

# Chapter 8 UTILITIES ELEMENT

Introduction .....	8-1
State Planning Context .....	8-1
Growth Management Act.....	8-1
Local Planning Context.....	8-2
Utilities Aspirations .....	8-2
Major Issues .....	8-2
Goals and Policies .....	8-3
Background Information.....	8-7
Private Utilities .....	8-7
Natural Gas .....	8-7
Telecommunications – Local Telephone .....	8-8
Telecommunications -- Cellular Phone Service .....	8-9
Cable Television .....	8-9
Solid Waste.....	8-12
Hazardous Waste .....	8-14
Public Utilities .....	8-14
Water .....	8-14
Sanitary Sewer .....	8-17
Electrical .....	8-18

## INTRODUCTION

The purpose of this Element is to assure utilities: (1) are provided at appropriate levels to accommodate projected growth at a reasonable cost, (2) facilitate reliable service, (3) ensure public health and safety, and (4) maintain an attractive community.

## STATE PLANNING CONTEXT

### *GROWTH MANAGEMENT ACT*

The Growth Management Act requires that a Utilities Element address “...the general location, proposed location and capacity of all existing and proposed utilities, including but not limited to electrical lines, telecommunication lines and natural gas lines.” Utilities both public and private provide needed services to citizens, including electric power, water,

natural gas, sewer, storm water management, solid waste disposal, telephone, cable and telecommunications.

## LOCAL PLANNING CONTEXT

### **UTILITIES ASPIRATIONS**

*Looking ahead 20 years...*

**Through the 2030s, the planning and placement of utilities in University Place has supported the community's vision for the preferred location and amount of growth.**

*Utility planning for higher growth areas such as the Town Center and other locations within the University Place Regional Growth Center has advanced the vision. For those utilities provided by public entities and private companies, the City has ensured sufficient area is available to locate such facilities and provided a reasonable regulatory climate.*

**Utility planning has contributed to a high quality of life for University Place residents and businesses by ensuring efficient utility delivery.**

*Communications facilities are keeping up with changes in technology. Conservation and protection of existing resources has ensured a continued supply of clean water and energy.*

**Proper utility planning has also protected University Place's natural environment and resources, including Puget Sound.**

*Upgrades to the sanitary sewer system have eliminated many septic systems, thereby controlling contaminants released into the environment. The City has protected the natural environment by developing stormwater systems to prevent or reduce excess stormwater runoff that eventually makes it way to Puget Sound, by designing and upgrading systems and plans to prevent damage to the environment, by fostering conservation operationally and by implementing low-impact development practices.*

### **MAJOR ISSUES**

- Increased competition in the telecommunications field, more providers, and rapidly changing technology present cities with new challenges in siting and coordination of facilities.
- Utility rates have been rising. These rates are not under the direct control of the City except through franchise agreements.
- Utility poles and an abundance of wires, cables and other equipment create a cluttered appearance on residential and arterial streets.
- The security of utility infrastructure and the need to protect critical systems from intentional acts of vandalism and terrorism is a concern of the community.

# GOALS AND POLICIES

This Element contains the Utility goals and policies for the City of University Place. These goals reflect the general direction of the City, while the policies provide more detail about the steps needed to meet the intent of each goal. The goals and policies address the following utility challenges:

- Ensuring that adequate public utilities and facilities are planned for, extended, and sized in a cost effective manner consistent with planned population and economic growth described in the Land Use Element and other provisions of the Comprehensive Plan;
- Locating utilities to minimize impacts on public health and safety, surrounding development, the environment and interference with other public facilities; and
- Reducing demand for new resources through support of conservation policies and strategies and the use of innovative technologies. Stormwater management and sanitary sewer policies are discussed in the Capital Facilities Element.

## **GOAL UT1**

**Ensure that adequate public utilities and facilities are planned for, extended, and sized in a cost-effective manner consistent with planned population and economic growth described in the Land Use Element and other provisions of the Comprehensive Plan.**

### **Policy UT1A**

Work with providers to appropriately site new utility facilities to maintain a reliable level of service, accommodate growth, minimize adverse impacts to the City, maximize efficiency, and preserve neighborhood character.

### **Policy UT1B**

Support efforts by utilities to employ new technology to make operations and work practices safer, increase reliability, facilitate permitting, and minimize rate increases. Consider allowing utilities to develop pilot projects for innovative utility programs in University Place that may benefit the City's residents and businesses. Facilitate access to state-of-the-art technology.

### **Policy UT1C**

Work with utility providers and policy makers to improve service while maintaining the lowest possible utility rates. Actively monitor services provided by each utility provider and assess these services against the applicable rate structure. Utilize the franchise negotiation process to ensure provision of quality services to residents.

### **Policy UT1D**

Process utility permits in a fair and timely manner, consistent with development and environmental regulations, to minimize the time and cost required for a utility to provide needed services to local residents and businesses. Consider utility providers' concerns

about regulations during periodic code updates and strive to balance concerns for the public health, safety, welfare, and environment with utility providers' needs.

#### **Policy UT1E**

Assist utilities with the development of accurate, long-term system facility plans that will ensure provision of adequate service capacity by sharing land use planning and growth projections and other information.

#### **Policy UT1F**

Ensure reasonable access to rights-of-way for all providers consistent with federal and state laws. Utilize the franchise negotiation process to ensure that utilities have reasonable access to use the public right-of-way while guaranteeing that utility use will not degrade the roadway or overly disrupt the traveling public.

#### **Policy UT1G**

Require proponents of development to pay for or construct the growth-related portion of utility infrastructure needs in order for utility service providers to balance capital expenditures with revenues and still maintain established service standards. Support the use of reimbursement agreements, such as latecomer agreements, as a method of employing equitable cost sharing for development costs among the original developer and subsequent developers who benefit from the increased capacity provided by the original developer.

### **GOAL UT2**

**Locate utilities to minimize impacts on public health and safety, surrounding development, the environment and interference with other public facilities.**

#### **Policy UT2A**

Encourage sharing of utility corridors to save time and expense associated with the cost of utility installation and repairs to the City right-of-way, reduce traffic disruptions, extend pavement life, and minimize required monitoring of repair quality. When permits are requested, the City should require the utility to notify other providers for possible coordination.

#### **Policy UT2B**

Coordinate the design and timing of utilities siting, installation and repair with street improvements whenever possible. The City should share plans for street construction or overlay with utilities in order to identify opportunities for simultaneous construction projects and provide timely resolution of conflicts.

#### **Policy UT2C**

Promote high quality designs for utility facilities to minimize aesthetic impacts and integrate these facilities into neighborhoods. Use architecturally compatible designs for above ground utilities, landscape screening, buffers, setbacks, and other design and siting techniques to minimize impacts. Mitigate the visual impact of transformers and associated vaults through measures such as the use of varied and interesting materials, use of color, additions of artwork, and superior landscape design.

**Policy UT2D**

Minimize negative siting impacts associated with siting personal wireless telecommunication facilities through the administration of regulations consistent with applicable State and federal laws. Regulate the placement, construction and maintenance of such facilities to minimize their obtrusiveness by ensuring appropriate screening of facilities and encouraging collocation to lessen the number of towers or structures needed to support telecommunications equipment.

**Policy UT2E**

Apply regulations and franchise agreement provisions that encourage the use of smaller telecommunication facilities that are less obtrusive and can be attached to existing utility poles or other structures without increasing their visual impact.

**Policy UT2F**

Design, locate and construct facilities to minimize adverse impacts to the environment and to protect environmentally sensitive areas, especially Puget Sound, shorelines and critical areas. When no viable alternative exists to constructing facilities in critical areas, the environmental review process and critical areas regulations should identify and, if appropriate, mitigate negative impacts. Mitigation should take into account both individual and cumulative impacts. Impacts should be minimized through actions such as:

- Using construction methods and materials to prevent or minimize the risk of overflows into watercourses and water bodies;
- Locating utility corridors in existing cleared areas;
- Locating utility facilities and corridors outside of wetlands;
- Minimizing crossings of fish-bearing watercourses;
- Using biostabilization, riprap or other engineering techniques to prevent erosion where lines may need to follow steep slopes; and
- Minimizing corridor widths.

**Policy UT2G**

Avoid utility impacts to public health and safety, consistent with current research and scientific consensus. Monitor scientific research and adopt regulatory measures if research concludes that a proven relationship exists between electric utility or wireless communication facilities and adverse health impacts. Monitor improvements in the natural gas industry and require gas pipeline utilities to upgrade their facilities to implement the best available technology with respect to leak detection devices and other components.

**Policy UT2H**

Protect the City's rights-of-way from unnecessary damage and interference and ensure restoration to pre-construction condition or better. Ensure that trenching for the installation, repair, or maintenance of facilities; installation of poles and streetlights; boring; or patching or restoring streets where work has just been completed are performed in accordance with City standards that apply to construction or repair of utility facilities in the right-of-way. Require bonds or other financial guarantees to ensure that restoration is performed properly and that failed repairs will be corrected.

### **Policy UT2I**

Promote undergrounding of existing utility lines to reduce visual clutter, minimize inappropriate pruning of trees and shrubs to accommodate maintenance of overhead lines, and enhance reliability of power and telecommunication facilities. Consider new technologies, such as wireless transmission, as they become available in order to minimize aboveground utilities.

### **Policy UT2J**

Require undergrounding of new utility distribution lines and feeders as a condition for development projects. Underground existing utility distribution lines or provide for future undergrounding as street projects occur. Fund undergrounding through a capital improvement program or through formation of a local improvement district. Require individual service lines to be undergrounded when significant site improvements are made. Require undergrounding except where underground installation would cause greater environmental harm than alternatives or where it is demonstrated that such installation will be economically infeasible.

### **Policy UT2K**

Require Pierce County Public Works and Utilities to ensure that the Chambers Creek Regional Wastewater Treatment Plant operates in a manner that does not negatively impact neighboring properties in terms of odors, activity levels, and other operational characteristics.

### **Policy UT2L**

Support efforts by utility providers to enhance the security of their infrastructure and protect critical systems from natural environmental forces and intentional acts of vandalism and terrorism. Coordinate with utility service providers in advance planning efforts as well as through the City's Emergency Operations Center during or following an event that threatens critical infrastructure and public health and safety.

## **GOAL UT3**

**Reduce demand for new resources through support of conservation policies and strategies and the use of innovative technologies.**

### **Policy UT3A**

Encourage resource saving practices and procedures in facilities and services used by the City. Conduct operations in a manner that leads by example through activities such as recycling, water conservation, energy conservation and low- impact development processes whenever possible. Encourage coordination with utility providers to identify and implement resource saving procedures in City facilities and services. Use City facilities as demonstration sites for innovative resource conservation techniques.

### **Policy UT3B**

Cooperate with utility providers and other agencies in encouraging resource conservation by local residents, employees and businesses. Support efforts to disseminate educational materials and other information regarding resource conservation programs.

### **Policy UT3C**

Encourage the use of innovative technologies to provide and maintain utility services, reduce the negative impacts of additional utility service demands, improve the existing service, and reduce, where appropriate, the overall demand on utility systems. The City supports the exploration, assessment and development of alternative energy sources that accomplish these objectives, provided potential impacts of such development are mitigated to a level deemed acceptable by the community.

## **BACKGROUND INFORMATION**

The adequate provision of utilities for University Place residents and businesses is important to citizens' quality of life. Certain utilities such as electricity are virtually essential. Others, like cable television, are not essential but are a desirable convenience for many households.

Reliability and cost are concerns citizens often have with utility provision. While the City of University Place is not the direct provider of many utilities, policies can be developed to help promote reliable and cost-effective utility services for the community. The Utilities Element seeks to accomplish this by pursuing a cooperative approach with utility providers. To promote the provision of utility services in the future, this section discusses both public utilities and private (investor-owned) utilities.

The inventory in this Element is useful for planning purposes. It identifies the general location, proposed location, and capacity of existing and proposed utilities. The Utilities Element also includes policies that seek to promote the provision of utility services to accommodate projected growth at a reasonable cost, facilitate reliable service, with consideration for public health and safety, and maintain an attractive community.

Certain utility industries are reluctant to share some information, and cite competitiveness of the market or security concerns as a constraint. The City respected these concerns in preparing this element.

### ***PRIVATE UTILITIES***

#### ***Natural Gas***

Puget Sound Energy (PSE) provides natural gas service to more than 750,000 customers in six Western Washington counties: Snohomish, King, Kittitas, Pierce, Thurston, and Lewis. It is estimated that PSE serves over 6,350 customers within the City of University Place.

PSE is regulated by the Washington Utilities and Transportation Commission (WUTC). The WUTC is responsible for overseeing and regulating PSE's level of service, service areas, and rates. PSE's natural gas service provision is based on customer request(s) and market analysis. This determines whether or not revenues from extending services will offset construction costs.

#### **Existing Distribution System**

Natural gas comes from gas wells in the Rocky Mountains and in Canada and is transported through interstate pipelines by Williams Northwest Pipeline to Puget Sound Energy's gate

stations. Supply mains then transport the gas from the gate stations to district regulators where the pressure is reduced to less than 60 psig. The supply mains are made of welded steel pipe that has been coated and cathodically protected to prevent corrosion. They range in size from 4" to 20". Distribution mains are fed from the district regulators. They range in size from 1-1/4" to 8" and the pipe material typically is polyethylene (PE) or wrapped steel (STW). Individual residential service lines are fed by the distribution mains and are typically 5/8" or 1-1/8" in diameter. Individual commercial and industrial service lines are typically 1-1/4", 2" or 4" in diameter.

#### Future Facility Construction

PSE will be conducting "pothole" investigations at up to 42 locations in the City limits to identify the manufacturer of older PE pipe previously installed to determine whether it is DuPont pipe. Identified DuPont piping in PSE's entire system will be ranked for replacement accordingly.

The following projects may be initiated in the future at any time:

- Construction of new facilities, or replacement of existing facilities, to meet increased capacity requirements due to new building construction and conversion from alternate fuels;
- Main replacement to facilitate improved maintenance of facilities; and
- Replacement or relocation of facilities due to municipal and state projects.

#### ***Telecommunications – Local Telephone***

CenturyLink, a private for-profit corporation, is certified by the Washington Utilities and Transportation Commission (WUTC) to provide local telephone and other related special services (alarm circuits and data transmittal) throughout University Place. The WUTC regulates the provision of telecommunication services, including those provided by local exchange carriers such as CenturyLink. Telephone utilities are considered an essential utility by the WUTC; therefore, CenturyLink has an obligation to serve the public requirements for communication utilities. CenturyLink is also subject to various federal laws and regulations administered by the Federal Communications Commission (FCC).

Local jurisdictions in Washington fall within a particular Local Access and Transportation Area (LATA). A LATA is a telephone exchange area that serves to define the area within which CenturyLink is permitted to transport telecommunications traffic. CenturyLink is permitted to carry telephone calls only within LATA boundaries. Calls outside of the LATA require long distance carriers, which University Place residents may select for this service.

Hundreds of Central Offices (CO's) serve CenturyLink customers in Washington. A CO is a telecommunications common carrier facility where calls are switched. For local exchange or intra-LATA calls the central office switches calls within and between line exchange groupings. Transmission facilities, which serve University Place, originate from the Logan CO at 2823 Bridgeport Way West (See **Figure 8-1**). From this CO, the main cable routes extend generally north, south, east and west to serve University Place and the surrounding area. From each main cable route are branch feeder routes. Branch feeder routes may be aerial or buried. Extending from the branch feeder routes are local loops that provide dial tone to every telephone subscriber.

CenturyLink construction planning is driven by customer needs. As communities grow, facilities are upgraded to ensure adequate service levels. RCW 80.36.090 requires CenturyLink to provide adequate telecommunications services on demand. To comply with RCW 80.36.090, CenturyLink regularly evaluates the capacity of its facilities. CenturyLink's goal is to maintain its routes at 85 percent capacity. When usage exceeds 85 percent, additional facilities are planned, budgeted and installed. Moreover, facilities are upgraded as technology makes additional services available. Capacity is available to serve the area.

### ***Telecommunications -- Cellular Phone Service***

There are seven cellular providers licensed by the FCC to serve in the Puget Sound area. With the passage of the Federal Telecommunications Act of 1996, service area competition has increased. Prior to the Act's passage, only two cellular providers would be licensed by the FCC to service a particular area. With the Act's passage, the number of carriers competing in a particular market may conceivably include all seven. Verizon Wireless, T-Mobile, Sprint, Cricket and AT+T provide services in University Place. In the future, the FCC may also expand the frequency range available to wireless providers, potentially resulting in new providers entering the market.

Because the City has a somewhat complex topography, service providers may need to install multiple facilities (each working on a line-of-sight basis) in order to provide complete coverage for the City. Further, companies may need to modify existing facilities in order to take advantage of technology advances to provide additional wireless services.

Where feasible, cellular companies site facilities on existing structures, poles, and buildings, where antennas can also be mounted on rooftops and electronic equipment located within the building itself. Also, facilities can be collocated on the same structures. Typically, facilities are supported by ground mounted equipment. Topography and other engineering constraints influence specific site selection because of the need to "hand off" the signal so that it can be picked up by another facility. The City has adopted telecommunications regulations to address the siting of cellular and other telecommunications facilities inside of the City limits.

**Figure 8-1** depicts the six existing telecommunication tower facilities in the City of University Place. Towers situated on public property are located at the Pierce County Environmental Services Building on 64<sup>th</sup> Street West, the City of University Place Public Works Maintenance Facility on Grandview Drive, and Curtis High School on University Place School District property on 40<sup>th</sup> Street West. Towers situated on private property are located in the Narrows Plaza Center, on Drexler Drive north of 40<sup>th</sup> Street West, and on 46<sup>th</sup> Street West on the east side of Bridgeport Way.

### ***Cable Television***

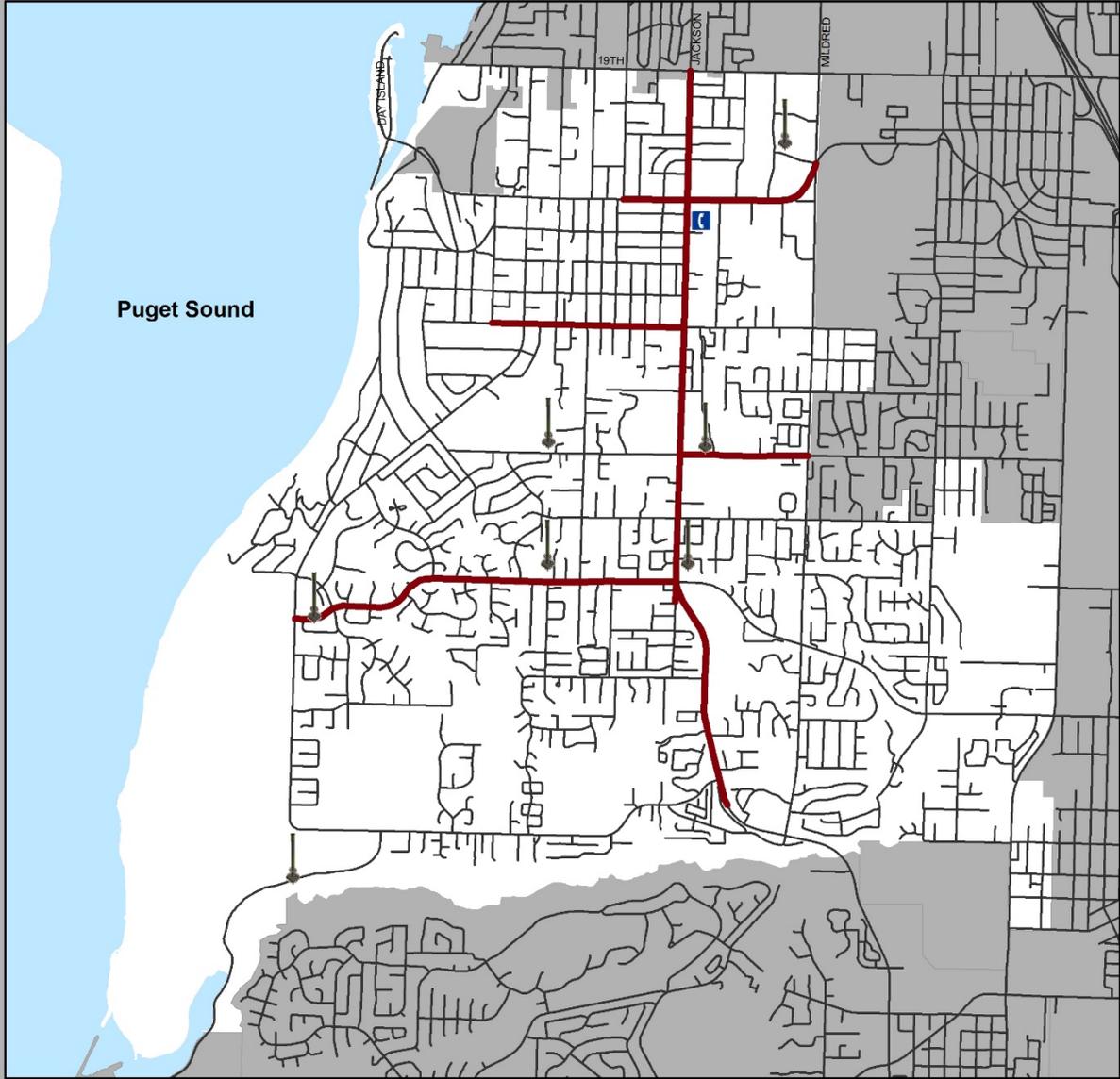
Click!, a division of Tacoma Public Utilities, and Comcast provide cable service to the City of University Place under separate franchise agreements. The Rainier Communications Commission, through an inter-local agreement with Pierce County and other cities and towns in the County, was created to facilitate inter-jurisdictional cooperation on regulation and oversight activities and to build expertise in negotiating with cable companies. In 1997, the City of University Place joined the Rainier Communications Commission.

Cable television service is delivered to customers through a complex series of electrical components and many miles of cable. Located at the origin of a cable system are a receiver and headend. The headend includes electronic equipment such as antennas, frequency converters, demodulators, and preamplifiers. The headend processes signals in a manner that allows them to be distributed into the network. Trunk lines carry this signal and its strength is maintained by amplifiers located along the system. Amplifiers allow for feeder line connections and the eventual hookup of individual customers.

Click! offers cable television packages for residential and commercial locations in University Place. Three internet service providers (ISPs) operate on its network: Advanced Stream, Net-Venture and Rainier Connect. These ISPs offer a variety of high speed internet and phone packages to residential and commercial locations.

Figure 8-1

# Telecommunication Facilities



Cell Towers

Phone Trunk Lines

Telephone Exchange



Scale  
1:40,000

University Place  
Planning and Development Services

Commercial customers in University Place have access to custom network solutions through Click's Authorized Service Partners: Integra, Rainier Connect, Optic Fusion and Spectrum Networks. These Authorized Service Partners offer voice and data services, internet, co-location, and local and long distance phone services. Services can be delivered over SONET Based Line Services or Metro Ethernet Services.

Comcast and Click! make every attempt to provide service to all residents within their franchise areas. Factors considered in extending service include the overall technical integrity, economic feasibility, and franchise agreements. Both Comcast and Click! can serve future growth in the City of University Place. **Figure 8-2** depicts the location of the certain Comcast and Click! cable facilities within the City of University Place.

### ***Solid Waste***

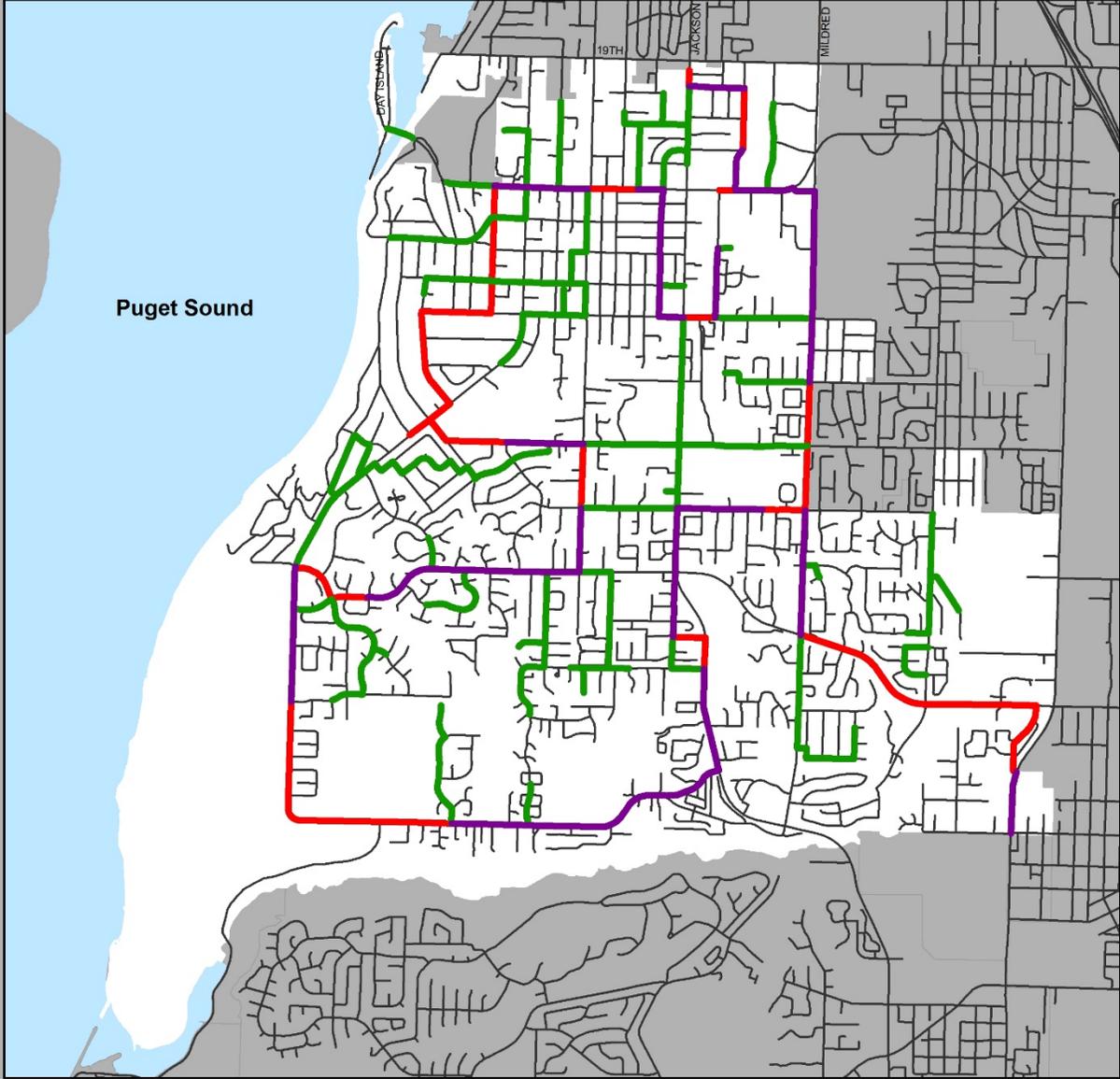
State law requires counties, in coordination with their cities, to adopt comprehensive solid waste plans for the management, handling, and disposal of solid waste for twenty years, and to update them every five years. Cities may choose to be joint participants in the plan, delegate planning to the county, or do their own plan. In Pierce County, waste management and recycling activities for all jurisdictions are coordinated under the umbrella of the Tacoma-Pierce County Solid Waste Plan.

There are three separate collection and disposal systems in the County: 1) The County's system includes the unincorporated areas of the county and 19 cities and towns using the County's disposal system; 2) Tacoma, as a joint participant in the plan, has its own collection utility and disposal system and the Town of Ruston operates its own collection utility, but has an inter-local agreement with Tacoma for disposal and an interlocal agreement with the County adopting the Solid Waste Plan; and 3) Joint Base Lewis McChord uses the Fort's disposal system but coordinates with the County on public outreach and educational programs about waste reduction and recycling.

Waste is collected in University Place by two private haulers -- University Place Refuse, and LeMay Enterprises (dba Lakewood Refuse). Collected waste is handled through the Pierce County disposal system. Both companies have franchises with the City that run through 2025. The two companies offer residents solid waste, recycling, and yard waste collection programs coordinated with the unincorporated areas and 18 other cities and towns. Further, both companies coordinate with the City to provide citywide clean-up programs in the spring and fall of each year plus special yard waste pick-up programs.

An update of the Solid Waste Plan was adopted in 2008 and the City signed an interlocal agreement with Pierce County pursuant to the plan. Under this agreement, the County has responsibility for overall planning, disposal and waste reduction and recycling education. Cities are responsible for collection and the development of any recycling program specific to their jurisdiction.

**Figure 8-2**  
**Primary Cable Transmission Lines**



-  Network Overlap
-  Comcast Network
-  Click Network



Scale  
1:40,000

University Place  
Planning and Development Services

## ***Hazardous Waste***

The Tacoma-Pierce County Local Hazardous Waste Management Plan was adopted by all participating jurisdictions in 1991. The Plan is administered by the Tacoma-Pierce County Health Department. The Hazardous Waste Plan was developed in accordance with RCW 70.105 to “address hazardous waste currently exempt from the State’s Dangerous Waste Regulations.” This type of waste is mostly household hazardous waste or small quantities from commercial generators. The Tacoma-Pierce Health Department, Pierce County, and the City of Tacoma provide coordinated management of services, collection, and public outreach for all residents of the county for household hazardous waste.

In 2007, an advisory group, representing state and local government, businesses and citizen groups, was formed to evaluate the current hazardous waste management system and provide recommendations for future program enhancements. However, due to funding and staff reductions a formal Plan Update was postponed. Beginning in the fall of 2011, a Local Hazardous Waste Management Plan Update was being drafted to include recommendations made by the 2007 advisory group. It is anticipated that the Update will incorporate more recent program developments, trends, and survey data to provide a comprehensive planning document.

Unused and unwanted prescription drugs and other medicines can create health and safety risks and environmental impacts if not disposed of properly. Within University Place, Bartell Drugs operates a medicine take back program that accepts over-the-counter medicines and prescription drugs – not including controlled substances.

## ***PUBLIC UTILITIES***

### ***Water***

Tacoma Water, a division of Tacoma Public Utilities, is the primary provider of water service to the City of University Place where it serves over nine thousand customers. Tacoma Public Utilities is governed by a five-member board, appointed by the Tacoma City Council.

The primary water supply to this area comes from the Green River in King County and local wells. During high demand periods, mostly in the summer, well water from the south Tacoma aquifer and other local aquifers supplements the river water. Tacoma Water’s Green River First Diversion water right can supply up to 73 million gallons of water each day. Tacoma Water’s Green River Second Diversion water right can provide up to 65 million gallons of water each day. This second diversion is subject to minimum streamflow standards and is a resource shared with Tacoma Water and its Regional Water Supply System partners. Tacoma Water’s share of the second diversion equals 27 million gallons of water per day. In addition to the Green River, Tacoma Water owns wells located in and around the City of Tacoma, including University Place. Tacoma Water’s wells have a short-term combined pumping capacity of approximately 60 million gallons per day.

A water system consists of a transmission supply and distribution system made up of various sized mains (transmission and distribution), reservoirs, standpipes, wells, and pump stations. **Figure 8-3** identifies water facilities inside the City of University Place. A summary of these facilities is as follows:

### Transmission Lines

Very generally, the water transmission lines within the City limits are located north-south along Sunset Drive, and east-west along 40<sup>th</sup> Street West, 56<sup>th</sup> Street West, Cirque Drive, and 29<sup>th</sup> Street West.

### Pump Stations

83<sup>rd</sup> and Cirque Drive; 4802 83<sup>rd</sup> Avenue West

### Wells

The University Place wellfield consists of two wells. One well (UP-1) was constructed in 1986 as a replacement for two of the original wells (U6 and U7). Well U-10 is designated as an emergency source and has not been used for a number of years. The wellfield has a combined capacity of 1,800 gallons per minute (gpm) or approximately 2.6 million gallons per day (MGD).

1. UP-1; 3516 Crestview Drive West; 1.6 MGD
2. UP-10; 9409 48<sup>th</sup> Street West; 1.0 MGD

### Reservoirs

1. University Place Tank Number 6; 4521 83<sup>rd</sup> Avenue Court West; 0.9 MGD capacity
2. University Place Tank Number 5; 4521 83<sup>rd</sup> Avenue Court West; 0.3 MGD capacity

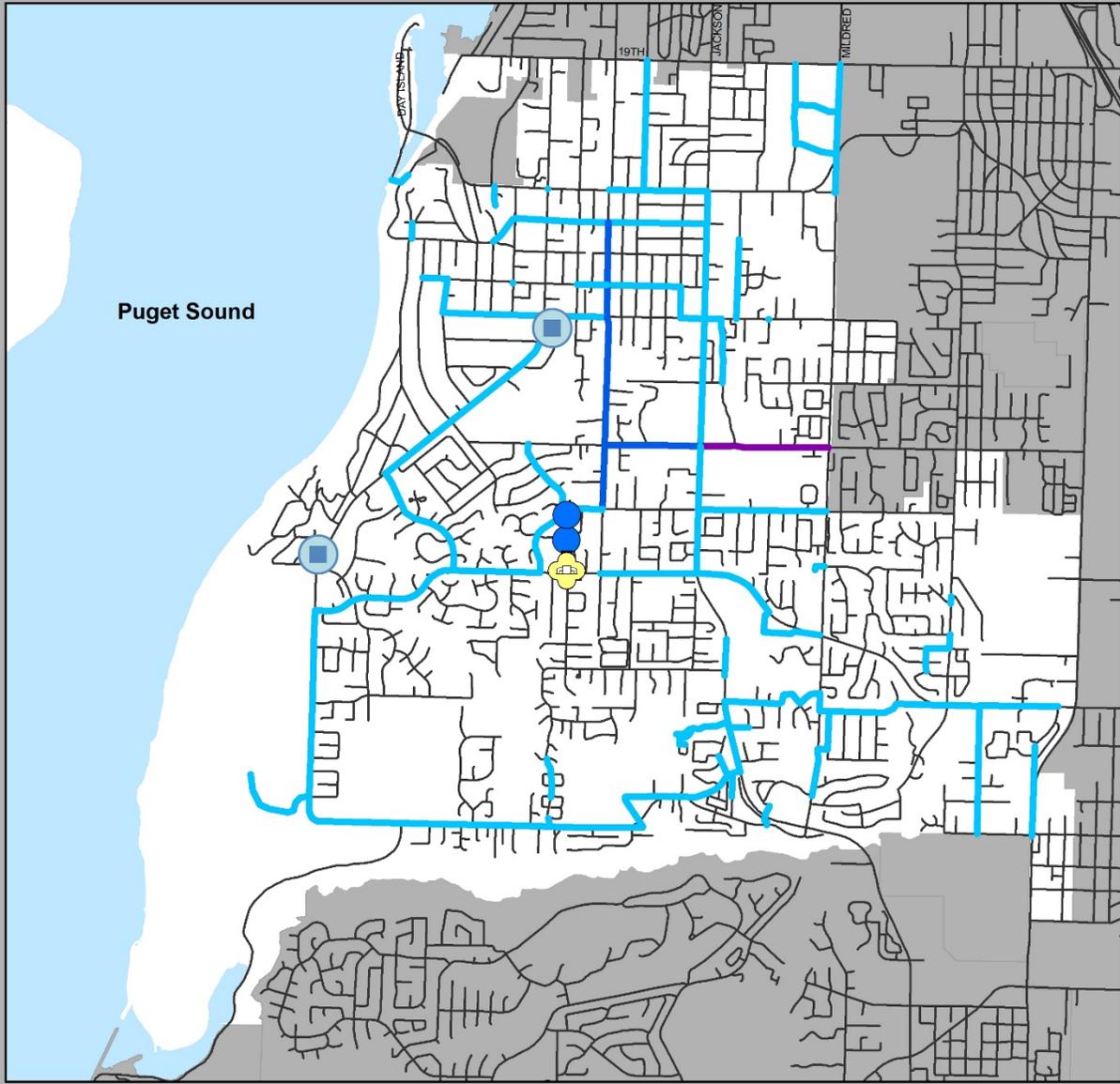
Distribution lines are commonplace and have not been inventoried.

The City of Tacoma Capital Facilities Plan (CFP) establishes a level of service of 442 gallons per day per equivalent residential unit (ERU) and/or as contained in Tacoma Water's Washington State Department of Health approved water system plan. 442 gallons per day per ERU represents a 4-day peak period demand, with a peak factor of 2.01 times the actual average daily residential water consumption of 220 gpd per ERU. Based on Tacoma Water 2012 demand forecast, Tacoma Water has excess supplies when taking into account peak day requirements looking out to year 2060.

Tacoma Water will complete construction and initiate operations of a new Green River filtration facility in 2015. Filtration of the supply will meet regulatory requirements and provide enhanced reliability for the supply.

Pierce County has acquired all rights associated with the Lone Star Northwest Gravel Mine purchase, including water rights. The majority of Pierce County's existing water rights are approved for municipal use and being utilized on the Chambers Creek Properties. The County has applied to the Washington Department of Ecology for additional rights, which would increase availability by another 10,200 acre feet per year at the site. The County continues to explore wholesaling water to local water purveyors.

**Figure 8-3  
Tacoma Water Supply Facilities**



- 12-20 Inch Main
- 20-24 Inch Main
- 26-30 Inch Main
- Water Tower
- Well
- Pump



Scale  
1:40,000

University Place  
Planning and Development Services

## **Sanitary Sewer**

Sanitary sewer service is provided to the City of University Place by Pierce County Public Works and Utilities and, to a lesser extent, by the City of Fircrest through the City of Tacoma. The entire City of University Place is located within the University Place East and University Place West Sub-basins, two of the 22 established sewer sub-basins within Pierce County.

The University Place East Sub-basin consists of approximately 1,700 acres and is bordered to the west by Bridgeport Way, to the north by 27th Street West, to the south by Chambers Creek and to the east by Lakewood Drive and Orchard Streets. The University Place West Sub-basin consists of approximately 3,990 acres and is bordered to the west by Puget Sound, to the north by 19th Street West, to the south by Chambers Creek and to the east at approximately Bridgeport Way. The sub-basin is made up of the University Place North ULID 70-1, Soundview ULID 76-1, Westside Sewer District, numerous developer extensions, and flows transferred from the City of Tacoma's Western Slope Sub-basin.

The Chambers Creek Regional Wastewater Treatment Plant was approved by the federal and state governments, and is sized to meet the long-term needs for full service to the established sewer service area when fully developed. The plant is expected to serve a population in the Basin of approximately 560,000 by 2040.

The Pierce County Sewer Division Unified Sewer Plan was adopted in 2001 and updated in 2010 with final state Department of Ecology approval in 2012. Additional information pertaining to the sanitary sewer system can be obtained by reviewing the Unified Sewer Plan located on-line on the Public Works and Utilities website.

The plan identifies future service needs for the County and makes provision for expansions to meet those needs, including expansion of the Chambers Creek facility to 43-45 MGD (million gallons per day) capacity in the first phase of a five phase major expansion of the WWTP to be completed in December 2016.

The Unified Sewer Plan identifies one project, the Upper Leach Creek Interceptor, which is on schedule to be completed by 2020. This improvement will enable new service to be provided to areas of eastern University Place not served and could also serve the City of Fircrest in the event their flows are transferred to Pierce County.

The County's sanitary sewer system includes approximately 690 miles of public sewer collector and interceptor lines, 174 miles of private sewer lines, and 99 pumping stations. The system is generally gravity fed, designed to direct flows downhill to the Chambers Creek Regional Wastewater Treatment Plant (WWTP). **Figure 8-4** depicts certain major sewer facilities and the two sub-basins in the City of University Place.

Pierce County purchased the initial 44 acre site for the WWTP in 1979 from the Lone Star and Glacier Mining concerns. The Sewer Utility purchased the remaining 886 acres in 1992 culminating in what is now the Chambers Creek Properties. The WWTP began operations in 1984 and utilizes 49.75 acres of the 200 acre campus reserve within the 930 acre property. The Utility owns the Properties and maintains them through an agreement with Pierce County Parks and Recreation and the Kemper Company.

The WWTP serves more than 69,400 households and businesses in the 117 square mile sewer service area. Since opening in 1984, wastewater flows have increased each year by an average of 3-5 percent. Treatment capacity is rated at 28.7 MGD and the Plant operates at an average capacity of 18.0 - 20.0 MGD. Expansion is expected to continue to meet demand, accommodate anticipated growth, and meet increasingly stringent water quality standards over the next 25 years. Total build out is expected to be 60 MGD as outlined in the Unified Sewer Plan.

As Pierce County has developed, ensuring wastewater treatment capacity sufficient to handle increasing wastewater volumes and to protect groundwater quality has become a focus of sanitary sewer facilities planning. Septic systems, which dispose of wastewater through percolation into the aquifer, are a known source of groundwater pollution. University Place would like to eventually connect all development in the Chambers Creek-Clover Creek Drainage Basin to a sewer system. Approximately 980 parcels within the City are not connected to sewer (see **Figure 8-5**). City and County staff are discussing options for extending sewer service to those areas. The sewer system replaces septic tanks and drain fields with wastewater collection and conveyance facilities and percolation of untreated effluent with wastewater treatment and bio-solid disposal. Presently, the County has a pay-as-you-go program for new sewer connections.

The City of Fircrest provides service within its corporate boundaries and to specific areas outside of its corporate boundaries and has agreements with other service providers concerning service area boundaries and wastewater treatment. Portions of the City of University Place are within the City of Fircrest service area. This includes an area south of 44<sup>th</sup> Street West near Alameda Avenue. These flows are taken by the City of Tacoma and routed to the Tacoma Central Wastewater Treatment Plant.

### ***Electrical***

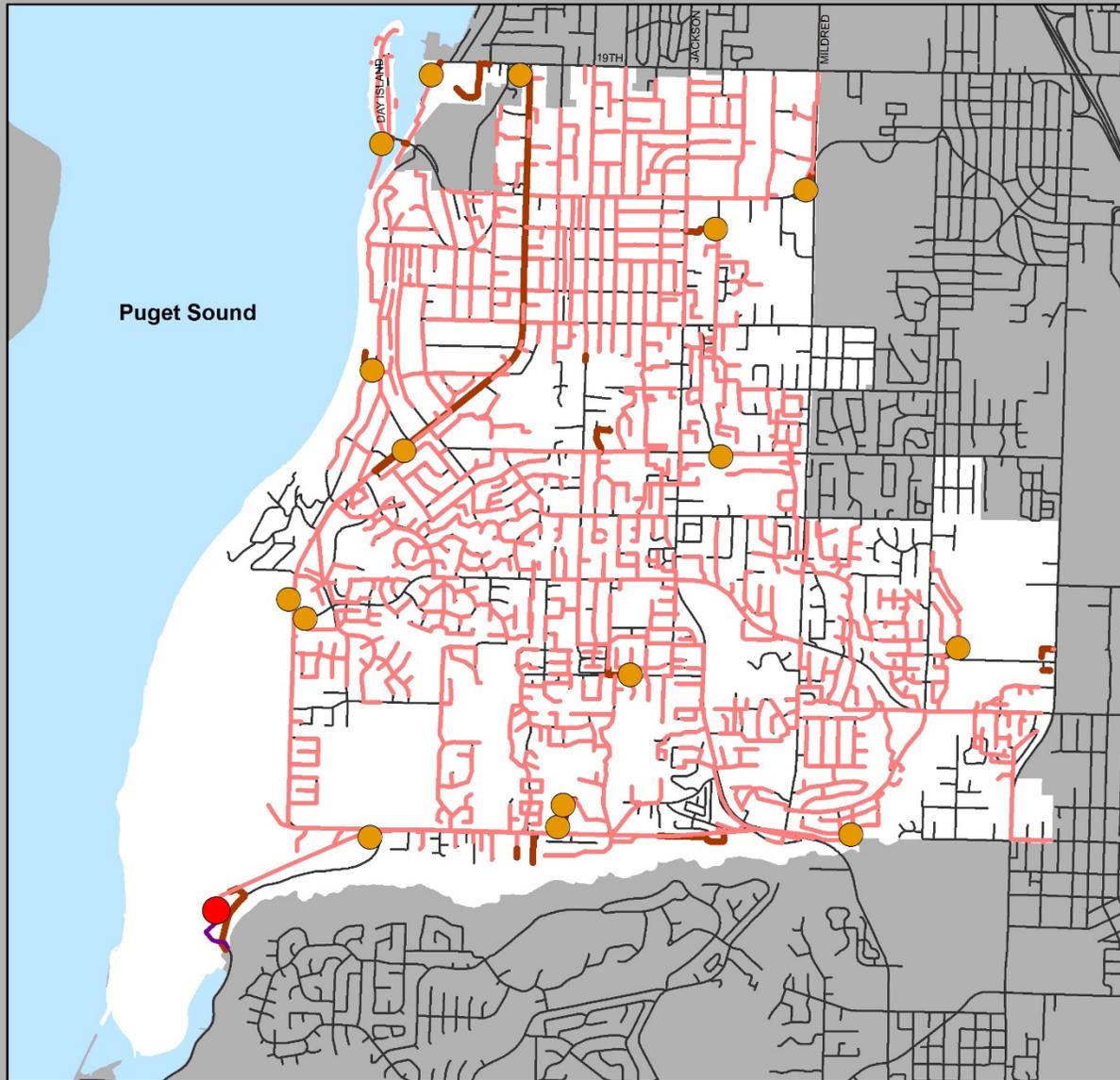
Tacoma Power, a division of Tacoma Public Utilities, is the electrical provider to the City of University Place. A five-member public utility board appointed by the Tacoma City Council governs the utility.

Tacoma Power serves a 180 square mile area. The service area includes the cities of Tacoma, Fircrest, University Place, and Fife; portions of Lakewood; as well as portions of unincorporated Pierce County including Graham, Spanaway, Parkland, Joint Base Lewis McChord, Midland, Summit, Frederickson, Waller, South Hill Puyallup, and Elk Plain.

Tacoma Power operates both transmission and distribution facilities. Approximately 8.5 miles of transmission lines are located within University Place. Transmission access is provided by the Southwest and Pearl substations, both of which are outside of the City limits. Six distribution substations supply customer load for University Place, and the total nameplate capacity is 150 Megavolt Amperes (MVA). Four of the six distribution substations are located within the City limits: University, Menlo, Sunset, and Bridgeport.

Of the 15,900 customers served by Tacoma Power, approximately 85 percent are residential and 15 percent are commercial.

**Figure 8-4**  
**Sanitary Sewer Facilities**



- Lift Station
- Waste Water Treatment Plant
- Gravity Main
- Force Main
- Siphon Main



Scale  
 1:40,000

University Place  
 Planning and Development Services



Tacoma Power has a maintenance agreement with University Place to service and maintain street light facilities. Tacoma Power utilizes forecasts produced by the Puget Sound Regional Council (PSRC) and local municipalities to project future load growth. Tacoma Power uses this information in conjunction with its system planning criteria to prepare a six-year facilities plan. The six-year plan helps Tacoma Power identify those strategic projects that will ensure a safe, reliable, and operable system. Tacoma Power's level of service is to maintain the standard voltage level within + or - 5% of nominal voltage. All distribution service shall be provided within the acceptable range established by industry standards.

Pursuant to its six-year plan, Tacoma Power does not anticipate development of new substations or major line replacements within University Place. The addition of a large commercial or industrial load in the area may require development of additional new facilities.

**Figure 8-6** depicts the general location of the electrical system in the City of University Place.

