8. UTILITIES ELEMENT

Purpose

The Utilities Element addresses water, sewer, surface water, solid waste collection and transfer, electric power, natural gas, telecommunications, and hazardous liquid pipelines.

The Utilities Element supports the Land Use Element and the Sustainability, Climate, and Environment (SCE) Element of the Comprehensive Plan by establishing policies for provision of efficient and sustainable utilities to serve anticipated growth and development.

The Capital Facilities Element contains further explanation about capital projects needed to meet the level of service standards for City-managed utilities.

Figure U-1: Solar panels on the roof of City Hall

Vision

The element supports the continued provision of utility services to support existing and future development. In addition, the element provides policies for regional coordination of utility needs and support for resource efficiency and sustainability.

Figure U-2: Yard Smart Rain Rewards Sign

This rebate program helps Kirkland homeowners beautify their yards and help keep polluted rainwater runoff out of Lake Washington.

Existing Conditions

The City of Kirkland currently provides the following utility services:

- Water: All areas of the City except those north of NE 124th Street that are outside the City's service area. Figure U-4 shows the City's water system.
- Sewer: All areas of the City except those north of NE 116th Street that are outside the City's service area. Figure U-6 shows the City's sewer system.
- Solid waste, recycling, and compost collection: All areas of the City. The City currently contracts with Waste Management, Inc.
- Surface water: All areas of the City. Figure U-8 shows the City's surface water system.

The following non-City-managed utilities provide additional services:

- Northshore Utility District and Woodinville Water District: Both are special purpose districts that operate independently from the City. They provide water and sewer services to the northern portions of the City. Both have franchise agreements that include provisions for future City assumption of service at such time as it is desirable to do so. The Washington State Departments of Health and Ecology review and approve the Utility Districts' Comprehensive Plans, and they are bound by the same service regulations as the City. Figures U-2 and U-4 show the water and sewer systems.
- City of Bellevue Water Utility: A very small portion of southeast Kirkland , within the Bridle Trails neighborhood is served by the City of Bellevue.
- Puget Sound Energy (PSE): PSE is a public service company – a corporation or other nongovernmental business entity which delivers certain services considered essential to

the public interest. PSE transmits and distributes electric power and natural gas in a nine-county area, including Kirkland and much of King County. Figures U-7 and U-8 show PSE's electrical and gas facilities.

- Telecommunications: Provided by a variety of private companies. Kirkland has both wired and wireless telephone, cable TV, and high speed cable and fiber-optic Internet services. Those that use City rights-of-way to provide services have franchise agreements with the City. Figure U-6 shows the fiber conduit system.

Figure U-3: City of Kirkland free wireless internet service sign at Marina Park

Water

The City of Kirkland Water Utility provides water service to all of its residents, except those generally north of NE 124th Street who are served by the Northshore Utility District or the Woodinville Water District (see Figure U-4). A very small portion of the southeastern City is served by the City of Bellevue.

The City's water system is primarily a gravity system consisting of 176 miles of water lines and 12.62 million gallons of storage capacity that includes 1.5 million gallons of fire protection storage. An average of 5.7 million gallons of water per day is distributed to Kirkland's water service area customers. Projected costs associated with the water system are primarily

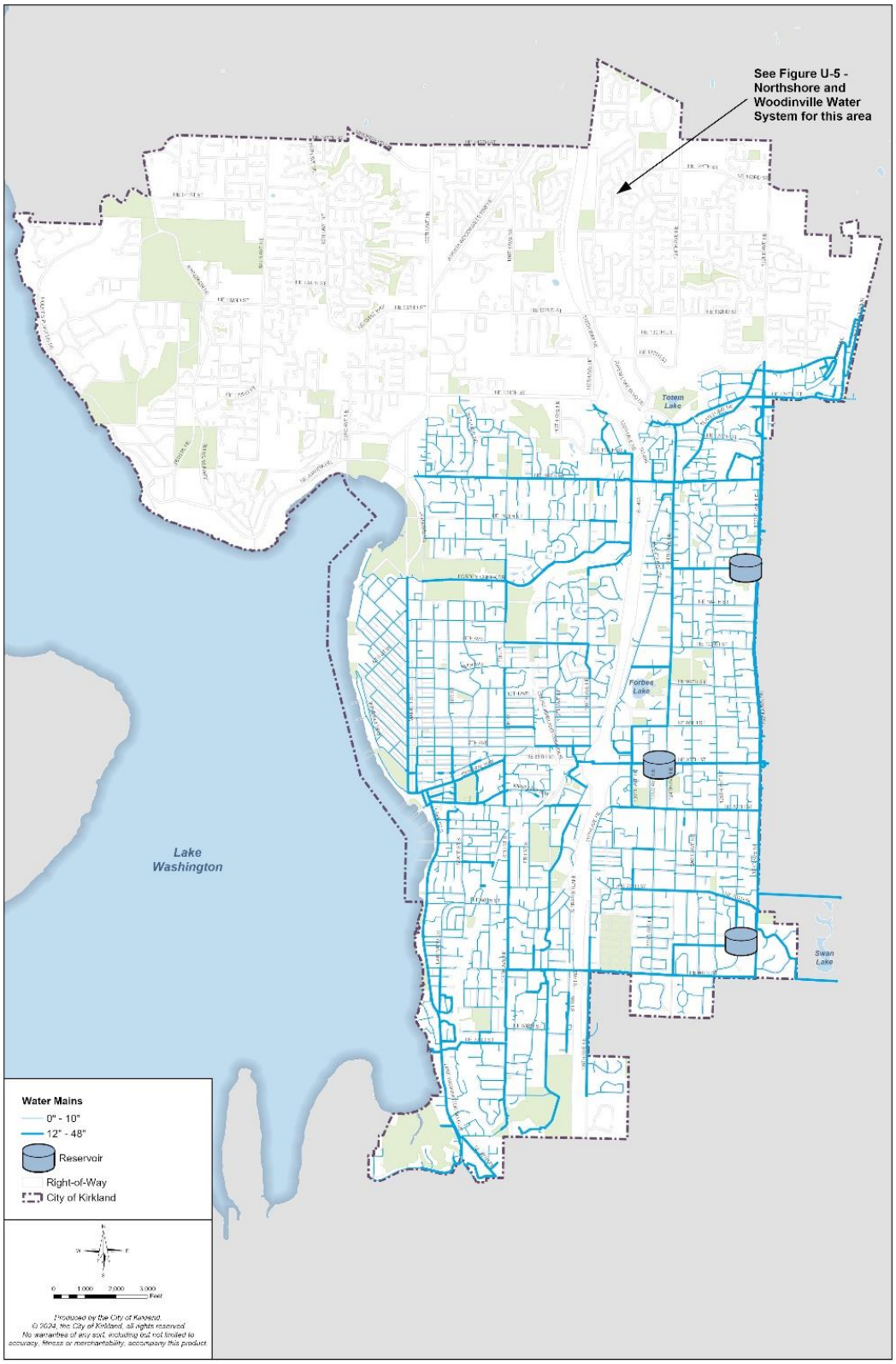
maintenance and replacement costs for aging pipe and fire flow needs. The Kirkland Water System Plan was last updated in 2015 and outlines water projects to upgrade any deficiencies in the system for the next 20 years. The next update to the Water System Plan will be complete in 2025 and will address the City's growth through 2044. The City will construct projects as needed to address system deficiencies. The City updated its Capital Facilities charges in 2022 to ensure adequate funding to address system maintenance and future growth needs.

As a member of the Cascade Water Alliance, Kirkland purchases its water supply from Seattle Public Utilities. The water is then distributed to Kirkland customers through the City's distribution system. The City currently receives its entire water supply from Seattle from the Tolt River Watershed, with occasional supply from the Cedar River Watershed when routine maintenance is required at the Tolt Treatment Facility. Cascade Water Alliance currently has an agreement with Seattle Public Utilities to provide 33.3 million gallons of water per day to its members through the year 2039 with the opportunity for an extension of the contract until 2063. As of 2024, Cascade Water Alliance is pursuing contract negotiations, therefore, Cascade could either extend its contract with Seattle or enter a new supply contract with another wholesale water provider.

In addition to the supply from Seattle Public Utilities, Cascade Water Alliance also has an agreement with the City of Tacoma for additional supply into the year 2042 and has the capability of developing Lake Tapps in East Pierce County if the need arises beyond 2063. According to the Cascade Water Alliance, based on current trends of water use, responsible plumbing codes, and water efficient appliances, it is likely that Lake Tapps will not need to be developed for decades.

Cascade Water Alliance Water Efficiency Program has a single regional water efficiency savings goal for all its members of a cumulative savings of 0.4 million gallons per day on an annual basis.

Figure U-4: Water System Map



Northshore Utility District

The Northshore Utility District provides water services to northern portions of the City. Figure U-5 shows the existing Northshore water system. Potable water from the Tolt River Watershed is purchased from Seattle Public Utilities (SPU).

The water system has eight reservoir sites with a 29-million-gallon capacity. Water Level of Service is 174 gallons per day (GPD) per equivalent residential units (ERU). Level of service is the standard level of water or sewer service served by the utility in relation to a detached single-unit home; ERU is a normalized unit of measurement to quantify service demand commonly used by utilities.

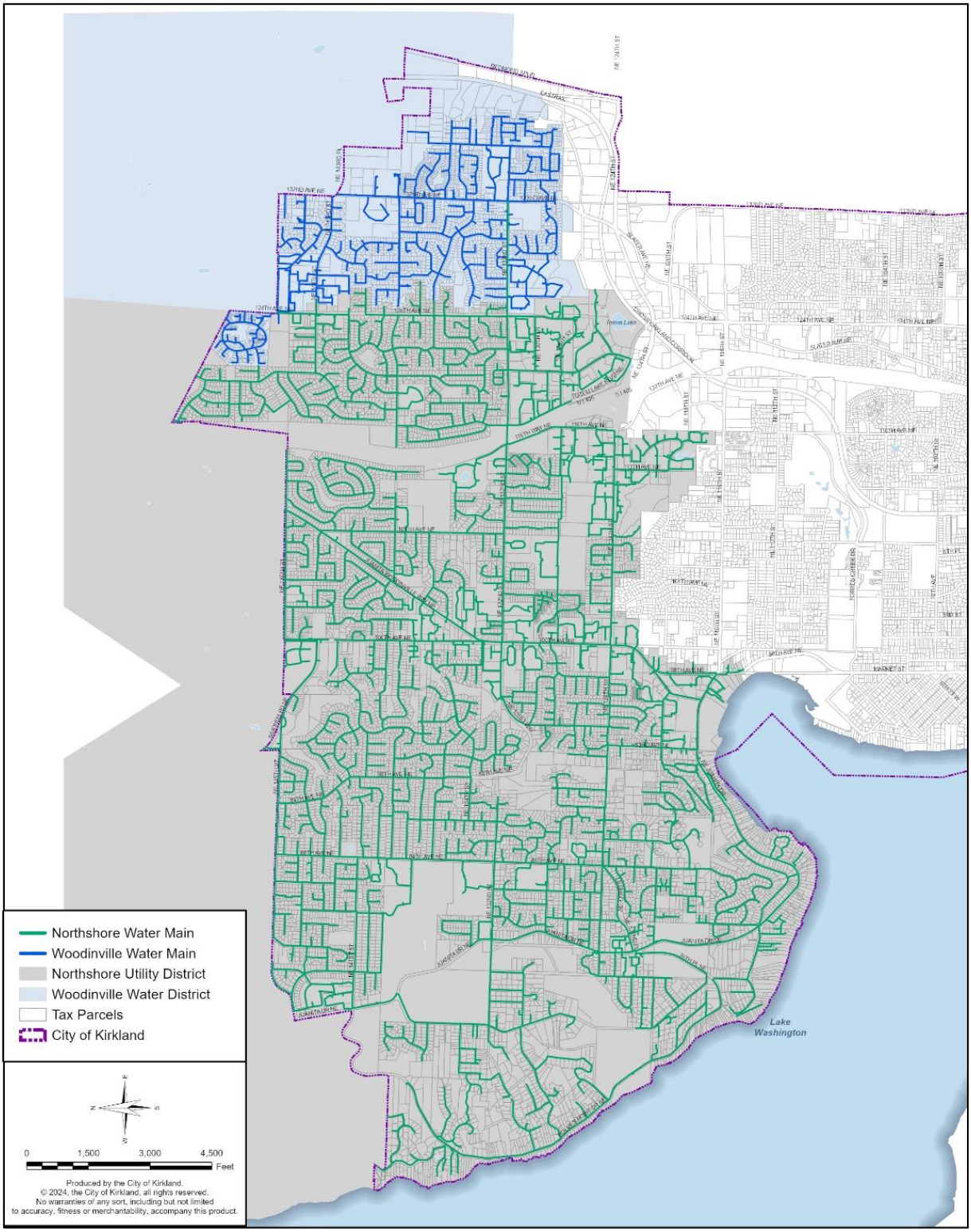
The District's water and sewer plans include identification of capital improvements for replacement and repair of the older sections of the system. Repair and maintenance of the system occur when needed and extensions necessitated by future development will be provided by the developer.

Woodinville Water District

The Woodinville Water District provides water services to the northeast portion of the City and sewer service to only a few single-unit homes. Figure U-5 shows the existing Woodinville water system.

The water system has eight reservoir sites with a 14.9-million-gallon capacity. Water level of service is 207 gallons per day(GPD)/equivalent residential units (ERU). Repair and maintenance of the system occur when needed and extensions necessitated by future development will be provided by the developer. Construction of a new standpipe for additional water storage in Kingsgate is on the Woodinville Comprehensive Water System Plan Capital Improvement Program project list.

Figure U-5: Northshore and Woodinville Water Systems Map



Sewer

The City of Kirkland Sewer Utility provides sanitary sewer service to all of its residents south of NE 116th Street (see Figure U-6). The Northshore Utility District provides sewer service to most residents north of NE 116th Street.

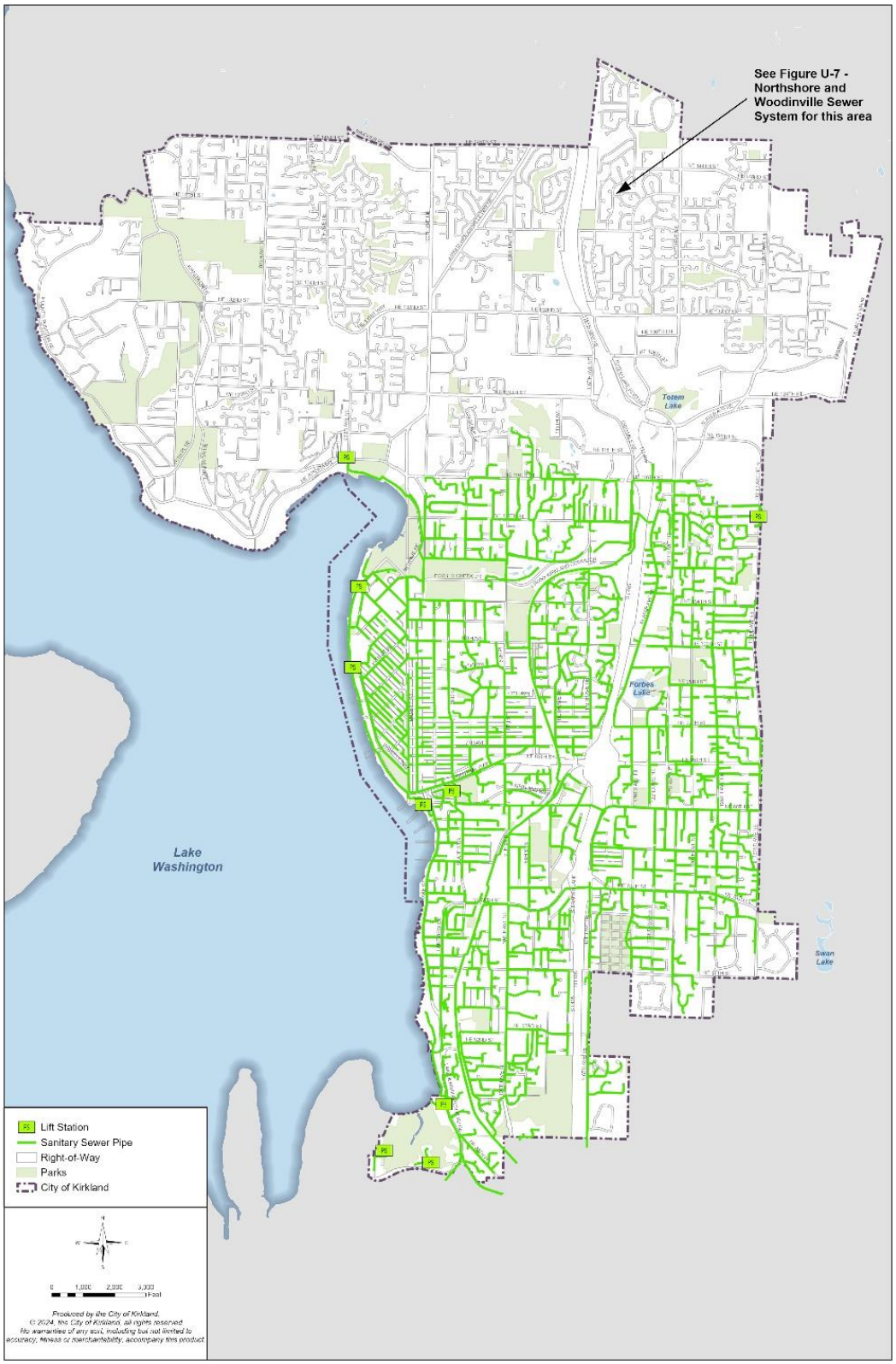
The collection system consists of 13 major sewer drainage basins, 40 minor sewer basins, 122 miles of sewer pipe, six lift stations and force mains, and approximately 3,184 maintenance holes. Approximately five to 10 percent of Kirkland residents use septic systems. Sewer extensions typically occur when there is redevelopment; KMC Chapter 15.28 has specific requirements that address sewer connections. Sewer extensions have typically been funded by developers or local owners in compliance with the Kirkland Municipal Code.

The primary costs anticipated to maintain existing levels of service are related to replacement and rehabilitation of older pipelines, improvement of pumping capacity, and system expansions in the Lake Plaza Basin (located near Marina Park), Central Way Basin, and Juanita Basin.

Kirkland's General Sewer Plan establishes the policy basis for recommended capital improvements to correct deficiencies and meet future service needs. The Plan provides the City with a guide to evaluate the impact of possible reclaimed water use and future development on the local and regional sewer system. The General Sewer Plan was last updated in 2015; the latest update is planned to be completed in 2025.

The King County Wastewater Treatment Division (WTD) provides the City's service area with sanitary sewer treatment services. City sewage and a majority of Northshore Utility District's sewage are treated at King County's South Treatment Plant in Renton. The Brightwater Treatment plant in Woodinville supplies reclaimed water to the region. Very small portions of Northshore's sewage flows to the Brightwater Treatment Plant in Woodinville and the West Point Treatment Plant in Seattle. Ongoing asset management and planned upgrades to King County's treatment facilities and conveyance systems will occur in order to maintain capacity to serve anticipated growth.

Figure U-6: Sanitary Sewer System Map



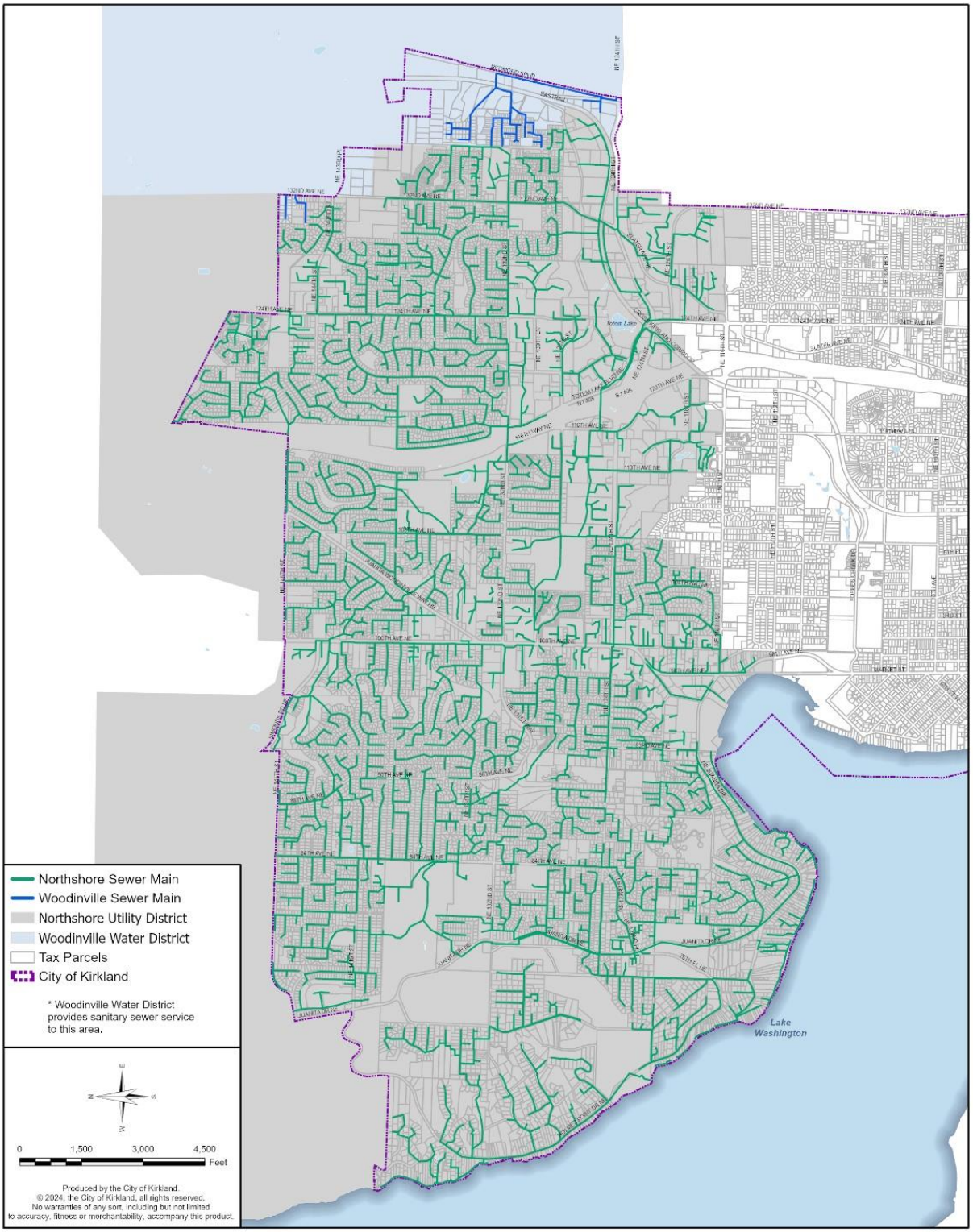
Northshore Utility District

The Northshore Utility District provides sewer services to northern portions of the City. Figure U-7 shows the existing Northshore sewer system. Northshore's sewer system is primarily a gravity system. Wastewater is treated at King County's West Point and South treatment plants. Sewer level of service is 71 gallons per capita flow rate.

Woodinville Water District

The Woodinville Water District provides sewer service to only a few single-unit homes in the northeast portion of the City. Figure U-7 shows the existing Woodinville sewer system. Woodinville's sewer system is primarily a gravity system. Due to the topographical difficulty of providing gravity sewer service to the Kingsgate area, Northshore Utility District provides sewer service there, even though it is within Woodinville's service area. Woodinville Water District's wastewater is treated at King County's West Point and South treatment plants. Sewer level of service is 80 gallons per day per capita.

Figure U-7: Northshore and Woodinville Sewer Systems Map



Surface Water

The City maintains conveyance, flow control and water quality treatment systems in public rights-of-way, and flow control and water quality treatment facilities that serve single-unit homes. These facilities are managed to reduce flooding and to protect water quality. As of 2023, the City owns and manages 267 miles of conveyance pipes and culverts and 814 retention and detention facilities (i.e., tanks, vaults, and ponds).

Privately owned stormwater facilities consist of conveyance, flow control and water quality treatment facilities that serve multiunit residences and commercial properties, and certain private roads and single-unit homes. City staff inspect 710 private sites to ensure that facilities are clean and functioning as designed. In addition, staff inspect 380 facilities designed in accordance with low impact development (LID) practices, typically on single-unit residential properties, to ensure these systems are functioning as designed. Staff also provides technical assistance for drainage and water quality problems that impact these systems. Figure U-8 shows the City surface management water system.

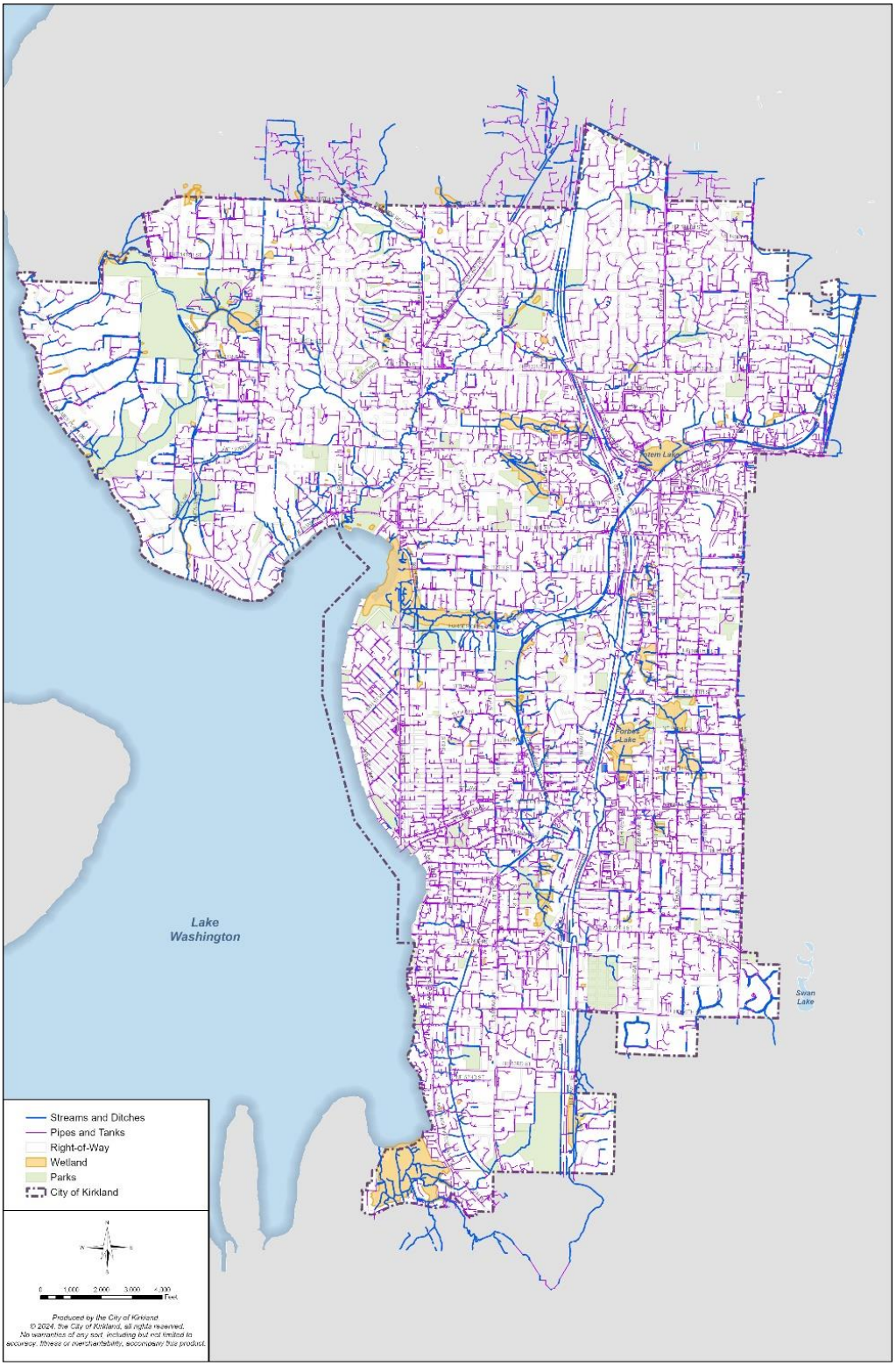
Low impact development (LID) is a land development strategy and set of practices that strives to mimic natural watershed hydrology by slowing, evaporating/transpiring, and filtering water before it reaches a stream channel. LID contrasts with past drainage techniques that collect and convey water to streams quickly – damaging stream channels and degrading water quality.

The Kirkland Surface Water Strategic Plan is used by the City to identify capital projects, strategies and resources to accomplish City and Surface Water Utility goals. This provides the policy basis for operational and capital projects.

Kirkland has a National Pollutant Discharge Elimination System (NPDES) Western Washington Phase II Municipal Stormwater Permit (Permit). The Permit is issued by the State of Washington under authority from the Environmental Protection Agency. The current Permit became effective on August 1, 2024 and will expire on July 31, 2029. The Permit allows Kirkland to discharge stormwater into waters of the State (Lake Washington) if the City takes specific steps in each of the following areas to minimize discharge of pollutants to stormwater: stormwater planning; public education and outreach; public involvement and participation; stormwater system mapping and documentation; illicit discharge detection and elimination; controlling runoff from new development, redevelopment, and construction sites; stormwater management for existing development; operations and maintenance; source control for existing development; and monitoring and assessment.

A watershed approach has been used for managing the surface water utility by dividing the City into 15 drainage basins (i.e., areas of land where all flowing surface water converges into a body of water such as a stream, lake, or wetland). The largest and most important streams are Juanita Creek and Forbes Creek. These two basins ranked highest based on a combination of factors which focused on flow control and water quality needs in basins that can support salmon populations. Denny Creek and Champagne Creek are the next highest priority basins within the City and are significant because they provide salmonid fish habitat and productive associated wetlands and protected areas. Smaller critical drainage basins include, but are not limited to, Carillon Creek, Yarrow Creek, Everest Creek, Holmes Point, and Kingsgate Slope. More information on the watershed and drainage basins, and a map illustrating their location, can be found in the Sustainability, Climate, and Environment (SCE) Element (see Figure SCE-1).

Figure U-8: Surface Water Management System Map



Solid Waste, Recycling, and Compost Collection

The City currently contracts with Waste Management, Inc. to provide curbside solid waste, recycling, and compost collection to all residential and commercial customers. Businesses and multiunit properties can request a compost cart at no additional cost. Multiunit residents who do not have access to a compost cart can bring food scraps to the City's drop-off locations at City Hall and the North Kirkland Community Center. The City encourages the community to use additional recycling services for additional items beyond curbside collection, like those at recycling events or transfer stations.

Reducing waste and achieving a high recycling diversion rate reduces the amount of garbage going to the Cedar Hills Landfill, which in turn extends the time before the landfill reaches capacity and other solutions must be found for disposing of King County's solid waste. Waste reduction and recycling programs throughout King County have extended the life of the Cedar Hills Landfill through 2028. In addition, recycling reduces the need to produce more raw materials for certain plastics, paper and aluminum.

The King County Comprehensive Solid Waste Management Plan sets specific goals for the City to achieve. The County and the City have committed to achieve a waste reduction goal of 20.4 pounds generated per household per week by 2030 and an interim recycling goal of 70 percent. In 2019, the City achieved a combined recycling diversion rate of 46 percent.

Solid Waste Transfer

Kirkland, along with 36 other King County cities, participates in a Solid Waste Interlocal Agreement for King County to manage the collection and transfer of solid waste to the Cedar Hills landfill. The King County Solid Waste Division (KCSWD) owns and operates the Houghton Transfer Station (HTS) in Kirkland where the majority of Kirkland's solid waste is collected and transferred to the Cedar Hills landfill. In 2021, the HTS processed 16 percent of the waste in the King County transfer system.

King County's 2019 Comprehensive Solid Waste Management Plan recommends siting and building a new Northeast recycling and transfer station and closing the existing Houghton Transfer Station. KCSWD has identified two sites as potential locations: the current Houghton Transfer Station property and a site in Woodinville. Environmental review for proposed sites for the new recycling and transfer station is underway with an anticipated project opening date of 2029.

Telecommunications

Telephone services are regulated by the Washington Utilities and Transportation Commission. Personal wireless service providers serving Kirkland are those licensed by the Federal Communications Commission (FCC) in the radio frequency spectrum for wireless communications service and registered to do business in Kirkland. Cable services are provided under municipal franchise.

City Telecommunications

The City expanded its fiber-optic network to service governmental facilities and traffic control systems by partnering with other cities and schools to build a regional fiber-optic telecommunication system (see Figure U-9). The publicly owned Community Connectivity

Consortium was founded by the City of Kirkland, Lake Washington School District, the University of Washington and the City of Bellevue. The Consortium has grown to a total of 28 member cities and agencies, and expansion projects are ongoing.

One of the recommended initiatives of the City's Smart City Strategic Plan is technology expansion and streamlining, which includes city fiber expansion. Additionally, the City has facilitated an expansion of pathway and fiber capacity when there are construction or project opportunities.

Telephone

Wired telephone service and certain related special services are available in the City. System facilities within Kirkland include switching stations, trunk lines, and distribution lines. Distribution lines are either pole- mounted or underground. Service and facility expansions are driven by customer demand.

Personal Wireless

Several companies provide wireless (cellular) telephone service. Cellular telecommunication permits wireless transmission of messages on a network of strategically placed receivers (i.e., mobile telephone communications). Receivers may be placed on tall poles, utility poles, light standards, lattice-type towers, or buildings. The cellular telephone industry does not plan facilities far into the future but uses market demand to determine expansion into new service areas.

Cable

Most homes are served by several Cable TV providers. Residential high speed DSL services, cable-based Internet, and fiber are available in most locations in the community.

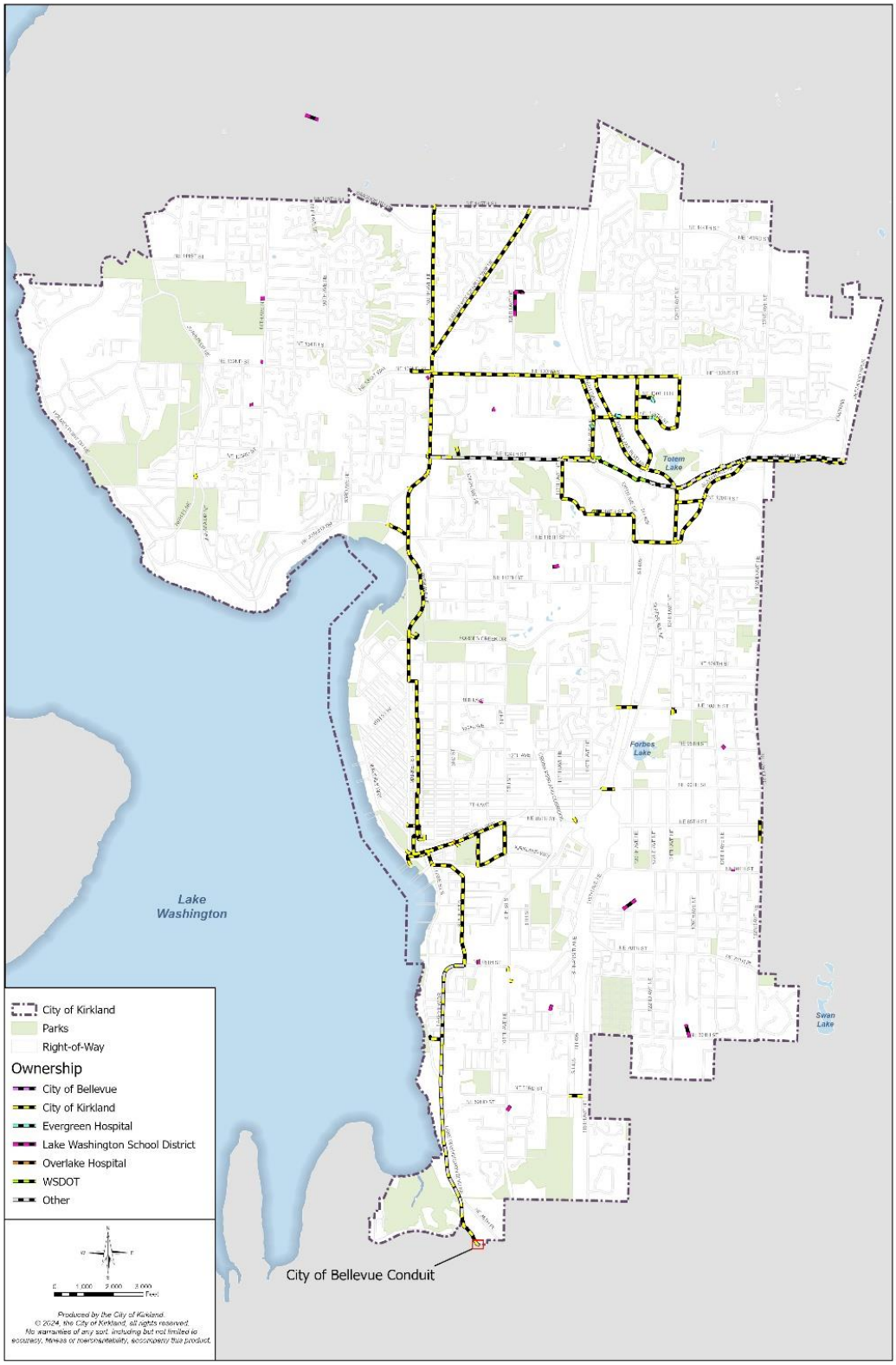
Fiber Optic

Many telecommunication vendors own optic fiber in Kirkland rights-of-way for commercial use. The City of Kirkland has access to some of these strands through franchise agreements.

Broadband

Broadband Internet Services are available nearly everywhere in Kirkland via commercial telecommunications providers.

Figure U-9: Fiber Conduit System Map



Electricity and Natural Gas

Puget Sound Energy (PSE) provides the Kirkland area with natural gas and electricity and is regulated by the Washington Utilities and Transportation Commission (WUTC). Figure U-10 shows the existing electrical system; Figure U-11 shows the existing natural gas system.

Electricity

PSE generates, transmits, and distributes power as part of the interconnected Northwest power grid. The electricity that PSE delivers to customers is generated from hydroelectric dams, coal, natural gas, wind, and to a much smaller degree from nuclear, and other sources (solar, biomass landfill gas, petroleum, and waste).

Kirkland is a part of PSE's Eastside and Northshore Electrical Subareas. Power is delivered on 230,000 volt (230 kV) transmission lines to substations in Redmond and Renton, where the voltage is transformed to 115 kV. Several distribution stations in Kirkland further transform the voltage to 12.5 kV, which is then distributed to customers. PSE completed five miles of new 115 kV transmission line connecting PSE's Sammamish Substation in Redmond to Kirkland's Juanita Substation, along with upgrades to aging substation equipment in December 2023. The project increases system capacity and improves reliability for customers in the area.

PSE's Energize Eastside project addresses an electrical transmission capacity deficiency and allows for a more robust and reliable transmission system for the entire Eastside. The project comprises a new substation and the upgrading of approximately 16 miles of electric transmission lines within the existing corridor from 115kV to 230 kV, from Redmond to Renton. Construction began in 2021.

A double-circuit 230 kV Seattle City Light transmission line runs through Kirkland north to south near 124th Avenue NE but does not directly serve the Eastside subarea.

Natural Gas

PSE provides natural gas to six Washington counties, including King County, via PSE's distribution system. The natural gas originates from various regions of the U.S. and Canada. Natural gas is transported throughout Washington via a network of interstate transmission pipelines owned and operated by Northwest Pipeline Corporation. PSE takes delivery of natural gas from Northwest at a gate station located east of Lake Sammamish outside Kirkland City limits. PSE gas distribution lines up to eight inches in diameter in Kirkland, together with future extensions and upgrades, will service Kirkland's growth.

While PSE plans for gas system demand growth, installation of gas main extensions and new service lines respond to customer demand. Washington Utilities and Transportation Commission rules require gas companies to demonstrate that existing ratepayers will not subsidize new customers.

Figure U-10: Electrical Transmission System Map

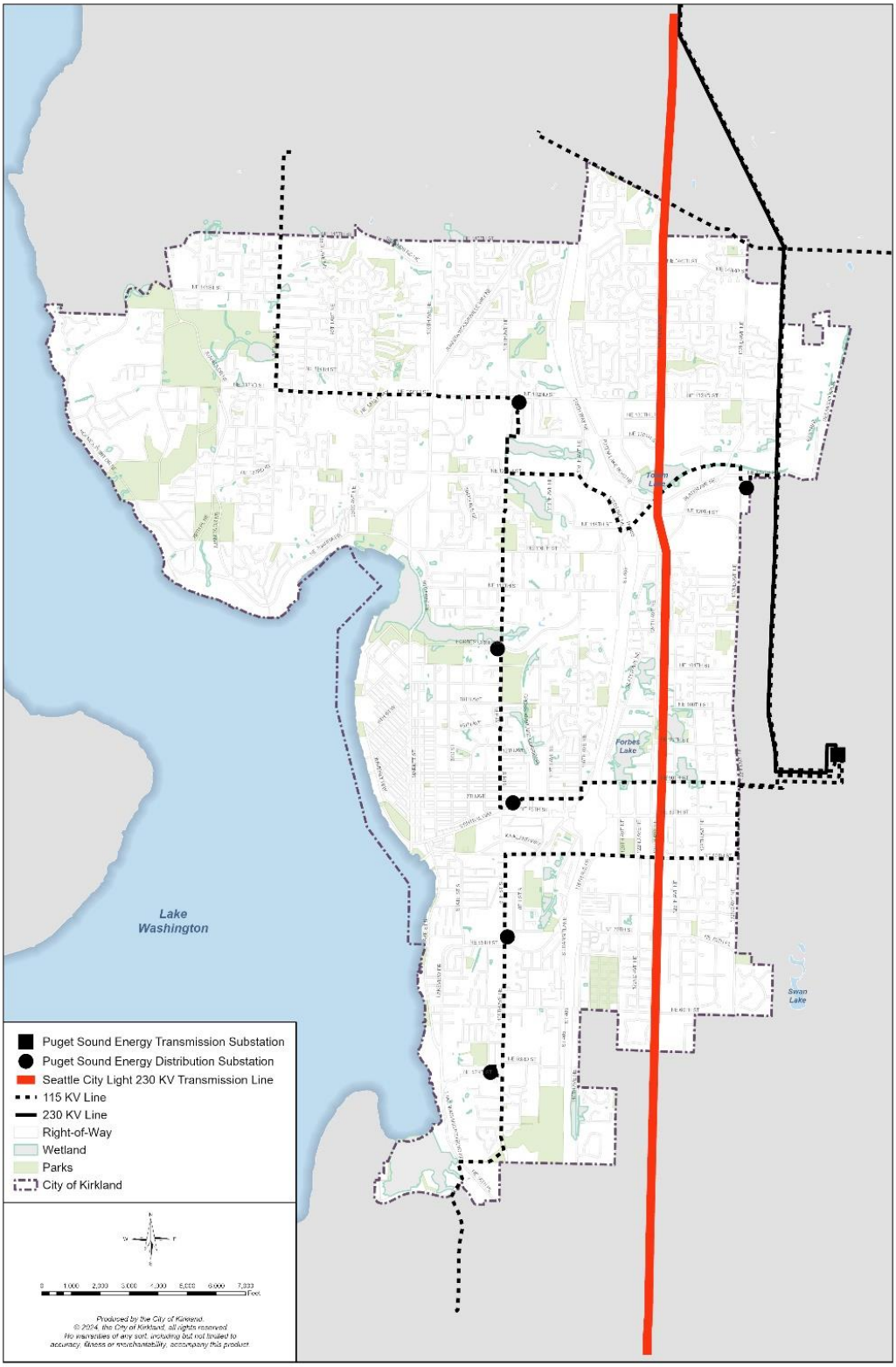
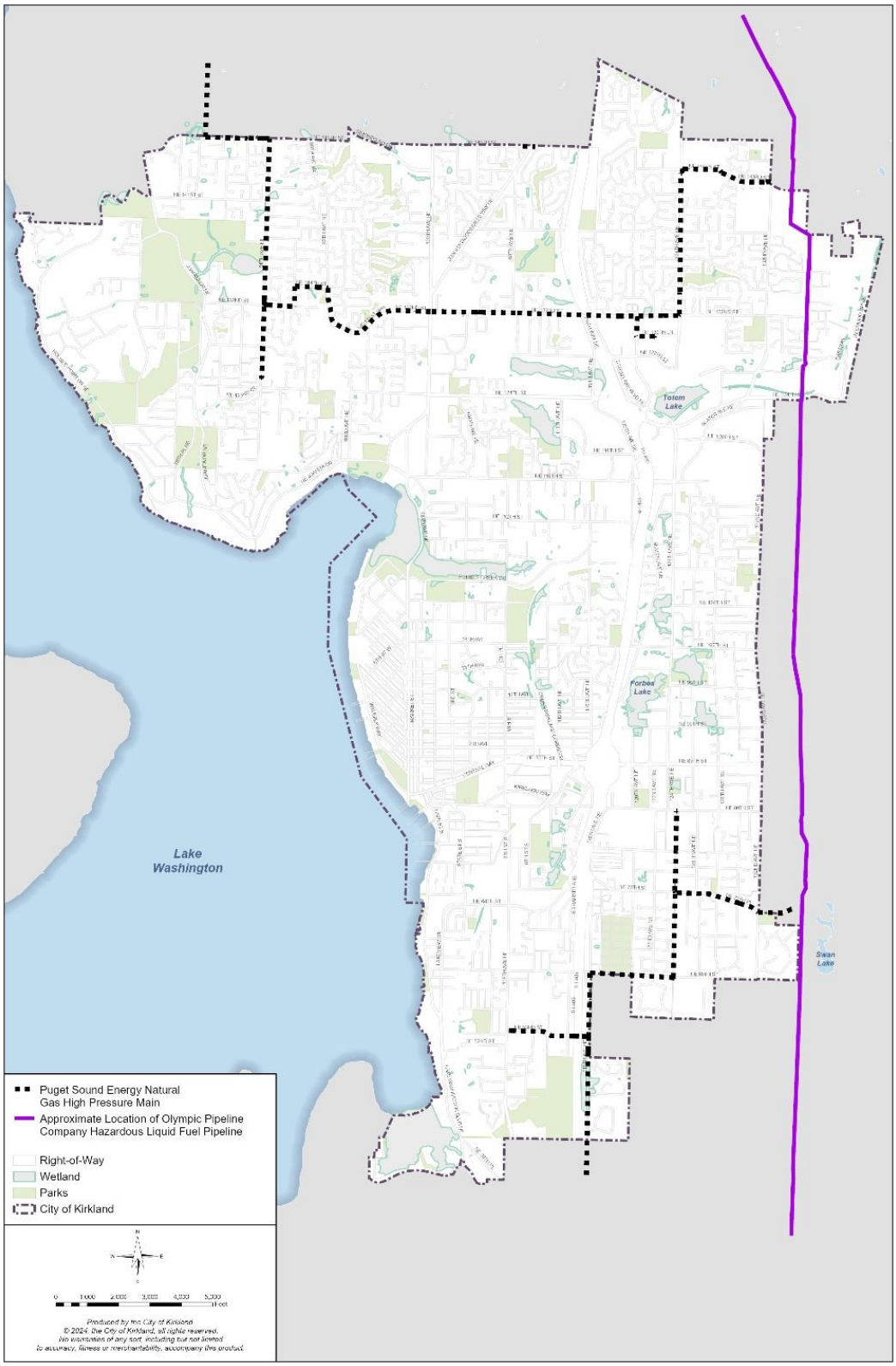


Figure U-11: Natural Gas Distribution System and Hazardous Liquid Transmission System



Hazardous Liquid Pipelines

The Olympic Pipeline Company, operated by BP Pipelines, North America, operates a 400-mile-long petroleum pipeline system from Ferndale, Washington, to Portland, Oregon. Two parallel lines, 16-inch and 20-inch in diameter, generally along the Puget Sound Energy easement north-south corridor, pass through the Kingsgate and Totem Lake neighborhoods in the northeast portion of Kirkland and are located close to a portion of the eastern boundary of the Bridle Trails neighborhood (see Figure U-10). The pipelines carry gasoline, diesel and aviation fuel. Delivery lines carry products from this mainline to bulk terminals at Sea-Tac International Airport; Seattle, Tacoma and Vancouver, Washington; and Linnton and Portland, Oregon.

The pipelines are hazardous liquid pipelines, as defined by state law (RCW 81.88.040). Pipeline facilities, if ruptured or damaged, can pose a significant risk to public safety and the environment due to the high operating pressure and the highly flammable, explosive and toxic properties of the fuel. The Federal Office of Pipeline Safety (OPS) is responsible for regulation of the interstate pipeline facilities and addresses safety in design, construction, testing, operation, maintenance and emergency response of pipeline facilities.

Kirkland's Fire Department has reciprocal emergency response agreements with Redmond and other surrounding jurisdictions in the event of a pipeline failure. The Redmond Fire Department Olympic Pipeline Response Plan includes technical information about the pipeline, potential hazards, a guide to hazardous materials scene management, emergency response and evacuation plans, and contacts and other resources. It contains the fundamentals of the City of Kirkland Fire Department response and maintains City specific data to be used in such an emergency.

Goals and Policies

Goal U-1: Maintain the adequate and efficient provision of public and private utilities in Kirkland.

Policy U-1.1: Maintain an inventory of existing capital facilities and utilities, including locations and capacities of such systems and facilities.

Policy U-1.2: Provide for needed capital facilities and utilities to achieve community goals related to growth in accordance with the Land Use Element of this Plan and to meet established levels of service.

Coordinated planning allows the City to make accurate land use projections based on utility plans, allows utility providers to plan for utilities in a manner that reflects anticipated land use patterns and densities, and ensures that adequate capital facilities and utilities will be available with development.

Policy U-1.3: Use the City's functional plans and designated guidance materials to manage the City's public sewer, water, and surface water facilities.

Table U-1: Water, Sewer, and Surface Water Level of Service

Facility	Standard
Water	Water distribution supple, pumping, and storage capacity per the City's current Water System Plan to provide safe and reliable drinking water for domestic, commercial, irrigation, and fire suppression uses.
Sanitary Sewer	Collection and pumping capacity per the City's current General Sewer Plan for conveyance to regional wastewater treatment facilities to protect public health and the environment.
Surface Water	Conveyance, flow control, and water quality treatment per the Stormwater Management Manual for Western Washington or equivalent to prevent flooding, protect water quality, and habitat in streams and lakes.

Policy U-1.4: Ensure that utility services are provided in a manner that is environmentally sensitive, considers future climate-related impacts, is safe, aesthetically compatible with planned land uses, reduces greenhouse gases, and achieves the City's sustainability goals.

A variety of factors must be considered for any proposed utility expansion. For example, clearing for installation or maintenance should minimize impacts to trees and vegetation as well as fish and wildlife habitat. Utilities also should be installed and maintained to protect the environment from contamination. Ensuring that utilities are screened to blend in with their surroundings should increase community acceptance of infrastructure. Individual implementation issues arising under this policy should be resolved on a case-by-case basis.

Policy U-1.5: Facilitate and encourage the conservation of electricity, water, and other utility resources to ensure community resilience.

The demand for utilities, such as water and electricity, may be met by either increasing the supply or reducing the demand (or a combination of both). As the region faces increased challenges to supply these resources, conservation and efficiency measures must be employed to delay the need for new supplies. Reducing the rate of energy consumption is a means to lower energy costs, reduce greenhouse gas emissions, and mitigate environmental impacts associated with traditional energy supplies. The City should continue to participate in and promote the conservation and efficiency initiatives by Puget Sound Energy, Cascade Water Alliance, and others to the public. See complementary conservation policies in the SCE Element.

Policy U-1.6: Provide equal access to utility services, regardless of historic disparities in income and employment opportunities.

Utility service should be available and provided at the adopted level of service throughout Kirkland. The City or non-City managed utility provider should plan to extend service or upgrade infrastructure where deficiencies are identified.

Policy U-1.7: Install new utility lines underground and, where feasible, move existing utility distribution lines underground.

The City should acknowledge the disproportionate costs of undergrounding existing lines for smaller developments by allowing owners to defer until undergrounding occurs as part of a larger project where economies of scale can be realized. The City will need to consider the tariffs on file with the WUTC in deciding where to underground existing distribution lines.

Policy U-1.8: Encourage the joint use of utility corridors and facilities.

Besides the benefit of minimizing the extent of environmental impacts, utility collocation, consolidation, and joint use increases the efficient use of resources.

Policy U-1.9: Coordinate with utility providers, other jurisdictions, and tribes when utility additions and improvements cross jurisdictional boundaries to ensure that decisions are consistent with regional demand and resources and consistency in timing of permit review.

Policy U-1.10: Identify opportunities to expedite or streamline permits for utility projects that increase electrical capacity and align with the City's electrification and net-zero energy goals.

In order to meet regional electricity demand given anticipated growth and the increasing shift to electrification, the City should consider ways to expedite or streamline the review process for certain utility projects.

Goal U-2: Provide an efficient water system to deliver safe, reliable, and sustainable water.

Policy U-2.1: Work in coordination with other jurisdictions and purveyors in the region to ensure a reliable, economic and sustainable source of water and to address long-term regional water demand, considering the impacts of climate change and fisheries protection on regional water resources.

As a member of the Cascade Water Alliance, Kirkland has played a large role in securing long term regional water supplies well into the future. The City will continue to work with Cascade Water Alliance, neighboring jurisdictions, and tribes.

Figure U-12: Community engagement event

Policy U-2.2: Implement system rehabilitation and improvements in order to manage water resources.

Increasing system efficiencies by taking such measures as replacement of older pipes can delay the need for new and more costly supply solutions.

Policy U-2.3: Protect public health and safety, through the appropriate design, installation, and maintenance of water facilities.

Water quality is regulated by the Washington State Department of Health and United States Environmental Protection Agency through the Safe Drinking Water Act. Per state and federal requirements, the City publishes an annual report on the origin and quality of the water it provides, including testing results.

Policy U-2.4: Ensure a resilient water system by maintaining emergency interties with adjacent purveyors.

Emergency interties are interconnections between public water systems to allow Kirkland and neighboring purveyors to provide temporary supplemental water supply for emergency purposes.

Policy U-2.5: Use design techniques, such as screening, to ensure that new water towers and other utility infrastructure is aesthetically compatible with their surroundings.

Utilizing vegetative buffers and camouflaging techniques can conceal and screen otherwise visually impacting facilities.

Goal U-3: Protect public health and environmental quality through appropriate and efficient design, installation, and maintenance of sanitary sewer infrastructure.

Policy U-3.1: Work with King County, adjoining jurisdictions, and local purveyors to manage, regulate, and maintain the regional sewer system.

Figure U-13: King County pump station in Downtown Kirkland

Policy U-3.2: Ensure that all new development proposals are served by adequate sanitary sewer systems.

In general, new development should not be permitted on property that is served only by septic tanks. However, in limited situations, septic systems should be considered for low-density residential development where no reasonable alternatives exist upon demonstrating that soil conditions will permit proper functioning of a septic system.

Policy U-3.3: Connect areas that are on septic systems to sanitary sewer.

Some older, less urbanized areas of the City are served only by septic systems. As these systems age and fail, they present health and environmental risks. Continued testing for markers of poor water quality and failed or leaching septic systems will identify priority areas for upgrades. The City facilitates sewer extensions to these areas in compliance with the Kirkland Municipal Code, by utilizing latecomer agreements. In addition, the City is partnering with the City of Redmond to map future sewer extensions along 132nd Ave NE. The City should require existing development to connect to the City wastewater collection system when on-site systems have failed and encourage conversion from onsite wastewater disposal systems as sewer lines become available so that all septic systems in the city are eventually eliminated.

Policy U-3.4: Correct deficiencies and increase system efficiency. Emphasis should be placed on correcting deficiencies that present sewage overflow risks.

The greatest system deficiencies in Kirkland's sanitary sewer system are related to the age and reliability of parts of the system. Infiltration and inflow of stormwater into the older pipes decreases system capacity and exfiltration of effluent from older pipes presents environmental and health risks. The City should continue to prioritize updating older portions of the systems, with an emphasis on areas where overflows could occur near water bodies. A new lift station at Rose Point and the Market Neighborhood Sewer Main Replacement Study are current

examples as of 2024 and the Trend Lift Station will be replaced in the near future. In addition, the City is working on a supervisory control and data acquisition (SCADA) Strategic Plan (for the water and wastewater systems) that will provide guidance to implement the first phase of the SCADA replacement service package.

Policy U-3.5: Educate businesses and the public on the proper use of the sewer conveyance system.

Public education and outreach focus on the proper management of fats, oils and grease (FOGs) and non-degradable products to prevent them from entering the sewer system. The outreach program reduces the degradation of infrastructure and overflows, controls odors, and protects both the public investment in the system and the environment.

Policy U-3.6: Work with Cascade Water Alliance and other regional partners to pursue water reuse and reclamation.

The City collaborates with King County and Cascade Water Alliance to study reclaimed water use and availability in Kirkland. The City should take advantage of the opportunity to access the regional repurposed water provided by the King County Wastewater Division at the Willows Pump Station. The City should pursue a combination of reclaimed, harvested, and grey and black water for the community's non-potable needs and set targets for water conservation. The City may benefit from installing separate recycled water pipes (known as purple pipes) that future development can access to irrigate landscapes and flush toilets. This will help protect Kirkland residents from future water shortages. Opportunities to reuse water for irrigation of parks and school facilities should also be explored.

Goal U-4: Provide surface water management facilities programs and services that provide adequate drainage and minimize flooding while protecting and enhancing the water quality and habitat value of streams, lakes, and wetlands.

Policy U-4.1: Implement the priorities and needs identified in the City's Surface Water Strategic Plan.

The Surface Water Strategic Plan sets the course for the next five to 10 years of surface water utility operations; the most recent Plan was adopted in April 2023. The plan is updated periodically and serves as a tool to guide the City's surface water utility work program while managing resources, complying with regulations, and coordinating with various entities that are responsible for different aspects of surface water and stormwater management.

Figure U-14: Staff monitoring a creek

Surface Water Utility programs work to improve water quality and habitat in our creeks, wetlands, and lakes. Staff monitor these areas for water quality and habitat health.

Policy U-4.2: Adopt and implement surface water design standards for new development, redevelopment, and construction sites that incorporate best available research and technology in protecting water resources in an economical and feasible manner, and provide effective sediment and erosion control from sites.

The goal of surface water design for new development and redevelopment projects is to provide adequate drainage and to provide post-construction controls that mimic predevelopment hydrologic patterns and protect water quality to the degree that is economically feasible. Such facilities may include low impact development techniques and/or structural controls such as detention vaults or ponds, infiltration facilities, biofiltration rain gardens and swales, or wetvaults. In order to reduce construction related erosion and delivery of sediment to our waterways, use of sediment and erosion control techniques should be required at all sites where significant clearing and grading will take place. The Western Washington Phase II Municipal Stormwater Permit requires that the City at a minimum follows the Department of Ecology's stormwater management design standards and typically requires updates to the design standards every permit cycle.

Policy U-4.3: Maximize the use of low impact development and green infrastructure principles and practices to minimize the surface water impacts of development.

Kirkland requires the use of LID and green infrastructure practices to the maximum extent feasible to support sustainability and should periodically evaluate improvements to land use development regulations and building codes to support these practices.

This approach uses various land planning and design practices to conserve and protect natural resources and reduce infrastructure costs. LID techniques seek to minimize the amount of stormwater runoff; LID facilities use soils and vegetation to treat and slow the stormwater runoff

that is produced on the site. LID allows land to be developed cost-effectively, which helps reduce potential environmental impacts.

Policy U-4.4: Require businesses and residents to take steps to prevent stormwater pollution.

Businesses and residents should be encouraged to use both nonstructural and structural "best management practices" (BMPs) to prevent discharge of pollutants from everyday activities. BMPs range from covering materials stored outdoors, sweeping rather than using water to clean parking lots, and installation of oil/water separators to connect car washing areas to sanitary sewers.

Policy U-4.5: Minimize environmental damage from spilling and/or dumping of pollutants into the storm drainage system.

The City should respond to instances of spilling and dumping of materials into the storm drainage system through activities such as the following:

- Identify those responsible for non-stormwater discharges and where appropriate take enforcement action, including requiring cleanup or conducting abatement;
- Maintain and periodically update inter-City and intra-agency spill coordination and response training and procedures;
- Conduct surveys and inspections to identify and eliminate illegal connections to the storm drainage system; and
- Maintain maps of the drainage system that allow pollutants to be quickly traced to their source.

Policy U-4.6: Assess the quality of water and habitat in local streams, wetlands, and lakes to evaluate the effectiveness of utility standards and programs and to focus future efforts.

Policy U-4.7: Conduct private stormwater inspections and provide technical assistance on drainage concerns to ensure privately owned stormwater assets are operated and maintained in a manner that maximizes their quantity and quality control benefits.

The City should continue to prioritize working with private property owners to ensure routine inspection and maintenance of all private stormwater systems occur on a regular basis. Proper maintenance of these systems protects the downstream system as well as our natural resources. The City should also continue to provide technical support to private properties to help remediate drainage or flooding issues.

Figure U-15: Remote video rover inspecting a pipe

Staff regularly inspect and maintain stormwater infrastructure. Pipes are inspected with specialized remote video rovers.

Policy U-4.8: Educate and engage the public on protecting and enhancing the quality of our water resources.

The City should strive to raise awareness of the impact that everyday business and residential activities can have on water quality and fish habitat and populations, and to provide information on best practices. These include natural yard care, proper disposal of animal waste, including chicken, horses and household pet waste, proper storage of materials, and washing practices, that can prevent the discharge of pollutants.

Community volunteers should be involved in activities that increase stewardship of our water resources. The City should also explore new techniques for engaging the public and effecting positive changes in behavior.

Policy U-4.9: Explore the potential for regional stormwater facilities.

Providing regional facilities for flow control and water quality treatment may provide efficient and effective means of management of stormwater. Investigate potential locations to support capital projects or private development and construct as feasible.

Policy U-4.10: Build stormwater retrofit facilities.

Most development in Kirkland was constructed prior to modern stormwater standards and does not sufficiently slow down or clean stormwater from existing impervious surfaces. Conduct planning to identify locations that may be appropriate for stormwater retrofit facilities, which are water quality treatment and flow control facilities to serve existing neighborhoods that were developed without this infrastructure. As feasible, advance these projects through design and construction. These projects will support improved hydrologic and water quality conditions in our streams, lakes, and wetlands.

Policy U-4.11: Prioritize removing fish passage barriers for public projects where there is the potential for significant ecological gain in fish habitat.

The Muckleshoot Indian Tribe has Treaty fishing rights in Kirkland. The City should work closely with the Muckleshoot Tribe and State agencies to prioritize fish passage barrier removal and other habitat enhancement projects to maximize the habitat benefits with available funding. In addition, the City should collaborate with the Washington State Department of Transportation, King County, and neighboring jurisdictions to plan public culvert upgrades to ensure fish passage barrier removal where feasible.

Policy U-4.12: Conduct municipal operations in a manner that protects water quality.

Use erosion control and pollution prevention practices in City operations including but not limited to parks, streets, wastewater, stormwater, and water operations in order to minimize the discharge of pollutants to the stormwater system.

Policy U-4.13: Coordinate basin planning, pollution prevention, and restoration activities with neighboring jurisdictions.

Watersheds do not stop at jurisdictional boundaries and must be analyzed and restored as whole entities. The City should coordinate activities with King County, Bellevue, Redmond, and other jurisdictions as appropriate to maximize the positive impact of projects and programs.

Policy U-4.14: Participate in regional surface water resources conservation planning, local aquatic habitat recovery, and salmon recovery planning and implementation efforts.

The City should continue in the participation of the Watershed Resource Inventory Area (WRIA) 8 (Lake Washington/Cedar/Sammamish Watershed) salmon recovery council and Interlocal Agreement for salmon recovery conservation planning and implementation efforts. Recovery of salmon stocks listed as threatened under the Federal Endangered Species Act would reduce the regulatory and liability burden for local jurisdictions, help to protect a vital part of our regional economy, and protect a species that has great cultural significance in the Pacific Northwest.

Policy U-4.15: Ensure compliance with State and federal regulations related to surface water quality and fisheries resources.

The City should coordinate surface water management requirements and programs with a variety of State and federal programs and regulations, including but not limited to the following:

- National Pollutant Discharge Elimination System, Phase II;
- Puget Sound Partnership Action Agenda for Puget Sound; and
- Federal Endangered Species Act listing of Chinook salmon as a threatened species.

Policy U-4.16: Investigate and plan for the impacts of climate change on operation, maintenance, and construction of the stormwater system.

Changes in precipitation patterns and climate may impact flooding and the need to store and reuse rainwater. Investigate and plan for sizing of the conveyance system, provision of additional areas for storage of flood waters, and potential for rainwater reuse using future built out conditions and predicted flows. Evaluate construction methods used for the stormwater system to ensure that they minimize the production of greenhouse gases as feasible.

Policy U-4.17: Maintain stormwater system assets and conduct planning to ensure uninterrupted and efficient operation of the stormwater system.

The City should minimize the impacts of flooding from public stormwater systems into private property. The City should routinely inspect, clean and rehabilitate stormwater system assets operated by the City. Identify assets that cannot be rehabilitated through maintenance activities alone so they can be repaired through future capital projects. Strategic planning utilizing the assessment of the condition and ranking of assets according to their likelihood of failure and consequence of failure should be done to help prioritize replacement and rehabilitation of the existing system. The City should acquire easements as needed to allow for efficient operation of the stormwater system and utilize hydrologic and hydraulic modeling to plan for anticipated growth within the City.

Policy U-4.18: Consider acquisition of properties such as open space, stream corridors and/or wetlands in cases where this would further goals of reducing flooding, improving water quality and improving fish habitat.

There are cases where preservation and/or restoration of stream corridors and wetlands would have significant benefits for water quality and habitat and may benefit City functions. This work may not happen despite critical areas regulations and may only be feasible under City ownership.

Policy U-4.19: Maintain a digital GIS map of the stormwater system.

The City should continue to invest in the staff and technology to maintain a digital, GIS based map of the stormwater system. This map should be continually updated as both private and public development modifies the stormwater system.

Policy U-4.20: Explore emerging stormwater technologies and policies.

Improving the quality and hydrology of stormwater is a community-wide and landscape-scale endeavor. The City should explore new technologies and creative policies for how to get this work done more efficiently and in more places.

Goal U-5: Ensure adequate and competitively priced telecommunication infrastructure, facilities and services for residents and businesses.

Policy U-5.1: Manage the City's existing and planned telecommunication improvements to optimize service delivery opportunities in Kirkland.

The City should plan and install sufficient capacity into its telecommunication system to meet future City needs.

Policy U-5.2: Partner with public agencies and private sector organizations to achieve cooperation and cost-sharing in building telecommunication systems and providing service.

The City should explore establishing partnerships with public agencies and private companies to encourage collocation of telecommunication equipment on towers and buildings and in fiber-optic lines.

Policy U-5.3: Periodically review and update City policies, procedures and regulations to facilitate the installation and maintenance of telecommunication systems.

The City should periodically review and update its policies, procedures and practices to ensure that they facilitate the installation of new telecommunication systems and support existing systems. In addition, the City's development regulations should be flexible or revised on a regular basis to respond to changes in federal regulations, technology and consumer needs.

Policy U-5.4: Seek opportunities to enhance the number of service providers in the community to increase choice and fair access and encourage competitive pricing and high quality customer service.

Choice, availability, and price are important factors to telecommunication consumers. The City should look for opportunities to increase the number of high quality service providers to have competitively priced and high quality telecommunication systems in Kirkland.

Policy U-5.5: Support access to internet service to unserved and underserved communities.

Equitable access to internet service is essential. The City should work with service providers to ensure that unserved and underserved communities and areas are prioritized. Additionally, the City should support internet expansion that serves the ongoing and growing needs of education, health care, and public safety systems.

Policy U-5.6: Continue to provide and improve audio-visual systems for City communication with the public.

The City should invest in high quality systems, equipment, and staff to support broadly available communications with community members via the technologies that work best for them.

Policy U-5.7: Mitigate impacts of wireless service facilities on adjacent land uses through careful siting and design. Facilitate the approval of wireless service facilities to balance the need for community connectivity with aesthetic standards. Stay up-to-date with changing technologies and rules.

In order to minimize potential impacts, there should be a preference for wireless service facilities to be collocated on existing towers, and located on existing structures such as building or equipment structure facades, transmission towers or utility poles, to avoid unnecessary proliferation. When new facilities are required or existing facilities are expanded, providers should be required to use techniques to screen or conceal the wireless service facilities to be compatible with the surroundings.

In recognition of the important role wireless services play in facilitating business and personal communication, the City should enable carriers to quickly and efficiently site and configure facilities in ways that meet our standards.

In addition, federal regulations covering wireless service facilities change frequently and the City should monitor and amend regulations accordingly. The City must comply with FCC regulations and also strives to retain as much local authority as possible to regulate aesthetics and reduce the neighborhood impacts of wireless facilities (to the extent allowed by the FCC).

Figure U-16: Wireless service facility shrouded within a light pole

Policy U-5.8: Allow new aerial telephone and cable lines in the right-of-way, provided that they are designed and installed to minimize aesthetic impacts and are subsequently required to be placed underground at the time of comprehensive undergrounding electrical distribution lines.

Communication lines (telephone and cable) are often located on electrical utility poles. However, electrical lines are typically the determinate for when communication lines are undergrounded. When electrical distribution lines are placed underground, communication facilities must also be undergrounded.

Policy U-5.9: Ensure that franchise and right-of-way agreements with telecommunication service providers require collaborative undergrounding of facilities when electrical distribution lines are placed underground.

The City's objective for undergrounding is to minimize aesthetic impacts and create more resilient infrastructure. Collaborative undergrounding creates economies of scale for all parties and minimizes traffic disruption.

Goal U-6: Reduce the risk to public safety and the environment in the event of a hazardous liquid pipeline failure.

Actions that can be taken to ensure a higher degree of safety include early detection of potential pipeline damage or failures through adequate maintenance of the hazardous liquid pipeline corridor, neighborhood education, and working with other governments and industry representatives to seek improvements in safety measures for hazardous liquid pipelines. These provisions are intended to protect the health, safety and welfare of the general public.

KZC Chapter 118 sets requirements during development review and construction of projects in the vicinity of the hazardous liquid pipelines to help prevent and minimize unnecessary risks, minimize the likelihood of accidental damage, reduce adverse impacts in the event of a pipeline failure, supplement existing federal and state regulations related to hazardous liquid pipeline corridor management, and improve communication between property owners and pipeline operators. Utility Element policies complement these development regulations.

Policy U-6.1: Coordinate with the pipeline operator when developments are proposed near the hazardous liquid pipeline corridor. Prohibit new high density land uses and critical public facilities from locating near a hazardous liquid pipeline corridor. Design proposed expansions of high density land uses and critical public facilities to avoid increasing the level of risk in the event of a pipeline failure and, where feasible, reduce the risk.

The City and Olympic Pipeline's Damage Prevention Team should communicate and coordinate their review. Methods include the following:

- Notifying the pipeline operator of proposed development projects located near the pipeline corridor.
- Receiving verification that the pipeline operator has received and reviewed the proposal and provided comments prior to City review of development activity.
- Seeking the pipeline operator's participation in preconstruction meetings if warranted.
- Seeking construction monitoring by the pipeline operator of development that involves land disturbance or other significant work within or near the pipeline corridor.

The City can help reduce the risk of injury in the event of a pipeline failure by not allowing certain land uses to locate near hazardous liquid pipelines. Land uses with high-density on-site populations cannot be readily evacuated or protected in the event of a pipeline failure. Examples are schools and multiunit housing exclusively for the elderly or those with mobility constraints. Facilities that serve critical "lifeline" or emergency functions, such as fire and police facilities or utilities that provide regional service also should not be located near pipelines.

John Muir Elementary School is located near the pipeline corridor in the Kingsgate neighborhood. Future expansions can use measures such as site planning that reflects anticipated flow paths for leaking hazardous materials and emergency procedures.

Policy U-6.2: Require maintenance of the hazardous liquid pipeline corridor through a franchise agreement or other mechanisms.

The pipeline operator can help reduce the likelihood of accidental damage by adequately maintaining the pipeline corridor. Dense vegetation such as blackberry bushes can impede visibility and access. Instead, the pipeline corridor can be properly maintained with grass or other low-growing vegetation that enables easy inspection while preventing erosion. Ensuring that above and below grade pipeline markers containing information such as operator name and number and facility type are in place and that missing markers are replaced is important. The pipeline operator should conduct periodic visual inspections of the pipeline corridor to detect potential problems. Kirkland can assist this effort when permits are necessary for inspections or repair with prompt permit processing.

Policy U-6.3: Expedite permits for the hazardous liquid pipeline company necessary for inspections and repairs.

Policy U-6.4: Continue to work with other jurisdictions, state and federal governments, and the pipeline operator to seek improvements in safety measures for hazardous liquid pipelines.

Working with other jurisdictions and agencies as part of a unified approach to addressing pipeline safety issues is important. This unified approach can address issues such as maintaining a model franchise agreement, periodic review of the pipeline operator's safety action plan to identify any deficiencies, and advocacy of City concerns regarding pipeline safety regulations.

Policy U-6.5: Encourage the pipeline operator to maintain a neighborhood education program for those who live and work within one-quarter mile of the hazardous liquid pipeline to educate them and the general public about pipeline safety.

People who live or work near the pipelines can also play an important part in avoiding pipeline damage and identifying potential problems early on. The pipeline operator can promote public safety through periodic neighborhood mailings and meetings. Important information should include facts about the pipelines, how to avoid damage, potential problems to watch out for, such as unusual smells or suspicious construction activities, and how to respond in the event of a failure or other problem.

Goal U-7: Support the transition to renewable energy and infrastructure that is energy efficient, addresses climate change, and benefits the community, while also ensuring the electric grid can support Kirkland's needs.

Policy U-7.1: Encourage the public to conserve energy and decrease load on the electric grid during times of peak use through public education, promoting incentives and programs, and collaboration with Puget Sound Energy.

The City should engage the community and work with PSE to promote energy conservation programs.

Figure U-17: PSE promoting one of their energy efficiency programs

Policy U-7.2: Participate in regional efforts and work with energy service providers to limit the construction of new fossil fuel power plants in order to support the transition to 100% renewable energy supply by 2045.

Renewable energy includes solar, wind, hydroelectric, and other sustainable energy sources. The Clean Energy Transformation Act (CETA) commits Washington to an electricity supply free of greenhouse gas emissions by 2045. PSE is committed to reaching the goals of CETA by achieving carbon neutrality by 2030 and carbon-free electric energy supply by 2045. The City should collaborate with PSE on projects and programs that enable conservation, increased electrification, and generation of renewable energy.

Policy U-7.3: Support initiatives to increase grid reliability and resiliency to meet the needs of existing and future development.

Kirkland requires highly reliable electricity service for public health and safety and to meet the needs of our residents and businesses. PSE has comprehensive plans for energy delivery system planning, such as the PSE Electrical Facilities Plan, and coordinates with the City on capacity and system projects in Kirkland. The City should continue to coordinate with PSE and facilitate their projects to increase grid reliability and resiliency.

Policy U-7.4: Promote the use of small to large scale renewable energy production facilities and battery energy storage systems.

The City should collaborate with regional partners and promote individual and community renewable energy production such as installation of solar panel systems in addition to battery energy storage systems (BESS) for clean, renewable energy. A BESS collects energy from renewable energy sources, such as wind and or solar panels or from the electricity network and

stores the energy using battery storage technology. The batteries discharge to release energy when necessary, such as during peak demands, power outages, or grid balancing. The City could also explore emerging technologies, such as digesters that divert and break down organic waste to produce energy and sewer heat recovery, where warm wastewater is transformed into energy.

Policy U-7.5: Facilitate the installation of charging stations for electric vehicles (EVs), electric personal mobility devices, and related infrastructure throughout the community in order to support the decarbonization of our transportation sector. Prioritize underserved communities.

The City should work towards installing EV charging stations in public rights-of-way and at City-owned facilities and parks. The City should also explore strategies and code amendments to reduce the barriers for residential and commercial property owners to install EV charging stations and related infrastructure and incentivize the installation of EV charging stations.

Figure U-18: Electric Vehicle charging stations at City Hall

Policy U-7.6: Require new and, where feasible, existing electrical distribution lines in the right-of-way, to be underground.

Electrical distribution lines, often located in the public rights-of-way, carry electricity to homes and businesses throughout Kirkland. Electrical service is provided to private property by service

lines connecting to these power lines. Electric distribution lines are located both above and below ground throughout Kirkland. In more recent development areas systems are typically underground.

Undergrounding of electrical distribution lines can reduce the potential for power outages associated with wind damage, eliminate or reduce the need for pruning vegetation, and enhance views.

Kirkland should acknowledge the disproportionate costs of undergrounding existing lines for smaller developments by allowing owners to defer until undergrounding occurs as part of a larger project where economies of scale can be realized.

Policy U-7.7: Screen above ground equipment cabinets and other structures associated with electrical distribution without hindering access as required by the provider.

Landscaping or other techniques to screen these structures will generally soften their appearance so that they fit in with the surroundings.

Policy U-7.8: Continue to administer and partner with PSE on financial assistance and discounted billing programs for income qualified residents in order to ensure that the most vulnerable are not disproportionately impacted by the State's clean energy transition.

Goal U-8: Provide efficient and convenient solid waste, recycling, and composting services to the community, with a focus on waste reduction.

Policy U-8.1: Coordinate with the City's solid waste and recycling collection contractors and King County Solid Waste Division to ensure that the existing level of service standards are maintained or improved, and waste reduction and recycling goals and targets are in compliance with the King County Comprehensive Solid Waste Management Plan (SWMP).

The SWMP establishes Countywide waste reduction and recycling goals for single-unit residential, multiunit residential, and commercial sectors. Cities that adopt the SWMP commit to implementing and/or maintaining waste reduction and recycling programs and collection standards to support the identified goals and targets.

The SWMP level of service goals for solid waste collection and recycling are summarized below.

Waste Prevention – This goal addresses all types of waste: yard waste, recycling and garbage. By looking at overall waste generation of all kinds (tons of material disposed plus tons recycled), trends in waste prevention activity can be identified. A decline means that the overall amount of materials alone or combined has been reduced. Waste generation rates to be achieved by 2030 are: 20.4 pounds/week per person from single-unit and multiunit residences; and 42.258 pounds/week per employee from the nonresidential sector.

Waste Disposal – This goal addresses only garbage disposed in landfills. Reductions in disposal over time indicate an increase in waste prevention and/or recycling. Waste disposal targets to be achieved by 2030 are 5.1 pounds/week per person from single and multiunit homes and 4.1 pounds/week per employee from the nonresidential sector.

Recycling – Recycling will continue to be an important strategy to reduce the disposal of solid waste. The recycling goal combines single-unit homes, multiunit residences, nonresidential and self-haul recycling activity. The overall interim recycling goal is 70 percent.

In 2023, Kirkland signed King County's Re+ pledge, committing to the actions in King County's Re+ pledge. Re+ is a re-imagining of our regional solid waste system from one that is disposal-based to one that is focused on reduction, recovery, recycling, and regeneration.

Policy U-8.2: Achieve the target of zero waste of resources for materials that have value for reuse, resale, and recycling by 2030.

This is a target of the K4C 2014 Joint King County-City Climate Commitments. The K4C is a partnership between the County and cities to coordinate and enhance local government climate and sustainability efforts.

Policy U-8.3: Encourage and make it easier for the community to reduce waste through reusing, repairing, recycling, and composting, including through educational programs and/or incentives.

The City should continue public education programs and behavior change focused outreach on waste reduction, recycling, and composting. The City's outreach efforts are centered around the waste hierarchy – encouraging residents and businesses first to prevent and reduce waste, reuse and repair, then recycle, recover, and dispose. Kirkland's work is aligned with the goals in King County's Re+ plan, keeping valuable resources out of the landfill. Kirkland's work on promoting reusables over single use items, installation of water bottle filling stations and community repair and swap events all support waste reduction and reuse. The City's outreach to multiunit residential and commercial customers encourages recycling and composting for all, promoting equity of services.

Figure U-19: Community composting bin at the North Kirkland Community Center

Policy U-8.4: Encourage reduction, reuse and recycling of building construction materials in order to reduce waste, increase diversion, and save energy.

Encouraging the construction industry to salvage, reuse and/or recycle construction, demolition, and land clearing debris supports the City's role as an environmental steward. Various City incentives to meet this objective are geared toward the development community by encouraging the practice of salvaging and reusing building materials, separating recyclable from non-recyclable materials on the jobsite and construction techniques that use fewer materials than conventional methods. The City's Green Building Program uses several certification programs that ensure that the building construction material waste stream is reduced. See complementary policies on the built environment in the SCE Element.

Policy U-8.5: Consider transitioning to electric waste collection vehicles as the technology becomes available.

The City of Kirkland's 2022 contract with Waste Management (WM) specifies that they will use near zero emission natural gas-fueled collection vehicles, electric box trucks for deliveries, and electric trucks for route managers. Through this 2022 contract, WM and the City of Kirkland will pilot an electric collection vehicle, with a plan to analyze its use and success, in the hopes of switching to electric collection vehicles in the future.

Goal U-9: Facilitate the development and maintenance of non-City-managed utilities at the appropriate levels of service.

Policy U-9.1: Work with non-City-managed utilities and review facility plans to ensure that they reflect and support Kirkland's land use plan. Likewise, the City should work with providers to ensure that utilities are available to support land uses and to maintain appropriate levels of service.

Systematic planning allows the City to make accurate land use projections based on utility plans and allows utility providers to plan for utilities in a manner that reflects expected land use patterns and densities.

Policy U-9.2: Coordinate with non-City providers of water and sewer on a joint program for maintaining adopted levels of service, concurrency requirements, funding, and construction of shared public facilities.

Policy U-9.3: Coordinate with the appropriate utility provider when considering land use decisions in the vicinity of proposed facility locations to ensure land use compatibility.

Policy U-9.4: Provide timely and effective notice to utilities of the construction, maintenance, or repair of streets, roads, or other facilities and coordinate such work with the serving utilities.

Policy U-9.5: Coordinate with King County Solid Waste Division on siting the new Northeast Recycling and Transfer Station project, ensuring that the existing Houghton Transfer Station in its current form is closed.

King County's Solid Waste Division has identified the current Houghton Transfer Station property as one of two potential locations for a new station to serve residents and businesses in Northeast King County. King County is currently conducting environmental review for the two proposed sites for the Northeast Recycling and Transfer Station (NERTS). While the location of the Northeast Recycling and Transfer Station is a County decision, the City will continue to be

involved in coordination of the project and will ensure adequate host city mitigation, such as transportation upgrades and public amenities, if the Houghton Transfer Station site is selected.

It is Kirkland's position that any city hosting the new NERTS should receive significant design consideration and mitigation to ensure the facility is a community amenity and to eliminate negative impacts the facility may have on the surrounding area. The new NERTS facility should be well-designed and meet green building standards and offer additional benefits to neighboring communities, wherever it is built. Additional mitigation will be necessary such as transportation infrastructure improvements; public park space maintenance and improvements; modern environmental protections and controls; increased public access to recycling, repair, and reuse space; and additional community benefits and amenities.

Policy U-9.6: Encourage the consolidation of special districts.

Obtaining urban services from cities, and encouraging special service districts, including sewer, water, and fire districts, to consolidate or dissolve as a result, advances the Growth Management, regional and county wide vision for municipalities to be the primary providers of urban services. Services should be provided in an efficient, environmentally sensitive, timely, and cost-effective manner.

Policy U-9.7: Coordinate emergency response for utility disaster response, system recovery, and resiliency.

During disasters, effective incident coordination between utility providers and emergency management, and communication with the public and neighboring jurisdictions, is imperative. Plans should include provisions for mitigating the impact of collapsed electrical poles and towers, pipeline failures of all kinds (water, sewer, petroleum), for restoration of service as quickly as possible, and for the Citywide implementation of emergency management plans.