

CHAPTER 10 Public Services and Utilities

10.1 Introduction

This chapter describes the potential impacts on public services and utilities associated with each alternative. Public services are defined as police, fire and emergency medical services, parks, and schools. Utilities addressed in this section include electricity, water, wastewater, and solid waste.

Each alternative's amount and location of growth and effect on levels of services is considered. Mitigation measures to address increased demand are proposed.

10.2 Affected Environment

This chapter addresses existing public services and utilities in the City of Bellevue. The review is conducted on a citywide scale and for the Wilburton study area. The analysis relies on published information provided by the City of Bellevue, such as City of Bellevue–maintained websites, annual reports from the Police Department, Fire Department, and Utilities Department and planning documents from the school districts.

10.2.1 Current Policy and Regulatory Framework

Relevant city policies and regulations for public services and utilities include:

- Bellevue City Code Chapter 9.26 Solid Waste.
- Bellevue City Code Title 23 Construction Codes.
- Bellevue City Code Title 24 Utilities Codes.
- 2018 International Fire Code as Amended by the State of Washington and the City of Bellevue.
- Bellevue Fire Department Standards of Response Coverage which establishes baseline and benchmark standards for the Fire Department.

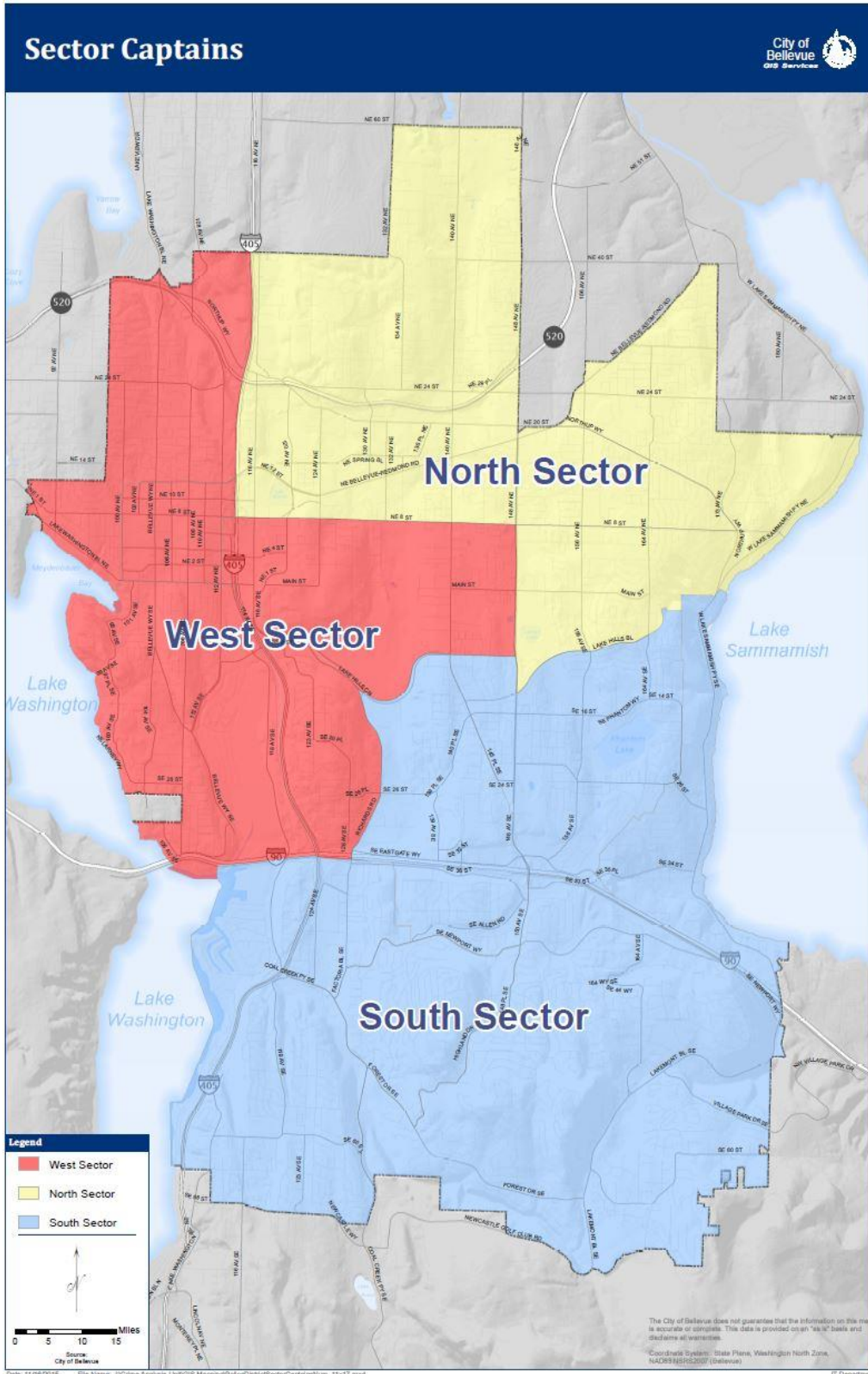
10.2.2 Public Services

POLICE PROTECTION

The City of Bellevue provides police protection throughout the city. The department headquarters is located at City Hall (450 110th Avenue NE). Community police substations are also located at the Crossroads (15600 NE Eighth Street Unit C3) and Factoria shopping centers (3915 Factoria Blvd. SE).

The Police Department is comprised of 249 staff including 199 commissioned employees and 50 non-commissioned personnel (Bellevue Police Department 2021). The Bellevue Police Department serves a population of more than 145,000 in a roughly 33-square-mile area (Bellevue Police Department 2023).

The department is divided into five divisions – Administration, Operations, Investigations, Planning/Research and Program Management and Administrative Services. Operations is the largest division, comprised of 143 commissioned police officers, two limited commissioned parking enforcement officers and a civilian crime prevention employee (Bellevue Police Department 2021). The city is divided into three sectors by geographic area to form the North, West, and South sectors (**Figure 10-1**). Sector captains work collaboratively with other city departments, sector-designated police officers, residents, and businesses to address problems and concerns. The 2021 Annual Report notes a number of vacancies that the department is working to fill (Bellevue Police Department 2021).



SOURCE: City of Bellevue 2016

FIGURE 10-1 City of Bellevue Police Sectors

The Planning/Research and Program Management major is a newly created position to oversee the department's strategic planning and policy development. The major is assigned to research and implement new technologies and resources such as body-worn cameras and the Community Crisis Assistance Team to improve services and transparency of the department within the community. (Bellevue Police Department 2021).

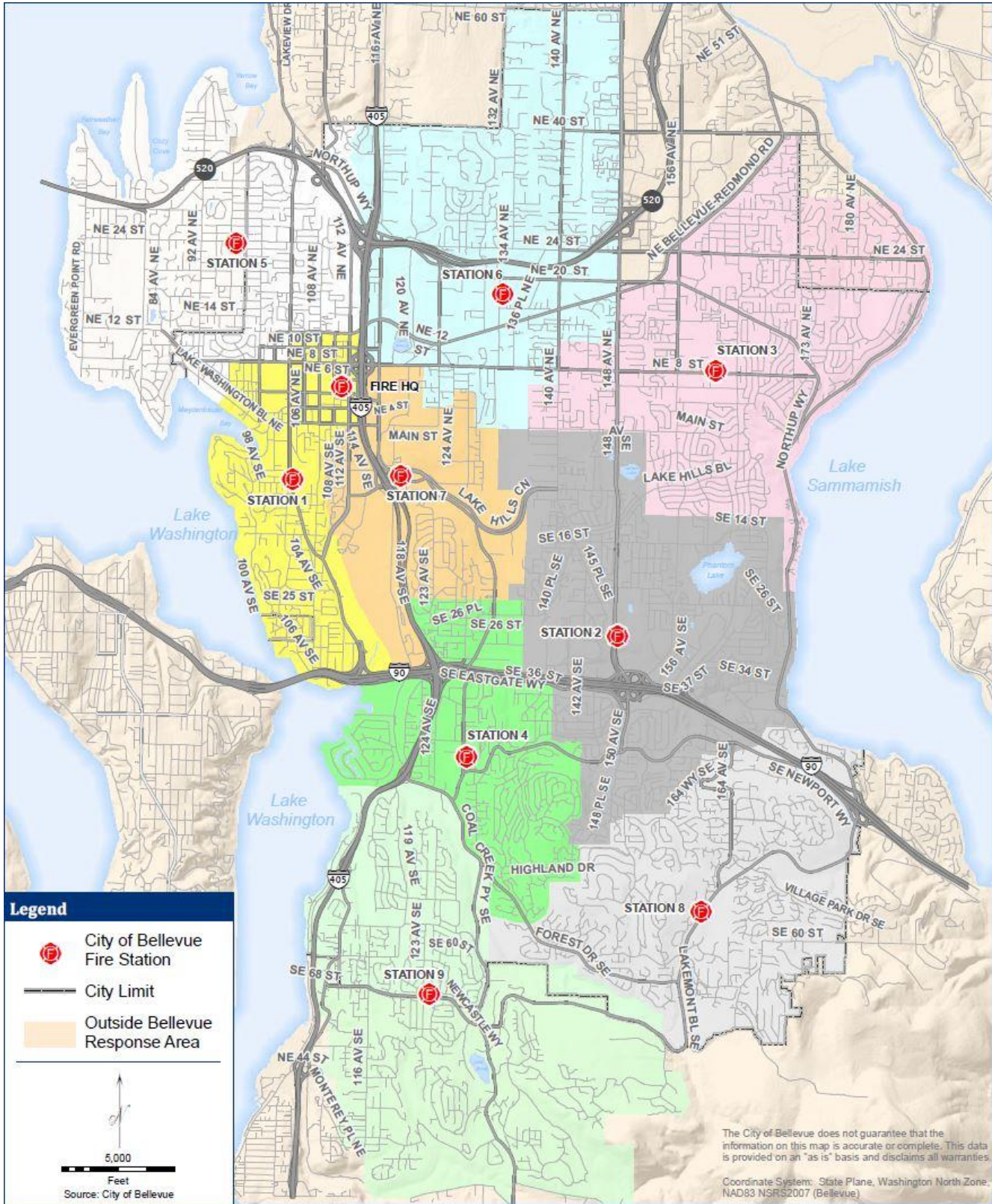
The Wilburton study area is served by the Bellevue Police Department and falls within the North and West Sectors.

FIRE PROTECTION AND EMERGENCY MEDICAL

Fire protection and emergency medical services in Bellevue are provided by the Bellevue Fire Department. Services provided by the Fire Department include fire suppression and prevention; emergency medical services (EMS), including Basic Life Support and Advanced Life Support; Hazardous Materials Response; Technical Rescue; Active Shooter/Hostile Event Response; Emergency Management; and Community Risk Reduction.

The Fire Department serves the City of Bellevue and the communities of Newcastle, Medina, Clyde Hill, Hunts Point, Yarrow Point and Village of Beaux Arts—approximately 39 square miles (Bellevue Fire Department 2021). The department includes 268 total employees: nine chief officers, 179 firefighter-emergency medical technicians (EMTs), 34 firefighter-paramedics and 46 civilian employees (Bellevue Fire Department 2021). The Fire Prevention Division of the Fire Department inspects new construction and redevelopment to ensure compliance with the International Fire Code. In 2021, the Fire Department completed 3,596 maintenance inspections and 5,400 new construction inspections (Bellevue Fire Department 2021).

The City of Bellevue is currently divided into nine response areas with one station per response area (**Figure 10-2**). These stations are staffed 24 hours a day, seven days a week, by three separate shifts (Bellevue Fire Department 2021).



SOURCE: City of Bellevue 2015

FIGURE 10-2 City of Bellevue Neighborhood Fire Stations

Fire Department Incident Response

In 2021, calls for service to the Bellevue Fire Department increased 20 percent over the previous year to 22,545, which is more than 3,800 more calls than the previous year. Calls for service include responses to fire and EMS and other calls such as false alarms, service calls, patient assist and non-injury incidents. The Fire Department estimates taller and more abundant high-rise buildings, elevated and below ground light rail, homelessness, opioid use, and an increased population may be influencing the increased calls for service. This increase demonstrates a likely trend for increased reliance on emergency service delivery (Bellevue Fire Department 2021).

The Fire Department established baseline performance standards as part of the 2012 Standards of Response Coverage Report. The baseline states that the first unit shall arrive on-scene in less than 8 minutes, 20 seconds, no less than 90 percent of the time (Bellevue Fire Department 2012).

Fire Department Planning

The Fire Facilities Levy passed in 2016 will fund a number of fire projects.

- **Construction of Fire Station 10 in Northwest Bellevue.** Fire Station 10 will be built on the west side of 112th Avenue NE and NE 12th Street, north of McCormick Park. Site selection was based on improved response times, site configuration, traffic impacts and freeway access. Fire Station 10 will improve response times for fire and medical emergencies in the Northwest Bellevue, Downtown and BelRed areas and will relieve pressure on resources throughout the city that must frequently respond into Downtown. Engine 110, Aid 101, Medic 101, and Battalion 101 will be posted there. (Bellevue Fire Department 2022).
- **New Fire Station 4 in Factoria.** Land acquisition and construction of a new facility for improvement of Ladder and Battalion Chief coverage.
- **Fire Station 6 Remodel in Bridle Trails.** Remodel to improve Ladder coverage.
- **Logistics Center Warehouse** to consolidate spare equipment and logistics services.
- **Seismic upgrades.** Upgraded facility infrastructure to meet current seismic code at Fire Station 1, Fire Station 2, Fire Station 3, Fire Station 7, Fire Station 8, and Fire Station 9.

Emergency Medical Services

Approximately 75 percent of calls for service received by the Bellevue Fire Department are for medical assistance. Every Bellevue firefighter has either an emergency medical technician or paramedic level of medical training (Bellevue Fire Department 2023). In 2021 the Bellevue Fire Department responded to a total of 15,951 medical/aid incidents, 10,693 for Basic Life Support and 5,258 for Advanced Life Support (Bellevue Fire Department 2022). There are four medic units operated daily by Bellevue Firefighters (Bellevue Fire Department 2022). Baseline standard of service for EMS is the first unit arriving on-scene in less than 8 minutes, no less than 90 percent of the time (Bellevue Fire Department 2012).

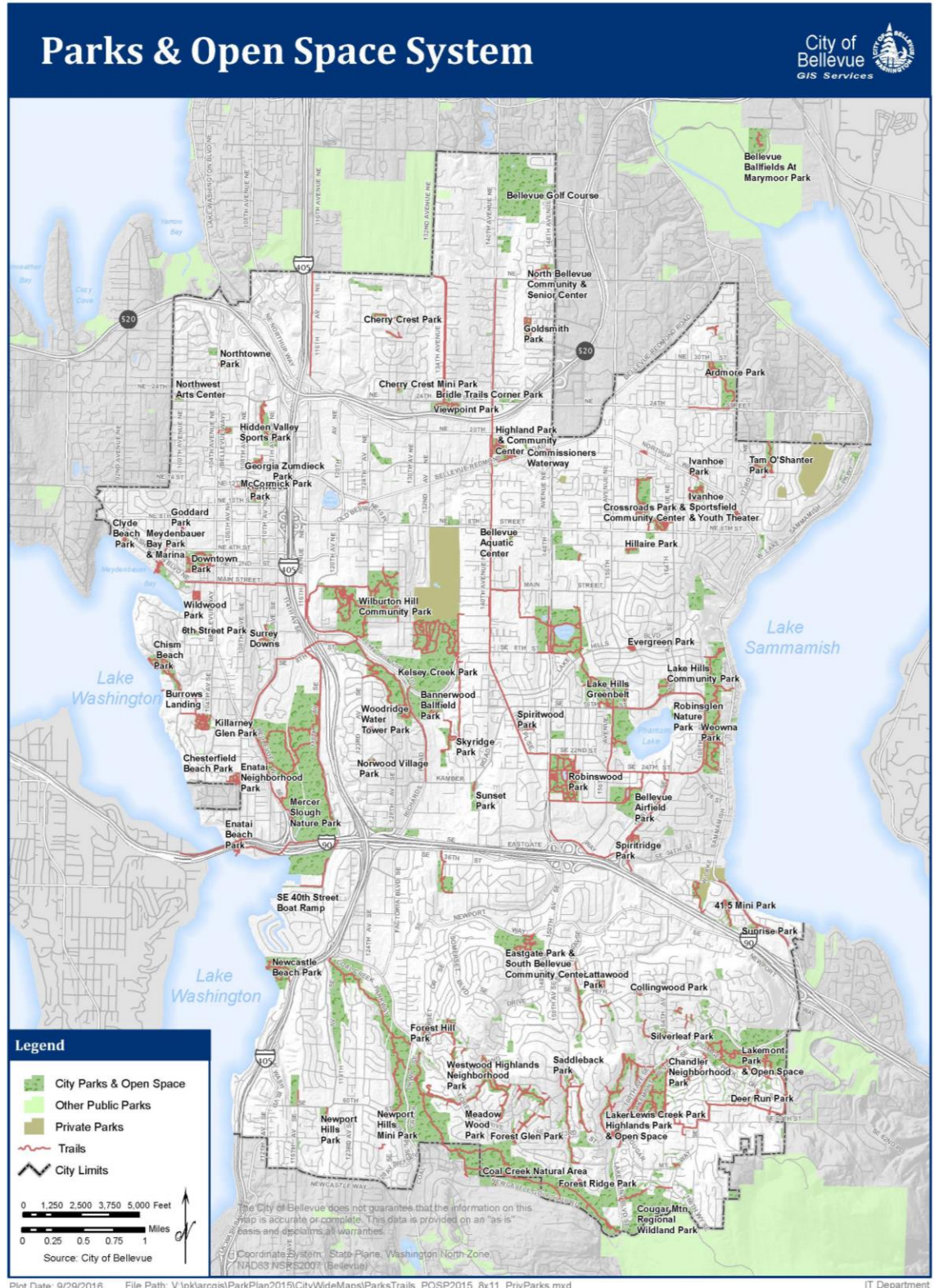
Bellevue is a part of Bellevue's Medic One system which is responsible for the City of Bellevue as well as Issaquah and North Bend Areas. Medic One locations include a Mobile Intensive Care Paramedic Unit stationed at the Overlake Hospital; Bellevue Fire Station 2; Eastside Fire & Rescue – Station 87 in North Bend; and Eastside Fire & Rescue – Station 74 in Issaquah.

The Wilburton study area is served by Fire Station 6, Fire Station 7, and the Bellevue's Medic One system.

PARKS

Bellevue's parks and open space system includes over 2,700 acres of land within city limits and about 80 additional acres outside of the city (see **Figure 10-3**). The Parks and Community Services Department manages 78 developed park sites and over 98 miles of multi-use trails. Street trees are present along many major roads throughout Bellevue, with a concentration of street trees in the Downtown area.

Some facilities within developed parks and open space include 18 ballfields, 12 soccer (or multi-use) fields, 47 playgrounds, 26 basketball courts, 37 tennis courts (some lined for pickleball), 13 picnic shelters, three community farms, and 100 community garden plots. The Parks and Community Services Department maintains 100 buildings totaling 267,000 square feet.



SOURCE: City of Bellevue 2016

FIGURE 10-3 City of Bellevue Parks and Open Space System

Four large multi-use community centers and other recreation facilities serve different geographic areas of the city and offer services targeting specific population groups, including community outreach and environmental education programming. Through the Recreation Division, the parks system provides opportunities for sports, visual and performing arts, special community events, after-school and summer day camps, youth leadership development, and life-long learning skills. These programs lead to over 700,000 interactions with program participants annually. Finally, through the Parks and Community Services Department's Human Services Division, funding partnerships are maintained with 49 non-profit agencies to support over 118 different programs serving the needs of low- and moderate-income Bellevue residents.

Decisions on the preservation of open space and development of the park and trail system in Bellevue are guided by two primary documents, the Bellevue Comprehensive Plan, and the Parks & Open Space System Plan. The Comprehensive Plan establishes the overall framework while the Parks & Open Space System Plan provides more specific goals and objectives designed to promote the community's vision for parks, recreation, and open space. The Parks & Open Space System Plan also works in tandem with or supports other city policies and initiatives.

The Parks & Open Space System Plan includes a 20-year vision for future acquisition and capital project priorities. The pace of change is rapid in Bellevue, so the 20-year list is revisited every six years to determine if new information warrants a course correction.

Through a partnership between the City of Bellevue and the Bellevue School District, school properties are also used to meet recreational needs for residents.

The 2022 Parks & Open Space System Plan was adopted by City Council on July 11, 2022. The Parks & Open Space System Plan is the primary tool used to guide the long-term growth and development of Bellevue's parks and open space system. The core of the plan is a set of 20-year capital project objectives. These long-term objectives are reviewed and updated approximately every six years. Funding to implement the long-term recommendations within the plan is determined through the Capital Investment Program budgeting process. The Parks & Open Space System Plan identifies seven major focus areas around which Parks & Community Services meets the park, open space and recreation needs of the community. In general, these focus areas have remained consistent since the 1987 edition of the plan, although they have been re-structured and modified over time to meet contemporary needs.

Based on a level of service analysis, the following neighborhood areas are identified as having significant gaps in walkable access to parks and trails:

- **BelRed** – An emerging area of need as residential population will increase over time as high density mixed use redevelopment occurs. The neighborhood will be better served by development of the publicly owned West Tributary property.
- **Bridle Trails** – This neighborhood is close to Bridle Trails State Park and the Bellevue Golf Course. Additional neighborhood park facilities have increased unstructured open space and playground areas. The northeastern portion of the neighborhood will be better served when the neighborhood park along 140th Avenue is developed. Trails systems in this neighborhood are often informal with no easement protecting public access. These serve the neighborhood, but do not fully integrate with the city's overall trail network.
- **Cougar Mountain/Lakemont** – Trails are the hallmark of this neighborhood. While parks and trails are generally distributed throughout the neighborhood, residents find walkable access challenging due to the steep topography.
- **Crossroads** – This area has neighborhoods without walkable access to parks, along with a higher population density than many other areas.
- **Downtown** – Areas lacking walkable access are geographically small; however, the high population density creates significant park supply gaps in the northwest and southeast quadrants of Downtown. The northwest quadrant stands out as the area most lacking neighborhood park access.
- **Eastgate** – This neighborhood includes a significant number of recently incorporated residential households south of I-90. This area is underserved by both park and trail access, creating a need for additional neighborhood park facilities.
- **Factoria** – An unconnected street network and lack of neighborhood park facilities in this neighborhood leaves most households without walkable access to parks. The high population density of workforce and multi-family residential populations exacerbate this need.
- **Newport** – Park facilities and access to existing trail systems are improving but are still limited. Newport Hills Woodlawn neighborhood park will help. There remains a need for new

neighborhood-scale park facilities and improved access to the South Bellevue/Coal Creek Greenway and associated trail system.

- **Northwest Bellevue** – The southwest part of this neighborhood may be served by new park facilities developed in neighboring areas. The western edge and center of the neighborhood will be better served when the publicly owned Chapin property is developed into a neighborhood park. The area north of SR 520 is the least served portion of the neighborhood.
- **Northeast Bellevue** – The area could benefit from additional park facilities added to the north and east of the Crossroads neighborhood. Enhanced trail connections could also improve access. The southern tip of this neighborhood is on a steep grade and may only be adequately served by a small future neighborhood-scale park directly within the neighborhood.
- **Somerset** – Trails are the hallmark of this neighborhood. While parks and trails are generally distributed throughout the neighborhood, residents find walkable access challenging due to the steep topography.
- **West Lake Sammamish** – Public waterfront access is a major need in this neighborhood. Future development of recently acquired publicly owned properties on Lake Sammamish will help address this need.
- **Wilburton** – While this neighborhood includes three major community parks, the northern end of the area lacks neighborhood-scale facilities that are within walking distance. This area may benefit from future park and trail development in BelRed or if the publicly owned Highland Glendale property is developed. Eastrail will provide trail connections and possible parks amenities across the neighborhood.

Bellevue uses local public opinion surveys and park and trail service area/accessibility standards to track community levels of service data. The three service measures that Bellevue uses are:

- **Individual Active Participation** – Measured by the percentage of population that participates in one or more active outdoor activities
- **Public Satisfaction** – Measured by the percentage of population satisfied with the condition of existing park and recreation facilities
- **Walkable Access Service Area** – Measured by the percentage of households within 1/3 mile (a 10-minute walk) of a park or trail access point.

SCHOOLS

Most of Bellevue is served by the Bellevue School District. Students are also part of the Lake Washington School District, Issaquah School District, and Renton School District, depending on where they live.

Enrollment in the Bellevue School District peaked in the 2019–2020 school year and has dropped to 18,400 students in the 2022–2023 school year (Bellevue School District 2023).

The district was faced with a \$31 million shortfall for the 2023 budget. The district reported that in October 2022 it became clear that enrollment would not go back to pre-pandemic levels, as a result of lower birth rates, higher housing costs, more educational options for families including private schools, lower immigration levels, and families moving to more affordable areas. The impact of the drop in enrollment will hit the district's financial position in the 2023–2024 school year. The magnitude of the situation serves as the rationale behind consolidation considerations.

As of October 2022, eight of Bellevue's 18 elementary schools had less than 400 students. The forecasted enrollment for the 2023–24 school year would result in 10 of Bellevue's 18 elementary schools having fewer than 400 students, according to the district. The district started discussions to consolidate schools and proposed in early 2023 to consolidate three elementary schools to save costs due to low enrollment, a trend expected to continue. The district voted in March 2023 to consolidate two elementary schools.

The Lake Washington School District (LWSD), which serves part of north Bellevue, had 30,423 students in 57 schools for the 2021–2022 school year. In October 2022, 30,423 students were enrolled in the district (Lake Washington School District 2023). LWSD moved from the sixth-largest school district in the state to the second-largest in a period of just five years. An additional 3,500 students are expected by 2030 (Lake Washington School District 2022).

The Renton School District serves southwest Bellevue, Renton, Newcastle, Kent, Tukwila, South Seattle, and parts of unincorporated King County (Renton School District 2023a). As of February 2023, the Renton School District serves 14,376 students across four high schools, four middle schools, 15 elementary schools and an early childhood learning center. Enrollment is declining (Renton School District 2023b).

Bellevue School District Enrollment

Enrollment in the Bellevue School District has dropped to 18,400 students in the 2022–2023 school year. The district reported that in October 2022, it became clear that enrollment would not go back to pre-pandemic level, as a result of lower birth rates, higher housing costs, more educational options for families including private schools, lower immigration levels, and families moving to more-affordable areas.

The Issaquah School District serves southeast Bellevue. It currently has capacity to serve 18,630 students in permanent facilities and 4,290 students in portables at 95 percent capacity. The Issaquah School District is expecting increased enrollment over time especially at the elementary and high school levels (Issaquah School District 2022).

The Wilburton study area is served by the Bellevue School District. Students within the Wilburton study area typically attend Wilburton Elementary, Chinook Middle School, Odle Middle School, Sammamish High School and Bellevue High School or a Choice School within the Bellevue School District.

10.2.3 Utilities

This section provides information on electricity, water, wastewater, and solid waste.

ELECTRICITY

Electricity in the City of Bellevue is provided by Puget Sound Energy (PSE). PSE serves roughly 1.1 million electric customers across King, Kitsap, Skagit, Thurston, Whatcom, Island, Kittitas, and Pierce counties. Six in-person paystations are located within the city of Bellevue (PSE 2023a).

- The Eastside Needs Assessment Report determined that overloads are expected to occur in extreme weather (Quanta Technology 2013).
- The Supplemental Eastside Needs Assessment Report written in 2015 predicted a capacity deficiency in the Eastside area that would develop by the winter of 2017-18 and that the deficiency in the Eastside area would increase beyond that date (Quanta Technology 2015).
- In 2021, 98 distribution circuits served Bellevue customers. Of these, 79 circuits had reliability numbers better than the systemwide performances and 17 circuits experienced no unplanned outages. 19 circuits had System Average Interruption Duration Index or System Average Interruption Frequency Index figures that exceeded the 2021 PSE system wide performance values (PSE 2022).

Energize Eastside

Puget Sound Energy's Energize Eastside project includes a new substation to provide additional capacity, 18 upgraded transmission lines within the existing corridor to deliver additional power to homes and businesses, and continued conservation. The new lines will bring more power to the cities of Bellevue, Kirkland, Newcastle, Redmond, and Renton. Construction is expected to be complete at the end of 2024.

Energize Eastside Project

Federal regulations require PSE to have sufficient infrastructure to meet foreseeable demand requirements or plan for intentional load shedding (also referred to as rolling blackouts or rotating outages) to customers. PSE is currently in the process of addressing future electrical needs by building elements of the Energize Eastside project. The Energize Eastside project resulted from the review of the studies listed in the previous section that showed that the region needs upgrades in electric infrastructure to keep up with the demand for electricity.

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Watershed Management Plan

The City of Bellevue prepared a Watershed Management Plan in 2022. A watershed is an area of land that drains to a body of water that includes streams, lakes, and wetlands. Ultimately, what happens on the land impacts the health and water quality of waterways. Bellevue is home to four major watersheds that include a diverse variety of fish and other wildlife. The four watersheds are:

1. Coal Creek Watershed
2. Kelsey Creek Watershed
3. Lake Sammamish Watershed
4. Small Lake Washington Watershed

WATER

Bellevue provides drinking water to more than 37,000 homes across Bellevue's service area via 600 miles of pressurized water mains (Bellevue Utilities Department 2023e). Water is acquired through the Cascade Water Alliance, an association of water districts and cities that serves as a regional water supply agency and wholesale water provider. Water comes from the protected watersheds of the Cedar and South Fork Tolt rivers in the Cascade Mountains and meets or exceeds state and federal water quality requirements (Bellevue Utilities Department 2023g).

The City of Bellevue prepared a Watershed Management Plan in 2022. The Watershed Management Plan recommends actions for the city in four categories:

- **Projects**, such as controlling and treating rainwater runoff from city streets before it gets into streams.
- **Programs**, like helping people who live near streams to better care for them and removing barriers so fish can move easily through our streams.
- **Policies or regulations**, such as incentives for developers or homeowners to build facilities to clean runoff before it gets into streams.
- **Enhanced maintenance**, like more street sweeping to prevent pollutants from entering streams.

The city will be able to act upon the recommendations to accommodate the need for water quantity and quality for all areas of the community (City of Bellevue 2023h).

The current City of Bellevue Storm and Surface Water System Plan (City of Bellevue 2016) establishes the city's storm and surface water policy and is a major update of Bellevue's 1994 Comprehensive Drainage Plan. Intended for residents, business owners, city staff, developers and other interested parties, the new plan supports Bellevue's Comprehensive Plan, evaluates the management of the city's storm and surface water system, provides a "road map" for future planning, and helps the city meet federal, state, and regional regulations (City of Bellevue 2022).

The Bellevue Utilities Department actively maintains its water infrastructure, which includes pipes, reservoirs, pump stations, pressure zones and fire hydrants, through regular maintenance, repair or rehabilitation and replacement. Approximately 5 miles—or 26,000 linear feet of water pipeline—are replaced each year (Bellevue Utilities Department 2023a). Bellevue has about 30 water main breaks per year (Bellevue Utilities Department 2023a).

Bellevue has two levels of services that directly affect customers: the number of unplanned water service interruptions (outages) and the frequency of water main breaks. The maximum threshold for target level of service for unplanned water service outages is three per 1,000 customers. The maximum threshold for water main break frequency is 10 times per 100 miles of pipe (Bellevue Utilities Department 2016).

The Utilities Department is replacing outdated, manually read water meters with new wireless-read Smart Water Meters at businesses and homes. Over its 20-year lifespan, the Utilities Department projects that the \$23 million investment in the Smart Water Meter upgrade will cost less than the manually read meter system. The Smart Water Meters project will not result in any additional rate increases.

The City of Bellevue is developing a master plan for providing an emergency source of drinking water in the event of disruption to the water currently supplied by Seattle Public Utilities (SPU) via the Cascade Water Alliance.

The CIP Plan is a schedule of major public facility improvements to be implemented over a seven-year period. The CIP Plan includes details on project design, land acquisition, construction costs, and

financing sources. The City Council approved the most recent Bellevue CIP Plan in December 2020.

The CIP Plan organizes projects into topics including transportation, parks, general government, public safety, community development, economic development, neighborhood enhancement program, neighborhood investment strategy, water, sewer, and storm drainage.

The Capital Facilities Element of the Comprehensive Plan references the CIP Plan and provides broader policy guidance for capital facility planning.

The CIP is updated every two years as part of the city's biennial budget process. Activities in the CIP include planning, design and construction for projects that support renewal and replacement of aging infrastructure; capacity for growth; environmental preservation; and service enhancement.

The following projects have been identified for investment over the next 20 years (Bellevue Utilities Department 2023f):

- Water Main Replacement
- Pressure Reducing Valve Rehabilitation
- Minor Water Capital Improvement Projects
- Reservoir Rehabilitation or Replacement
- Water Pump Station Rehabilitation or Replacement
- Replacement of Large Commercial Meter Vaults
- Water Service Line & Saddle Replacement Program
- Water Supply Inlet Rehabilitation
- Water System Planning
- Supervisory Control and Data Acquisition System Upgrade
- 170th Pl. SE Pressure Improvements
- Increase Drinking Water Storage Availability for West Operating Area
- Maintenance and Operations Yard
- Somerset Highlands Capacity Improvements
- Groundwater Well Improvements

WASTEWATER

Wastewater is the water that leaves the inside of a residence or business through sinks, toilets, washing machines, etc. and enters Bellevue's wastewater (sewage) collection system. 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 525 miles of mainline pipes, 130 miles of service stubs, 18.7 miles of "lake line" sewer pipe, 10 flush stations, 36 pump stations and 14,360 manholes (Bellevue Utilities Department 2014). The wastewater utility serves 37,000 customer accounts across 37 square miles, including the entire City of Bellevue, Clyde Hill, Medina, Hunts Point, Yarrow Point, Beaux Arts and small adjacent portions of the City of Issaquah and unincorporated King County (Bellevue Utilities Department 2023g).

Bellevue owns 15 miles of submerged wastewater pipeline in Lake Washington and approximately 4 miles of submerged wastewater pipeline in Lake Sammamish. These "lake lines" were constructed in the late 1950s and 1960s and are nearing the end of their useful life. The city maintains them and is evaluating their 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. The city is currently in the process of developing a management plan for improvements to the existing Lake Washington lake lines.

Bellevue relies on both a Storm and Surface Water System Plan and a Wastewater System Plan to guide decisions on infrastructure. The current Storm and Surface Water System Plan establishes the city's storm and surface water policy and is a major update of Bellevue's 1994 Comprehensive Drainage Plan. Intended for residents, business owners, city staff, developers, and other interested parties, the new plan supports Bellevue's Comprehensive Plan, evaluates the management of the city's storm and surface water system, provides a "road map" for future planning, and helps the city meet federal, state, and regional regulations.

The Wastewater System Plan is the culmination of months of policy review, a technical evaluation of the wastewater system, followed by

Lake Washington Lake Lines

Bellevue's lake lines are an important part of the wastewater system, located along the shorelines of Lake Washington and Lake Sammamish. A management plan is being developed for just the Lake Washington line. The Lake Washington wastewater pipes are either underwater or on land adjacent to the lake. Lake line pipes carry raw sewage from shoreline properties to sewer pump and/or lift stations, which in turn, pump the sewage into an upland King County sewer system to eventually discharge into a county sewer treatment plant.

development of plan recommendations that will guide future management and operation of the wastewater utility system.

Both the plans are updated regularly, and as growth continues, other projects to accommodate future needs would be addressed.

On-Site Sewage Disposal Systems

On-Site Sewage (OSS) Disposal Systems

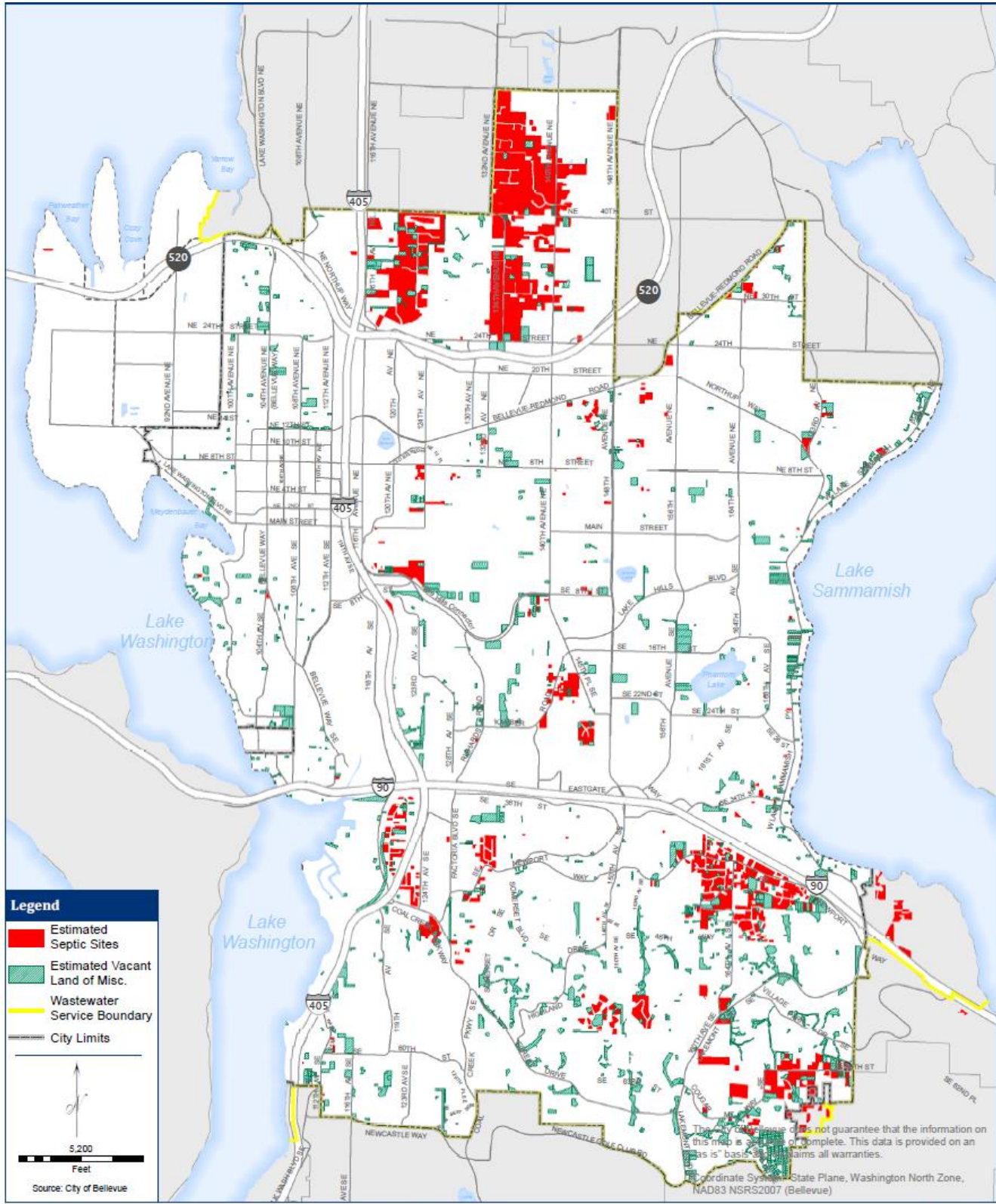
OSS disposal systems treat wastewater when homes and buildings are not connected to public sewer systems. The King County Public Health OSS Program provides educational, advisory, and permitting services for owners of septic systems and certifications for septic professionals.

Significant sections of the city still use on-site sewage (OSS) disposal systems. The term typically refers to a system using a septic tank in combination with a drainfield, such as a leachfield or mound. When operating properly, OSS disposal systems are an acceptable means of treating and disposing of sewage on a small scale. If on-site systems are improperly maintained or constructed in soils with poor percolation rates, OSS disposal systems can fail. Poorly treated septic waste can surface or pond on the site or percolate into the groundwater. See **Figure 10-4** for non-sewered parcels. These areas include portions of the Bridle Trails neighborhood in northern Bellevue, areas near Cougar Mountain (southeastern Bellevue) and the Coal Creek area.

Bellevue Ordinance No. 4232, adopted February 22, 1991, prohibits any new buildings from connecting to septic systems except by variance. Since that time, only 16 variances have been approved to allow septic systems. The 2023–2029 Capital Investment Program Plan Sewer Fund allocates funds to ensure that current and future generations have reliable wastewater services and help protect the natural environment (Bellevue Utilities Department 2023a).

Sewer Capital Investment Projects proposed in the 2023–2029 CIP include (Bellevue Utilities Department 2022):

- Sewer Pump Station & Force Main Improvements
- Sewer System Pipeline Major Repairs & Replacement
- Minor (Small) Sewer Capital Improvement Projects
- Lake Washington Sewer Lake Line Management Plan
- Sewer System Pipeline Replacement
- Sewer Planning Program
- Supervisory Control and Data Acquisition (SCADA) System Upgrade



SOURCE: City of Bellevue 2014

FIGURE 10-4 Non Sewered Parcels

King County's Public Health OSS Program also helps to ensure that over 84,000 septic systems are safe. They provide educational, advisory, and permitting services for owners of septic systems.

- Operations and Maintenance Yard
- Sewer Extensions in Septic System Areas
- Post-construction Monitoring and Maintenance Program

The wastewater systems have limited capacity to carry sewage and runoff that enters the system. More-intense rainfall may lead to more runoff entering the wastewater system through cracks and defects (infiltration) or through leaky manhole covers or direct connections to stormwater systems (inflow). This causes excess flows and surcharging, which is when the volume of wastewater exceeds the capacity of the system. During surcharge events, wastewater may back up and overflow and cause damage to private property or disrupt septic systems.

Ensuring Access to Safe Decentralized Wastewater Treatment is an Equity Issue

Some low-income households pipe untreated wastewater into yards or streams. Households that cannot afford to install septic systems, or maintain the systems they have, face health issues caused by wastewater backing up in homes and yards. These wastewater challenges affect primarily low-income people, communities of color, rural areas, and tribal communities. For these households, access to safe decentralized wastewater systems is key to protecting their health and wellbeing.

Ensuring access to safe decentralized wastewater treatment is an important water equity issue. More than 20 percent of Americans use decentralized systems, many of them in rural areas that are not served by municipal sewer systems (U.S. Water Alliance 2020). While most of these households have access to safe, functional systems, some vulnerable communities do not. According to the census, approximately two million people in the U.S. lack access to indoor plumbing, running water, or safe wastewater treatment. Some low-income households pipe untreated wastewater into yards or streams. Households that cannot afford to install septic systems, or maintain the systems they have, face health issues caused by wastewater backing up in homes and yards. These wastewater challenges affect primarily low-income people, communities of color, rural areas, and tribal communities. For these households, access to safe decentralized wastewater systems is key to protecting their health and wellbeing.

SOLID WASTE

Bellevue contracts with Republic Services for collection of garbage, recycling and organics from residents and businesses, citywide litter pickup and customer service and billing. The city manages the solid waste collection contract with Republic Services and provides outreach, education and technical assistance to residents and businesses to promote waste prevention, recycling and proper disposal of hazardous and moderate risk wastes. Per the 2017 Amended and Restated Solid Waste Interlocal Agreement between King County and

the City of Bellevue, the King County Solid Waste Division provides regional planning, transfer and recycling and disposal services for Bellevue, as well as 32 other cities (King County 2017).

Materials in Bellevue are processed as follows (Bellevue Utilities Department 2023b):

- **Recycling** – Republic Services sorts and processes Bellevue’s recyclables at its material recovery facility in Seattle.
- **Organics** – Cedar Grove processes the city’s organics into compost at its facility in Maple Valley.
- **Garbage** – Republic Services hauls Bellevue’s garbage to one or more of eight transfer stations in the King County transfer station system, where it is compacted and delivered for permanent landfilling at the county-owned Cedar Hills Regional Landfill.

10.3 Potential Impacts

10.3.1 Thresholds of Significance

In addition to a general analysis of public services and utility impacts, the following thresholds of significance are included in this chapter:

- Reduce access to parks and open space facilities.
- Result in increases in students and lack of facilities.
- Negatively affects the response times for police and/or fire and emergency medical services identified by the Bellevue Police Department and Bellevue Fire Department.
- Increase demand for special emergency services beyond current operational capabilities of service providers.
- Result in inconsistencies with planned growth and capital plans for the utility system.
- Potentially require major new projects or initiatives for energy system upgrades to accommodate redevelopment.

In addition, each alternative is evaluated using the equity and environmental sustainability performance metrics:

- Qualitative discussion of gaps in sewer infrastructure and where capacity is increasing in combination with the location of septic systems.

10.3.2 Impacts Common to All Alternatives

The potential impacts identified for the No Action Alternative and Action Alternatives includes analysis of the “build-out” housing unit capacity and job capacity associated with each alternative. For the No Action Alternative and the Action Alternatives, these capacities for growth are higher than overall citywide growth targets of 35,000 new housing units and 70,000 new jobs by 2044. It is not expected that the “build-out” housing and job capacities would all occur by 2044, but the EIS nonetheless assumes this growth when evaluating potential environmental impacts associated with the alternatives.

The No Action and Action Alternatives have varying amounts of housing capacity and job capacity, which may increase the need for public services and utilities based on the percentage of increase.

Potential population growth associated with increased housing capacity will increase under each alternative, particularly with Alternative 3 the most and Alternative 1 the least.

Potential future population and employment growth will increase the demand for public services including police, fire/EMT, and schools. Incremental growth over the planning period would be addressed during the city’s regular capital planning efforts. Each service provider in conjunction with the city could evaluate levels of service and funding sources to balance with expected growth; if funding falls short, adjustments may be needed to level of service targets or to growth targets as part of regular planning under the Growth Management Act.

PUBLIC SERVICES

Police

Increases in population and employment in the City of Bellevue, under all alternatives could potentially increase calls for police service. In addition to the increases in densities, other factors may influence crime levels as areas grow. Under all alternatives, Bellevue would see growth of population and employment, creating more demand for fire and emergency medical services while continuing to challenge staff to meet response time targets.

Fire

Increased development under all alternatives would likely increase calls for fire service. As the area grows, additional staff, equipment,

and potentially new fire stations would be required to maintain current level of service standards. In addition, to meet response time requirements as growth occurs, the city may need to re-evaluate staffing levels and equipment at specific fire stations located closest to areas planned for high levels of growth. As congestion increases, satellite storage for emergency response equipment may be needed.

With the passage of the Fire Facilities Levy in 2016, the City of Bellevue is planning to start construction on the new Fire Station 10. The construction and operation of Station 10 and the proximity to high-rise buildings will help with response times, including vertical response times (time to travel from curbside to location in a high-rise building). The new station will enable the department to effectively access Downtown, BelRed, and the area around the Wilburton Light Rail Station, where greater growth and taller buildings are planned.

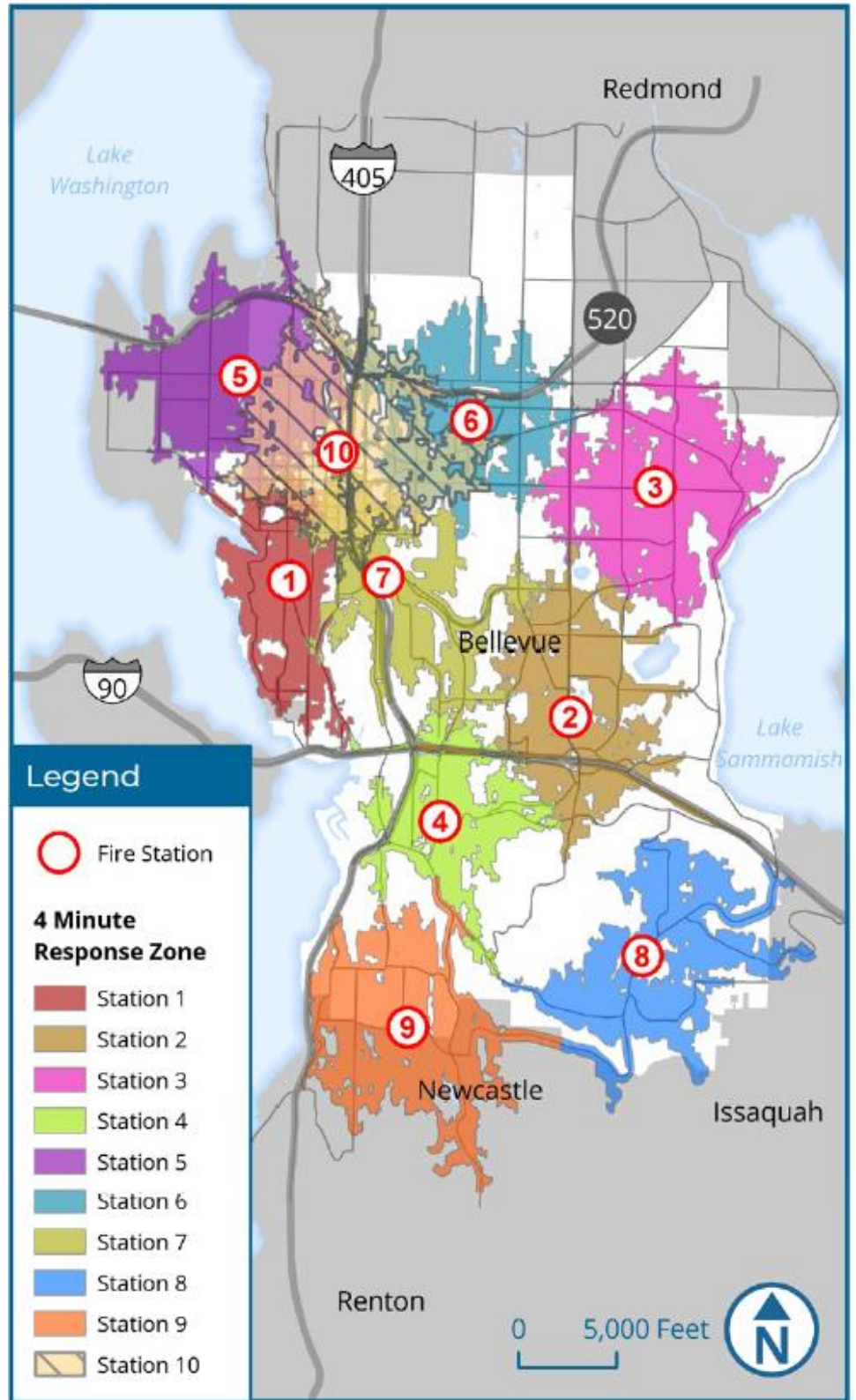
Figure 10-5 demonstrates four-minute response times with the addition of Fire Station 10.

Significant impacts on response times are not expected. The passage of the levy also provides funding to upgrade other stations and facilities to ensure the department can meet the growing demand in services and maintain response times.

Parks

As population increases in the city from new development, demand for parks and recreation would increase. The city relies on the Bellevue Comprehensive Plan and the Parks & Open Space System Plan to identify and accommodate gaps in service. As mentioned in Section 2.2.1, the following neighborhood areas are currently identified as having significant gaps in walkable access to parks and trails: BelRed, Bridle Trails, Cougar Mountain/Lakemont, Crossroads, Downtown, Eastgate, Factoria, Newport, Northwest Bellevue, Northeast Bellevue, Somerset, West Lake Sammamish, and Wilburton.

The city would rely on the Parks & Open Space System Plan future updates and funding to accommodate the need for increased population needs for parks and recreation spaces under all of the alternatives. With implementation of mitigation measures and regular periodic review of plans, **no significant unavoidable adverse impacts on parks or recreation in the City of Bellevue or in the Wilburton study area are expected.**



SOURCE: Bellevue Fire Department 2022

FIGURE 10-5 Four-Minute Response Zone with Station 10

Schools

New residential development may result in additional students. The alternatives have varying amounts of housing capacity and approaches to adding new housing types.

The Bellevue School District, Renton School District, Lake Washington School District, and Issaquah School District will continue to monitor student enrollment and plan for changes by implementing short-term and long-term solutions. As mentioned above, the school districts are experiencing lower enrollments. Through school district planning, the schools can accommodate changing student numbers. The school districts currently believe they can accommodate students. With implementation of mitigation measures and regular periodic review of plans, **no significant unavoidable adverse impacts on schools in the City of Bellevue or in the Wilburton study area are expected.**

UTILITIES

Electricity

New residential development and commercial development may result in additional electrical utility use on a system that already has circuits that exceed customer minute interruption goals. The reliability of the electrical system is reviewed by assessing the reliability metrics that indicate the performance of the system relative to planned and unplanned outages. Electric system reliability is measured by standard industry metrics of System Average Interruption Frequency Index (SAIFI) and System Average Interruption Duration Index (SAIDI).

PSE's Energize Eastside program is currently under construction and is intended to be able to supply adequate electrical needs to the city even as the population grows.

This is a non-project action that will not create significant adverse impacts. Specific projects proposed will need to provide evidence that the city has the provisions for electricity. During project review, the city may determine they do not have enough electricity to provide for larger projects. In that case, they may not be able to accommodate the anticipated new growth under any of the alternatives. If the city is able to respond to additional demand for electricity as part of their planning (as they are doing with Energize Eastside), there should be **no significant impacts on electrical supply.**

System Average Interruption Frequency Index (SAIFI) and System Average Interruption Duration Index (SAIDI)

- SAIFI measures the number of outages an average customer experiences in a year.

SAIDI reflects the amount of outage time an average customer experiences during a year.

Water

New residential development and commercial development may result in an increase in need for additional water supply.

All alternatives would result in an increase in water demand, although the use of higher efficiency and low-flow fixtures could reduce per-capita demand. The Water System Plan is updated on a 6- to 10-year cycle to address aging infrastructure, expansion to accommodate development and recommended improvements.

Currently, all alternatives fit within the water system plan build-out analysis, and any increases in the water demand are expected to be covered under existing agreements with the Cascade Water Alliance. The Cascade Water Alliance is planning for the growth of the communities it serves and has contracts and opportunities to secure the necessary water for the region's growth.

All development may require developer-financed improvements to the water system serving that development. These improvements will be constructed concurrently with the development. Some projects to serve the additional growth may benefit a larger area and several future projects. The upcoming water system plan update will need to re-evaluate these required water system projects. In most cases, areas proposed for commercial, multi-family, or mixed used development that are served by lines that are smaller than 12 inches will be required to increase the water line serving their development to at least 12 inches.

Under all alternatives, the city is expected to see growth and may require water system improvement to increase the fire flow to meet current standards. To ensure fire flow is not affected in areas of growth, developers will be required to install improvements to the water system to ensure fire flow standards are met.

Provided that the actions above are met, **no significant impacts on water supply are expected.**

Wastewater

Development of any of the alternatives would result in greater demands on the local wastewater collection system and on the downstream conveyance and treatment facilities.

The Wastewater System Plan is one of the tools the city uses to track that there is adequate sewer infrastructure and show where capacity is increasing in combination with the location of septic systems. The

city will need to ensure that safe decentralized wastewater treatment is provided to all households in order to provide access to safe decentralized wastewater systems and protect their health and wellbeing.

Although demand for stormwater and other water services would increase, the application of regular capital facility planning, updated system plans, existing regulations, plans, or other mitigation measures can reduce impacts associated with future growth under all alternatives. New development and redevelopment must also comply with the current stringent stormwater regulations to be approved. Part of plan updates should include an emphasis on providing safe decentralized wastewater treatment to all households. With implementation of mitigation measures and regular periodic review of plans, **no significant unavoidable adverse impacts on wastewater in the City of Bellevue or in the Wilburton study area are expected.**

Solid Waste

All alternatives would result in increases in population density and commercial development, which would increase demand for garbage, recycling and organics collection.

10.3.3 Alternative 0 (No Action)

The No Action Alternative continues the current plan with growth focused in the Downtown, BelRed, and East Main Mixed Use Centers. The No Action Alternative has capacity for adding 41,000 new housing units over the 2023–2044 planning horizon. This is above the regional growth target for Bellevue, which is 35,000 new units, but does not meet other new planning requirements, including affordable housing across income bands and a range of housing types. There would be capacity for 124,000 new jobs under this alternative, which is above the regional growth target of 70,000 jobs. Housing capacity within the Wilburton study area would be small (less than 1 percent of the citywide total), and the Wilburton study area would have a modest share of citywide job capacity (5 percent), with no changes to allowed uses or building intensities.

The No Action Alternative would have the least amount of pressure on public services and utilities. Under Alternative 0, there would be the least growth and the least increase in demand for public services. The No Action Alternative is consistent with the expected growth in current water and wastewater system plans, which did not yet incorporate a more intense mixed use development pattern. With

implementation of mitigation measures and regular periodic review of plans, **no significant unavoidable adverse impacts on public services or utilities in the City of Bellevue or in the Wilburton study area are expected.**

10.3.4 Alternative 1

Alternative 1 allows for larger residential buildings, as well as gentle density increases across the city, resulting in capacity for an additional 59,000 housing units. Alternative 1 job capacity is 179,000. Alternative 1 would place more demand on public services and utilities than the No Action Alternative based on the “build-out” capacity. With implementation of mitigation measures and regular periodic review of plans, **no significant unavoidable adverse impacts on public services or utilities in the City of Bellevue or in the Wilburton study area are expected.**

10.3.5 Alternative 2

Alternative 2 focuses growth in Mixed Use Centers as well as in areas with good access to transit and jobs. There would be capacity for an additional 77,000 housing units. Alternative 2 job capacity is 177,000, slightly less than Alternative 1. Alternative 2 would place more demand on public services and utilities than the No Action Alternative and Alternative 1, but less than Alternative 3. With implementation of mitigation measures and regular periodic review of plans, **no significant unavoidable adverse impacts on public services or utilities in the City of Bellevue or in the Wilburton study area are expected.**

10.3.6 Alternative 3

Alternative 3 would allow a greater diversity of housing types in all centers and along transit corridors. There would be capacity for an additional 95,000 housing units. Alternative 3 job capacity is 200,000 (76,000 above the No Action Alternative). Alternative 3 would place the most demand on the public services and utilities in Bellevue.

Potential future population and employment growth associated with increased capacity will increase the demand for public services including police, fire/EMT, and schools. This growth would occur incrementally and be addressed during the city’s regular capital planning efforts. Each service provider in conjunction with the city could evaluate levels of service and funding sources to balance with expected growth; if funding falls short, adjustments may be needed

to level of service targets or to growth targets as part of regular planning under the Growth Management Act. With implementation of mitigation measures and regular periodic review of plans, **no significant unavoidable adverse impacts on public services or utilities in the City of Bellevue or in the Wilburton study area are expected.**

10.4 Avoidance, Minimization, and Mitigation Measures

Through the capital facilities planning process, the City of Bellevue would continue to address changes in services for police, fire, and utilities. The growth planned for the area would be incremental, and the planning process to relevant plans would address improvements required to maintain response times, ensure access to parks, address student growth, and ensure that utilities can accommodate growth.

10.4.1 Other Mitigation Measures

- Explore opportunities to develop new parks, open space, and recreation facilities, especially in the northern portion of the city, to address the 1/3-mile gap in access.
- Concentrate growth in areas with adequate water and sewer infrastructure.
- Build in additional population density into upcoming plan or service updates such as the Bellevue Fire Department Standards of Response Coverage, CIP Plan, and Police Initiatives.
- Invest in building 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.
- Extend water and wastewater utility service to unserved areas of the utility service area to ensure that all citizens have equitable access.
- Require wastewater connections for all new development, including single-family plats, unless otherwise allowed by state or county regulations.
- 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.

- Reduce vulnerability to surcharging during rainstorms by running the sewer model using forecast climate change rainfall amounts, expected to increase at highest percentages. The results will identify where retrofits may be required, but also where new development and redevelopment can mitigate for the future by installing pipes that carry a larger capacity.
- Update the Wastewater Management Plan to identify projects in the Capital Improvement Program or other studies that address known deficiencies for on-site disposal systems. Several areas have existing deficiencies that could be addressed as capital projects.
- Consider including the equity issues of provision of utilities in future updates to their Wastewater Management Plan to ensure all members of the community are provided safe means of handling wastewater.

10.5 Significant Unavoidable Adverse Impacts

Under all alternatives, potential future population and job growth would occur citywide and in the Wilburton study area. Effects on population growth on public services and utilities could be mitigated through the strategies in Section 10.4.1 above. The growth planned for the area would be incremental. Through the capital facilities planning process, the City of Bellevue would continue to address changes in public services and utilities. The school districts would continue to address changes in student enrollment.

While all alternatives will generate additional demand for water and sanitary sewer facilities, no significant unavoidable adverse impacts are expected with regular capital facility planning, updated system plans, and application of codes and standards. With implementation of mitigation measures and regular periodic review of plans, **no significant unavoidable adverse impacts on public services or utilities in the City of Bellevue or in the Wilburton study area are expected.**