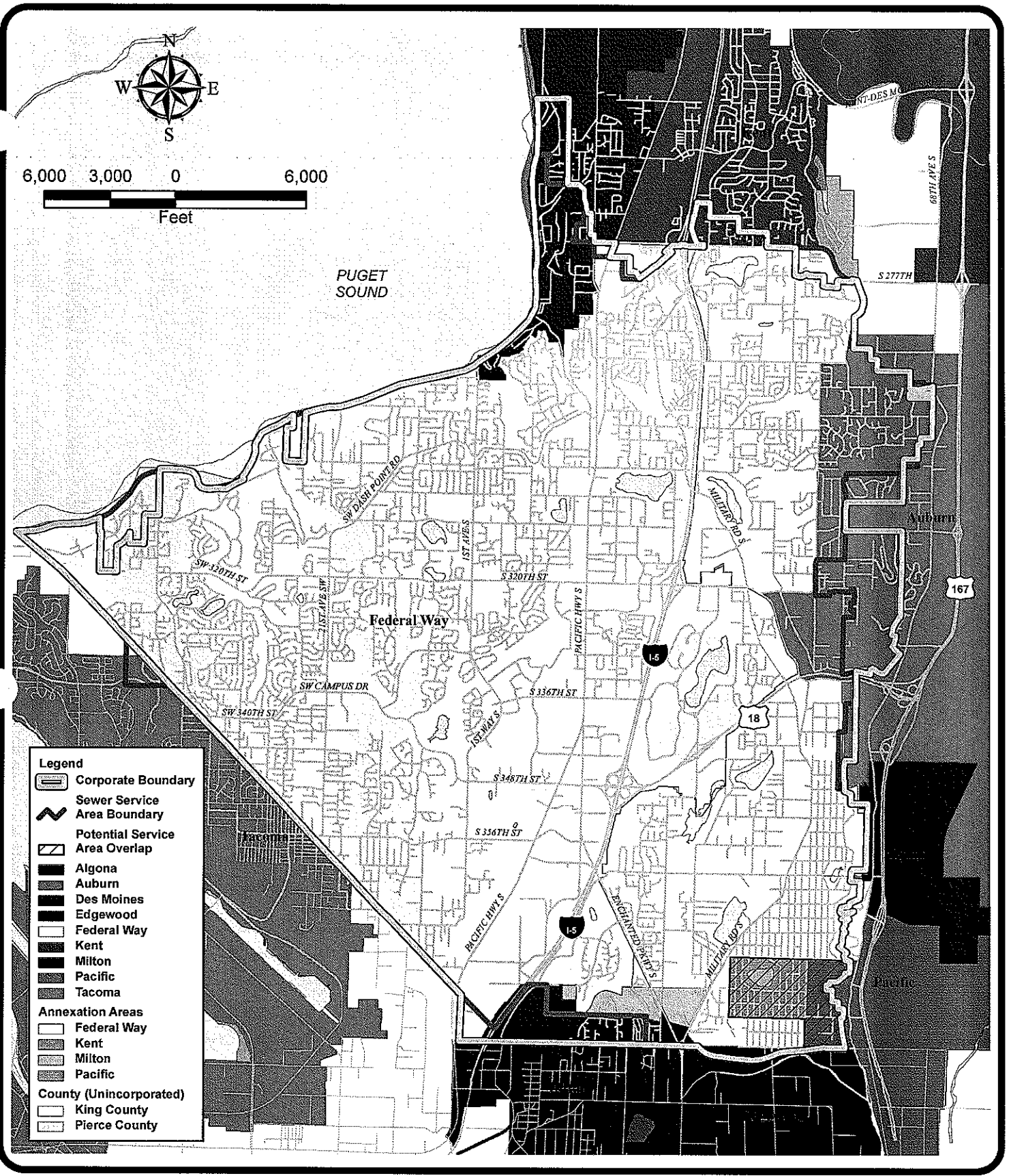
The surface water bodies listed in this Table represent significant bodies of water within Lakehaven, and are not intended to be all inclusive.

**2.5.4 Sensitive Areas**

Sensitive areas such as steep slopes, wetlands, streams, flood hazard areas, erosion hazard areas, etc. occur within Lakehaven and limit the potential for development or redevelopment on specific properties. Sensitive areas are regulated by the local land use jurisdictions within which Lakehaven operates (i.e. County or City).

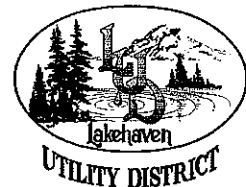






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Lakehaven Utility District  
 Comprehensive Wastewater System Plan  
**FIGURE 3-1**  
 CITY BOUNDARY MAP



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