



10. UTILITIES ELEMENT

Note: This Chapter contains supporting inventory information as well as the following essential Comprehensive Plan components: goals, objectives, and policies; and implementation strategies. Supporting information may be updated periodically for informational purposes by City staff as authorized by the City Council. Amendments to essential components would require formal Comprehensive Plan amendment by the City Council in accordance with City regulations.

UTILITIES ELEMENT

INTRODUCTION

Purpose

City residents rely on a number of basic services that help define their quality of life and maintain their health and well being. Water supply and sewage waste disposal involving more than one user and the delivery of natural gas, electricity, and telecommunication services are considered utilities. These services are often taken for granted, yet without coordination and conscientious planning for future growth, service may be interrupted, inadequate, or prohibitively expensive. The Utilities Element addresses electric, telecommunication, and natural gas lines as well as water, wastewater, and solid waste services, and conservation.

Growth Management Act Requirements

The Growth Management Act (GMA) has the goal of ensuring that those public facilities and services necessary to support development shall be adequate to serve the development at the time development is available for occupancy and use with decreasing current service levels below locally established minimum standards. A Utility Element is required to address the general location, proposed location and capacity of electrical lines, telecommunication lines, and natural gas lines.

Countywide Planning Policies

The King County Countywide Planning Policies include general policies to ensure adequate infrastructure for planned development are defined for those areas within the King County Urban Growth Boundary. Growth is to be directed to centers and urbanized areas with existing infrastructure capacity.

EXISTING CONDITIONS/FORECAST FUTURE NEEDS

Power

Electric utility service for the City of Kenmore and Joint Study Areas is provided by Puget Sound Energy (PSE). Puget Sound Energy was formed by the merger of Puget Sound Power & Light and Washington Natural Gas in 1997. PSE is an investor-owned integrated energy utility serving customers within thirteen counties of western Washington. Currently PSE serves approximately 900,000 electric customers within its 6,000 square mile service area. Approximately 275,000 of these customers purchase both gas and electricity from the company. Within Kenmore, PSE has 7,900 electric customers as of September 30, 1999.

Existing Distribution System

The current comprehensive plan for power is the 1993 King County Growth Management Act Electric Facilities Plan. Kenmore is within the “Northshore Electrical Subarea” of that plan. Power supplied to customers in the Northshore subarea is delivered from distant generating stations on 230kV transmission lines to the Sammamish Transmission Substation (in Redmond) and Bonneville Power Administration (BPA) Snohomish (in Snohomish County) transmission substations where the voltage is transformed from 240kV to 115kV. The power transformed at the Sammamish and BPA Snohomish transmission substations is delivered to the Study Area on 115kV transmission lines to distribution substations. Four distribution substations provide electricity for the Study Area, although only two of these, Kenmore and Inglewood, are in the Study Area. At the distribution substations, voltage is further reduced to 12kV, the standard distribution voltage for PSE. **Figure U-1** shows the locations of existing primary electric

transmission lines and substations within the Study Area. As of December 21, 1998 the winter peak loads of these stations are as shown in **Table U-A**.

TABLE U-A
WINTER PEAK LOADS – KENMORE VICINITY (DECEMBER 1998)

SUBSTATION	LOAD (MVA)
Inglewood	21.2
Kenmore	25.6
North Bothell	10.8
Wayne	19.5

Source: Puget Sound Energy October 1999

Planned Upgrades to System

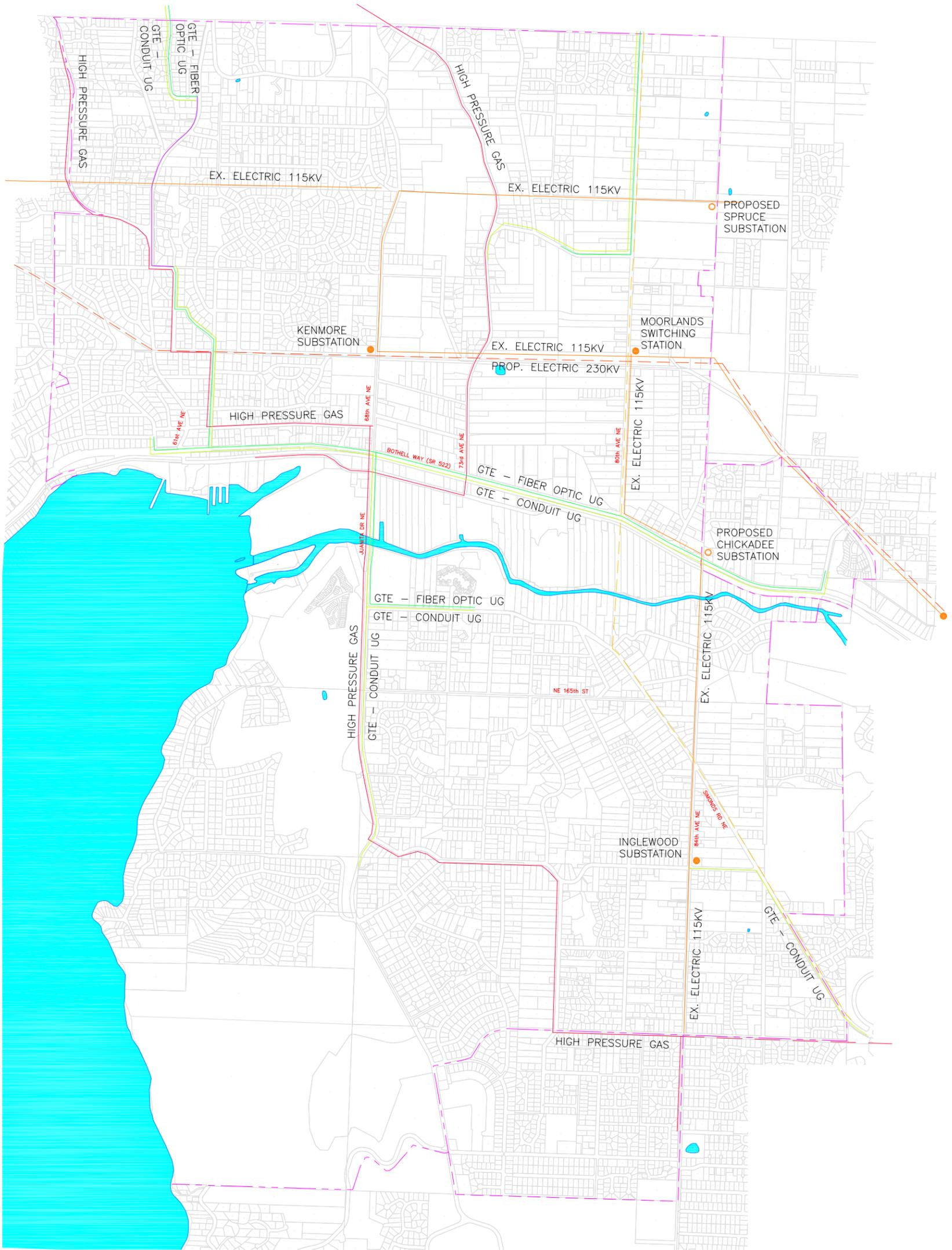
In planning upgrades to the electrical power system within Central Puget Sound area, PSE uses the detailed residential population, employment population, and employment projections of the Puget Sound Regional Council. This power-planning process is outlined in PSE's Planners' Briefing Book on Electric Utility Issues in Growth Management, Puget Sound Power & Light Co, April 1993. PSE's transmission system is modeled by a computer program to determine the load level at which system improvements are required. Based on load growth rates, the date by which a new facility will be needed is estimated. However, the actual loads are monitored to determine when new facilities should be scheduled for budgeting and construction purposes.

Future power facility construction within Kenmore before 2020, according to plans for the Northshore Subarea, will include additional transmission lines and two new substations (see **Figure U-1**). New 115kV transmission lines are proposed to the south from the Snohomish County boundary along 80th Avenue NE, across the Sammamish River, then southeast along Simonds Road. New 230kV transmission lines are proposed to cross Kenmore along the Tolt Pipeline right-of-way. A 115kV transmission line already occupies the portion of the Tolt Pipeline right-of-way between the eastern City Limits and 68th Avenue NE. The proposed Spruce substation will be located at the eastern City limit at along the existing 115KV transmission lines that follow the NE 195th Street alignment. The proposed Chickadee substation will be located at the eastern City Limits north of Bothell Way.

Conversion to Underground Service

The undergrounding of electric facilities is regulated by the Washington Utilities and Transportation Commission (WUTC). Underground installations by PSE must be done in accord with the rates and tariffs on file with the WUTC. There are rates and tariffs for conversion of existing overhead distribution systems in residential and commercial areas as well as for installation of new distribution lines underground.

At the time of this writing, PSE Electric Tariff G, Schedule 70 states conversion to underground service in residential areas costs \$20.33 per centerline foot for areas utilizing surface-mounted transformers and \$25.54 per centerline for areas using subsurface-mounted transformers. These costs do not include trenching or restoration. Schedule 71 states that conversion to underground service in commercial areas requires payment to PSE of 70 percent of the total cost of the project, excluding trenching and restoration. However only 30 percent of the total cost of the project, excluding trenching and restoration, is required if the conversion is necessitated by the addition of one or more lanes to an arterial roadway.



Power, Telephone & Gas

Legend

PSE - EXISTING HIGH PRESSURE GAS	
PSE - PROPOSED HIGH PRESSURE GAS	
PSE - EXISTING ELECTRIC 115KV	
PSE - EXISTING ELECTRIC SUBSTATION	
PSE - PROPOSED ELECTRIC SUBSTATION	
PSE - PROPOSED ELECTRIC 115KV	
PSE - PROPOSED ELECTRIC 230KV	
GTE - FIBER OPTIC UNDERGROUND	
GTE - FIBER OPTIC AERIAL	
GTE - CONDUIT ROUTE UNDERGROUND	

This map is intended for planning purposes only and is not guaranteed to show accurate measurements.

Sources:

King County GIS Data Standard & Parcel Data issued April 1999.

Electric and gas facility location from mapping provided by Puget Sound Energy, October 1999.

Telecommunications fiber optic and conduit routes from mapping provided by GTE Network Services.



Figure U-1

800 0 800 1600 FEET



February 22, 2001

BUR BUCHER, WILLIS & RATLIFF CORPORATION

Cost for installation of underground facilities is directly dependent on the type of facility to be built and the location of the proposed construction. Larger feeder cables have higher costs than smaller cables that feed small numbers of customers and typically result in larger impacts to the construction area due to larger trenches and larger duct and vault systems. In addition, construction within highly urbanized areas increases the cost considerably due to factors such as high traffic volumes (which impact working hours) and higher incidences of construction and restoration in paved areas. Costs for undergrounding may range from \$30 per foot to as high as \$200 or more a foot based on the above factors. Each undergrounding project must be reviewed independently to establish true installation costs. As a general rule, distribution line undergrounding is approximately 150 percent to 200 percent the cost for distribution overhead facility extensions.

Energy Conservation Programs

PSE currently has several energy conservation programs for residential, commercial, and industrial customers. Programs range from technical assistance and information to referrals and financial assistance. PSE maintains an “Energy Efficiency Hotline” to help direct customers to the various conservation programs. For residential customers PSE offers a free, do-it-yourself home energy audit as well as several free informational brochures. PSE also provides weatherization assistance for low-income customers.

Policy on Electric and Magnetic Fields

PSE has adopted a policy statement on electric and magnetic fields (EMF). Electric and magnetic fields exist in nature as well as around all types of electrical devices. The electric and magnetic fields around all electrical appliances and power lines fall within the extremely low frequency (ELF) range. For several years, scientists reflecting a broad range of scientific disciplines have considered the question of whether EMF presents a hazard to human health. The scientific consensus, according to the PSE statement, is that the evidence has not demonstrated a cause-and-effect relationship between health effects and extremely low frequency EMF. PSE’s policy statement says that “Puget Sound Energy has and will continue to:

- Follow all applicable laws and regulations governing the installation of electrical facilities
- Monitor research, regulations, legal actions, and communications on extremely low frequency EMF to further develop our ability to communicate with our customers, our employees and government officials
- Support the existing research program on extremely low frequency EMF jointly funded with and coordinated by the federal government
- Respond to customer and employee requests for information and provide free in-home measurements of extremely low frequency magnetic fields to customers who request them
- Participate in public proceedings to enhance understanding of the scientific studies, and to review the limits of existing information.”

Gas

Natural gas utility services for the City of Kenmore and Joint Study Areas is also provided by PSE. Currently, PSE serves 690,000 gas customers within its 6,000 square mile service area and a total customer base of 1.4 million customers. Approximately 275,000 of these customers purchase both gas and electricity from the company. Within Kenmore, PSE has 4,013 gas customers as of August 1999.

The source of natural gas in the Pacific Northwest (Washington, Oregon, and Idaho) is gas from a wide range of sources in North America. Sixty percent of the region’s natural gas supply comes from British

Columbia and Alberta in the north, 40 percent comes from domestic sources including the San Juan Basin in New Mexico/Texas in the south. The Pacific Northwest consumes nearly 400 billion cubic feet of natural gas per year.

Existing Distribution System

Natural gas is supplied to the City of Kenmore and Joint Study Areas from Williams Pipeline Corporation through the North Seattle Town Border Station, located in Snohomish County. At this station natural gas from the pipeline is reduced to 250 pounds per square inch (psi). Capacity is about 11 million cubic feet per hour (cfh). High pressure lines transport gas from gate stations to district regulators. The pipe material is typically wrapped steel. There are approximately 36,984 feet of eight-inch and six-inch high pressure gas line in Kenmore (see **Figure U-1**) capable of supplying 2.2 million cfh to Kenmore. District regulators reduce pressures to typical distribution operation pressures of 25 to 60 psi. There are six district regulators within Kenmore that feed distribution mains ranging in size from 1-1/4" to 8" diameter.

PSE has 55 miles of main within Kenmore. Most of the streets within the Study Area contain gas mains. The largest gaps in gas service occur along portions of 80th Avenue NE north of Bothell Way.

Planned Upgrades to System

Upgrades to the natural gas system are made to maintain reliable gas service to customers. Reliable natural gas service is dependent on both adequate system capacity and operating pressures throughout the distribution system. As customers are added to the existing distribution system and gas consumption increases, gas pressure within the distribution system decreases. From time to time system improvements must be made to ensure adequate pressures are maintained. Typical improvements and expansions to the distribution system include interconnection of portions of the supply and distribution mains to provide gas from multiple directions, addition of more parallel mains, and replacement of existing mains where larger sizes (and higher capacity) are needed.

PSE employs a modeling tool that uses existing customer load information to model the gas system. Using temperature as the variable, Puget can model the gas system under high load conditions. This modeling system is then compared against actual gauge readings for establishing accuracy of the model. Using this modeling system as its base, PSE gas planners then plan for system upgrades based on a number of inputs, such as proposed population growth, specific requests for gas service, notification of land use action by jurisdictions, physical condition of the system, and municipal roadway improvements or new construction.

Based on current growth predictions, PSE has identified one major project within the Planning Area to be completed before 2020. This proposed improvement would consist of installing a 12-inch diameter high-pressure main in NE 145th Street between 84th Avenue NE and the eastern City Limits. (see **Figure U-1**) This improvement would continue east beyond the City boundary to 124th Avenue NE and cross under I-405.

Natural gas is not an essential service and therefore PSE is not mandated to serve all areas. Extension of service is based on request and the results of a market analysis to determine if revenues from and extension will offset the cost of construction.

Energy Conservation Programs

PSE currently has several energy conservation programs for residential, commercial, and industrial customers. Programs range from technical assistance and information to referrals and financial assistance. PSE maintains an "Energy Efficiency Hotline" to help direct customers to the various

conservation programs. For residential customers PSE offers a free, do-it-yourself home energy audit as well as several free informational brochures. PSE also provides weatherization assistance for low-income customers.

Telephone

Telephone service is provided within the entire Planning Area by GTE. GTE does not have any fixed cellular facilities within the City boundary nor does it have major projects planned for the near future. **Figure U-1** shows GTE fiber optic and conduit routes within the Planning Area. Metricom, Nextel, and AT&T, among others, have or are planning on installing cellular facilities in the community.

Cable

TV cable service is provided within the entire Planning Area by AT&T Cable Services. As of October 8, 1999 there were 4,683 cable customers within Kenmore. AT&T has been in the process of a system upgrade between Olympia to Bellingham that includes Kenmore. This upgrade will provide a “universal line-up” whereby the whole region will receive the same channels and programming.

Local Water Service

The Northshore Utility District provides public water service to the entire City of Kenmore, the Kenmore-Bothell Joint Planning Area, and the Kenmore-Kirkland Joint Planning Area. The district is organized as a special purpose district that has the authority to operate under Title 57 of the Revised Code of Washington (RCW).

The District owns and operates a water distribution and storage system. All water is purchased from Seattle Public Utilities (SPU) through connections to the Tolt Pipeline No. 1, one connection to the Tolt Eastside Supply Line, and one connection to the Maple Leaf Supply Line. The current water supply contract with SPU expires in 2011.

The current Comprehensive Water System Plan for the District was completed in 2000. This plan evaluates the existing system and its ability to meet anticipated requirements for water source, quality, transmission storage, and distribution for a twenty-year period (2000-2020) in accordance with the Growth Management Act. District population estimates for the planning period are based on the Transportation Analysis Zone (TAZ) projections provided by the Puget Sound Regional Council and Utility District Staff determinations.

The 2000 plan includes a \$13.6 million six-year Capital Improvement Plan that includes projects for the 2000-2006 timeframe covering water supply, distribution system, storage facilities, metering and telemetry improvements, and emergency response. The majority of these projects constitute ongoing upgrades to the system. Due to the upcoming expiration of the SPU water supply contract in 2011, the District is currently evaluating various alternate supply options for insuring a continued reliable supply.

The Northshore Utility District 2000 Water System Comprehensive Plan should be referred to directly for detailed information about the District and its facilities. **Figure U-2** shows existing water mains and reservoirs in the City of Kenmore.



Public Water Facilities

Legend

- NORTHSHORE UTILITY DISTRICT WATER MAINS 
- SEATTLE PUBLIC UTILITIES TOLT RIVER PIPELINE 
- CITY BOUNDARY 
- JOINT STUDY AREA BOUNDARY 
- NORTHSHORE UTILITY DISTRICT RESERVOIR 

This map is intended for planning purposes only and is not guaranteed to show accurate measurements.

Sources:
King County GIS Data Standard & Parcel Data issued April 1999.

Water facility locations from Northshore Utility District mapping.



Figure U-2

February 22, 2001

BWR BUCHER, WILLIS & RATLIFF CORPORATION

Regional Water Service

The Seattle Public Utilities Tolt Pipeline No. 1 crosses the city of Kenmore from east to west. The pipeline forms the northeast boundary of the Kenmore-Bothell Joint Planning Area, then turns due west and crosses the majority of Kenmore along the NE 185th Street alignment. At 61st Avenue NE the pipeline alignment turns in a northwest direction to the western City boundary.

One tap into the Tolt Pipeline exists within the Study Area boundary at 64th Avenue NE and serves a portion of the Northshore Utility District. A second Northshore Utility District tap exists just outside the Bothell-Kenmore Joint Planning area near the intersection of NE 180th Street and 88th Avenue NE.

Seattle Public Utilities initiated construction of an additional pipeline along the existing Tolt Pipeline alignment beginning in 2000 with completion expected in 2002.

Local Wastewater Service

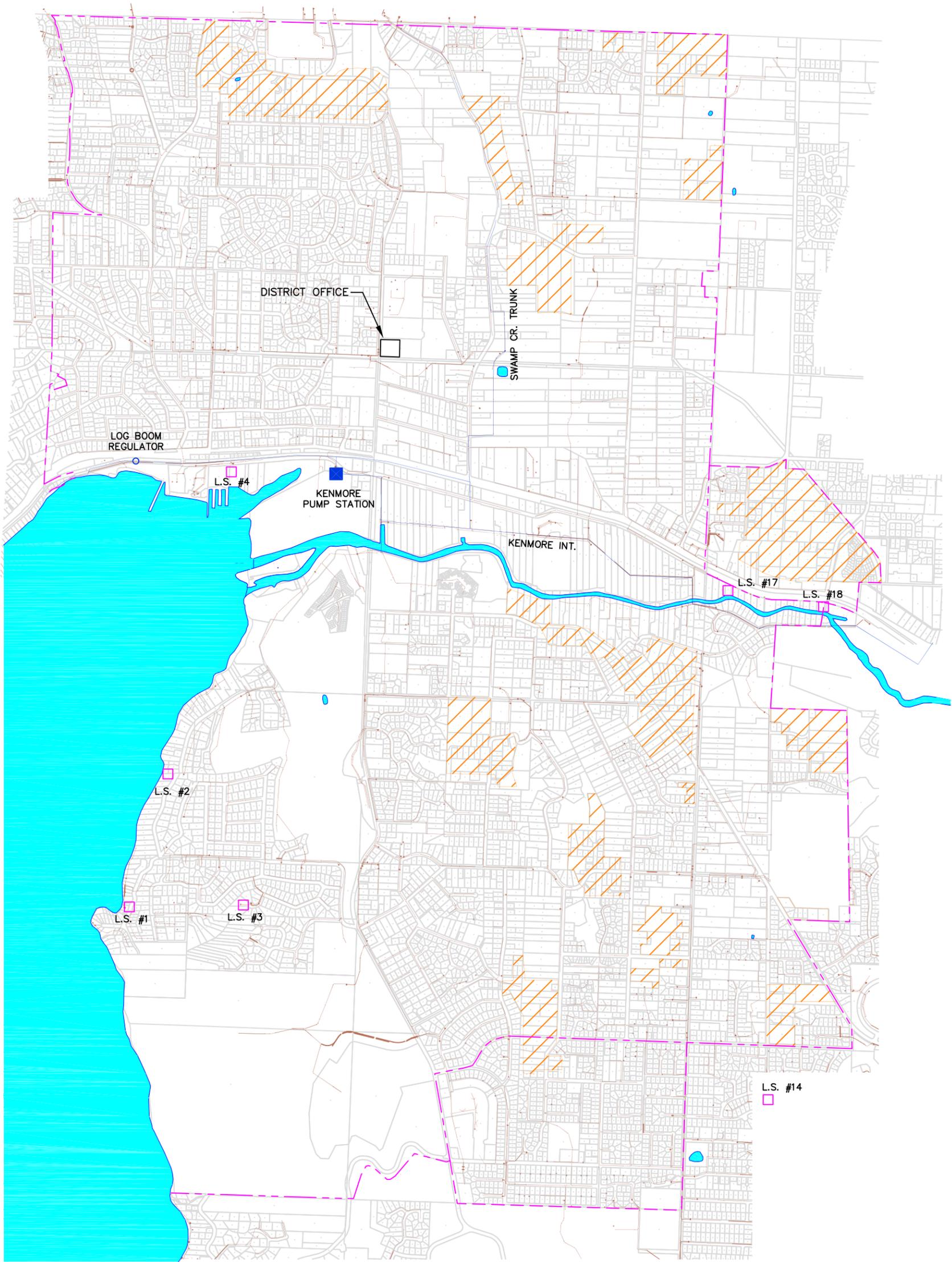
The Northshore Utility District provides public sewer service to the entire City of Kenmore as well as the Kenmore-Bothell and Kenmore-Kirkland Joint Planning Areas. The district is organized as a special purpose district that has the authority to operate under Title 57 of the Revised Code of Washington (RCW).

The District owns and operates a wastewater collection system consisting of collection sewers, trunk sewers, lift stations, and force mains. Waste water treatment is provided by King County Department of Natural Resources, Wastewater Treatment Division at plants in Renton and at West Point in Seattle.

The current Comprehensive Wastewater System Plan for the District was completed in 2000. The 2000 plan evaluates the existing collection system and identifies improvements needed to meet the needs of current and future sewer customers in light of changing regulatory requirements, population growth, development trends, and aging facilities for the time frame of 2000-2020. District population estimates for the planning period are based on the Transportation Analysis Zone (TAZ) projections provided by the Puget Sound Regional Council and Utility District Staff determinations. For the portion of the District within the Kenmore city limits, the 2000 population is estimated to be 19,179 and the 2020 population is projected to be 23,835. Approximately 90 percent of the District's population is sewered. The goal of the 2000 plan is for 100 percent sewer service by 2020.

The 2000 plan recommends projects for the 2000-2020 time frame that include the extension of trunk and gravity lines to serve growing populations and unsewered areas, increasing capacity of three pump stations, eliminating two pump stations that can be served by gravity, measures to increase emergency preparedness, and reduction of inflow and infiltration by replacing or rehabilitating aging mains. The plan includes a \$17.9 million six-year capital improvement plan and \$42.5 million of additional capital improvements for the remainder of the 20-year planning period.

The Northshore Utility District 2000 Wastewater Comprehensive Plan should be referred to directly for detailed information about the District and its facilities. **Figure U-3** shows existing sewer conveyance and pumping facilities in the City of Kenmore. Currently unsewered areas are also shown on this figure.



Public Wastewater Facilities

Legend

NORTHSHORE UTILITY DISTRICT SEWER MAINS	
EXISTING KING COUNTY REGIONAL SEWER	
PROPOSED KING COUNTY REGIONAL SEWER	
CITY BOUNDARY	
JOINT STUDY AREA BOUNDARY	
NORTHSHORE UTILITY DISTRICT LIFT STATION	
KING COUNTY PUMP STATION	
UNSEWERED AREAS	

This map is intended for planning purposes only and is not guaranteed to show accurate measurements.

Sources:

King County GIS Data Standard & Parcel Data Issued April 1999.

Northshore Utility District Sewer Mapping.



Figure U-3

February 22, 2001

Regional Wastewater Facilities

King County Department of Natural Resources, Wastewater Treatment Division operates regional facilities within Kenmore. These include the Kenmore Pump Station/Logboom Regulator System, Swamp Creek Trunk, and Kenmore Interceptor. The Kenmore Pump Station/Logboom Regulator System controls flows in the Kenmore Lakeline, a 48-inch diameter, five-mile long pipeline constructed in Lake Washington between Kenmore and Matthew's Beach. This system conveys sewage from King County's North Service Area to Matthews Beach Pump Station and from there to the West Point Treatment Plant. The Kenmore Interceptor is a 72-inch diameter sewer within Kenmore that enters the city from the east. The locations of these regional facilities are shown on **Figure U-3**.

The Swamp Creek Trunk is a 36-inch pipeline conveying sewage from the Swamp Creek basin to the Kenmore Pump Station. This facility serves the Swamp Creek Basin in King County as well as the Snohomish County Service Area. Currently, flows from the Swamp Creek Basin are conveyed from the Alderwood Sewer District's 36-inch trunk at the county line through an 18-inch Northshore Utility District main to NE 192nd Street, where the Swamp Creek Trunk currently ends.

At the time of this writing, King County has three projects planned to occur within Kenmore. The **Swamp Creek Trunk Extension** consists of extending the existing 36-inch Swamp Creek Trunk north along 73rd Avenue NE to the Snohomish County boundary to connect with the Alderwood Sewer District 36-inch trunk. The **Northlake Interceptor** is a tunnel to be constructed between the McAleer/Lyon Trunk and Kenmore to convey flows northward to the Kenmore Pump Station. An extension from this system would convey flows to the proposed new north end treatment plant. In the short term the tunnel would be used to provide storage upstream from the over-capacity Kenmore lake line. Six million gallons are expected to be available in 2002 and an additional 10 million gallons in 2010. The third project is an upgrade to the **Kenmore Pump Station** (emergency generator).

In late 1999 the King County Council adopted an update to the Regional Wastewater Comprehensive Plan. This includes several major wastewater projects that will have varying impacts on Kenmore. Following is a list of major projects that could affect Kenmore:

- A major new secondary wastewater treatment plant will be located somewhere in the Swamp Creek or North Creek basin
- A new large pump station will be built in the Kenmore area to convey wastewater to the new treatment plant either directly or through another pump station in the North Creek basin. In either case, a large force main will have to be built through Kenmore
- A large tunnel will be constructed from the new wastewater treatment plant to transport treated waste to Puget Sound. There could be construction impacts affecting Kenmore.

All of these regional wastewater facility projects will have the potential of impacting the City of Kenmore and its citizens both during construction and during on-going operations. The City will need to arrive at an agreement with King County regarding mitigation of these impacts.

Solid Waste

Coordination of Service

The King County Department of Natural Resources, Solid Waste Division, operates King County's transfer and disposal system comprised of a regional landfill, eight transfer stations, and two rural drop boxes for residential and non-residential self-haul customers and commercial haulers.

Unincorporated areas of King County are served by private garbage collection companies which receive oversight through the Washington State Utilities and Transportation Commission (WUTC). When an area incorporates, it has the option to establish a franchise with a private hauler but is not required to do so. If a local jurisdiction enters into a franchise, the franchise regulations would supersede state regulations and the private hauler is no longer regulated by the State. The City of Kenmore has elected to allow the state to continue to regulate the private hauler serving the City. The City has no immediate plans to establish a franchise, but may wish to establish one at some point in the future. The garbage/recycling service provider to Kenmore and both Joint Study Areas is Eastside Disposal.

General Waste Collection

Eastside Disposal collects residential and commercial solid waste and recycling on a weekly basis in the City of Kenmore and the Joint Study Areas. As of 1999, on a three-month billing basis, the cost for one 90-gallon garbage container for a single-family residential customer was \$49.74. Yard waste containers cost an additional \$18.87 for a three-month period. Mandatory recycling collection cost \$15.72 for the same time period. Solid waste fees are determined by the size of cans used. Eastside Disposal also collects "roll-off" material including garbage, recycling, and construction debris. Within the Kenmore City limits alone, waste is generated as shown in **Table U-B**. Mandatory service is not required in Kenmore for residential and commercial properties at the time of this writing.

**TABLE U-B
EASTSIDE DISPOSAL WASTE COLLECTION – KENMORE FALL 1999**

CUSTOMER TYPE	NUMBER OF CUSTOMERS	ANNUAL TONS
Residential	4,453	3,520
Commercial	237	2,840
Roll-Off	42	1,650

Source: Eastside Disposal Service, pers. com., November 17, 1999

The company collects and then hauls garbage to the King County Transfer Station at 1st and Meridian. Except for construction debris, which is taken to the Roosevelt Regional Landfill, refuse at the transfer stations is trucked to the Cedar Hills Landfill. According to King County, the Cedar Hills Landfill has capacity until 2013, after which time waste will most likely be exported elsewhere. It is not likely that another landfill site will be created within the County.

Based upon previous trends and for planning purposes, the County utilizes estimates of waste generation per person and per employee as shown in **Table U-C**.

**TABLE U-C
SOLID WASTE GENERATION – KING COUNTY**

RESIDENT/ EMPLOYEE	WASTE (tons/person/year)	CURRENT POPULATION/ EMPLOYMENT (1999 pop. and emp.)	CURRENT WASTE GENERATION (tons/year)
Resident	0.78	16,890	13,174
Household	1.13	6,783	7,647
Employees	0.63	4,472	2,577

Source: Dave White, King County Solid Waste Division, April 1999

On a per capita basis or per household basis, the waste generation rate assumed by King County exceeds the actual current waste tonnage collected by Eastside Disposal. However, the number of Eastside Disposal customers is less than the number of occupied housing units. King County’s employee generation rate predicts future waste tonnage at a somewhat lower rate than current waste tonnage collected by Eastside Disposal.

Recycling

In Kenmore, recycling collection services are provided to single-family and multi-family residences. Countywide, the per capita recycling rate equals 0.71 tons per year. Applying this to the Year 2000 Kenmore population, the recycling rate would equal 11,992 tons per person per year. This estimate exceeds the actual amount of recycling material picked up by Eastside Disposal in 1999 as shown in **Table U-D**.

TABLE U-D
RECYCLING RATES

SERVICE	POPULATION/CUSTOMERS	TONS/YEAR
Recycling – King Co. 2000 estimated	16,890	11,992
Recycling – ESD 1999	4,053 customers	1,900
Yard Waste – ESD 1999	2,063 customers	1,420

Source: King County Solid Waste Division, Eastside Disposal

Recycling material is collected curbside on a bimonthly basis and taken to the Rabanco Recycle Plant in Seattle. Yard waste is collected at curbside and taken to Cedar Grove Compost where it is composted then sold for use in gardens and flower beds.

The King County Solid Waste Division offers grants to cities to establish waste reduction and recycling projects addressing residential and business uses. In 1998, 26 cities participated and the program provided \$375,000 in grant funds. As a new city, Kenmore has not yet participated but may wish to do so in the future.

The County also sponsors a “Greenworks” Business Recycling Program to help businesses and institutions develop as well as expand waste prevention and recycling programs. It also encourages purchase of recycled products with the community. This program is operated in concert with suburban cities in King County and Seattle’s Business and Industry Recycling Venture.

GOALS, OBJECTIVES, AND POLICIES

Following are the utility goals, objectives and policies.

GOAL 48. ENSURE THAT ALL HOUSEHOLDS ARE SERVED OR CAN BE SERVED BY WATER AND SANITARY SEWER UTILITIES AT ACCEPTED SERVICE LEVELS.

OBJECTIVE 48.1 Coordinate with the Northshore Utility District, the King County Department of Natural Resources Wastewater Treatment Division, and the City of Seattle to ensure that sufficient sanitary sewer infrastructure and treatment, water supply, infrastructure, and fire flow are available or can be

provided to all areas of the community to meet existing and future needs and to protect environmental quality.

- Policy U-48.1.1 Ensure City regulations allow for improvements and additions to water and sewer facilities as needed to accommodate growth and provide reliable service.
- Policy U-48.1.2 Furnish regular updates of population, employment and development projections to the Northshore Utility District, King County and the City of Seattle in order to ensure appropriate services will be available as needed.
- Policy U-48.1.3 Coordinate with the Northshore Utility District in the amendment and implementation of its Water System Plan and Sewer System Plan in order to achieve shared goals and objectives of providing reliable, service to Kenmore citywide, and to ensure consistency with City's Comprehensive Plan.
- Policy U-48.1.4 Coordinate with the Northshore Utility District and the Northshore Fire District 16 to ensure adequate fire flow in all areas of the City.
- Policy U-48.1.5 If an areawide water or sewer deficiency is identified, ensure that the applicable service providers remedy the deficiency through capital improvement programs and long-term funding strategies. If financing and level of service remedies cannot solve the deficiency, the City may change zoning to address the problem.
- Policy U-48.1.6 Coordinate with the appropriate service providers to ensure water system plans include aggressive conservation and re-use measures, as well as development of new sources to support planned land uses with reliable service at minimum cost and in allocating water for fisheries, navigation, power, recreation, as well as municipal and commercial uses.
- Policy U-48.1.7 In partnership with the City of Seattle, identify appropriate shared uses along the Tolt Pipeline in consideration of environmental features.
- Policy U-48.1.8 Through memorandums of understanding or other methods, ensure the implementation of the County's Regional Wastewater Comprehensive Plan results in full mitigation of siting, construction, and operational impacts of new or expanded facilities in Kenmore.
- Policy U-48.1.9 To address ground and surface water quality, ensure Northshore Utility District sewer plans require hook-ups to the sanitary sewer system in the case of septic system failures when reasonably available. Work with the Northshore Utility District to determine the circumstances under which hook-up would be appropriate. Determine if funding sources are available in the case of economic hardship.
- Policy U-48.1.10 Ensure new development is served by the public sanitary sewer system.
- Policy U-48.1.11 Ensure the implementation of the County's Regional Wastewater Comprehensive Plan and the Northshore Utility District's Comprehensive Sewer Plan minimize failures, overflows, and contamination affecting the City's surface waters.

GOAL 49. PROVIDE SOLID WASTE COLLECTION AND DISPOSAL SERVICES TO THE COMMUNITY CONSISTENT WITH SOLID WASTE MANAGEMENT PLANS.

OBJECTIVE 49.1 Monitor the delivery of solid waste services provided by King County and waste handlers to ensure appropriate service levels are provided at a reasonable cost.

Policy U-49.1.1 Support the planning of solid waste services, and the provision of disposal capacity on a regional basis.

Policy U-49.1.2 Monitor the levels of solid waste service and costs currently provided to the Kenmore community through the Washington State Utilities and Transportation Commission's oversight of the local private hauler.

Policy U-49.1.3 Coordinate with current service providers to ensure that waste pick-up and curbside recycling services are reliable.

Policy U-49.1.4 Provide educational materials to the public which inform that waste burning is prohibited and identify appropriate solid waste services that are available.

OBJECTIVE 49.2 Establish a municipal solid waste plan.

- Policy U-49.2.1 Prepare a municipal solid waste plan which:
- a. Compares existing services in the community to services in adjacent similar communities.
 - b. Considers the establishment of a municipal solid waste franchise.
 - c. Considers requiring trash pick-up for all residents and businesses of the City.

GOAL 50. ENSURE THAT PRIVATELY PROVIDED UTILITIES, INCLUDING ELECTRICITY, NATURAL GAS, CABLE TELEVISION, AND COMMUNICATION, ARE AVAILABLE OR CAN BE PROVIDED TO SERVE THE COMMUNITY.

OBJECTIVE 50.1 Ensure utility providers make improvements and additions to improve service and accommodate growth in a timely manner.

Policy U-50.1.1 Ensure City regulations allow for improvements and additions to electric, natural gas, cable television, and telecommunication facilities as needed to accommodate growth and provide reliable service.

Policy U-50.1.2 Furnish regular updates of population, employment, and development projections to private utilities and service providers in order to ensure appropriate services will be available as needed.

Policy U-50.1.3 Require franchise agreements where necessary for private utility use of the City rights-of-ways.

- Policy U-50.1.4 Coordinate with other jurisdictions in the implementation of multi-jurisdictional electric facility additions and improvements.
- Policy U-50.1.5 Support the availability and efficient use of natural gas.
- Policy U-50.1.6 Encourage state of the art telecommunication services as a means to mitigate the transportation impact of development and growth.
- Policy U-50.1.7 Support cable television services that meet the cable-related needs and interests of all segments of the community, taking into account the cost of meeting such needs and interests. Encourage the completion of the “universal line up” where the region will be able to receive the same channels and programming.
- Policy U-50.1.8 Support the relocation of utility poles to protect the public safety and to further the Comprehensive Plan goals and realization of the Vision Statement.

OBJECTIVE 50.2 Coordinate the timing and location of utilities to minimize cost and disruption.

- Policy U-50.2.1 Strive to notify private utilities and service providers of construction work in the public rights-of-way which may affect their equipment. Encourage coordination of public and private utility trenching activities for new construction and maintenance and repair of existing roads.
- Policy U-50.2.2 Promote when reasonably feasible, co-location of new public and private utility distribution facilities in shared trenches and coordination of construction timing to minimize construction-related disruptions to the public and reduce the cost to the public of utility delivery.

OBJECTIVE 50.3 Facilitate the provision of reliable utility service in a way that minimizes environmental and safety impacts while allowing for a fair and reasonable price for the utility’s product.

- Policy U-50.3.1 Encourage the development of regional and statewide policies regarding exposure to electromagnetic fields (EMF) through a process involving local, regional and State governments, as well as electric utilities. Encourage the use of best available science in the development of the policies.
- Policy U-50.3.2 Review periodically, the state of scientific research on electromagnetic fields (EMF), and make changes to policies if the situation warrants.
- Policy U-50.3.3 Require utilities to define alternative routes to avoid impacts to environmentally sensitive areas where possible.

OBJECTIVE 50.4 Encourage undergrounding of overhead utilities and co-location of utilities to reduce aesthetic impacts.

- Policy U-50.4.1 To the extent feasible, require underground utility networks in new developments in the City.
- Policy U-50.4.2 Where significant work in existing rights-of-way will occur, investigate with service providers the possibility of buried lines where existing overhead lines are presently located.

- Policy U-50.4.3 Consider creating a funding mechanism for undergrounding of utilities on a continuing basis in developed areas.
- Policy U-50.4.4 Require co-location of utility facilities and equipment where feasible to minimize aesthetic impacts and increase efficiency in service.
- Policy U-50.4.5 Require communication facilities and poles, including cell or radio towers, to consider existing sites and co-locating prior to establishing new sites.
- Policy U-50.4.6 Consider view corridors when reviewing utility pole or facility placement.

GOAL 51. ENCOURAGE RESOURCE AND ENERGY CONSERVATION.

OBJECTIVE 51.1 Promote and support water conservation efforts.

- Policy U-51.1.1 Support water conservation programs of the Northshore Utility District for residential, commercial and industrial users.
- Policy U-51.1.2 Consider water conservation principles when maintaining and improving City facilities and parks.
- Policy U-51.1.3 Promote the use of water conservation features in the design or rehabilitation of residential structures.

OBJECTIVE 51.2 Encourage solid waste reduction and recycling.

- Policy U-51.2.1 Support King County and waste-hauler programs for waste reduction and recycling in accordance with the adopted King County Solid Waste Management Plan, and with any future City solid waste plans.

OBJECTIVE 51.3 Promote and support energy conservation.

- Policy U-51.3.1 Continue to enforce State Energy Code requirements.
- Policy U-51.3.2 Review and update codes as necessary regarding solar energy and other alternative energy sources.
- Policy U-51.3.3 Support the planting of trees along street edges to create a pleasing environment and to increase energy efficiency by reducing heat absorbed by asphalt that increases ambient temperatures.
- Policy U-51.3.4 Establish standards for street widths, parking lots, and landscaping to moderate temperature, provide shade, and minimize impervious surfaces.
- Policy U-51.3.5 Promote higher density and infill developments that are located near major transportation and transit links.
- Policy U-51.3.6 Encourage the rehabilitation of existing buildings as an alternative to demolition, where appropriate, to encourage the conservation of energy, building materials, and historic preservation.

IMPLEMENTATION STRATEGIES

The Utility Element policies would require new or increased commitments of City resources to prepare new regulations, review/amend existing regulations, create educational or incentive programs, or coordinate with adjacent jurisdictions.

New programs, rules, or regulations would be needed to address:

- A municipal solid waste plan
- Regulations requiring undergrounding of utilities.

A review of existing programs, rules and regulations would be needed to ensure they meet the policies, including:

- Right-of-way, coordination of utility construction and relocation of poles
- Regulations addressing co-location, alternate siting, and view corridors
- Energy code requirements
- Street tree and landscaping requirements
- Street and parking area standards.

Additional or continuing efforts would need to be made to coordinate with adjacent jurisdictions or participate in regional programs, including:

- Coordination with the Northshore Utility District, City of Seattle, and King County regarding water and wastewater services
- Coordination with private utilities including Puget Sound Energy, GTE, and AT&T
- Participation in multi-jurisdictional, multi-agency review of EMF science and affect upon regulations
- Coordination with County and franchisee regarding solid waste and recycling services and programs.

REFERENCES

Bucher, Willis & Ratliff Corporation (October 11, 1999). Personal Communication, phone call from Lisa Grueter to Jenny Shogren, AT&T Cable Services.

City of Kenmore (November 15, 1999). Personal communication, Carter Hawley, Assistant City Manager, to Lisa Grueter, Bucher, Willis & Ratliff Corporation.

Eastside Disposal (November 17, 1999). Personal communication, Dave Turgeon, General Manager to Lisa Grueter, Bucher, Willis & Ratliff Corporation.

GTE Network Services (September 13, 1999). Personal Communication, letter from Dave Hawkins, Section Manager, Access Design & Construction-Western Washington to Lisa Grueter, Bucher, Willis & Ratliff Corporation.

King County Growth Management Planning Council (December 31, 1995). Countywide Planning Policies. Seattle, WA.

King County Solid Waste Division, Department of Natural Resources (September 1999). Annual Report 1999. Seattle, WA.

King County Solid Waste Division (April 20, 1999). Personal communication, Dave White to Lisa Grueter, Bucher, Willis & Ratliff Corporation.

Northeast Lake Washington Sewer and Water District (September 1990). Comprehensive Sewer Plan: 1990 Update. Prepared by ST Engineering Inc., P.S. Kenmore, WA.

Northshore Utility District (1993). 1993 Comprehensive Water System Plan. Prepared by Stack, Chambers & Porter, Inc. Kenmore, WA.

Northshore Utility District (October 1, 1999). Personal Communication, letter from John D. Hastig, Engineering Manager, to Bob Sokol.

Northshore Utility District (January 2000). 2000 Water System Comprehensive Plan. Prepared by Gray and Osborne, Inc.

Northshore Utility District (March 2000). 2000 Wastewater Comprehensive Plan. Prepared by Gray and Osborne, Inc.

Puget Sound Energy (October 13, 1999). Personal Communication, letter and document excerpts from Jason Van Nort, Municipal Land Planner, Puget Sound Energy to Lisa Grueter, Bucher, Willis & Ratliff Corporation.

