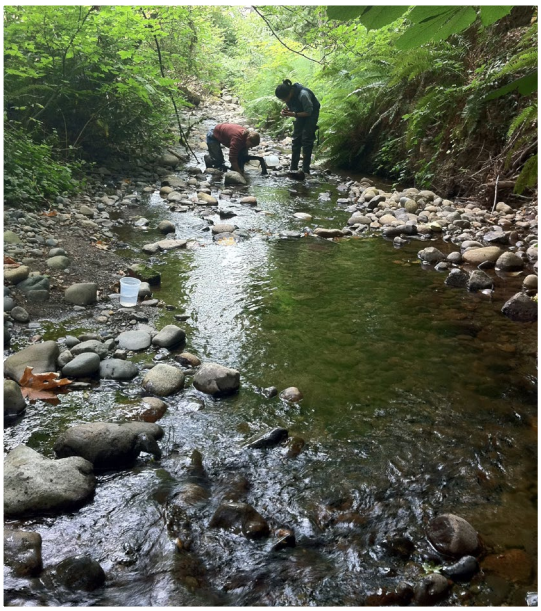


UTILITIES

WHAT YOU WILL FIND IN THIS CHAPTER

- An overview of utility systems in Bellevue and anticipated future trends.
- As required by the Growth Management Act, maps showing the general location of existing and proposed utilities, including, but not limited to, electrical lines, telecommunication lines, and natural gas lines.
- Policies to maintain utilities at appropriate levels of service to accommodate the city's expected growth while maintaining a balance with other community and environmental goals.
- A description of the city's planning framework for existing and proposed utilities, including water, sewer, stormwater, electrical lines, telecommunications, and natural gas.

UTILITIES VISION

BELLEVUE HAS THE PUBLIC AND PRIVATE UTILITIES THAT MEET THE NEEDS OF A GROWING ECONOMY.

Public and private utilities are building the systems to grow a 21st century economy. These services are resilient, efficient, and available to the entire community. Utilities are sited, designed, and operated in a manner that maintains community character.

INTRODUCTION

Utilities are the basic building blocks of urban living. While we may take for granted services such as clean drinking water, wastewater and stormwater management, electricity, natural gas, telephone, and internet, these facilities make living in cities possible.

This element works in concert with the Land Use Element to ensure that Bellevue will have adequate utilities to serve both existing development and future growth. Policies also address environmental impacts, facilities siting and construction, economics, and aesthetics in design and landscaping.

In Bellevue, as in many cities, utilities are provided by a combination of city-managed and non-city-managed providers, as shown in Figure UT-1. Depending on their service, these are state regulated, federally licensed and/or municipally franchised providers. Non city-managed utilities providers include Puget Sound Energy (electricity and natural gas), as well as providers of telecommunication services.

Figure UT-1. City-Managed and Non City-Managed Utilities

City-managed utilities:	Non city-managed utilities:
Water	Electricity
Sewer	Natural gas
Storm and surface water	Other petroleum gas
Solid waste	Telephone
	Wireless services
	Cable

The Growth Management Act's Public Facilities and Services Planning Goal ensures that those public facilities and services necessary to support development shall be adequate to serve the development at the time the development is available for occupancy and use, without decreasing current service levels below locally established minimum standards.

TODAY'S CONDITIONS AND TOMORROW'S PROJECTIONS

UTILITIES TODAY AND TOMORROW

City-Managed Utilities

The City of Bellevue manages the wastewater, water, and storm and surface water utilities, as well as solid waste management activities. The wastewater and water utilities serve the city and several jurisdictions outside the city limits and are self-supporting enterprise operations, separate from the city General Fund. Each city-managed utility is governed by a functional system plan that contains a system inventory, system management and operational policies, and level of service standards. While detailed information about each utility system is contained in the individual functional plans, an overview of each city-managed utility system is provided below.

Wastewater

Bellevue operates, maintains, and extends the sewage collection system to respond to the needs of residents and commercial establishments. The collection system discharges into larger pipes owned and operated by the King County Wastewater Treatment Division that transports the sewage for treatment and eventual discharge into Puget Sound.

Bellevue's wastewater collection system includes approximately 524 miles of mainline pipes, 130 miles of service stubs, and 46 pump and lift stations. The wastewater utility serves 35,800 customer accounts across 37 square miles, including Medina, Clyde Hill, Hunts Point, Yarrow Point, and Beaux Arts.

WHAT DOES IT MEAN?

- Utility systems in Bellevue are provided either as city-managed or non city-managed utilities. While the city does not control non-city managed utility facilities, it has authority to regulate how private utilities are developed in Bellevue.
- Each city-managed utility system is governed by a functional plan that contains a detailed system inventory, lists of planned improvement projects, and policies specific to that utility system. The role of this Utilities Element is to establish an overall strategy for providing adequate utility service to serve the growth projected in the land use Element.
- Utilities providers plan for the necessary infrastructure to manage aging systems, respond to growth, and adapt to changing consumer behavior.

Bellevue owns 15 miles of submerged wastewater pipeline in Lake Washington and 4 miles of submerged wastewater pipeline in Lake Sammamish. These "lake lines" were constructed in the late 1950s and 1960s and may be nearing the end of their useful life. The city maintains them and is evaluating the condition to determine when rehabilitation and/or replacement will be necessary. The cost for this work will be substantial. Management of the lake lines is critical to maintaining and protecting water quality in Lake Washington and Lake Sammamish.

Water

Bellevue's drinking water utility serves 37,300 customer accounts, operates 620 miles of water main pipes, and serves an area of over 37 square miles, including the adjacent communities of Clyde Hill, Hunts Point, Medina, Yarrow Point, and portions of the cities of Issaquah and Kirkland.

Bellevue purchases water from the Cascade Water Alliance, a regional supplier to several cities and special purpose districts. Water from Cascade is distributed through mains, operated and maintained by the water utility to residential, commercial, and industrial users. The Cascade Water Alliance facilitates the development of a regional water supply system that balances regional water resources and regional water supply needs, and provides equitable participation in ownership and management. Bellevue works with Cascade to promote the efficient use of the public water supply to customers through education, technical assistance and incentive programs.

Storm and Surface Water

Bellevue's storm and surface water operations include stormwater runoff and flood control, protection of surface water quality, support of fish and wildlife habitats, and protection of the environment, and public education. Bellevue provides storm and surface water utility service to all properties within the city (32,900

customer accounts). There are 26 drainage basins in the city, most with year-round streams, over 19,000 public storm drains, 400 miles of pipes, and over 1,200 city and privately owned detention facilities.

Solid Waste

Solid waste management activities include solid waste planning, promotion, and monitoring the performance of private contractors who carry out collection of solid waste, recyclables, yard waste, and litter pick up. These services are financed through garbage rates that are set by the City Council. There are 29,000 single-family residential customer accounts, 330 multifamily accounts, and 1,600 commercial accounts in Bellevue. The city encourages waste reduction and recycling to manage demand for solid waste services.

Non-City Managed Utilities

Authority

The Washington Utilities and Transportation Commission (WUTC) regulates the services and defines the costs that a utility can recover, to ensure that the utility acts prudently and responsibly. With the adoption of the Growth Management Act, both the WUTC and the City of Bellevue have jurisdiction over the activities of electric, gas, and telephone utilities within Bellevue's city limits.

Bellevue has the authority to regulate land use and, under Growth Management Act, the requirement to consider the location of existing and proposed utilities and potential utility corridors in land use planning. The city must also plan for the adequate provision of utilities consistent with the goals and objectives of its Comprehensive Plan, taking into consideration the public service obligation of the utility involved.

Bellevue is entitled to reasonable compensation for use of its rights-of-way and leases of city-owned property, structures and conduits. The Telecommunications Act of 1996 established new

responsibilities for the Federal Communications Commission in licensing of wireless communication providers. The licenses allow the right to use a block or blocks of the radio frequency spectrum to provide wireless services. Section 704(a)(7) of the Act recognizes the authority of state and local governments over decisions regarding siting of wireless communication facilities, subject to certain limitations.

Electrical Service

Puget Sound Energy builds, operates, and maintains the electrical utility system serving Bellevue. Puget Sound Energy imports electrical energy from generation sources in Canada, on the Columbia River, and from other generation sites inside and outside of Puget Sound Energy's service territory.

Puget Sound Energy's goals are to meet future customer needs for electrical service, enhance system reliability, and maintain safe facilities. Puget Sound Energy builds, operates, and maintains the electric transmission and distribution systems serving the City of Bellevue. Puget Sound Energy is an investor-owned utility serving more than 1,097,500 electric customers in an eight county service area. As of the end of 2014, Puget Sound Energy served more than 63,900 electric customers within the City of Bellevue.Puget Sound Energy's 2013 Integrated Resource Plan forecasts growth in electric peak hour capacity 'need' (the gap between the effective capacity of existing resources and the peak hour capacity needed) to increase 12 MW by 2017, 100 MW by 2020 and 2,194 MW by 2033. For the shorter term and based on 2012 population, employment and development forecasts from its October 2013 Eastside Needs Assessment Report, Puget Sound Energy's corporate load forecast for winter under normal conditions and 100% conservation indicates load increases a total of about 138 MW from 2013 to 2022 or about 17 MW of increased load per year. This annual increase is significantly lower than previous forecasts and is much lower than the 2011 forecast of approximately 22 MW per year.

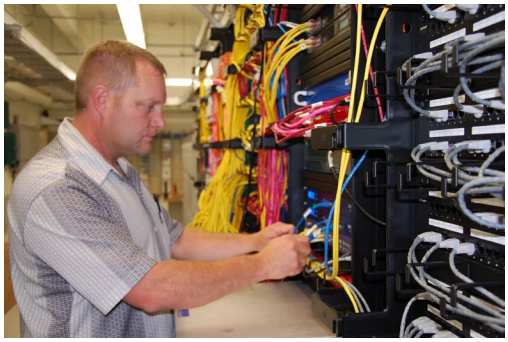
Actual load growth could vary from projections due to economic cycles, land use zoning changes and other drivers.

Several new system facilities including transmission lines and substations may need to be constructed to meet the projected increased demand for electrical service and to enhance reliability. Bellevue's knowledge-based economy is part of a community lifestyle that requires and expects sufficient and highly reliable electrical service.

The city maintains a list and schematic system map (Map UT7) of necessary electrical transmission, distribution, and substation facilities and administers policies that guide provision of adequate electrical power to serve the community. The city also has environmental review and permitting authority over the activities of the utility within the city's boundaries.

The potential for undergrounding existing aerial lines is addressed by Washington State's electrical utility regulatory framework including various tariff Schedules (73, 74 and 80). Bellevue relies on Comprehensive Plan and capital investment policy as well as its franchise agreement and memoranda of understanding with Puget Sound Energy to implement undergrounding of distribution facilities. The framework for undergrounding reflects the Utilities Element policies and the tradeoffs inherent in underground versus overhead distribution facilities. As a result of this the city takes an incremental approach to undergrounding electrical distribution facilities, and a mitigative approach to identified environmental and aesthetic impacts of other electrical facility infrastructure.

A future reliable electric grid may include emerging concepts such as non-wire, microgrid, or alternative technology solutions to the existing overhead system that better address the community's interest in mitigating impacts.



Natural Gas Service

Puget Sound Energy also builds, operates, and maintains the natural gas distribution system serving Bellevue. At the end of 2014, Puget Sound Energy served more than 33,500 natural gas customers within Bellevue.

The Pacific Northwest receives natural gas from various regions of the United States and Canada. Natural gas is transported throughout the states of Washington, Oregon and Idaho via a network of interstate transmission pipelines owned and operated by Northwest Pipeline Corporation. Puget Sound Energy takes delivery of natural gas from Northwest's Williams Pipeline east of Lake Sammamish and distributes the gas to customers via Puget Sound Energy's distribution system. The distribution system serving Bellevue consists of both high pressure and intermediate pressure mains.

As of 2014, Puget Sound Energy's natural gas distribution system has sufficient capacity to serve existing demand for gas service in Bellevue. However, system capacity enhancements may be required in the next few years to provide service to new development. Thereafter, the need for additional system improvements will be driven by future development.

Telecommunication Services

Telecommunications is the transmission of information in the form of electronic signals or other similar means. Telecommunications services generally include the following categories:

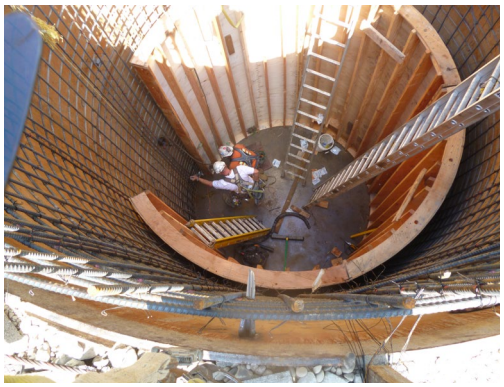
- **Landline Telephone** – Telephone service in Bellevue is offered through two major providers, though local telephone service is now being offered by cable companies. It is anticipated that additional upgraded telephone facilities will be needed to handle a growing demand for advanced telecommunications services.

- **Wireless Communications** – A wide variety of cellular communications and wireless data services are available in Bellevue. Currently, these services rely on ground-based antennae located on towers or buildings. This element recognizes that providing wireless service involves adapting to changing technologies, which may make current forms of receivers obsolete.
- **Cable Television and Broadband Internet** - Multiple cable operators provide cable services in Bellevue. This service provides broadcasting via a network of overhead and underground coaxial cables and often includes broadband internet and telephone service.

Bellevue's central location and significant employment concentration will continue to attract new and evolving technologies in the field of telecommunications. The city supports increasing the availability of improved telecommunications services throughout the city. The city encourages new telecommunications technology that balances the costs and benefits of the following factors: health and safety, aesthetics, the environment and the economy.

In most cases, telecommunications services will use existing utility corridors, public rights-of-way, and other city-owned properties, and will be able to provide services to all parts of the city. Bellevue encourages the shared use of space consistent with the city's service mission for telecommunication infrastructure projects within the street right-of-way and for telecommunication infrastructure opportunities on other city property. Bellevue's infrastructure investment and aesthetic quality should be protected from unnecessary degradation caused by the construction of telecommunications infrastructure.

The policies in this element address current technology recognizing that new communication technologies are constantly evolving. The city encourages new technology that is consistent with a balancing of the costs and benefits discussed above.



CHALLENGES AND OPPORTUNITIES

Development and Support of New Technologies

New technology offers new opportunities to bring high speed Internet access to more of the city. A "Smart City" strategy seeks to include high speed data options for businesses and residents by encouraging the deployment of broadband infrastructure. Ensuring that quality, affordable internet connectivity is available will further the city's goal of economic growth and competitiveness. As this system is deployed, the community will need to work to ensure that there are not excessive visual impacts and that access is not limited to select areas of the city. A balanced permitting process will help encourage deployment of high speed telecommunications infrastructure while protecting neighborhood character.

Condition of Utility Infrastructure

Some of Bellevue's utilities infrastructure is aging and will require repairs and replacement over the next twenty years. The costs of replacing utility infrastructure are substantial and take years for planning and implementation. Each city-managed utility has strategies and plans for funding and building the necessary improvements, which are scheduled and assigned funding in the city's seven-year Capital Investment Program.

For example, infrastructure for both drinking water and wastewater is aging, with most of the systems well past midlife. Slightly more than 40 percent of the city's water mains are made of asbestos cement pipe, generally the oldest pipe in Bellevue's water system and the type that wears out the fastest. Replacing asbestos cement pipe is the focus of Bellevue's water pipe replacement programs. For wastewater utility programs, the cost to repair or replace aging sewer mains, especially in-lake submerged wastewater pipes, will be substantial. The utility's asset management program is planning for timely replacement of pipes and other facilities to maintain reliable service and and protect the environment.

Accommodating Future Demand

Increased demand will require investment to build new facilities for water, wastewater, and stormwater services. Non-city utility providers will also experience increased demand for services and will need to plan for new or improved facilities.

Maintaining Neighborhood Character

While it is critically important to meet growing demand for utility services and further develop the reliability of Bellevue's utility systems, it is also important to ensure that new and expanding utility facilities are sensitive to neighborhood character. Map UT7 identifies planned electrical facilities that have the potential to create significant incompatibilities with Bellevue neighborhoods. It reflects an analysis of planned facility locations and manner of expansion anticipated by Puget Sound Energy's system plan. Such sensitivity factors as proximity to residential neighborhoods, visual access, and expansion within or beyond an existing facility border were considered in identifying potential incompatibilities. The early screening represented in Figure UT.7 identifies a list of facilities that will require special regulatory siting scrutiny. This is intended to increase transparency of the siting process for Puget Sound Energy and the public, while also ensuring the utility's ability to meet system needs.

BELLEVUE'S UTILITIES PLAN

Bellevue facilitates the development and maintenance of all utilities at the appropriate levels of service to accommodate the city's project growth. Bellevue facilitates the provision of reliable utility service in a way that balances the public's interest in safety and health, consumers' interest in paying no more than a fair and reasonable price for the utility's product, the natural environment, and the community's desire that utility projects be aesthetically compatible with surrounding land uses. Bellevue processes permits and approvals for utility facilities in a fair and timely manner and in accord with development regulations that encourage predictability. Bellevue encourages new technology that improves utility services and reliability while balancing health and safety, economic, aesthetics, and environmental factors. Bellevue provides policy guidance for each utility facility system specific to its city-managed or non-city-managed utility system status.

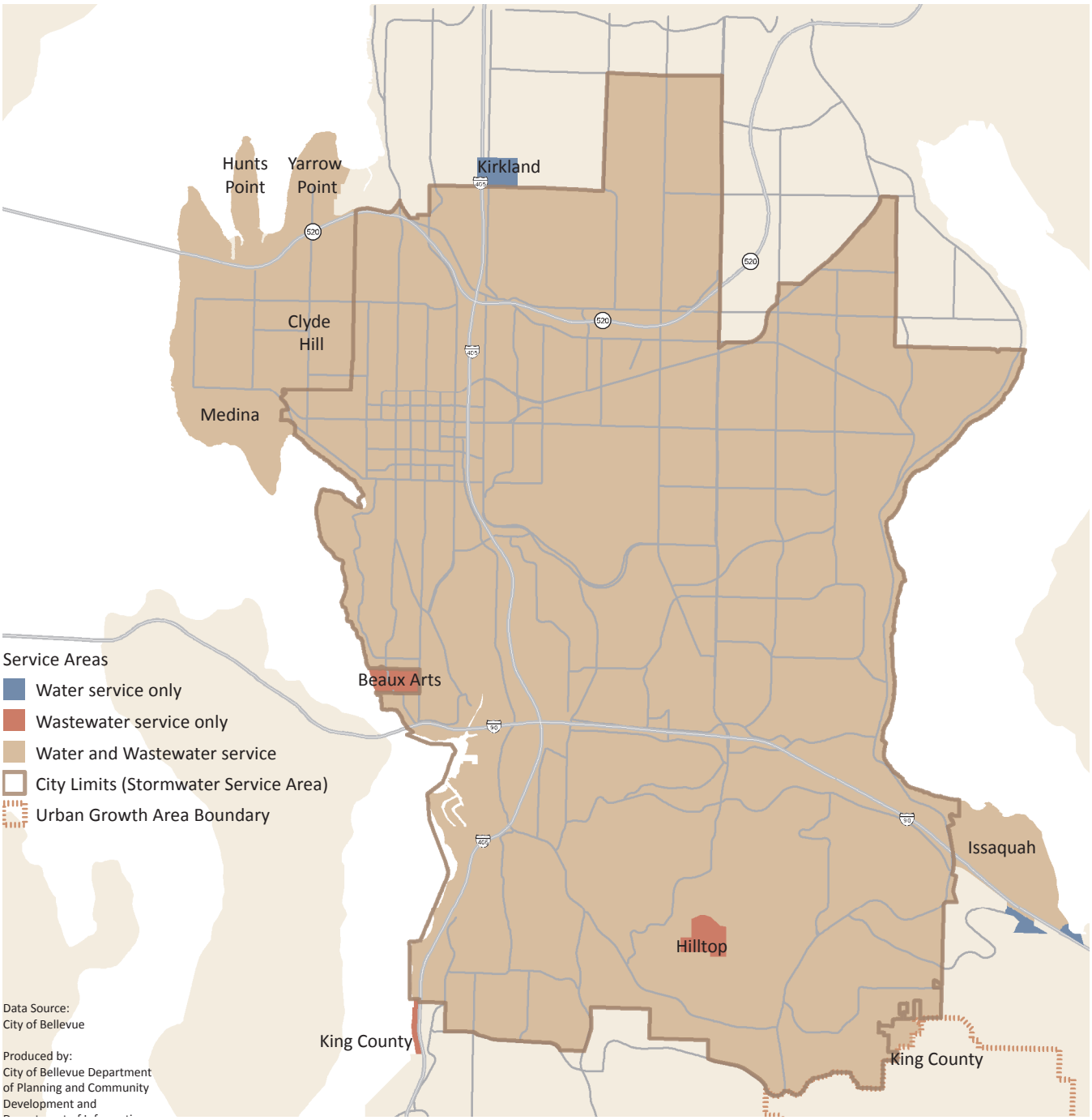
This Utilities Element acts as a "hub" for a collection of functional system plans. While each utility is governed by a detailed functional plan that provides specific policy guidance for that specific system, the Utilities Element provides guidance for all utilities in Bellevue in establishing the city's overall approach to providing safe, high-quality, and reliable utility services for residents and businesses.

WHAT DOES SUCCESS LOOK LIKE?

- Utilities are provided at appropriate levels of service to Bellevue residents and businesses.
- New technologies are used to enhance service, reduce costs, and reduce the impacts of utility service.
- Wide spread access to high speed internet.
- Utilities provide reliable, equitable service while avoiding and minimizing community impacts.

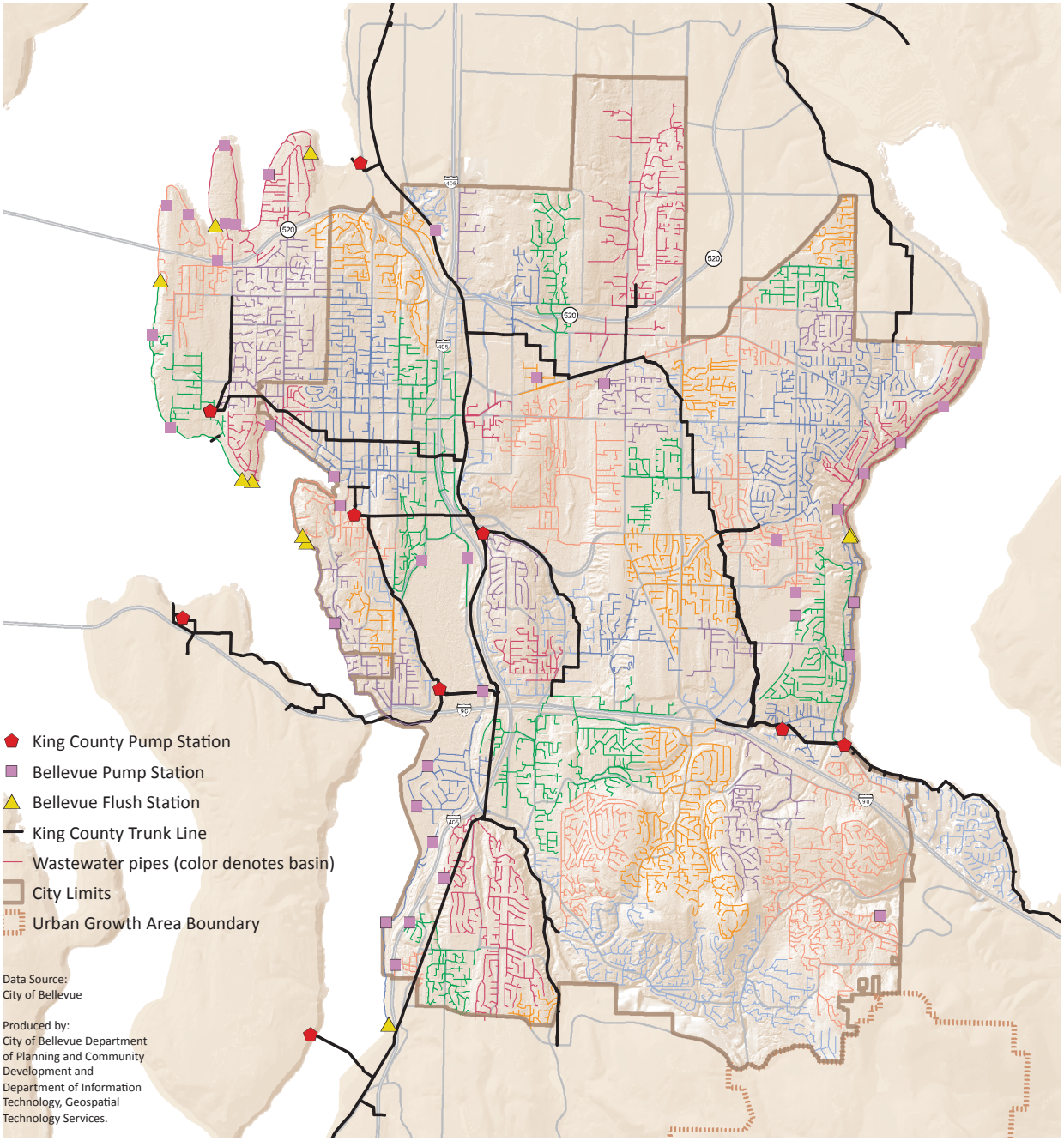
Map UT-1. Utility Service Areas

The City of Bellevue provides water, wastewater and stormwater services to all areas within Bellevue except in the Hilltop subdivision where water service is provided by Water District 117. The City also provides water and/or wastewater services to areas outside of Bellevue including the Points Communities, Beaux Arts, and parts of Issaquah, Kirkland and unincorporated King County as shown in the map below.



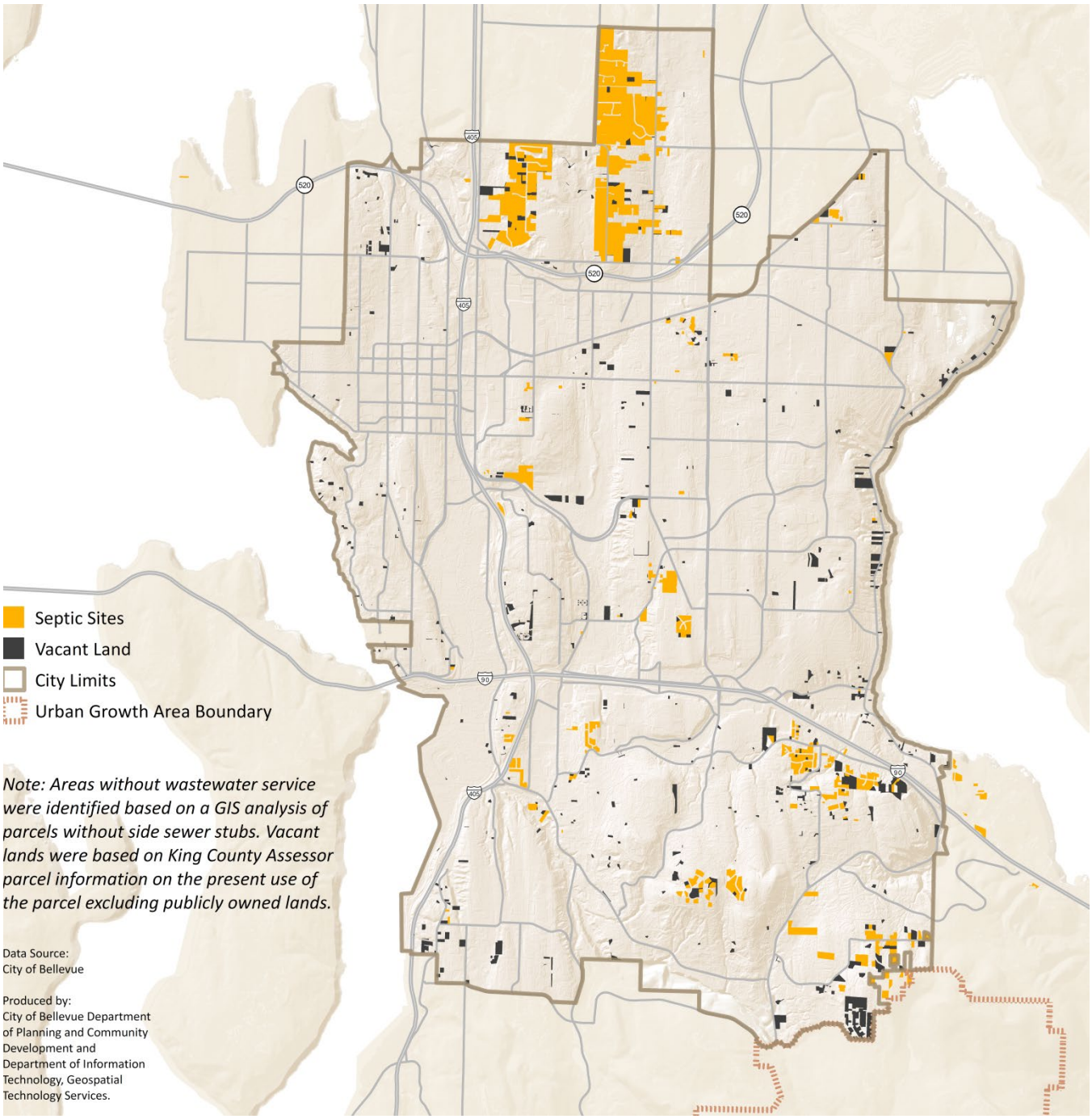
Map UT-2. Wastewater Collection System Facilities

This map shows the locations of wastewater pump and flush stations as well as sewer pipes. Wastewater basins are depicted by different colors of pipe. Bellevue's wastewater collection system includes over 650 miles of mainline pipes and service stubs, and 46 wastewater pump and lift stations. Wastewater flows through city-owned and maintained pipes into King County's regional trunk lines where it is conveyed to Renton or Brightwater Wastewater Treatment Plants for treatment. See Bellevue's **Wastewater System Plan** for details.



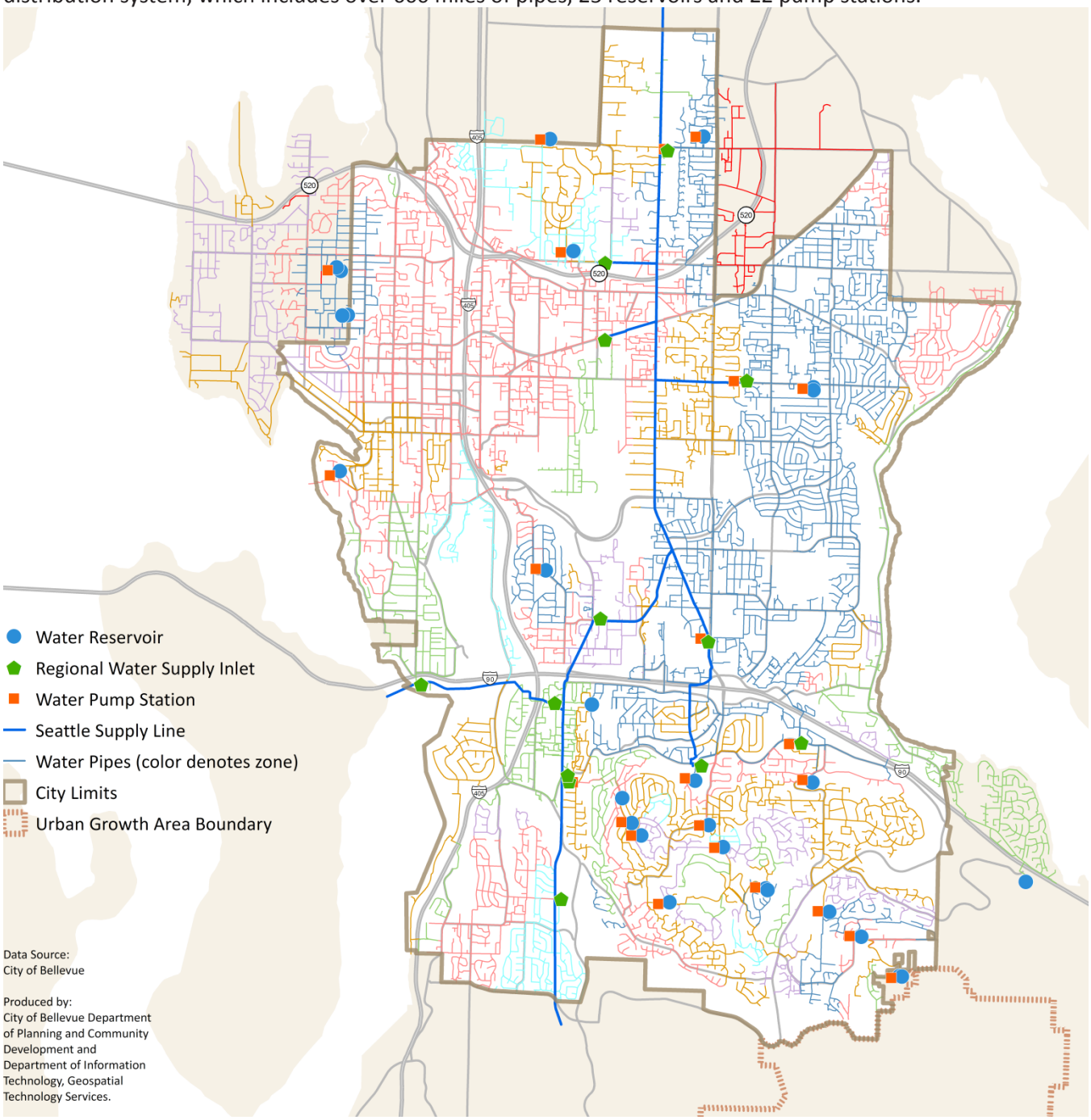
Map UT-3. Property without Wastewater Service

Non-sewered areas relying on septic tanks for wastewater treatment and vacant lands are shown on the map below. The King County Health Department regulates the use of septic systems in King County, including Bellevue. See the City of Bellevue's **Wastewater System Plan** for more information regarding the use of septic tanks.



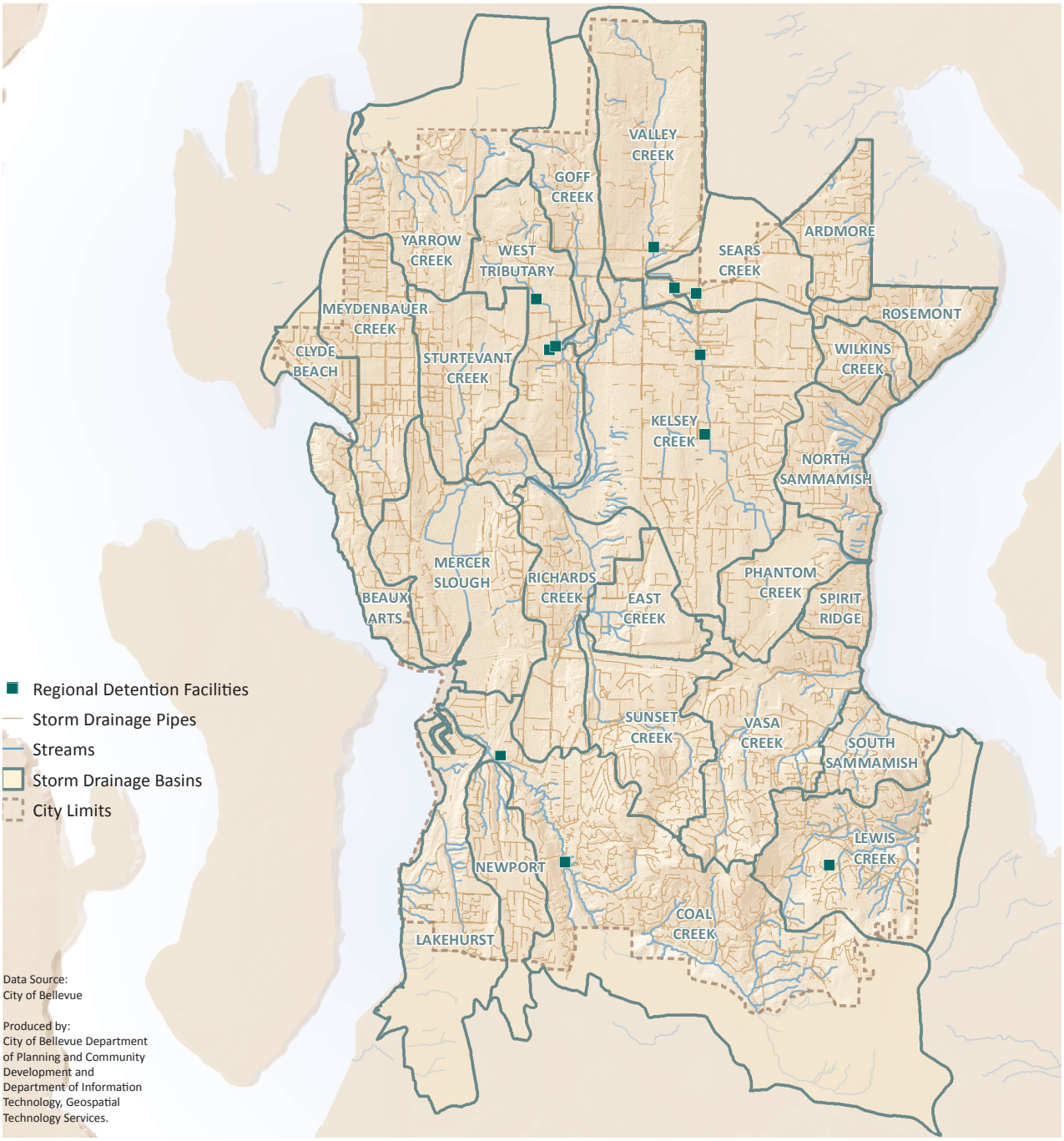
Map UT-4. Major Water Facilities

Bellevue's drinking water is acquired through the Cascade Water Alliance, an association of water districts and cities, including Bellevue, which serves as a regional water supply agency and wholesale water provider. This map shows locations of water reservoirs, pump stations, and supply inlet meters along with the main supply line and water pipes. Pressure zones are depicted by different colors of pipe. Bellevue is responsible for the local water distribution system, which includes over 600 miles of pipes, 25 reservoirs and 22 pump stations.



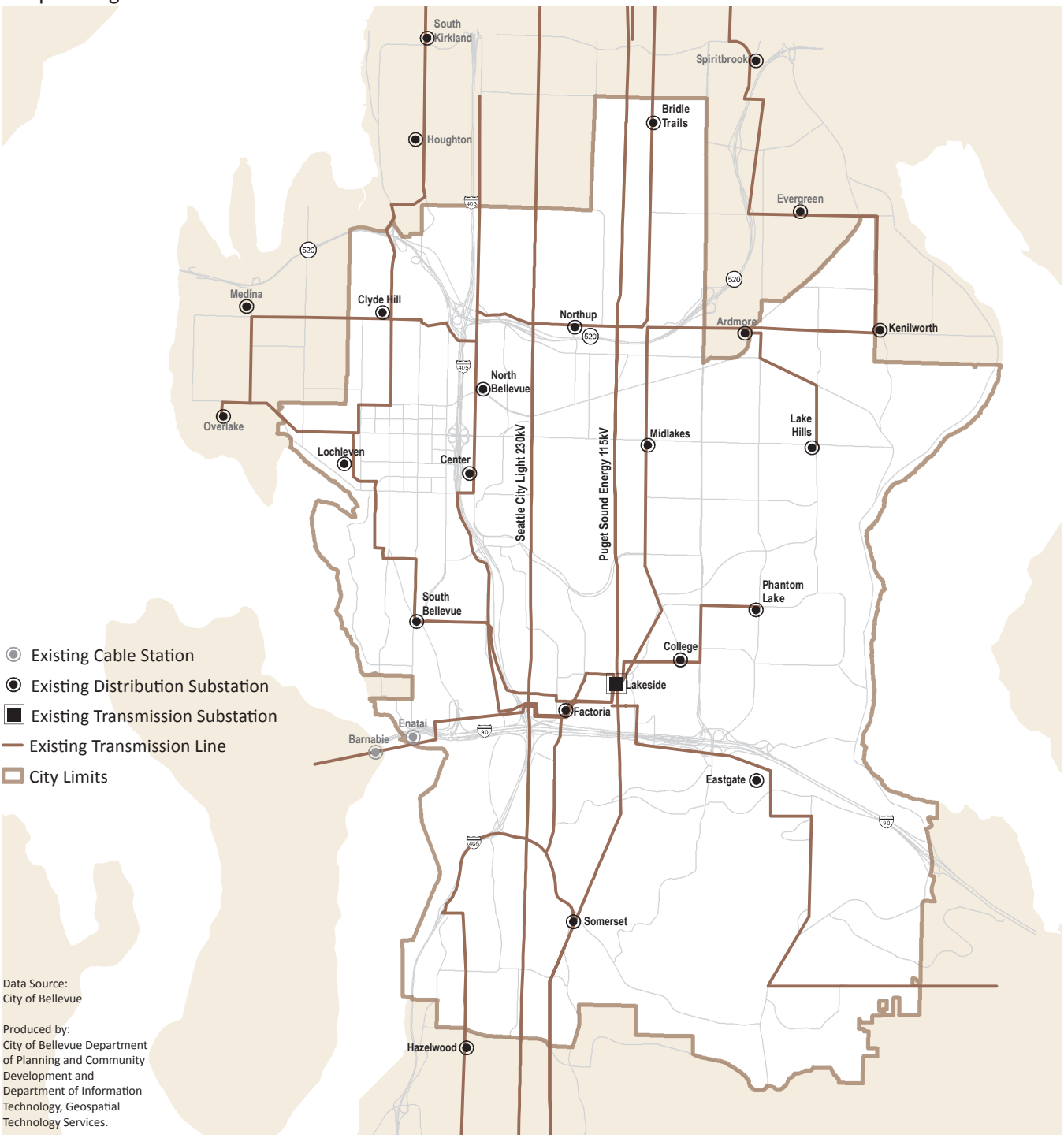
Map UT-5. Storm and Surface Water Facilities

This map shows storm water drainage basins within Bellevue along with regional detention facilities, and pipes. The stormwater system in Bellevue is a combination of streams, lakes, wetlands, pipes, catch basins and flood control sites--private and public systems that eventually drain into either Lake Washington or Lake Sammamish. Storm and surface water facilities help manage storm water runoff during storm events. See Bellevue's **Storm and Surface Water System Plan** for more detail.



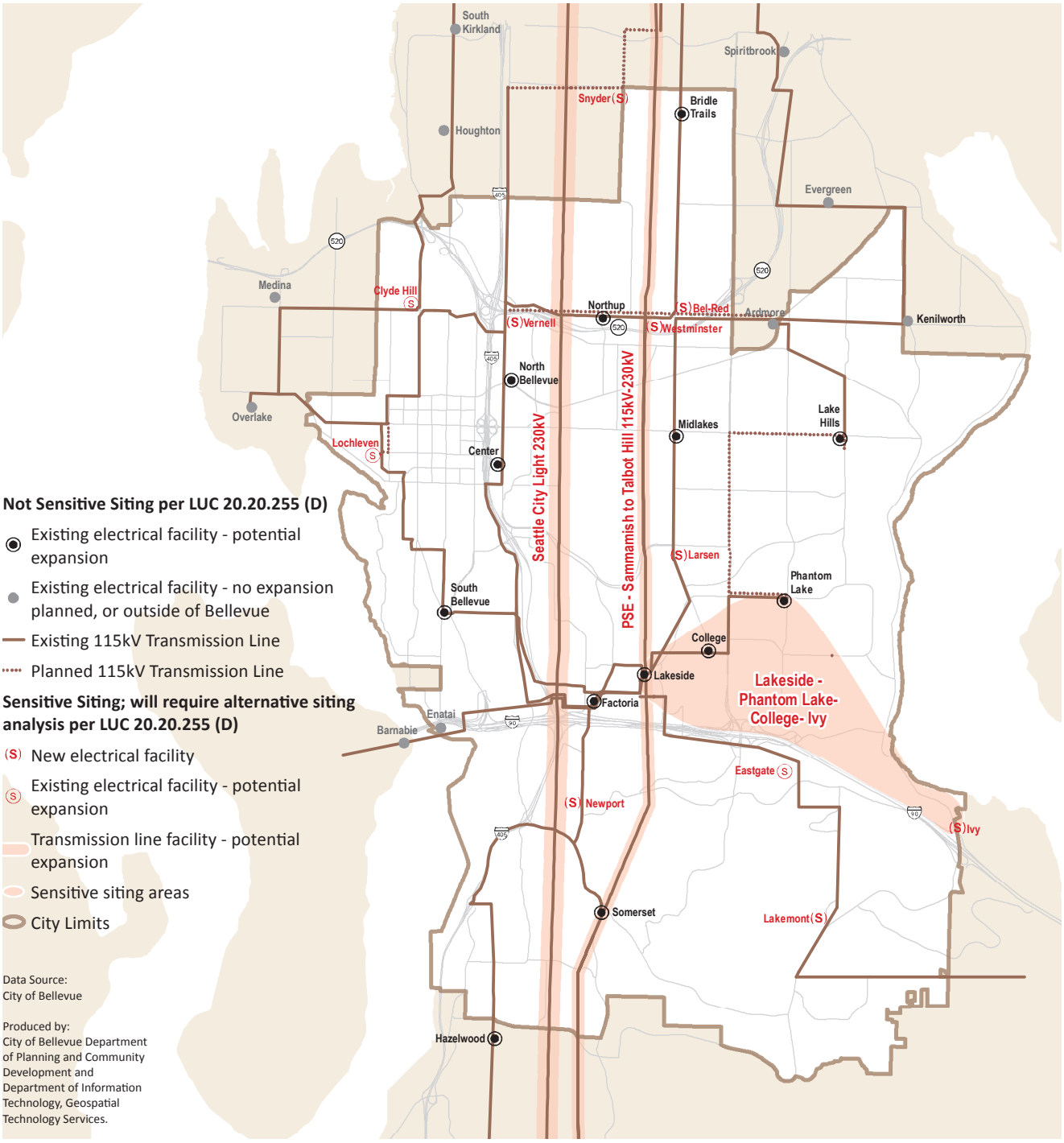
Map UT-6. Existing Electrical Facilities

This map and the following map of new and expanded facilities together guide the siting of electric facility utilities in the city, requiring the city under GMA to consider the location of existing and proposed utilities in land use planning.



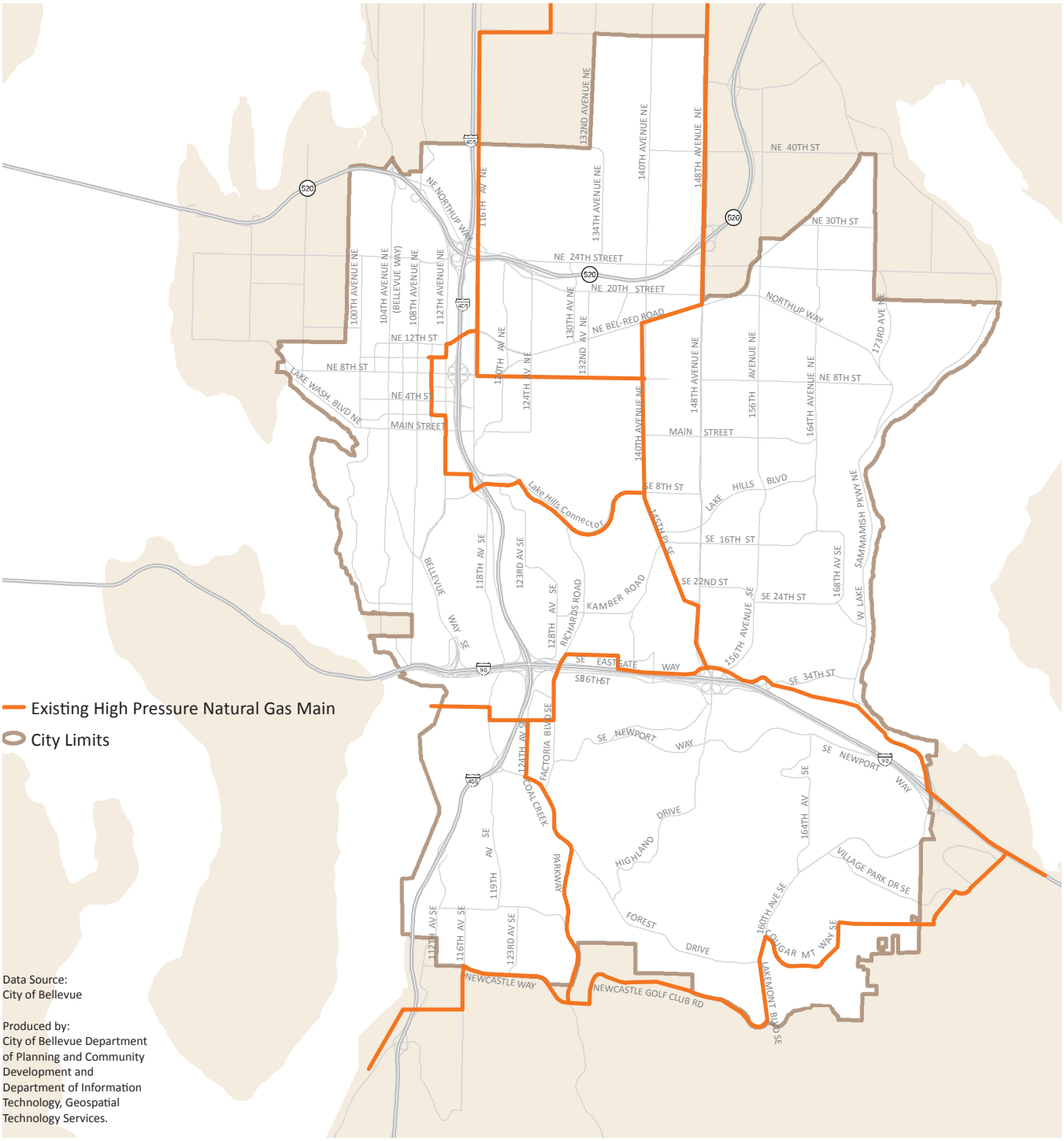
Map UT-7. New or Expanded Electrical Facilities

This map shows the general locations and conceptual alignments of Puget Sound Energy's planned facilities together with the city's sensitive siting classifications. These locations, alignments and classifications guide the review of the actual location of transmission lines, routes, and substations subject to the Conditional Use Permit and other City review processes. The actual locations may ultimately differ from those depicted here.



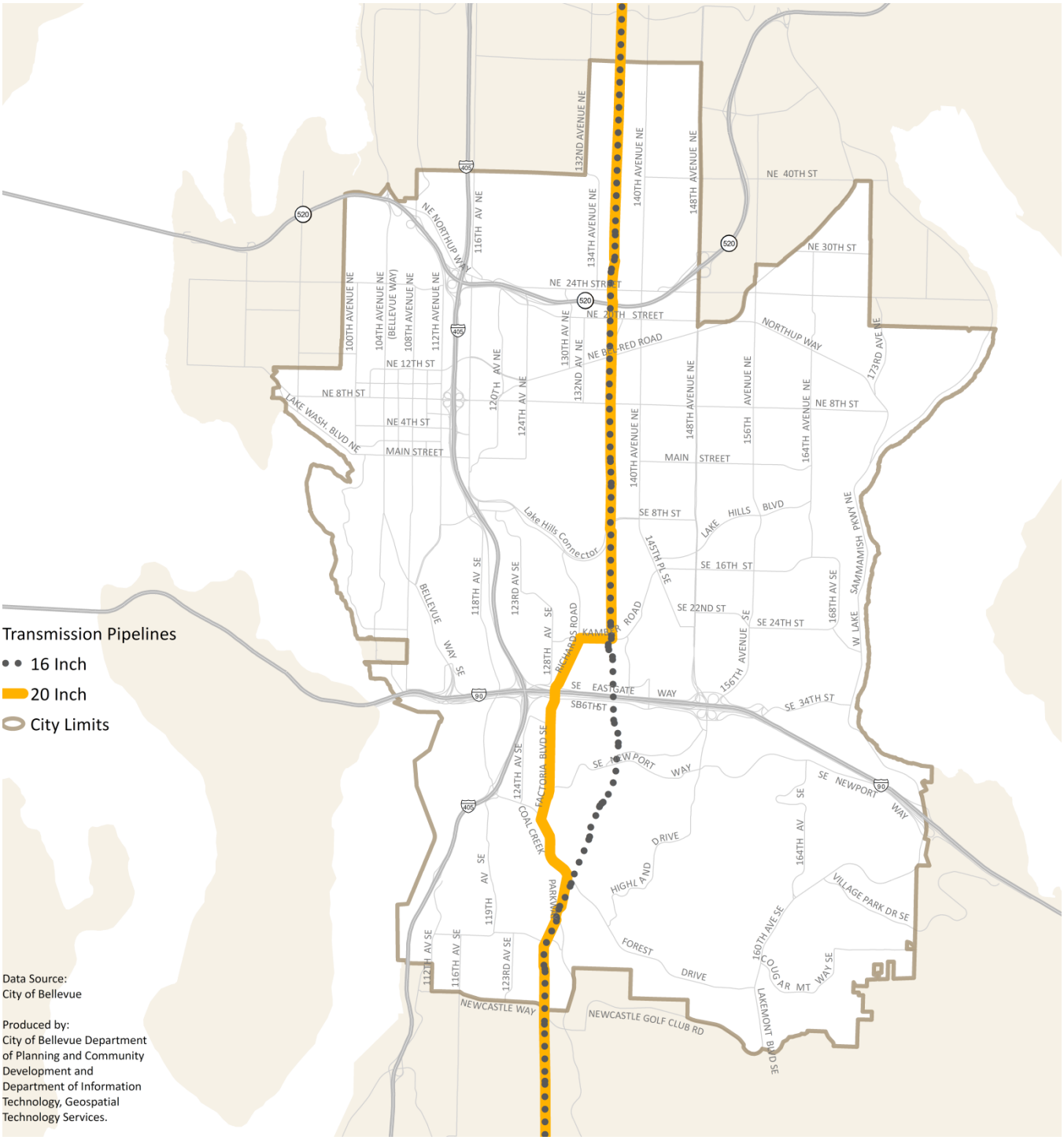
Map UT-8. Puget Sound Energy Natural Gas Mains

This map shows the locations of the Puget Sound Energy's existing high pressure natural gas mains.



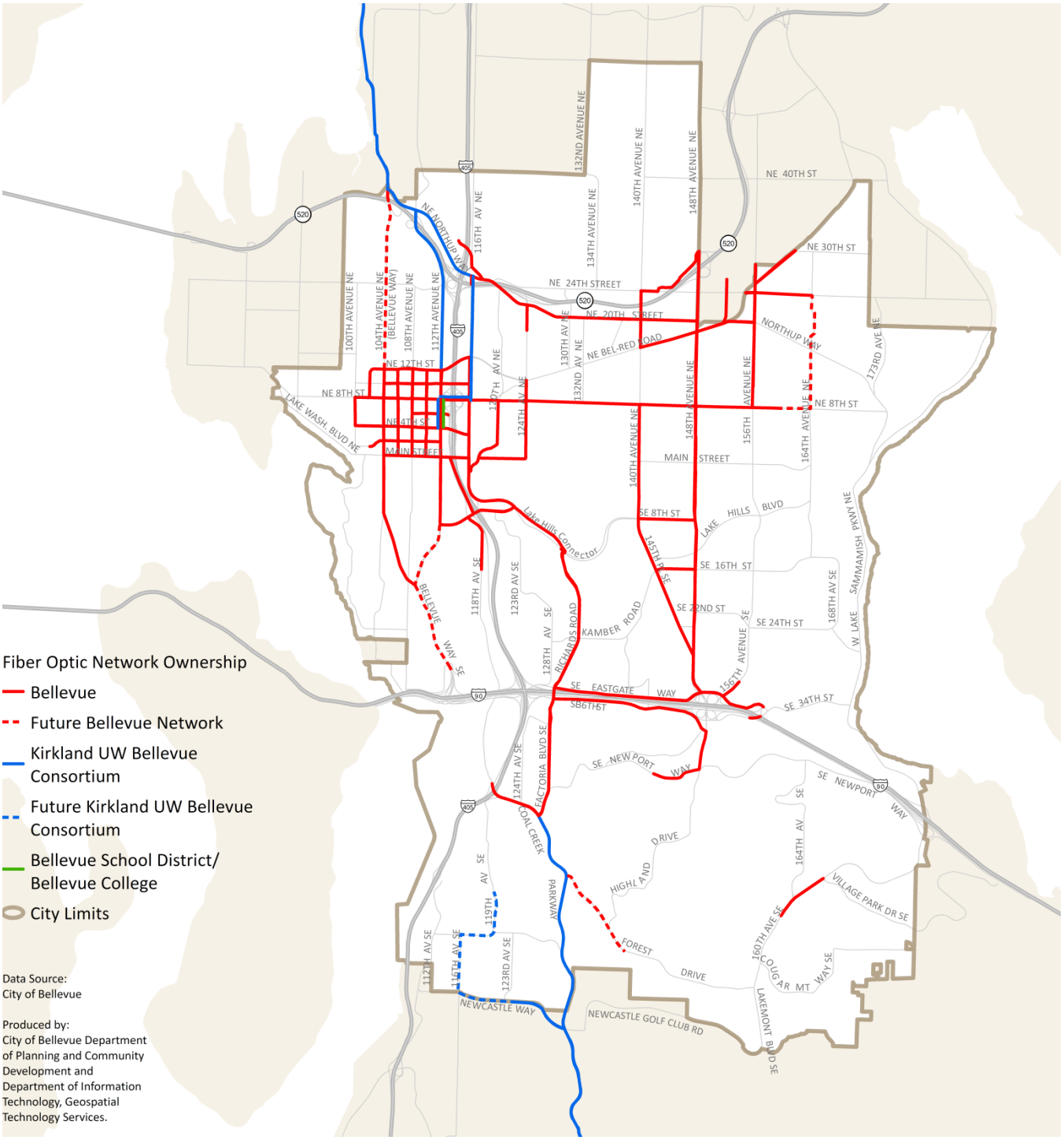
Map UT-9. Olympic Pipeline Company Transmission Pipeline

This map shows the locations of the Olympic Pipeline Company's liquid petroleum transmission pipelines within Bellevue.



Map UT-10. Fiber Optic Network

This map shows the location of Bellevue's existing and future fiber optic network by ownership.



GOALS & POLICIES

GOAL

- To develop and maintain all utilities at the appropriate levels of service to accommodate the city's projected growth.
- To ensure reliable utility service is provided in a way that balances public concerns about infrastructure safety and health impacts, consumer interest in paying a fair and reasonable price for service, potential impacts on the natural environment, and aesthetic compatibility with surrounding land uses.
- Utility facilities are permitted and approved by the city in a fair and timely manner and in accord with development regulations, to encourage predictability.
- New technology to improve utility services and reliability is used in balance with health and safety, economic, aesthetics, and environmental factors.

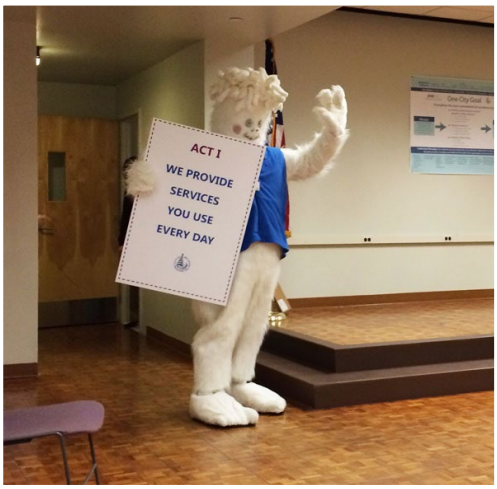
POLICIES

General Utility System

UT-2. Manage utility systems effectively in order to provide reliable, sustainable, quality service.

UT-X1. Build and manage city-owned utility infrastructure assets to reduce the likelihood of risks to public safety, property and environment, and disruption due to asset failure.

UT-1. Use design and construction standards that are environmentally sensitive, safe, cost-effective, and appropriate.



UT-X2. Encourage public-private partnerships to take advantage of the city's fiber optic network to facilitate innovation, service delivery, and competition for broadband deployment throughout the city.

UT-X3. Encourage new and cost-effective emerging information and telecommunications technologies that would benefit city utility users and improve utility service and efficient water and energy use.

UT-3. Ensure that the location, type, and size of all public facilities is determined and/or approved by the city.

UT-4. Base the extension and sizing of system components on the land use plan of the area. System capacity will not determine land use.

UT-5. Design, construct, and maintain facilities to minimize their impact on surrounding neighborhoods.

UT-6. Encourage the joint use of public facilities such as the development of a storm and surface water detention area as passive recreation.

UT-X4. Emphasize cost effective management of city utility systems over their lifetime, including planning for their renewal and replacement, balancing risk, and maintaining desired service levels. Forecast future capital and maintenance costs and manage rates so that customer rate revenue funds the cost of ownership equitably across generations.

UT-X5. Educate and inform utility providers, consumers and the community about the costs and benefits of emerging technologies.

UT-X6. Develop and periodically update functional utility system plans that forecast system capacity and needs for at least a 20 year planning horizon.

UT-X7. Consider Low Impact Development principles to minimize impervious surfaces and native vegetation loss on all infrastructure improvement projects.

AN-3. Make the city's utility service areas coincide with the Potential Annexation Area.

AN-6. Extend the service area boundaries only if landowners requesting service have begun the annexation process or have made prior agreements with city.

AN-8. Use pre-annexation agreements only if immediate annexation cannot be required or is not reasonable.

Utility Coordination

UT-7. Extend water and wastewater utility service to unserved areas of the utility service area, including extensions into potential annexation areas, if the city's costs are reimbursed and provided that service will be extended only upon annexation to the city.

UT-9. Coordinate with other jurisdictions and governmental entities in the planning and implementation of multi-jurisdictional utility facility additions and improvements.

UT-10. Coordinate with the appropriate jurisdictions to ensure that utility facilities that are to be constructed in potential annexation areas are designed and built in accord with City of Bellevue standards.

UT-X8. Coordinate emergency preparedness and response with local and regional utility partners.

Hazardous Waste

UT-11. Cooperate with other private and public agencies in the region to manage and control hazardous waste and moderate risk waste, including medical wastes and hazardous household substances.

UT-12. Educate the public in the proper handling and disposal of hazardous household waste and on the use of alternative products or practices which result in reducing the use and storage of hazardous materials in homes and businesses.

UT-13. Provide for the safe and convenient disposal of hazardous household waste through a permanent and conveniently located collection facility for Bellevue residents.

Solid Waste

UT-14. Promote the recycling of solid waste materials by providing opportunities for convenient recycling and by developing educational materials on recycling, composting, and other waste reduction methods.

Discussion: Waste reduction and source separation are the city's preferred strategies for managing solid waste. Materials remaining after effective waste reduction and source separation should be handled in accordance with the King County Solid Waste Plan.

UT-15. Encourage and actively seek an effective regional approach to solid waste management.

UT-16. Use a public review process in the selection and approval of sites for any disposal facility, to study and consider sensitivity to aesthetics, health effects and the environment.

UT-17. Maintain a safe, cost-effective and responsive solid waste collection system that provides convenient, efficient, environmentally-friendly and visually unobtrusive components and services.

UT-18. Manage solid waste collection to minimize litter and neighborhood disruption.

Wastewater Utility

UT-X9. Provide a reliable wastewater disposal system that ensures public health and safety, and protects the environment.

UT-20. Require wastewater connections for all new development, including single family plats, unless otherwise allowed by state or county regulations.

UT-21. Allow existing single family homes with septic systems to continue to use septic systems, provided they remain in compliance with Seattle-King County Public Health requirements. Homeowners are encouraged to connect to wastewater systems where available. If existing septic systems fail to maintain compliance with Seattle-King County Public Health standards and cannot be brought into compliance, homeowners should be required to connect to the wastewater system.

Storm and Surface Water Utility

UT-23. Provide a storm and surface water system that controls damage from storms, protects surface water quality, provides for the safety and enjoyment of citizens, supports fish and wildlife habitat, and protects the environment.

UT-22. Participate in regional watershed based efforts with the goals of achieving local drainage basin health and addressing Endangered Species Act issues. Manage the storm and surface water system within a system wide, watershed based context.

UT-X10. Design context appropriate stormwater management facilities that reflect the unique character of the neighborhood in which the site is situated.

UT-25. Educate the public about water quality issues.

UT-X11. Encourage the use of low impact development and stormwater best management practices to manage stormwater runoff, which may result in smaller facilities constructed on- and off-site for flow control, conveyance, and water quality.

Water Utility

UT-26. Provide a reliable, cost-effective supply of safe, secure, high quality drinking water that meets the community's water needs in an environmentally responsible manner.

UT-27. Provide a water supply that meets all federal and state drinking water quality standards.

UT-28. Provide reliable water service for domestic use, fire flow protection, and emergencies.

UT-29. Promote conservation and the wise and efficient use of the public water supply and discourage the waste of this valuable resource.

UT-30. Improve the quality and quantity of the water supply of well water users by allowing access to the city water system as contained in the Water System Functional Plan, and provided that at least the fair share costs are paid by the benefiting parties.

UT-31. Serve as a role model for the community in the efficient use of water.

NON CITY-MANAGED UTILITIES

General Non City-Managed Utilities

UT-X12. Coordinate with non-city utility providers to ensure planning for system growth consistent with the city's Comprehensive Plan and growth forecasts.

UT-X13. Support new and emerging information and telecommunications technologies that would benefit utility service delivery by being sustainable, appropriate and viable.

UT-32. Defer to the serving utility the implementation sequence of utility plan components.

UT-33 Coordinate with the appropriate jurisdictions and governmental entities in the planning and implementation of multi-jurisdictional utility facility additions and improvements.

UT-34. Require effective and timely coordination of all public and private utility activities including trenching and culvert replacements.

UT-X14. Encourage widespread, affordable, high-speed internet access, including access to competing telecommunications services and new forms of technology to provide the community with choice and to facilitate innovation.

UT-X15. Maintain Bellevue's competitive advantage and attraction as a highly connected community.

UT-X16. Assess the coverage and quality of residential and business access to internet and telecommunication services and explore opportunities to enhance service to areas of need.

UT-X17. Ensure a permitting process that achieves a balance between encouraging deployment of advanced high-speed telecommunications infrastructure and protecting neighborhood character.

UT-35. Facilitate coordination between telecommunications providers as a key consideration in city street right of way infrastructure projects to ensure opportunities to install facilities in common trenches.

UT-36. Limit the amount of disturbance to city infrastructure by encouraging co-location of telecommunications conduit in the public right-of-way.

UT-37. Inform telecommunications companies authorized to provide services within Bellevue about the schedule for capital projects and opportunities to install telecommunications infrastructure.

UT-38. Require notification to the city prior to a utility's maintenance or removal of vegetation in city right-of-way.

UT-39. Require the undergrounding of all new electrical distribution lines except that interim installation of new aerial facilities may be allowed if accompanied by a program to underground through coordination with the city and other utilities. Require the undergrounding of all existing electrical distribution lines where a change in use or intensification of an existing use occurs, unless delayed installation is approved as part of a specific program to coordinate undergrounding of several utilities or in conjunction with an undergrounding program for several sites or when related to street improvements.

UT-X18. When implementing street projects, determine whether the relocation of distribution facilities underground is required. If so, determine the manner of payment: tariff schedule, capital improvement program, or the formation of a local improvement district.

UT-X19. Work with Puget Sound Energy, telecom providers, state regulatory agencies, and other responsible parties to develop funding tools that enable full mitigation of the neighborhood impacts of deploying electrical and telecommunications infrastructure.

UT-X20. Allow new aerial telecommunication lines on existing systems provided that they shall be designed to address visual impacts and are required to be placed underground at the time of undergrounding electrical distribution lines.

UT-X21. Support neighborhood efforts to underground existing electrical distribution lines where a significant number of neighborhood residents have demonstrated a willingness and ability to cover the non-utility share of project costs.

UT-40. Require the reasonable screening and/or architecturally compatible integration of all new utility and telecommunication facilities.

UT-41. Protect Bellevue's aesthetic quality and infrastructure investment from unnecessary degradation caused by the construction of telecommunication infrastructure.

UT-42. Encourage directional pruning of trees and phased replacement of improperly located vegetation in the right-of-way. Perform pruning and trimming of trees in an environmentally sensitive and aesthetically acceptable manner and according to professional arboricultural specifications and standards.

UT-43. Encourage consolidation on existing facilities where reasonably feasible and where such consolidation leads to fewer impacts than would construction of separate facilities. Examples of facilities which could be shared are towers, electrical, telephone and light poles, antenna, substation sites, trenches, and easements.

UT-44. Encourage the use of utility corridors as non-motorized trails. The city and utility company should coordinate the acquisition, use, and enhancement of utility corridors for pedestrian, bicycle and equestrian trails and for wildlife corridors and habitat.

UT-45. Avoid, when reasonably possible, locating overhead lines in greenbelt and open spaces as identified in the Parks and Open Space System Plan.

UT-46. Facilitate the conversion to cost-effective and environmentally sensitive alternative technologies and energy sources.

UT-47. Facilitate and encourage conservation of resources.

Discussion: Items the city should consider in implementing this policy include conserving the use of electric energy in its own facilities, and adopting practical and cost-effective energy building codes.

UT-48. Encourage cooperation with other jurisdictions in the planning and implementation of multi-jurisdictional utility facility additions and improvements. Decisions made regarding utility facilities shall be made in a manner consistent with, and complementary to, regional demand and resources, and shall reinforce an interconnected regional distribution network.

CO-LOCATING UTILITIES

Aesthetic impact of utilities can be reduced by using existing facilities, where feasible. Examples of facilities that might be shared are towers; electrical, telephone and light poles; substation sites; trenches; and easements.

TRAILS AND UTILITIES

Coordination between the city and utilities on the acquisition, use, and enhancement of utility corridors can allow for greater opportunities for pedestrian, bicycle and equestrian trails and for wildlife corridors and habitat.

UT-49. Encourage communication among the city, the WUTC, and utilities regulated by the WUTC about the distribution of costs for existing and proposed utility facilities; especially requirements for the undergrounding of transmission, distribution, and communication lines exceeding statewide norms.

UT-50. Encourage system practices intended to minimize the number and duration of interruptions to customer service.

UT-51. Prior to seeking city approval for facilities, encourage utilities service providers to solicit community input on the siting of proposed facilities which may have a significant adverse impact on the surrounding community.

UT-52. Encourage utility providers to erect limited on-site signage on all sites purchased for future major utility facilities to indicate the utility's intended use of the site.

UT-53. Require all utility equipment support facilities to be aesthetically compatible with the area in which they are placed by using landscape screening and/or architecturally compatible details and integration.

UT-54. Support federal or state actions that would preserve local government authority to regulate time, manner and place of construction in the right-of-way.

Non City-Managed Utilities - Additional Wireless Communication Facilities

UT-55. Require the placement and design of wireless communication facilities in a manner that minimizes the adverse impacts on adjacent land uses.

UT-56. Require permit applicants to submit an area wide plan that demonstrates the lowest land use impacts consistent with telecommunication customer needs.

UT-57. Allow exchanges ("swaps") between providers of permitted wireless communication facilities sites, to encourage industry cooperation and coordination.

UT-58. Require wireless equipment constructed in public rights of way in residential areas to be under 30 inches high.

UT-59. Recognize that wireless communication facilities will be deployed in all areas of the city to provide coverage and capacity consistent with the changing use of wireless technology. Minimize the attendant impacts, particularly the visual impacts of, wireless communication facility towers, lattice towers and structures by utilizing criteria for the design and location of such facilities that appropriately balance the need for wireless services and the impacts of the necessary facilities.

UT-60. Minimize visual impacts of wireless communication facilities by encouraging deployment in land use districts in the following preferred and descending order when possible, considering the provider's coverage needs:

1. Nonresidential land use districts, except Transition Areas;
2. Transition Areas;
3. Multifamily (R-20 and R-30) districts; and
4. Park sites and Residential districts.

UT-61. Minimize visual impacts of wireless communication facilities by encouraging system designs in the following preferred and descending order:

1. Attached to public facility structures, building mounted, or integrated with utility poles, light standards, and signal supports;
2. Co-located on utility poles, light standards, signal supports; and
3. Free standing towers.

UT-62. Require timely removal of abandoned facilities that are visually intrusive whenever facilities are replaced or upgraded.

UT-65. Encourage wireless equipment to be installed in a manner compatible with other utility functions.

UT-66. For infrastructure opportunities on city property, other than street rights-of-way, encourage the use of appropriate city owned properties for lease to install wireless communications equipment that is compatible with existing city uses of the sites and consistent with land use requirements.

UT-67. Encourage the co-location of telecommunications equipment on city sites that reduce total impact of antennas on the community.

UT-X22. Periodically review and update wireless facility regulations to respond to changes in technology and community conditions to balance impacts with the need for service.

Non City-Managed Utilities - Additional Electrical Facilities Policies

UT-68. Encourage the public to conserve electrical energy through public education.

UT-69. Encourage city and utility involvement with regional or statewide agencies when and if they are developing policies regarding exposure to electric and magnetic fields (EMF) or other utility issues.

UT-70. Review new accepted scientific research of potential health impacts associated with electrical and telecommunications facilities and make changes to policies if the situation warrants.

UT-71. Require in the planning, siting, and construction of all electrical facilities, systems, lines, and substations that the electrical utility strike a reasonable balance between potential health effects and the cost and impacts of mitigating those effects by taking reasonable cost-effective steps.

UT-72. Work with Puget Sound Energy to implement the electrical service system serving Bellevue in such a manner that new and expanded transmission and substation facilities are compatible and consistent with the land use pattern established in the Comprehensive Plan.

Discussion: Where feasible, electrical facilities should be sited within the area requiring additional service. Electrical facilities primarily serving commercial and mixed use areas should be located in commercial and mixed use areas, and not in areas that are primarily residential. Further, the siting and design of these facilities should incorporate measures to mitigate the visual impact on nearby residential areas. These considerations must be balanced with the community's need to have an adequate and reliable power supply.

UT-73. Require siting analysis through the development review process for new facilities, and expanded facilities at sensitive sites, including a consideration of alternative sites.

Discussion: Sensitive facility sites are those new facilities and existing facilities proposed to be expanded where located in or in close proximity to residentially-zoned districts such that there is potential for visual impacts absent appropriate siting and mitigation. The city will update Map UT-7 to the extent needed to stay current with changes in Puget Sound Energy's system planning.

UT-74. Avoid, minimize and mitigate the impacts of new or expanded electrical facilities through the use of land use regulations and performance standards that address siting considerations, architectural design, site screening, landscaping, maintenance, available technologies, and other appropriate measures.

UT-75. Work with and encourage Puget Sound Energy to plan, site, build and maintain an electrical system that meets the needs of existing and future development, and provides highly reliable service for Bellevue customers.

Discussion: Providing highly reliable service is a critical expectation for the service provider, given the importance of reliable and uninterrupted electrical service for public safety and health, as well as convenience. Highly reliable service means there are few and infrequent outages, and when an unavoidable outage occurs it is of short duration and customers are frequently updated as to when power is likely to be restored. A highly reliable system will be designed, operated and maintained to keep pace with the expectations and needs of residents and businesses as well as evolving technologies and operating standards as they advance over time.

UT-X23. Encourage the prioritization of restoring electrical service to water and wastewater utility facilities following power outages.

UT-X24. Administer applicable regulations and franchise agreement authority over the Seattle City Light and Olympic Pipeline infrastructure located in Bellevue.

POLICY CONNECTIONS

The Utilities Element addresses the location of municipal and non-municipal utilities and anticipates the amount and distribution of utilities to meet community needs and growth. Other elements of the Comprehensive Plan also help to plan for utilities infrastructure to help meet the needs of growth.

The **Environment** Element addresses the stewardship of natural resources including ground and surface water.

The **Capital Facilities** Element includes an inventory and financing policies for municipal utilities.

Utility services must keep pace with growth; the **Land Use** Element includes policies and information about Bellevue's projected growth.

The **Urban Design** Element contains policies that address design and visual impacts that might result from utility infrastructure.

IMPLEMENTATION

Bellevue implements the Comprehensive Plan through numerous actions, including day-to-day operations, capital investments, strategic partnerships, and review of new development projects. Both municipal and non-municipal utilities in Bellevue generally have their own planning processes to ensure future facilities meet the city's needs. The following list shows some of the relevant plans that implement the Utilities Element.

Implementation Program	Type
Capital Investment Program This is the city's six-year financing and implementation plan in which needed capital improvements to the city's public facilities and infrastructure are identified and prioritized.	**Funding:** updated biennially.
Water System Plan This plan provides a basis for capital improvement planning for six years and forecasts anticipated needs to a 20-year planning horizon.	**Functional Plan:** updated on a 6-10 year cycle, as needed.
Wastewater System Plan This plan addresses aging infrastructure, system expansion to accommodate development, revised policies and practices, data, finances, revised growth forecasting, and recommended improvements.	**Functional Plan:** updated on a 6-10 year cycle, as needed.
Storm and Surface Water System Plan This plan establishes the city's storm and surface water policy.	**Functional Plan:** updated on a 6-10 year cycle, as needed.
Redmond Water System Plan The Redmond water utility serves a small portion of Bellevue in the Overlake area.	**Functional Plan:** updated on a 6-10 year cycle, as needed.
King County Comprehensive Solid Waste Management Plan This plan presents proposed strategies for managing King County's solid waste over a six-year period.	**Functional Plan:** updated on a 6-10 year cycle, as needed
Land Use Code Work Program The Land Use Code work program includes a number of initiatives to update or draft new development regulations.	**Land Use Code:** updates conducted annually.
Development Review Review of utilities projects to ensure they conform to the Land Use Code.	**Project review:** on-going

ADDITIONAL RESOURCES

- Puget Sound Energy Bellevue, Washington
- Local cable and broadband service providers
- Local wireless telecommunications service providers