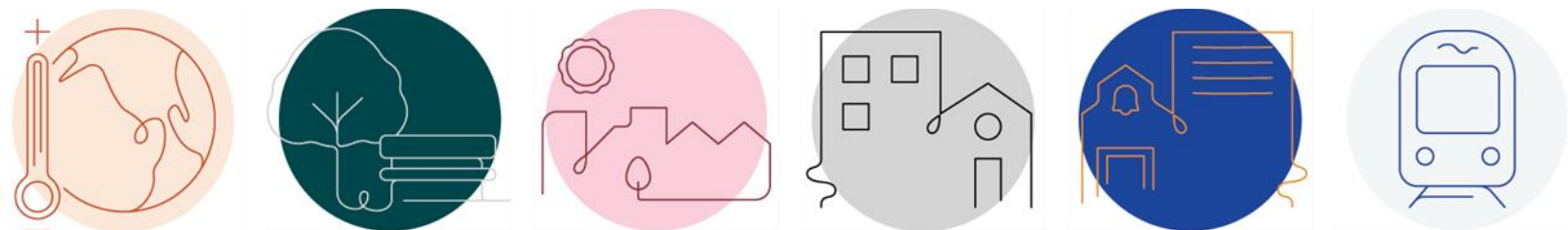


3.11 Public Services



Jefferson Park. Source: City of Seattle, 2023.

This section addresses the potential impacts on public services associated with each alternative. Public services are defined as police, fire, emergency medical; parks and recreation; and schools. These services are provided citywide principally by the City of Seattle for police, fire, and parks, and by the Seattle Public Schools for education. Other providers of public safety include the Port of Seattle, King County Metro, and University of Washington. Other private institutions provide education services. Regarding parks, the focus is on Seattle Parks and Recreation Facilities managed with a level of service for the public. Other recreation facilities that are available to the community include public schools and universities, public street ends, Port recreation facilities, and other public lands like Seattle Center and Hiram M. Chittenden Locks.

Impacts of the alternatives are considered significant if they:

- Result in insufficient parks, open space, and trail capacity to serve expected population based on existing levels of service.
- Create inconsistencies with shoreline public access policies.
- Result in increases in public school enrollment that cannot be accommodated through regular school planning processes.
- Increase demand for police or fire and emergency that can't be accommodated through regular planning and staffing processes.
- Result in insufficient capacity to handle solid waste under current Seattle Public Facility plans.

3.11.1 Affected Environment

Police

Information about police services was collected from the Seattle Police Department (SPD) as well as other law enforcement agencies responsible for patrol in the City of Seattle. Data from SPD's 2019 Strategic Plan and the City's adopted 2021 Budget, and 2023-2028 Capital Improvements Plan published calls for service, response times, and crime reports annually inform this analysis. Independent researchers at Seattle University also collect data at the micro- community level through the annual Seattle Public Safety Survey which is available via SPD's Survey Results Dashboard. Coordination between the EIS authors and SPD's Director of Strategic Initiatives also informed this analysis.

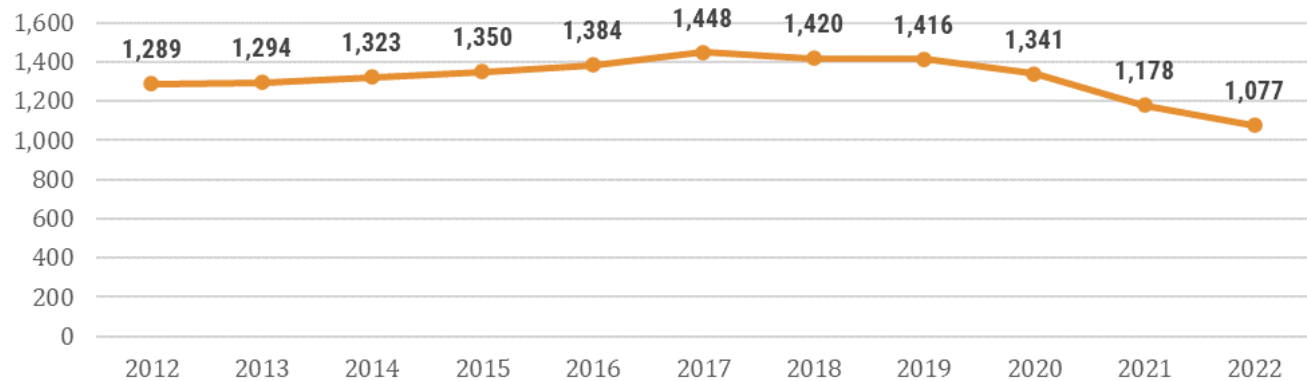
Citywide

Facilities & Staff

The Seattle Police Department (SPD) provides police protection services to the City of Seattle. Its primary duties include foot, car, and bike patrols, harbor patrols, 911 calls, investigations, traffic enforcement, parking enforcement, homeland security, and specialty units such as

Special Weapons and Tactics (SWAT), gang, bomb/arson, and canine units. As of 2022, SPD currently has had 1,077 deployable sworn officers across all precincts and support facilities and between 341 and 405 additional non-officer employees (Washington Association of Sheriffs & Police Chiefs 2022, Socci, 2023). From the same WASP source, a 2023 estimate of sworn officers was 1,065. As of spring 2024, the number of sworn officers was estimated as 917. (Seattle Police Department 2023). **Exhibit 3.11-1** highlights a recent downward trend in officer staffing.

Exhibit 3.11-1. Commissioned SPD Officers



Source: Washington Association of Sheriffs and Police Chiefs, 2023

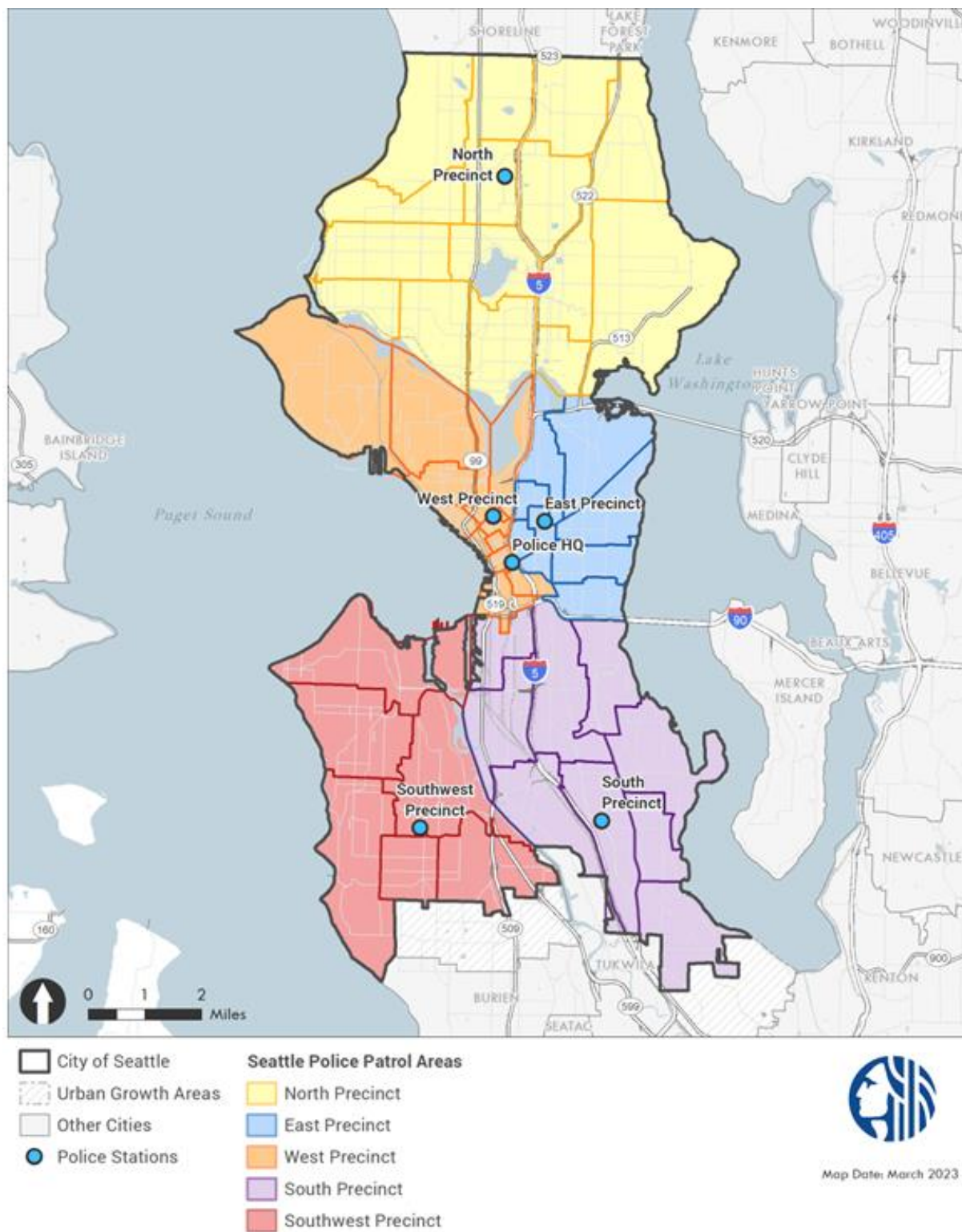
The Department is divided into five precincts, each with a police station that serves as the base of operations for that precinct. Information about the precinct facilities is available in **Exhibit 3.11-2** and the areas of service for each of the precincts are mapped in **Exhibit 3.11-3**.

Exhibit 3.11-2. Police Precinct Facilities

Precinct	Location	Primary Area Served	Sq Ft	Year Built
North	10049 College Way N	North of the Ship Canal to city limits	16,434	1984
West	810 Virginia St	Queen Anne, Magnolia, the Downtown core, and the area west of I-5	46,231	1999
East	1519 12th Ave	Eastlake and the area north of I-90 to the Ship Canal and east of I-5	61,580	1926
South	3001 S Myrtle St East	South of I-90 to city limits and west of the Duwamish	13,688	1983
Southwest	2300 Webster St	West Seattle and the Duwamish Industrial Area	28,531	2002

Source: City of Seattle, 2020

Exhibit 3.11-3. Police Precinct and Beat Boundaries



Sources: City of Seattle 2022; BERK, 2023.

These precincts serve different sectors of city and their alignment with Comprehensive Plan Analysis zones is generally as follows:

- A. EIS Study Areas 1 and 2: North Precinct
- B. EIS Study Areas 3 and 4: West Precinct
- C. EIS Study Area 5: East Precinct
- D. EIS Study Area 6: Southwest Precinct
- E. EIS Study Areas 7 and 8: South Precinct

Maps illustrating the EIS Study Area boundaries and precincts are available in [Appendix I](#).

Police Departments with Shared Jurisdiction

There are some areas and situations where the Seattle Police Department shares enforcement with other agencies.

Port of Seattle Police

The Port of Seattle Police (POSPD) are responsible for patrol and primary law enforcement of multiple different seaport locations as well as SeaTac International Airport which falls outside of the study area. Seaport properties such as the Downtown Seattle terminals, Shilshole Bay Marina, shipping facilities on the Duwamish River, and parts of Harbor Island are monitored by the Marine Patrol Unit and the POSPD Dive Team.

King County Sheriff's Office

Since Seattle is within King County, the King County Sheriff's Office has jurisdictional authority within the city limits as well, but the Seattle Police are considered the primary police agency. SPD works very closely with the King County Sheriff's Office.

Regional Transit Police

Both King County Metro and Sound Transit work closely with SPD but are primarily responsible for transit stops, tunnels, and other regional transit facilities.

Washington State Patrol

The Seattle Police Department shares jurisdictional authority with the Washington State Patrol within the study area's interstate highways.

Washington State Patrol is also the central repository for criminal history information in the State of Washington and runs the Crime Lab for the entire state of Washington.

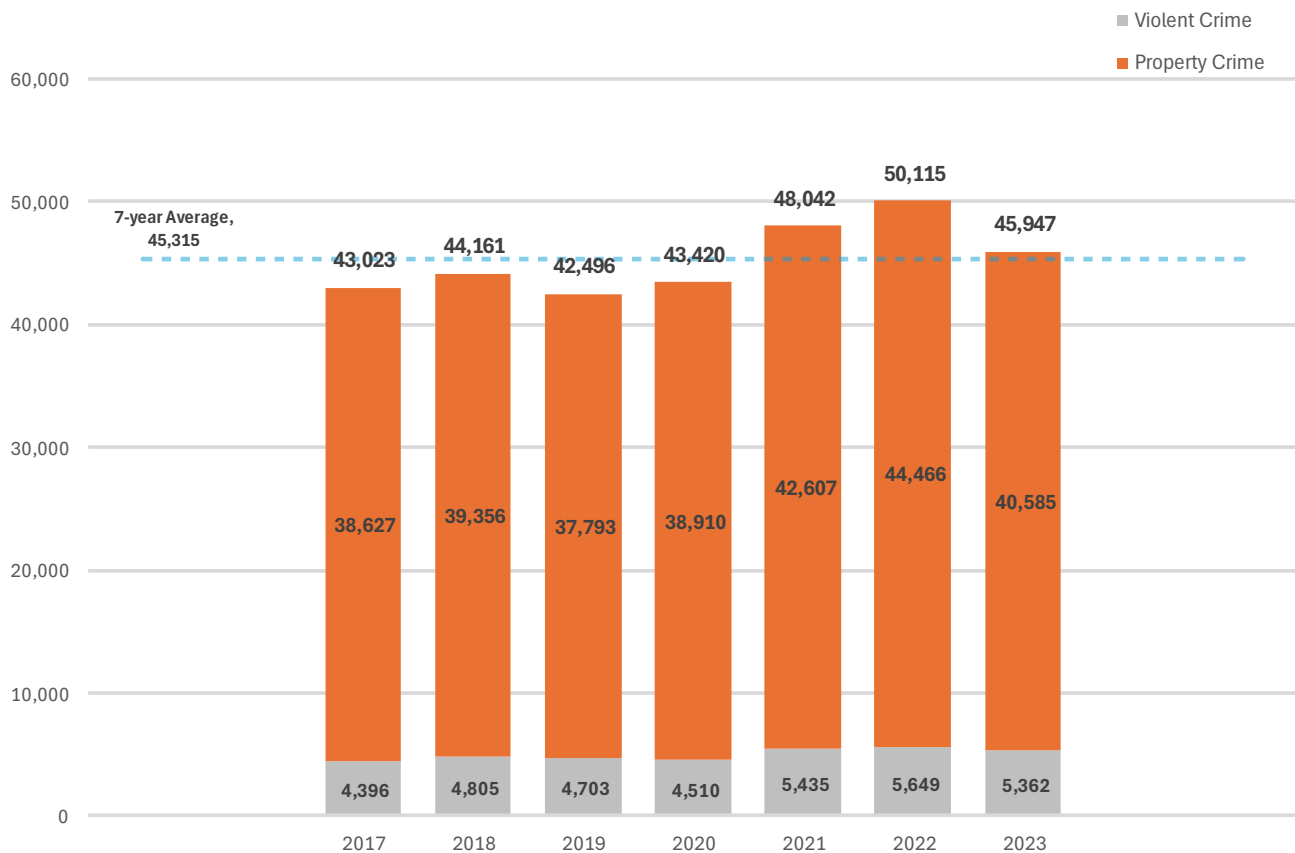
University of Washington Police

This police department has jurisdictional responsibility over the University of Washington Campus and serves as the primary law enforcement and investigative agency. All crime statistics within this jurisdiction are maintained by the University of Washington Police department.

Crime Rates & Service Calls

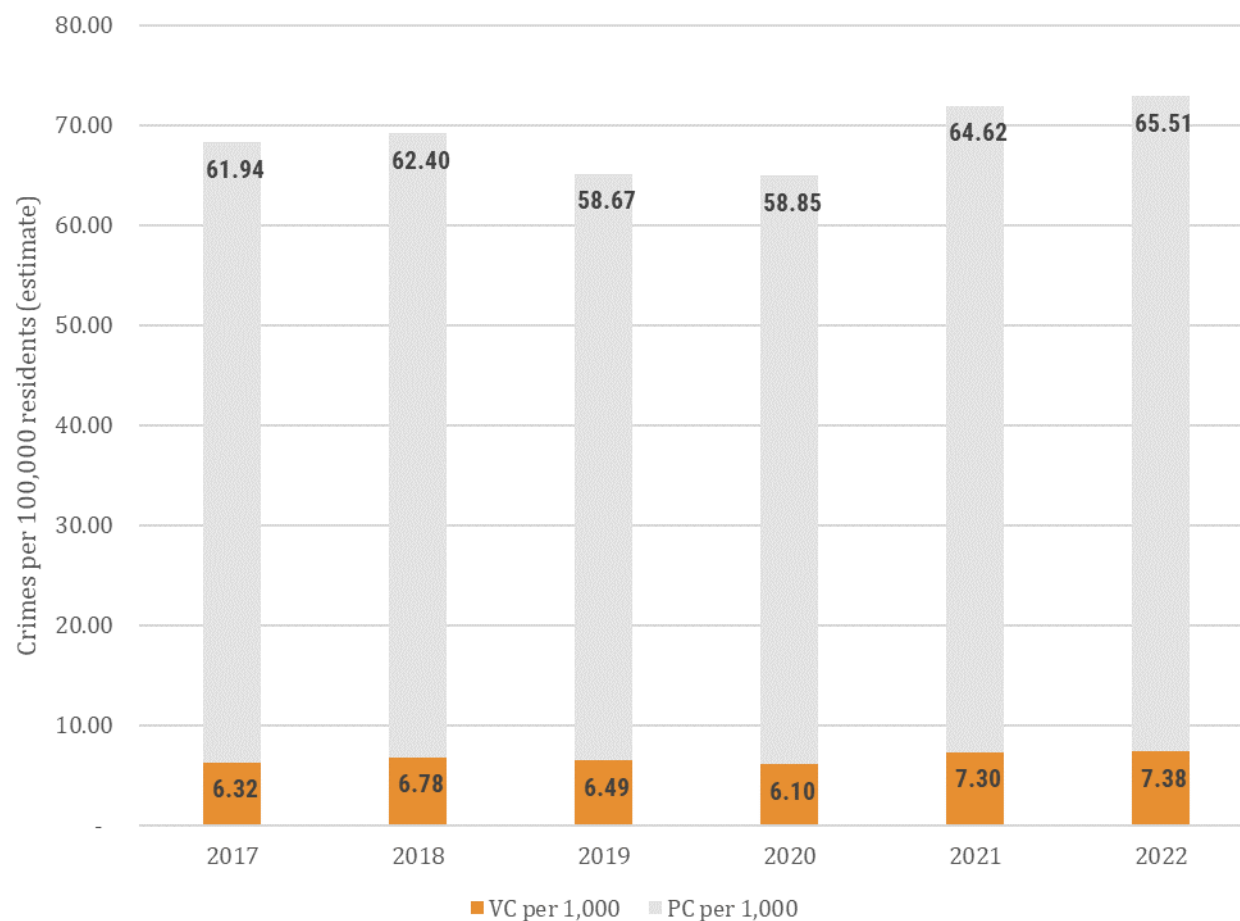
Since 2017, Seattle's crime rate has increased both in aggregate and per capita. In [Exhibit 3.11-4](#) and [Exhibit 3.11-5](#) violent crime includes homicide, rape, robbery, and aggravated assault whereas property crime includes burglary larceny and vehicle theft. There was a slight drop in the crime rate in 2019 that has since increased in 2021 and 2022 but dropped back down in 2023 to a level more similar to 2017 – 2020.

Exhibit 3.11-4. Crime Reported, 2017-2023²



Note: Graph replaced since the Draft EIS to add 2023 and adjust prior year statistics. General order of magnitude is similar.
 Sources: Seattle Police Department Crime Dashboard, 2024³; BERK, 2024³.

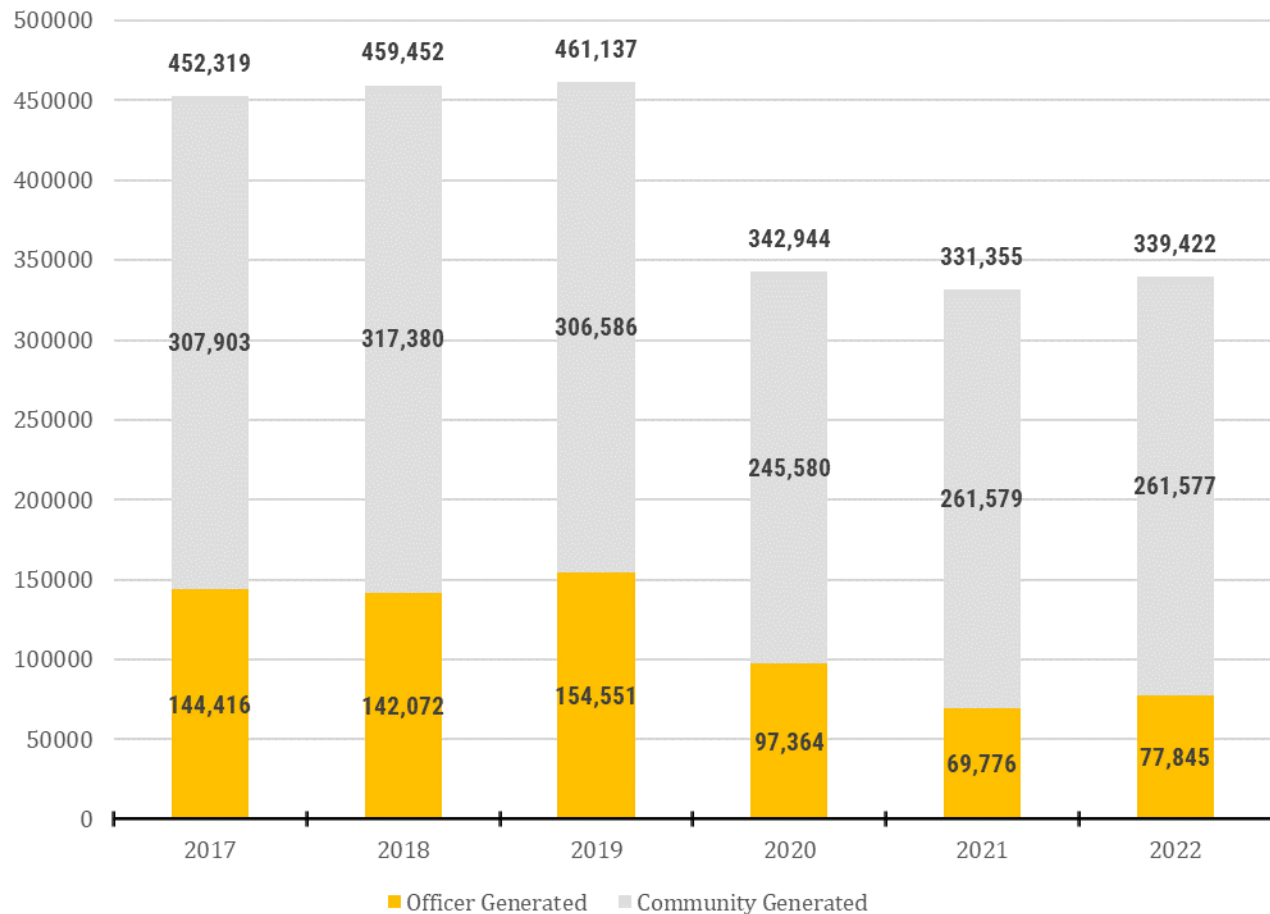
Exhibit 3.11-5. Reported Crime per 1,000 in Population, 2017-2022



Sources: OFM population statistics, 2017-2022; Seattle Police Department Crime Dashboard, 2023; BERK, 2023.

Data from the 2022 Crime Report and the Crime Dashboard show that while the crime rate has increased during this period indicating a positive correlation between population growth and crime rate, the calls for service have gone down significantly during the same period as seen in [Exhibit 3.11-6](#).

Exhibit 3.11-6. SPD Citywide Dispatches by Type, 2017-2022



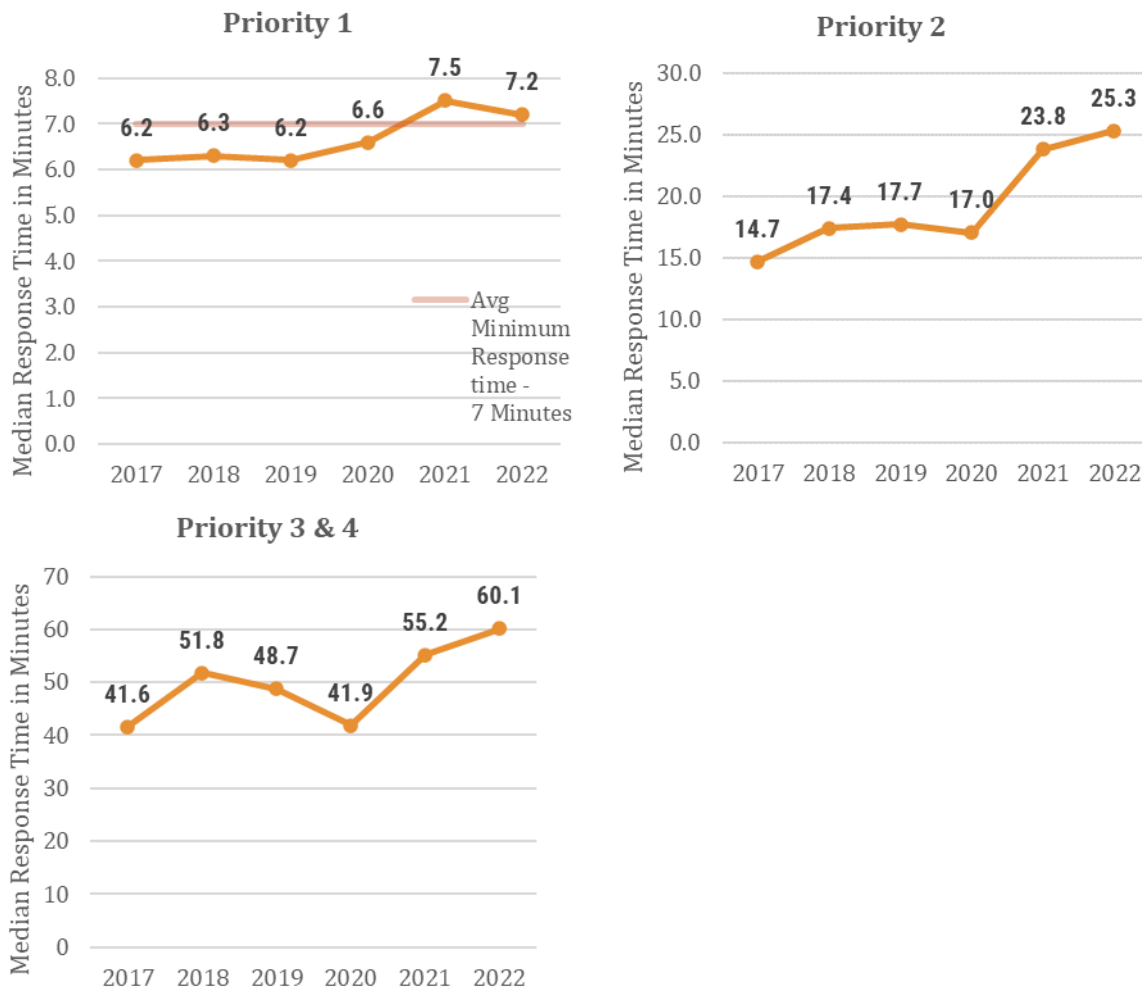
Note: Dispatches that were generated by unknown sources were not counted in this exhibit.

Sources: Seattle Police Computer Aided Dashboard, 2023; BERK, 2023.

Citywide Emergency Response Times

Dispatches are divided into priority 1-4 and the minimum response time level of service is determined by the priority of the call. The response time goal for priority one calls is 7 minutes. SPD has consistently been able to meet or narrowly miss this goal from 2017-2022 as seen in [Exhibit 3.11-7](#).

Exhibit 3.11-7. SPD Dispatches and Response Times by Priority, 2017-2022



Source: City of Seattle, 2022; BERK, 2023.

Area Specific

Seattle Police Department is divided into five precincts and each precinct is divided into beats that are patrolled by officers.

Micro-Community Police Plans (MCP) Priorities

The Seattle Public Safety Survey collects data at the micro-community level about perceptions of crime and public safety, police-community interactions, and knowledge and understanding of the MCPs. The top five citywide public safety concerns identified in the 2021 survey (in order) were:

1. Police Capacity
2. Property Crime
3. Homelessness
4. Traffic Safety
5. Community and Public Safety Capacity

The top five public safety concerns in each Precinct are listed in [Exhibit 3.11-8](#).

Exhibit 3.11-8. Top 5 Safety Concerns by Precinct in Ranked Order, 2021

Precinct	1st	2nd	3rd	4th	5th
East	Police Capacity	Property Crime	Homelessness	Traffic Safety	Community and Public Safety Capacity
North	Police Capacity	Homelessness	Property Crime	Traffic Safety	Community and Public Safety Capacity
South	Police Capacity	Property Crime	Homelessness	Drugs and Alcohol	Community and Public Safety Capacity
Southwest	Police Capacity	Property Crime	Homelessness	Traffic Safety	Community and Public Safety Capacity
West	Police Capacity	Property Crime	Homelessness	Drugs and Alcohol	Community and Public Safety Capacity

Source: Seattle Public Safety, 2021.

Safety concerns are summarized below:

- **East:** Survey respondents in the East Precinct identified the same top five public safety themes as the city. These themes were the same when analyzed at a MCP level, just in different orders of priority. The Public Safety survey noted that overall, there is less concern

about crime (both day and night) compared to the city and has an overall less favorable view of SPD compared to Nationwide trends.

- **North:** The North Precinct shared similar public safety concerns as the city. However, survey respondents noted drugs and alcohol as a major public safety concern. There is an overall less concern of crime (both day and night) and have a less favorable view of SPD. Looking at MCPs, Lawlessness was identified as a top theme in Lake City and Homelessness in Fremont, showing some discrepancies in looking at different subareas within the North Precinct.
- **South:** South Precinct Survey responded that Drugs and Alcohol was a higher concern compared to the city than traffic safety. Fear of Crime (both day and night), and perception of SPD, and the police nationwide, is less than the city's average overall. When looking at MCPs, there were some differences in top public safety concerns. For example, property crime was a top safety concern in SODO.
- **South-West:** Top public safety concerns match city wide themes. The precinct has a higher level of fear of crime (both day and night) and a higher favorable view of SPD and the police nationwide. This is the highest favorable perception of SPD in all the precincts.
- **West:** Survey respondents had similar top public safety themes compared to the city but noted Drugs and Alcohol as a higher priority. The precinct has the highest fear of crime compared to the city and have a high favorable perception of SPD and police nationwide. Violent Crime is also noted as a top priority in the International District when looking at MCPs.

Staffing & Facilities

SPD's staff is split between its five precincts, headquarters, support facilities, harbor patrol facility, and more. Approximately 514 of the 1,077 commissioned officers are considered precinct staff. See [Exhibit 3.11-9](#). Other staff distributions are available in [Exhibit 3.11-9](#).

Exhibit 3.11-9. SPD Precinct Staffing as of December 31, 2022

	East		North		South		Southwest		West		Citywide		Total	
	Sargent	Officer	Sargent	Officer	Sargent	Officer	Sargent	Officer	Sargent	Officer	Sargent	Officer	Sargent	Officer
911	11	66	19	116	10	74	8	52	13	107	5	23	66	438
Beats	—	—	—	—	—	—	—	—	1	6	—	—	1	6
Seattle Center	—	—	—	—	—	—	—	—	1	2	—	—	1	2
Total	11	66	19	116	10	74	8	52	15	115	5	23	514	

Note: includes phase 3 student officers, personnel who are unavailable due to vacation, training, limited duty, or short-term illness/injury, half time officers, and officers in Acting Sargent assignments. Excludes phase 1 and phase 2 students, detectives, and personnel on extended leave.

Source: SPD, 2023; Socci, 2023

By precinct, the available size and features of each station building is identified below:

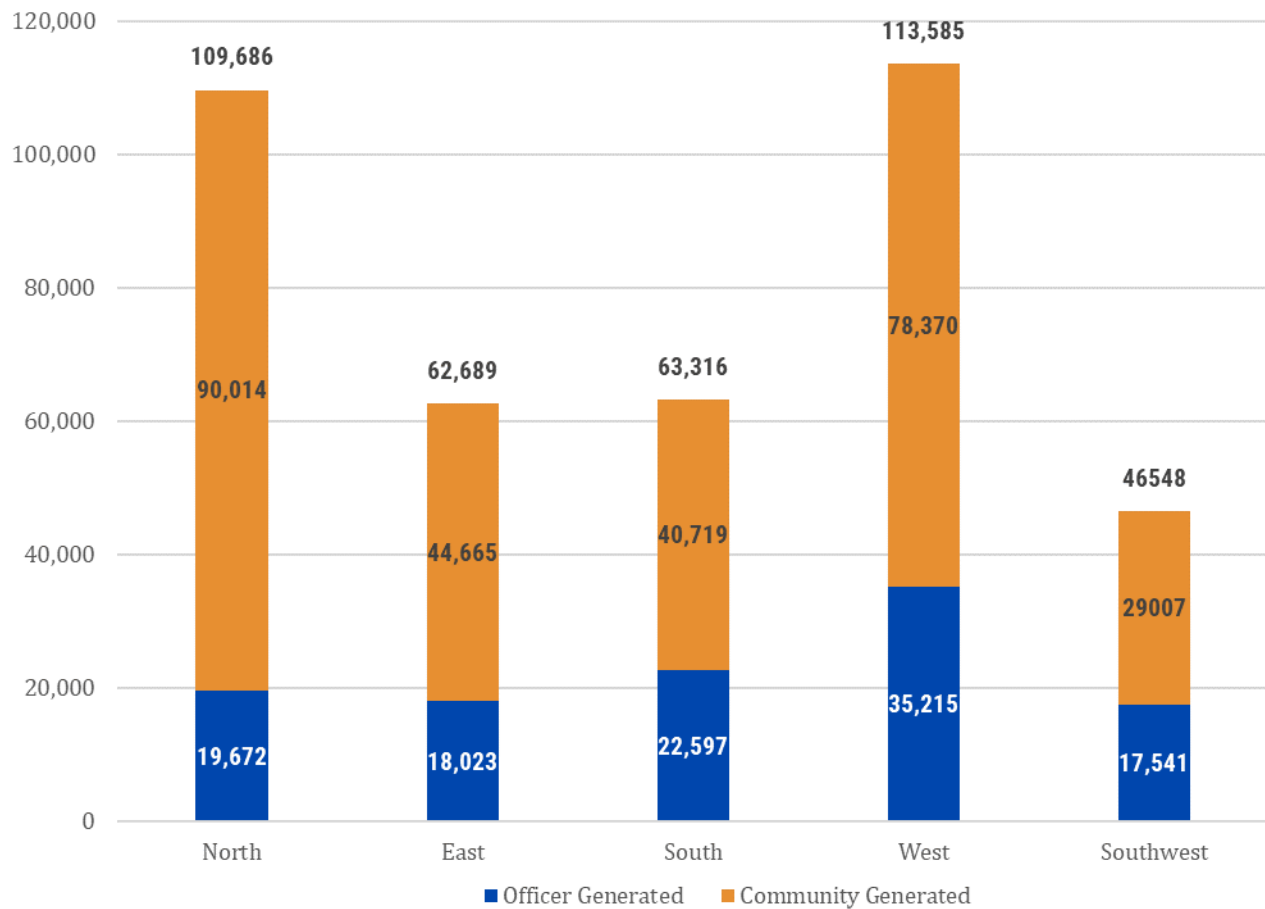
- A. **North:** The North precinct was built in 1994 and is 16,560 square feet. Currently the department is leasing 5,000 square feet of nearby office space to house additional administrative staff members. It is the base for 135 sworn in officers and 119 additional staff and was designed to accommodate 154 staff. The North Precinct Police station upgrade was put on hold in 2016 to re-address department needs (Seattle, 2018).
- B. **West:** The West precinct was built in 1999 and is 46,231 square feet. It is the base for 140 sworn in officers and 82 additional staff and is currently at capacity.⁹⁶
- C. **East:** the East precinct was remodeled completely in 1990 and is 31,356 square feet. It is the base for 77 commissioned officers and 107 additional staff and is at capacity.⁹⁷
- D. **Southwest:** The Southwest precinct was built in 2002 and is 28,531 square feet. It is the base for 60 sworn in officers and 58 additional staff and was designed to accommodate 131 staff.
- E. **South:** The South precinct was built in 1983 and is 13,700 square feet. It is the base for 84 sworn in officers and 39 additional staff is currently at capacity. The existing facility will require seismic upgrades and renovations to bring the facility up to current standards. Further capacity and staff projection analysis is required.

Precinct Dispatching

Precincts dispatch to officers 911 calls throughout the city and expect officers to respond to possible crimes that they may see on their patrols. The North and West precincts were dispatched the most on average from 2017-2022. These data in [Exhibit 3.11-10](#) align with citywide data in [Exhibit 3.11-6](#) to show that most calls are community generated.

⁹⁶ Per SPD capacity assessment, design capacity of precinct not available.

⁹⁷ Per SPD capacity assessment, design capacity of precinct not available.

Exhibit 3.11-10. Six-year Average (2017-2022) of SPD Dispatches by Type

Source: Seattle Police Computer Aided Dispatch, 2023.

Fire/Emergency Medical Services

Information about fire and emergency medical services was collected from the Seattle Fire Department. SFD's published annual report includes information about the department, incident response trends and response standards, preventative measures taken (e.g., fire code implementation), public events/education, and other notable highlights. Other references include the City of Seattle geolocated call data on its Open Data Portal, SFD's 2012-2017 Strategic Plan, the City's proposed 2023-2024 Budget, and 2023-2028 Capital Improvement Plan. Coordination between EIS authors and SFD personnel knowledgeable about operations and spatial analysis informed this analysis.

Citywide

Level of Service (LOS)

SFD provides fire and rescue response, fire prevention and public education, fire investigation, and emergency medical services (EMS) throughout the city, including the study area. Emergency medical services include basic life support (BLS) and advanced life support (ALS). SFD also has specially trained technical teams that provide technical and heavy rescue, dive rescue, tunnel rescue, marine fire/EMS response, and hazardous materials response. SFD also provides mutual aid response to neighboring jurisdictions.

The 2022 Proposed Budget adds funding to enhance SFD operations in several areas including emergency responses, diversity recruitment, dispatch training, and IT system upgrades. In response to extensive research into community response models and on best practices gleaned from around the country, SFD will add a new specialized triage response program (Seattle City Budget Office 2021, 326).

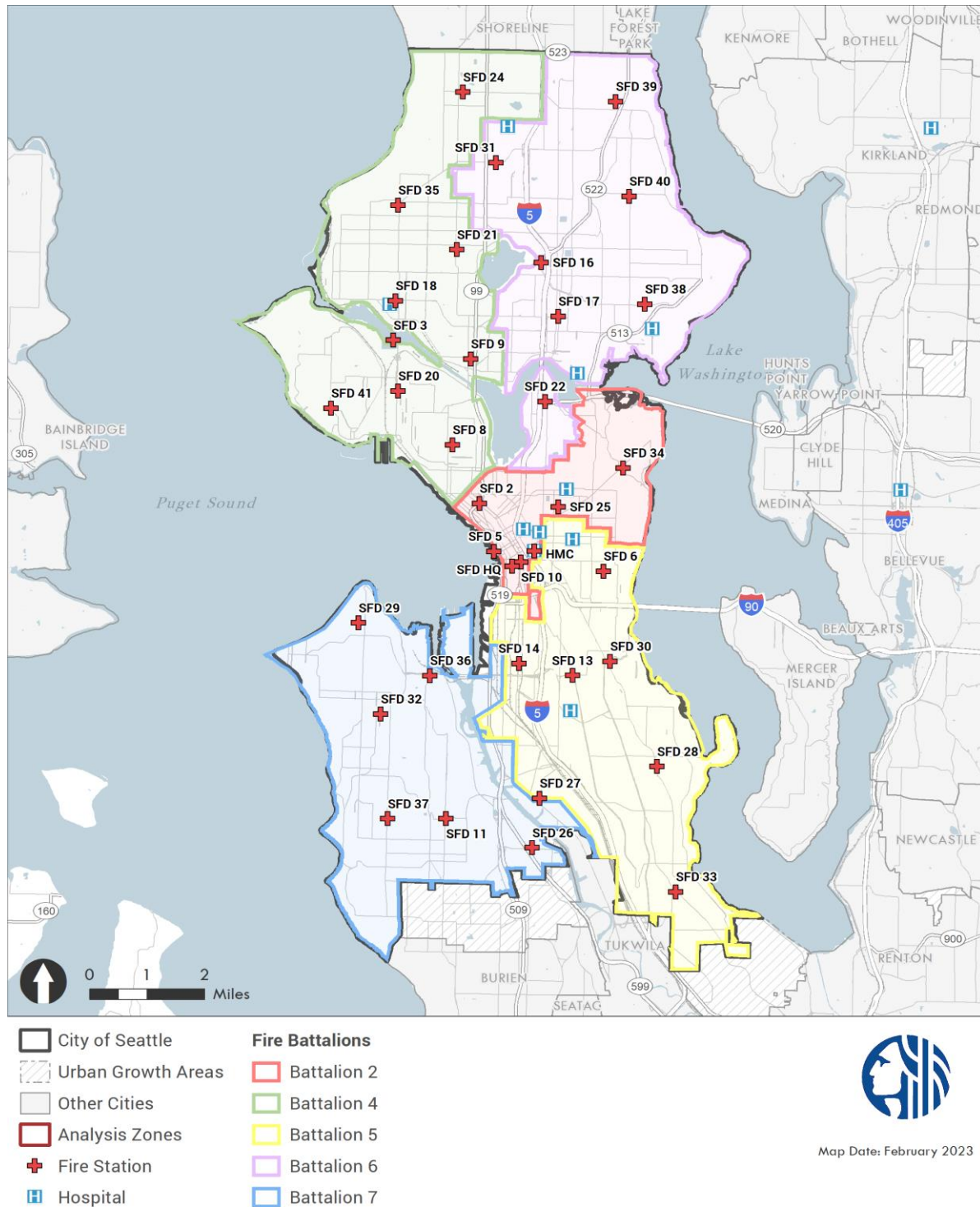
Facilities

SFD provides emergency response services through five battalions consisting of 33 fire stations (plus Battalion 3/Medic One at Harborview Medical Center) strategically placed around the city to maximize coverage and minimize response time. See [Exhibit 3.11-11](#). Close up maps of EIS Study Areas and SFD facilities are provided in [Appendix I](#).

All SFD stations are staffed 24 hours a day, seven days a week, by four separate shifts of firefighters. There are 216 members responding to emergencies every day across the city (220 with upstaffing for 2 daytime aid cars). In 2021, SFD had 963 uniformed personnel and 81 civilian personnel—uniform personnel include 897 firefighter/EMTs (including chiefs) and 66 firefighter/paramedics (Seattle Fire Department 2021).

These 220 uniformed fire department personnel on the clock 24 hours per day are responsible to provide services for an estimated 391,394 housing units (Seattle Fire 2023). The City also anticipates it will need to replace Station 3 and the Fire Marshal office, acquire, or develop a new facility for SFD Headquarters, replace or expand the commissary and fire garage, develop a fire station in South Lake Union, and develop a freshwater marine fire suppression facility (City of Seattle 2020).

Exhibit 3.11-11. Fire Battalions and Stations



Source: City of Seattle, 2023; BERK, 2023.

Exhibit 3.11-12. SFD Facility Locations and Equipment

Station	Battalion	Equipment	Engine	Ladder	Medic	Fire Boat	Aid
Headquarters	N/A	<ul style="list-style-type: none"> ▪ DEP1 ▪ SAFT2 					
Medic One / Harborview Medical Center	N/A	<ul style="list-style-type: none"> ▪ Medic 1 ▪ Medic 10 ▪ Medic 44 ▪ Battalion 3 			3		
Fire Station 2—Belltown	2	<ul style="list-style-type: none"> ▪ Engine 2 ▪ Ladder 4 ▪ Aid 2 ▪ Aid 4 ▪ Hose 2 	1	1			2
Fire Station 3—Fisherman's Terminal	4	<ul style="list-style-type: none"> ▪ Fireboat Chief Seattle ▪ Fireboat 1* 				2	
Fire Station 5—Waterfront	7	<ul style="list-style-type: none"> ▪ Engine 5 ▪ Fireboat 2* ▪ Fireboat Leschi ▪ Rescue Boat 5* 	1			2	
Fire Station 6—Central District	5	<ul style="list-style-type: none"> ▪ Engine 6 ▪ Ladder 3 	1	1			
Fire Station 8—Queen Anne	4	<ul style="list-style-type: none"> ▪ Engine 8 ▪ Ladder 6 	1	1			
Fire Station 9—Fremont	4	<ul style="list-style-type: none"> ▪ Engine 9 	1				
Fire Station 10—International District	2	<ul style="list-style-type: none"> ▪ Engine 10 ▪ Ladder 1 ▪ Aid 5 ▪ Aid 10 	1	1			2
Fire Station 11—Highland Park	7	<ul style="list-style-type: none"> ▪ Engine 11 	1				
Fire Station 13—Beacon Hill	5	<ul style="list-style-type: none"> ▪ Engine 13 ▪ Battalion 5 	1				
Fire Station 14—SoDo	5	<ul style="list-style-type: none"> ▪ Aid 14 ▪ Rescue 1 (DECON1 & REHAB1) ▪ Ladder 7** 		1			1
Fire Station 16—Green Lake	6	<ul style="list-style-type: none"> ▪ Engine 16 	1				
Fire Station 17—University District	6	<ul style="list-style-type: none"> ▪ Engine 17 ▪ Ladder 9 ▪ Medic 17 ▪ Battalion 6 	1	1	1		
Fire Station 18—Ballard	4	<ul style="list-style-type: none"> ▪ Engine 18 ▪ Ladder 8 ▪ Medic 18 ▪ Battalion 4 ▪ Hose 18* 	1	1	1		
Fire Station 20—West Queen Anne	4	<ul style="list-style-type: none"> ▪ Engine 20 	1				

Station	Battalion	Equipment	Engine	Ladder	Medic	Fire Boat	Aid
Fire Station 21—Greenwood	4	▪ Engine 21	1				
Fire Station 22—Roanoke	6	▪ Engine 22	1				
Fire Station 24—Bitter Lake	4	▪ Engine 24 ▪ Air 240	1				
Fire Station 25—Capitol Hill	2	▪ Engine 25 ▪ Ladder 10 ▪ Aid 25 ▪ Battalion 2	1	1			1
Fire Station—26—South Park	7	▪ Engine 26 ▪ Medic 26	1		1		
Fire Station 27—Georgetown	7	▪ Engine 27	1				
Fire Station 28—Rainier Valley	5	▪ Engine 28 ▪ Ladder 12 ▪ Medic 28	1	1	1		
Fire Station 29—Admiral District	7	▪ Engine 29	1				
Fire Station 30—Mount Baker	5	▪ Engine 30 ▪ Air 9	1				
Fire Station 31—Northgate (Interim)	6	▪ Engine 31 ▪ Ladder 5 ▪ Medic 31 ▪ Aid 31	1	1	1		1
Fire Station 32—West Seattle Junction	7	▪ Engine 32 ▪ Ladder 11 ▪ Medic 32 ▪ Battalion 7	1	1	1		
Fire Station 33—Rainier Beach	5	▪ Engine 33	1				
Fire Station 34—Madison Park	2	▪ Engine 34 ▪ Hose 34*	1				
Fire Station 35—Crown Hill	4	▪ Engine 35	1				
Fire Station 36—Delridge & Harbor Island	7	▪ Engine 36	1			1	
Fire Station 37—West Seattle & High Point	7	▪ Engine 37 ▪ Ladder 13	1	1			
Fire Station 38—Hawthorne Hills	6	▪ Engine 38	1				
Fire Station 39—Lake City	6	▪ Engine 39	1				
Fire Station 40—Wedgwood	6	▪ Engine 40	1				
Fire Station 41—Magnolia	4	▪ Engine 41	1				
Totals			32	12	9***	5	7****

* Not listed in 2022 annual report and identified on Seattle Fire Web Page

** Part of Rescue 1 Unit

*** Includes Health 1 and added Medic Unit at Station 26

**** Two of seven are "Peak-Time Aid Units."

Source: Seattle Fire 2022 Annual Report, [Seattle.gov/fire](https://seattle.fire.gov/fire).

Incident Response Trends

Between 2017 and 2021 total incident responses decreased from 96,822 to 93,233. As shown in **Exhibit 3.11-13**, the number of total responses remained relatively constant in 2017 and 2018, then decreased in 2019 and 2020. The COVID-19 pandemic drove a decrease in EMS calls in 2020—a trend SFD believes resulted from fewer people being outside their homes coupled with a fear of being exposed to the virus—and a rise in fire responses. However, both EMS and fire incident calls increased from 2020 to 2021. Total incident responses increased 16% from 2020-2021 and an additional 12.5% between 2021 and 2022.

Exhibit 3.11-13. Seattle Fire Department Emergency Response Incidents

Year	EMS Incidents: BLS and ALS	Fire and Specialty Incidents*	Other and Mutual Aid**	Total
2017	78,758 (81.3%)	16,548 (17.1%)	1,111 (1.1%)	96,822
2018	76,484 (80.7%)	17,080 (18.0%)	1,128 (1.2%)	94,780
2019	72,980 (79.6%)	18,088 (19.7%)	648 (0.7%)	91,716
2020	61,717 (76.8%)	18,094 (22.5%)	505 (0.6%)	80,316
2021	74,302 (79.7%)	24,616 (26.4%)	53 (0.1%)	93,233
2022	78,808 (74.0%)	27,587 (25.9%)	58 (.05%)	106,453

* "Special Incidents" responses were previously included in "Fire" in 2019 and 2020 but were separated in 2021

** For 2021 "other responses" transitioned to "mutual aid" responses.

Sources: SFD Live and SFD 2019 & 2022 Annual Report.

Response Time

Maintaining or improving emergency response times is the core of Seattle Fire Department operations (Seattle Fire Department, 2012). SFD's response standards specify the minimum criteria needed to deliver fire suppression, special operations response, and emergency medical services (Seattle Fire Department 2020) effectively and efficiently. The Capital Facilities Appendix of Seattle 2035 establishes the following response time standards for the Department (City of Seattle 2020, 529-530):

- A. Call Processing Time: 60 seconds for phone answered to first unit assigned for 90% of calls.
- B. Fire Response Time: Arrival within 4 minutes for first-arriving engine at a fire for 90% of calls, and arrival within 8 minutes of the full first alarm assignment of 15 firefighters, for 90% of calls.
- C. Basic Life Support: Arrival within 4 minutes of the first medical unit with two EMTs, for 90% of calls.
- D. Advanced Life Support: Arrival within 8 minutes for 90% of call

Exhibit 3.11-14 shows the statistics the Department uses to measure response time performance. These statistics generally correspond with the Department's response time standards.

Between 2016 and 2020 the Department fell short of meeting its response time standards, with the exception of meeting its call processing time standard in 2018 and its full first alarm assignment standard from 2018-2022. Call processing has also decreased significantly in 2022 to 60%.

Exhibit 3.11-14. Response Statistics, 2017-2022

Year	Call Processing Time within 60 seconds	First Arriving Engine at Fire within 4 Minutes	Full Fire Alarm Assignment at Fire within 8 Minutes	Fire Arriving Unit for a BLS Incident within 4 Minutes	Fire Arriving Unit for an ALS Incident within 8 minutes
Adopted Standard	90%	90%	90%	90%	90%
2017	84%	77%	71%	79%	89%
2018	92%	76%	93%	79%	86%
2019	64%	75%	94%	76%	86%
2020	66%	78%	92%	73%	81%
2021	59%	75%	91%	73%	81%
2022	60%	76%	95%	75%	82%

Sources: Seattle Fire Department Annual Report, 2019, 2021, and 2022; BERK, 2023.

Area Specific

The 2023-2024 proposed operating budget includes a \$2.2-million expenditure for 30 additional firefighting recruits, \$303,102 for paramedic recruits in 2023, \$606,203 for paramedic recruits in 2024. These additional recruit positions are on top of the 60 firefighting recruit positions and 5 paramedic recruit positions that are part of the base budget. The goal of these additional positions is to alleviate vacancies from attrition and retirement within the department.

These recruit positions are not reflected in the current FTE levels by Battalion in [Exhibit 3.11-15](#). Other expenditures for fire prevention are increasing from 11.5 million in 2022 to a proposed 11.7 and 11.85 million in 2023 and 2024 respectively.

Exhibit 3.11-15. SFD Staffing and Expenditures Budget by Battalion

Battalion	FTE & Expenditures 2021	FTE & Expenditures 2022	FTE & Expenditures 2023 (proposed)	FTE & Expenditures 2024 (proposed)	Minimum Staff Per Shift (estimate)	Minimum staff for four shifts (estimate)
2	205.45 \$28,015,684	205.45 \$32,635,307	205.45 \$32,309,457	205.45 \$32,893,487	42	168
3	82.00 \$15,476,222	82.00 \$17,419,528	82.00 \$17,360,397	82.00 \$17,665,117	12	48
4	199.45 \$29,591,593	199.45 \$33,261,878	199.45 \$34,272,162	199.45 \$34,883,293	48	192
5	185.45 \$28,465,652	185.45 \$31,605,322	185.45 \$32,044,188	185.45 \$32,584,561	44	176
6	169.45 \$26,641,698	169.45 \$28,850,602	169.45 \$29,158,278	169.45 \$29,641,374	46	184
7	148.45 \$26,619,359	148.45 \$25,663,613	148.45 \$25,625,945	148.45 \$26,028,047	52	208

Source: Seattle Finance Department 2023-2024 proposed budget <https://www.seattle.gov/city-budget-office/budget-archives/2023-2024-proposed-budget>.

The Battalion staffing levels combined with information received from Seattle Fire about minimum staffing levels for each fire apparatus per shift are also available in **Exhibit 3.11-15**.

This data highlights potential opportunities for shifts in staff resources as well as current estimated staffing needs in each of the battalions. Battalion 6 and 7 are currently running at lower staff than their fire units can support. Battalion 7 Supports the Downtown Waterfront Station 5, South Park, Georgetown, as well as all five stations on the West Seattle peninsula. Battalion 6 supports the entire Northeast quadrant of the city ranging from the Roanoke Station in Eastlake up through Lake City and including the University of Washington and Greenlake.

Both of these Battalions' stations have at least one engine but as is consistent across the city there are far fewer fire units to support emergency medical staff and aid units which make up nearly 70% of dispatches to SFD (Haskell, McAuslan, 2023). These minimum staffing estimates are based on the types of units at each station and were provided by Seattle Fire. Engines & Ladders require four operators per run; Medic Units, Aid Units, and other special apparatuses require between two & four operators per run depending on the unit. Please note that two was used to form the basis of this estimate. (Haskell, McAuslan, 2023).

The subareas for analysis maps are found in **Chapter 2** and are the basis for the growth estimates for each different growth alternative. The subareas align partially with some battalions but do not overlap exactly. The subarea analysis highlights the current levels of service for households within them. **Section 3.12.2, Section 3.11.3, and Section 3.11.4** provide additional context for each subarea and the different proposed growth alternatives that will impact public services such as Fire, Police, and Parks.

Area 1

Northwest Seattle's seven fire stations service an estimated 79,576 housing units, both the highest number of stations and housing units in Seattle. Each station has an engine and additional units are mostly supported by Station 26 in Ballard that houses specialized apparatuses such as a ladder unit, a medic unit, one of Seattle's two hose and foam units. The Greenwood Station houses Seattle's mass casualty incident unit which has only been dispatched 87 times since data collection began in 2004. The Bitter Lake station houses one of Seattle's two air units. Area 1 also includes Station 31 at Northgate which is currently operating from an interim station until a new station is built. The new station is still currently in the design phase (City of Seattle 2022-2027 Adopted CIP). See [Exhibit 3.11-16](#) for stations, equipment, staffing, and ratios of fire units to dwelling units.

Exhibit 3.11-16. Stations and Fire Units in Area 1

Stations	Engines (4 Staff Per shift)	Ladders (4 Staff Per Shift)	Medic (2 Staff Per Shift)	Aid (2 Staff Per Shift)	Other Apparatus (~2 Staff Per Shift)
9, 16, 18, 21, 24, 31, 35	7	2	2	1	3
Required Minimum staff per shift	28	8	4	2	6
Housing units per fire unit	11,368	39,788	39,788	79,576	26,525

Sources: Seattle Fire Department Annual Report, 2022; Seattle 2035 Capital Facilities Appendix, 2020; BERK 2023.

Area 2

Northeast Seattle contains four fire stations with one engine per station as well as four other fire and EMS units. The University District Station houses the Battalion 6 vehicle as well as the one medic unit in this subarea. The most notable shortcoming of this subarea's fire station capacity is that it does not have a dedicated aid unit. There are 64,581 households in the service area so aid units and engines from elsewhere in the city respond to these emergencies. This shortcoming may increase response times and decrease service level standards. See [Exhibit 3.11-17](#) for stations, equipment, staffing, and ratios of fire units to dwelling units.

Exhibit 3.11-17. Stations and Fire Units in Area 2

Stations	Engines (4 Staff Per shift)	Ladders (4 Staff Per Shift)	Medic (2 Staff Per Shift)	Aid (2 Staff Per Shift)	Other Apparatus (~2 Staff Per Shift)
17, 38, 39, 40	4	2	1	0	1
Required Minimum staff per shift	16	8	2	0	2
Housing units per fire unit	16,145	32,290.5	64,581	—	64,581

Sources: Seattle Fire Department Annual Report, 2022; Seattle 2035 Capital Facilities Appendix, 2020; BERK, 2023.

130th/145th Station Area

The 130th and 145th Station Area is in Area 2, and between SFD Stations 24, 31 and 39. These stations' units include two engines, one ladder, and one air unit. Growth in the station areas could increase demand. Currently there are 2,376 housing units in the direct station area.

Exhibit 3.11-18. 130th/145th Station Area Fire Stations, Units and Minimum Required Staff

Stations	Engines (4 Staff Per shift)	Ladders (4 Staff Per Shift)	Medic (2 Staff Per Shift)	Aid (2 Staff Per Shift)	Other Apparatus (~2 Staff Per Shift)
24, 39	2	1	0	0	1
Required Minimum staff per shift	8	4	0	0	2
Fire units per 1000 housing units	.1	.03	.03	0	.05
Housing units per fire unit	1,188	2,376	—	—	2,376

Sources: Seattle Fire Department Annual Report, 2022; Seattle 2035 Capital Facilities Appendix, 2020; BERK, 2023.

Area 3

Area 3 includes Queen Anne, Magnolia, and part of Ballard's business district. The four stations within this subarea do not have any medic units or aid units and are therefore highly dependent on utilizing fire specific units and personnel for aid and medic calls or on stations elsewhere in the city. There are 36,514 housing units in this area. A large percentage of Area 3 is dedicated to non-housing uses such as commercial, industrial, and parks land. SFD staff has identified the topography of this subarea combined with the lack of more nimble fire and aid apparatuses as limiting factors on response times and levels of service (Haskell, McAuslan, 2023). Station 3 at Fisherman's Terminal houses Fire Boat Chief Seattle as well as Fireboat 1 that are dispatched to marine fires on the freshwater side of the Ballard's Hiram M. Chittenden Locks. See [Exhibit 3.11-19](#) for stations, equipment, and staffing.

Exhibit 3.11-19. Stations and Fire Units in Area 3

Stations	Engines (4 Staff Per shift)	Ladders (4 Staff Per Shift)	Medic (2 Staff Per Shift)	Aid (2 Staff Per Shift)	Other Apparatus (~2 Staff Per Shift)
3, 8, 20, 41	3	1	0	0	2
Required Minimum staff per shift	12	4	0	0	2
Housing units per fire unit	12,171	36,514	—	—	18,257

Sources: Seattle Fire Department Annual Report, 2022; Seattle 2035 Capital Facilities Appendix, 2020; BERK, 2023.

Area 4

Downtown Seattle has three fire stations as well as Seattle Fire Headquarters. Station 5 is home to two fire boats and a rescue boat that are dispatched to offshore emergencies within Puget

Sound. The stations also have the highest number of aid units with two full-time and two peak hour units. There are no medical units within this subarea but Medic One is located at Harborview Hospital and can easily be dispatched to Area 4. Seattle Fire Headquarters is also home to the Health One program. Health One is an integrated health response unit that can respond to physical or mental health crises and provides social services to those in distress. This unit is staffed by two firefighters and social workers and includes three truck units.

Most of the land area is dedicated to major institutions, commercial properties, and multifamily dwellings. The estimated 51,611 multifamily housing units that make up this area have much stricter fire codes than the estimated 451 single family homes and typically require more aid dispatches than fire dispatches. See [Exhibit 3.11-20](#) for stations, equipment, and staffing.

Exhibit 3.11-20. Stations and Fire Units in Area 4

Stations	Engines (4 Staff Per shift)	Ladders (4 Staff Per Shift)	Medic (2 Staff Per Shift)	Aid (2 Staff Per Shift)	Other Apparatus (~2 Staff Per Shift; 3 for Health One*)
2, 5, 10, Headquarters	3	2	0	4	6
Required Minimum staff per shift	12	8	0	8	15
Housing units per fire unit	17,354	26,031	—	13,015.5	8,677

*Health one is only staffed Monday-Friday during daytime hours rather than the traditional four shift schedule.

Sources: Seattle Fire Department Annual Report, 2022; Seattle 2035 Capital Facilities Appendix, 2020; BERK, 2023.

Area 5

The central east study area has four fire stations as well as Medic One based in the Harborview Medical Center on First Hill. This area is 64% residential by area with an estimated 12,445 single family units and 57,725 multifamily units. Medic One houses the Battalion 3 vehicle as well as three medic units. The area's aid unit as well as the Battalion 2 vehicle are based at Capitol Hill Station. There is also the SFD Communications Van based at Roanoke Station and the HOSE34 hose and foam unit at Madison Park Station. See [Exhibit 3.11-21](#) for stations, equipment, staffing, and ratios of fire units to dwelling units.

Exhibit 3.11-21. Stations and Fire Units in Area 5

Stations	Engines (4 Staff Per shift)	Ladders (4 Staff Per Shift)	Medic (2 Staff Per Shift)	Aid (2 Staff Per Shift)	Other Apparatus (~2 Staff Per Shift)
6, 22, 25, 34, MED ONE	4	2	3	1	3
Required Minimum staff per shift	16	8	6	2	6
Housing units per fire unit	17,543	35,085	23,390	70,170	23,390

Source: Seattle Fire Department Annual Report, 2022; Seattle 2035 Capital Facilities Appendix, 2020; BERK, 2023.

Area 6

The West Seattle study area contains four stations serving an estimated 21,595 multi-family housing units and 24,905 single-family units. This subarea is also the second largest by acreage and has no aid units. Like in other subareas and station areas, existing units have been operating outside of the intended use in order to meet SFD's level of service standard and response time standard. These stations have benefited from the additional units being relocated within and near the study area. One Ladder unit was placed at West Seattle Station and a medic unit was placed in Area 7 to serve the West Seattle Bridge Closure. Both movements were originally temporary but were later made permanent by Seattle City Council. See [Exhibit 3.11-22](#) for stations, equipment, staffing, and ratios of fire units to dwelling units.

Exhibit 3.11-22. Stations and Fire Units in Area 6

Stations	Engines (4 Staff Per shift)	Ladders (4 Staff Per Shift)	Medic (2 Staff Per Shift)	Aid (2 Staff Per Shift)	Other Apparatus (~2 Staff Per Shift)
11, 29, 32, 37	4	2	1	0	1
Required Minimum staff per shift	16	8	2	0	2
Housing units per fire unit	11,625	23,250	46,500	—	46,500

Source: Seattle Fire Department Annual Report, 2022; Seattle 2035 Capital Facilities Appendix, 2020; BERK, 2023.

Area 7

The Greater Duwamish MIC, Georgetown, and South areas are supported by four fire stations in South Park, SoDo, Delridge/Harbor Island, and Georgetown. See [Exhibit 3.11-23](#). This is a predominantly industrial area with unique apparatuses to support industrial uses. Examples include SFDs Rescue One Technical Rescue Team which include DECON1 and REHAB1 apparatuses. An additional medic unit was moved to Station 26 in South Park in response to the West Seattle Bridge closure and now permanently supports the ~2,287 dwellings in the area.

Exhibit 3.11-23. Stations and Fire Units in Area 7

Stations	Engines (4 Staff Per shift)	Ladders (4 Staff Per Shift)	Medic (2 Staff Per Shift)	Aid (2 Staff Per Shift)	Other Apparatus (~2 Staff Per Shift)
14, 26, 27, 36	3	1	1	1	2
Required Minimum staff per shift	12	4	2	2	4
Housing units per fire unit*	762	2,287	2,287	2,287	1,143.5

Source: Seattle Fire Department Annual Report, 2022; Seattle 2035 Capital Facilities Appendix, 2020; BERK, 2023.

* Note: this is a predominantly industrial area and its units reflect the needs of industrial firefighting rather than residential firefighting needs—additional assessment of unit needs in [Exhibit 3.11-40](#).

Area 8

The Southeast Seattle Subarea is serviced by four fire units and runs from I-90 to Rainier Beach East of I-5. These fire units service about 22,183 single family units and 17,521 multifamily units. This subarea takes up most of the land area within Fire Battalion 5 jurisdiction and none of the four stations have an aid car. The Mount Baker Station does house one of SFDs AIR units to provide supplemental breathing equipment for fire calls and Station 28 in the Rainier Valley houses Medic28 which provides life support dispatches.

Exhibit 3.11-24. Stations and Fire Units in Area 8

Stations	Engines (4 Staff Per shift)	Ladders (4 Staff Per Shift)	Medic (2 Staff Per Shift)	Aid (2 Staff Per Shift)	Other Apparatus (~2 Staff Per Shift)
13, 28, 30, 33	4	1	1	0	2
Required Minimum staff per shift	12	4	2	0	4
Housing units per fire unit	9,926	39,704	39,704	—	19,852

Source: Seattle Fire Department Annual Report, 2022; Seattle 2035 Capital Facilities Appendix, 2020; BERK, 2023.

Parks

Information about open space and recreation was collected from Seattle Parks and Recreation (SPR) and the Seattle Parks District. Plans and studies referenced include system wide plans particularly those that guide the location and use of parks, trails, and centers serving the broader public:

- Seattle Parks and Recreation Strategic Plan (2020),
- Seattle Parks and Recreation 2022-2024 Action Plan (2022),
- Parks and Open Space Plan (POS) (2017),
- Seattle Shoreline Master Program (2015),

Seattle Comprehensive Plan (2015). These plans set levels of service offered to Seattle community members today and in the long term. The City is in the process of updating its POS Plan by 2024 in parallel with the One Seattle Plan Update.

Planning Framework

This section summarizes the policies and strategies of the City's plans that guide the provision of facilities and access to parks and shorelines.

Parks & Recreation Strategic Plan (2020)

The strategic plan sets a direction for the 12 year period 2020-2032, recognizing the rapid resident and employment growth of the 2015-2020 period and lack of equity. The vision and key strategies are under five key elements:

- **Pathway to Equity:** Seattle Parks and Recreation envisions programs, policies, and funding that create equitable outcomes, as well as strategies and actions that show measurable results toward our vision of healthy people, a healthy environment, and strong communities.
 - Steps to equity include: (1) developing an equity and engagement plan to implement equity goals, (2 and 6) developing an equity scorecard and map for resource allocation and planning and department performance, (3) revamping Race and Social Justice Initiative Outcomes, (4) training Seattle Parks and Recreation staff on pathway to equity, (5) conducting robust and culturally responsive engagement.
- **Healthy People:** Healthy people are active and moving around, feel safe and welcomed in public spaces across the city, have access to affordable, fresh food, and practice healthy habits that prevent disease and enhance physical and mental well-being.
 - In summary, nine implementing strategies address: (1) access to parks and recreation to all ages, (2) universal design, (3) quality spaces and facilities, (4) information about health and activity, (5) accessible public space and/or high quality recreation programs within a 10-minute walk of all residents, (6) increasing connection to nature for underserved communities, (7) improving equity in design and placement of community centers, (8) provide multifunctional spaces, and (9) increasing resilience of urban food system and access to fresh food.
- **Healthy Environment:** Seattle becomes a national leader in mitigating climate change impacts, stewarding and protecting our urban forests and natural spaces, promoting environmental responsibility and environmental justice, and building resilient infrastructure.
 - Ten strategies include in summary: (1) managing water resources through conservation and landscaping, (2) reducing waste, (3) creating a carbon-neutral park system, (4) develop new target for urban forest goal, (5) preserve parkland and open space, (6) providing a year-round system to respond to extreme climate events (heat, smoke), (7) improving connectivity, (8) increase alternative energy and technologies, (9) program and events for natural environment appreciation, (10) acquire land responsibly focusing on urban centers and underserved areas.
- **Strong Communities:** A strong Seattle community affords universal access to housing, living-wage jobs, education, and safe spaces to congregate and forge social connections. Children have support for success in school and in life, adults have access to employment and economic opportunity, and all ages feel part of a connected, vibrant city.
 - Eleven strategies include: (1) extended academic enrichment opportunities, (2) support childcare and programming, (3) increase free programming and streamline registration, (4) level grant programs and build capacity in underserved areas, (5) improve safety at

parks, (6) address homelessness through parks-based job-training and respectful cleaning of unsanctioned encampments, (7) bringing people together at events, (8) increase communication and outreach about programs, (9) reexamine partnerships and strengthen volunteer programs, (10) enhance economic opportunities through apprenticeships and green economy employment, and (11) increase cleanliness and safety of public restrooms.

- **Organizational Excellence:** The City of Seattle is managed by a world-class local government with a high-quality, well-trained workforce that operates with a focus on excellence and professionalism, collaborates with community and partners, equitably delivers essential services, adapts to changing best practices, and embraces new technology and innovative ideas.
 - In summary, the ten strategies: (1) develop and implement an equity strategy, (2) seek national accreditation, (3) have an appropriately sized workforce, (4) invest in training, (5) update systems and technology, (6) have ongoing engagement of vulnerable populations, (7) advance innovation, (8) collaborate with public and private partners to address livability, affordability, homelessness, and the environment, (9) address preventative maintenance, and (10) have a new structure to advisory committees and maximize engagement opportunities.

Seattle Parks & Recreation 2022-2024 Action Plan

After a pivot to pandemic response in 2020, in 2021 Seattle Parks and Recreation sought to engage with communities and develop short-term budget and priorities and operational goals. This action planning work focused on addressing four parallel crises within the city and to Seattle Parks and Recreation services:

- Public Health and Well Being
- Racial Equity
- Economic Recovery
- Impacts of Climate Change

The actions and goals identified within the 2022-2024 Action Plan highlight how Seattle Parks and Recreation intends to ~~move~~ address each of the immediate crises above by making specific progress on the five key elements identified in the Park & Recreation Strategic Plan.

Parks Open Space (POS) Plan (~~2017~~2024)

The City of Seattle POS Plan (~~2017~~2024) includes five major goals:

- **Goal 1:** Provide a variety of outdoor and indoor spaces throughout the city for all people to play, learn, contemplate, and build community.
- **Goal 2:** Continue to provide opportunities for all people across Seattle to participate in a variety of recreational activities.
- **Goal 3:** Manage the city's park and recreation facilities to provide safe and welcoming places.

- **Goal 4:** Plan and maintain Seattle’s parks and facilities to ~~accommodate~~ attract additional park users and visitors.
- **Goal 5:** Engage with community members ~~on parks and recreation plans, and to~~ design and develop parks and facilities, that are based on the specific needs and cultures of the communities that the park is intended to serve.

Shoreline Master Program Public Access

The Comprehensive Plan includes shoreline access goals and policies that are considered part of the Shoreline Master Program. Selected goals and policies addressing shoreline access include a general goal to maximize physical and visual access, enhancing views, and promoting street ends.

LUG44 Maximize public access—both physical and visual—to Seattle’s shorelines.

LUG45 Preserve and enhance views of the shoreline and water from upland areas, where appropriate.

LU238 Maintain standards and criteria for providing public access, except for lots developed for single-family residences, to achieve the following:

- 1. linkages between shoreline public facilities via trails, paths, etc., that connect boating and other recreational facilities.*
- 2. visible signage at all publicly owned or controlled shorelines and all required public access on private property.*
- 3. development of bonuses or incentives for the development of public access on private property, if appropriate.*
- 4. provision of public access opportunities by public agencies such as the City, Port of Seattle, King County and the State at new shoreline facilities and encourage these agencies to provide similar opportunities in existing facilities.*
- 5. view and visual access from upland and waterfront lots.*
- 6. prioritize the operating requirements of water-dependent uses over preservation of views.*
- 7. protection and enhancement of views by limiting view blockage caused by off-premise signs and other signs.*

LU240 Shoreline street ends are a valuable resource for public use, access and shoreline restoration. Design public or private use or development of street ends to enhance, rather than reduce, public access and to restore the ecological conditions of the shoreline transportation in the shoreline.

Level of Service (LOS)

The City of Seattle sets level of service (LOS) standards for open space and recreation across the City. The Seattle 2035 Comprehensive Plan states in policy P 1.2 “Provide a variety of parks and open space to serve the city’s growing population consistent with the priorities and level-of-service standards identified in the City’s Park Development Plan” now called the Parks and Open Space Plan (Seattle Parks and Recreation 2017).

The 2017 Parks and Open Space Plan includes level-of-service standard of 8 acres per 1,000 residents (Seattle Parks and Recreation 2017) which is no longer in effect as of May 2024. The assumption of 8 acres of park and recreation facilities per 1,000 residents is used ~~throughout this impacts analysis to~~ to compare population demand for open space and recreation. See [Exhibit 3.11-25](#). Seattle Parks and Recreation ~~has initiated a process to~~ updated and adopted a new Parks and Open Space Plan ~~by in March~~ May 2024. This update considers changes to the level-of-service standard. The 2024 Parks and Open Space Plan Update proposes to change the Level of Service (LOS) from an acres per 1,000 people standard to providing parks and park facilities within a 10-minute walk.

Exhibit 3.11-25. Seattle's Projected Population to Acres of City-owned Parkland Comparison

Year	Seattle's Population	Acres of Parkland (2017)	Acres/1,000 residents
2016	686,800	6,414 acres	9.34 acres/1,000 residents
2023	731,012 (projected)*	6,414 acres**	8.77 acres/1,000 residents
2035	806,800 (projected)*	6,454 acres (minimum)	8.00 acres/1,000 residents

Notes: *Assumption is that Seattle's population will increase by approximately 6,316 individuals annually.

** This model assumes parkland levels stay at the current acreage for comparison purposes. As noted below land acquisition is often opportunity driven, however SPR anticipates the acquisition of additional parkland before 2023 based on its prior history of acquisition and ongoing negotiating on several properties. The 2024 Parks and Open Space Plan update shows 6,478 acres as of 2024.

Source: Seattle POS Plan, 2017.

The POS plan also identified a long-term acquisition strategy for natural areas, and parks in a 5-minute walk in urban centers and areas outside urban centers with a 10-minute walk. See [Exhibit 3.11-26](#).

Exhibit 3.11-26. Long-Term Acquisition Strategy

Strategy	Locations
5-minute Walkability—Within Urban Centers	<div> <div>Aurora-Licton Springs</div> <div>Bitter Lake</div> <div>Northgate</div> <div>Ballard</div> <div>First Hill</div> <div>Fremont</div> <div>12th Avenue</div> <div>North Rainier</div> </div> <div> <div>North Beacon Hill</div> <div>Columbia City</div> <div>Othello</div> <div>Rainier Beach</div> <div>South Park</div> <div>West Seattle Junction</div> <div>Morgan Junction</div> <div>Westwood-Highland Park</div> </div>
Natural Area/Greenbelt Acquisition	200 + prioritized properties
10-minute Walkability Outside Urban Centers Underserved	Georgetown neighborhood and Bitter Lake/Aurora area

Source: Seattle POS Plan, 2017 and 2024.

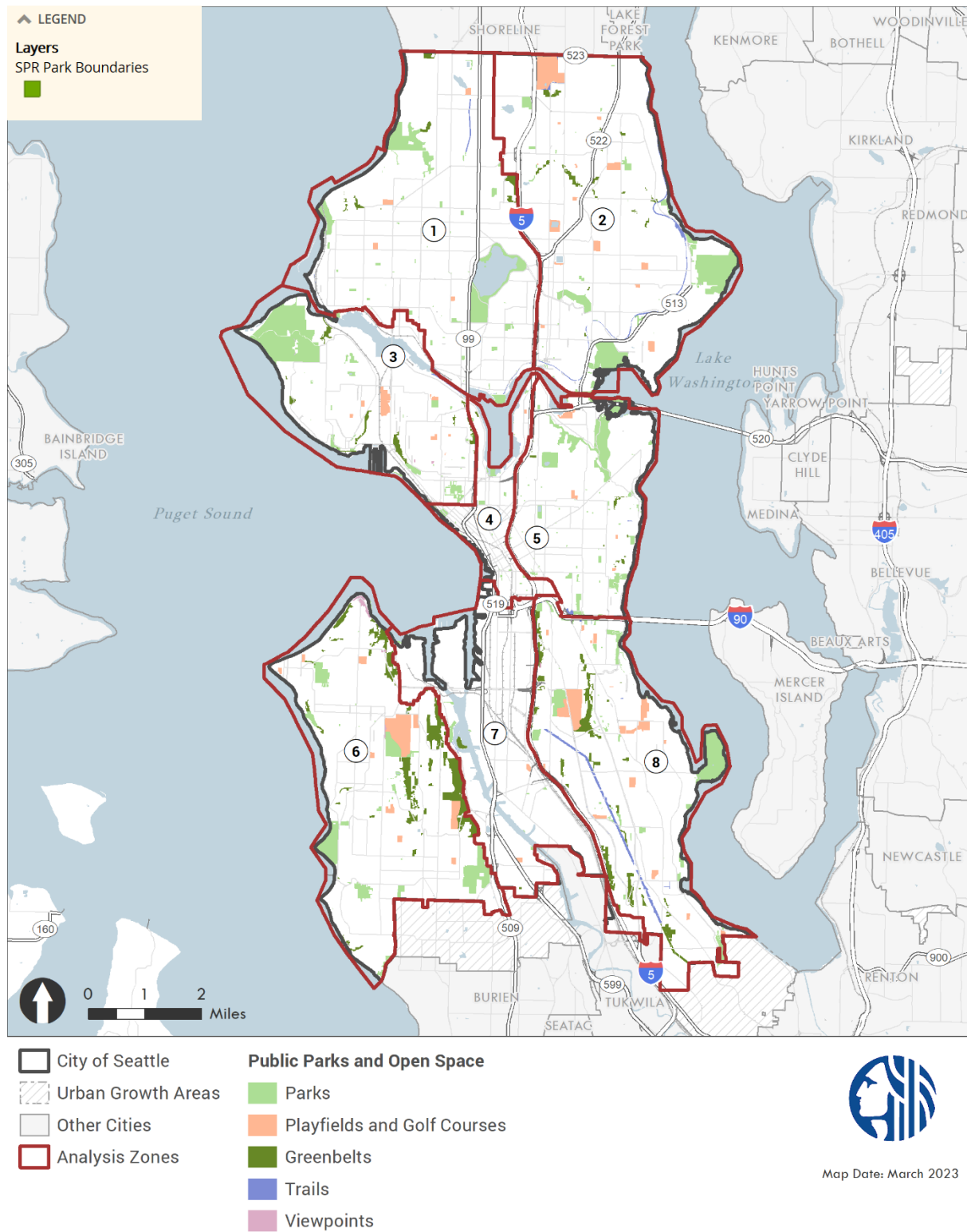
Current Conditions

Citywide

Seattle Parks and Recreation (SPR) manages a 6,478-acre park system with over 485 parks and natural areas. This system includes athletic fields, play areas, gardens, trails, facilities and community centers, swimming pools, education centers, golf course, and skateparks. The SPR system comprises about 12% of Seattle's land area.

The study area, the subareas, and the parks and recreation facilities available are identified in the map below (see [Exhibit 3.11-27](#)).

Exhibit 3.11-27. City and Study Area Parks and Recreation Facilities



Sources: Seattle POS Plan, 2017; BERK, 2023.

In 2020, OPCD developed an “Outside Citywide” map tool considering access to open spaces at city, county, state, and federal governments, special districts like schools and the Port, and other private space. Based on race and social equity, density and growth, and health outcomes, the City identified priority areas for public space provision. See [Exhibit 3.11-28](#). Areas with poor access include many of those referenced in [Exhibit 3.11-26](#). More notably, Ballard, Greenwood-Phinney Ridge, Aurora-Licton Springs, Lake City, Northgate, and Morgan Junction. The Greater Duwamish Manufacturing and Industrial Center (MIC) is also an area lacking parks and open space.

Exhibit 3.11-28. Outside Citywide Access—Public Space Priority Areas



Source: Seattle Parks and Recreation, 2020.

Analysis Areas

Maps of parkland by area are included in [Appendix I](#). A summary of key park features by analysis area is provided below.

Area 1: NW Seattle

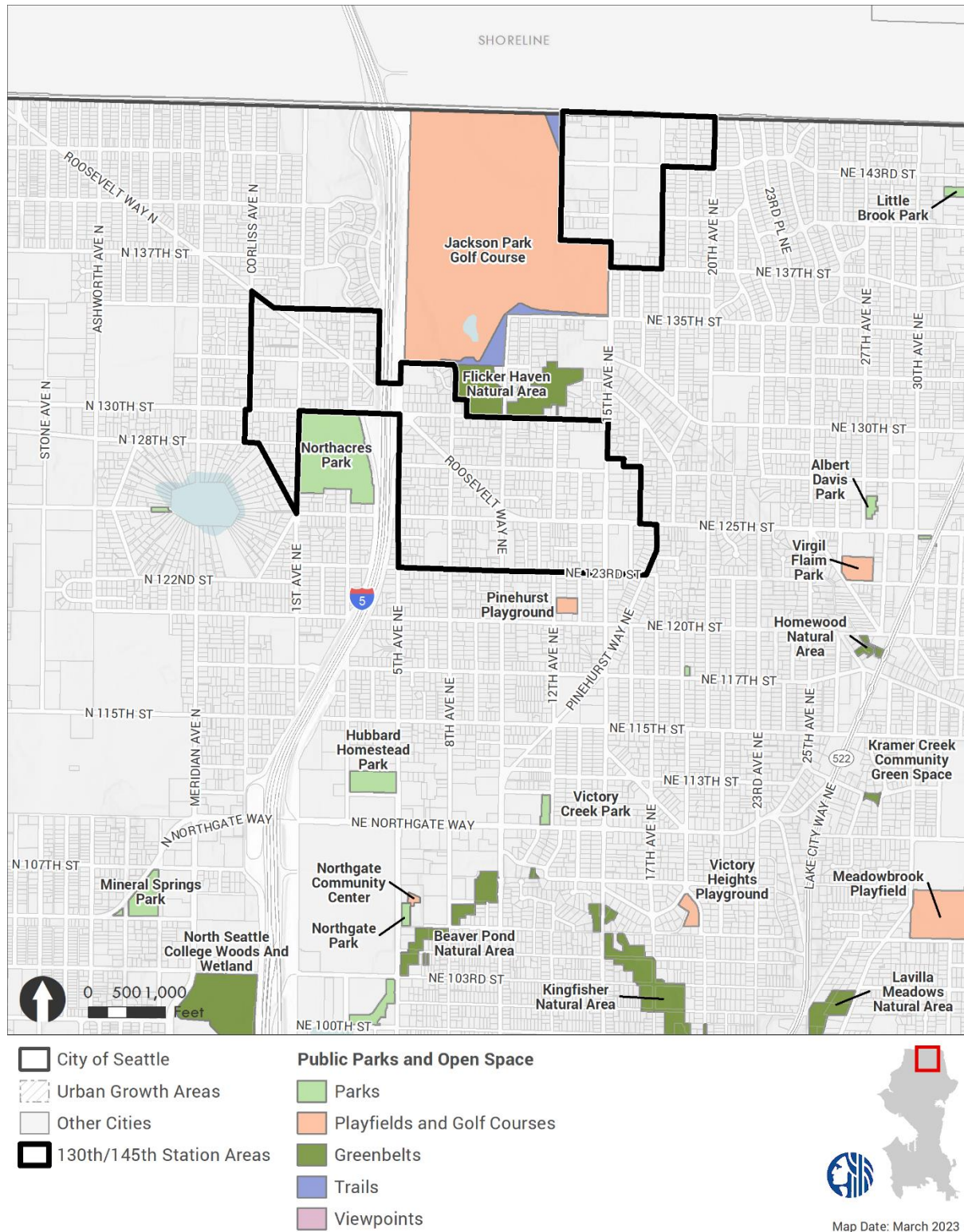
Major open spaces in Area 1 include: Carkeek and Golden Gardens along Puget Sound, as well as Greenlake and Woodland Park Zoo, Gas Works Parks as well as the Shilshole Bay Marina (Port of Seattle).

Area 2: NE Seattle

Major parks and open space in Area 2 include Jackson Park Golf Course, Warren G. Magnuson Park, the University of Washington east campus which includes a golf driving range, intramural fields and the Union Bay Natural Area, Ravenna Park, Maple Leaf Reservoir Park, Northeast Sports Complex—Nathan Hale High School (Seattle Public Schools), and others. Priority areas for public space include Northgate, Lake City, and NE 45th Street west of the University of Washington campus.

130th/145th Station Area. In the 130th/145th Station Area, the largest park and open space is Jackson Park Golf Course & Trail. Other parks in the area include Northacres Park, Licorice Fern Natural Area, Pinehurst Playground, Virgil Flaim Park, Albert Davis Park, Haller Lake Street End Park, Northwest Sports Complex (Ingraham High School—Seattle Public Schools) and others such as the North Seattle College Barton Woods wetland and campus landscape. The Evergreen Washelli Cemetery (private) is also located west of this area providing open space. Several P-Patches provide fresh food access and open space. See [Exhibit 3.11-29](#).

Exhibit 3.11-29. 130th/145th Station Study Area Parks and Open Spaces



Source: City of Seattle 130th & 145th Street Station Area Background Report, 2021; BERK, 2023.

Area 3: Queen Anne/Magnolia

Area 3 includes Discovery Park, Interbay Golf Course and Athletic Field, West Seattle Playfield and Community Center, Myrtle Edwards Park, Magnolia Boulevard, Queen Anne Boulevard, Kinnear Park, David Rodgers Park, and Centennial Park (Port of Seattle). Priority areas for parks include the BINMIC area and some parts of the Uptown Urban Center.

Area 4: Downtown/Lake Union

Area 4 contains Lake Union Park, Denny Park, Cascade Playground, Olympic Sculpture Park, Victor Steinbrueck Park, Waterfront Park, City Hall Park, Hing Hay Park, Danny Woo Garden and Kobe Terrace, Occidental Square, various public plazas, Memorial Stadium (Seattle Public Schools) and Port of Seattle piers. Most of the Downtown Urban Center is an area of priority public space needs.

Area 5: Capitol Hill/Central District

Area 5 includes Washington Park and Arboretum, Interlaken Park, Volunteer Park, Cal Anderson Park, Garfield Playfield, Madrona Park, Leschi Park, Frink Park, Sam Smith Park, Judkins Park and Playfield, and Judge Charles M. Stokes Overlook, East Duwamish Greenbelt, among other small neighborhood parks. The west side of the First Hill/Capitol Hill Urban Center and part of the Madison-Miller and 23rd & Union-Jackson Urban Centers have areas less well served by parks; see [Exhibit 3.11-27](#).

Area 6: West Seattle

Area 6 includes Lincoln Park, Alki Beach Park, Hamilton Viewpoint Park, Don Armeni Park, Schmitz Preserve Park, Alki Playground, West Seattle Golf Course, Camp Long, Me-Kwa-Mooks Park, Riverview Playfield, Westcrest Park, Roxhill Park, Southwest Athletic Complex (Seattle Chief Sealth International High School—Seattle Public Schools), Fauntleroy Park, Seola Park, and several natural areas and greenbelts along creeks and hillsides. The West Seattle Junction, Morgan Junction, and Westwood Highland Park are areas that could benefit from additional parks and open space.

Area 7: Duwamish

The Greater Duwamish MIC, Georgetown, and South Park areas in Area 7 have some shoreline access on Port of Seattle property and as well as parks, playfields and greenbelts such as Georgetown Playfield, Ruby Chow Park, Georgetown Urban Farm and Forest, South Park Playground, South Park Meadow, and Marra-Desimone Park. The South Park Urban Center and much of the MIC is considered a priority for public space.

Area 8: SE Seattle

Area 8 includes parks along the Lake Washington shoreline like Colman Park, Seward Park, Martha Washington Park, Pritchard Island Beach, as well as parks within the central residential area like Jefferson Park, Jefferson Golf Course, Maplewood Playfield, Chief Sealth Trail (Seattle City Light), Van Asselt Playground, Kubota Gardens, Lakeridge Park, Southeast Sports Complex (Rainier Beach High School—Seattle Public Schools) and other greenbelts. Priority locations for public access include areas abutting I-5 and Rainier Avenue South, as well as portions of the Mt. Baker/North Rainier, North Beacon Hill, Columbia City, Othello, and Rainier Beach Urban Centers.

Schools

The information about schools was collected from:

- Seattle Public Schools
- Seattle Preschool Program
- Washington Office of Superintendent of Public Instruction
- King County Assessor Parcel Records

Planning Framework

Seattle 2035

Seattle's Comprehensive Plan includes several goals related to education, including:

- **Capital Investments & Schools:**

CF 5.3 Partner with Seattle Public Schools to plan for expected growth in student population, explore opportunities to reduce the costs of developing new schools, encourage the siting of new school facilities in or near urban centers and villages, and make it easy for students and families to walk and bike to school.

AC 4.4 Encourage the adaptive reuse of historic community structures, such as meeting halls, schools, and religious buildings, for uses that continue their role as neighborhood centers.

AC 4.6 Encourage partnerships to use public and institutional spaces, such as parks, community centers, libraries, hospitals, schools, universities, and City-owned places, for arts, musicians, and culture.

CW 4.6 Work with schools, higher education institutions, libraries, community centers, and arts and cultural agencies and organizations to link services into a seamless system that helps students stay in school, such as through collocation of services and joint use of facilities.

CW 7.8 Encourage use of existing facilities and collocation of services, including joint use of schools and City and community facilities, to make services available in underserved areas and in Urban Center areas.

LU G3 Allow public facilities and small institutions to locate where they are generally compatible with the function, character, and scale of an area, even if some deviation from certain regulations is necessary.

■ **Access to Education, Recreation, & Cultural Access:**

CW 4.1 Create equitable access to high-quality early-learning services, and support families so that their children are prepared for school.

CW 4.9 Work with colleges, universities, other institutions of higher learning, and community-based organizations to promote lifelong learning opportunities and encourage the broadest possible access to libraries, community centers, schools, and other existing facilities throughout the city.

CW 4.10 Work with schools, libraries, and other educational institutions, community-based organizations, businesses, labor unions, and other governments to develop strong educational and training programs that provide pathways to successful employment.

AC G3 Improve access to arts and music education in all schools and outside the school setting so that students are prepared to be successful in school and life.

P 1.9 Use cooperative agreements with Seattle Public Schools and other public agencies to provide access to open spaces they control.

H 1.4 Remove barriers that prevent lower-income households from using rental assistance throughout Seattle, particularly in areas with frequent transit, schools, parks, and other amenities.

130th/145th Station Area Plan

The 130th/145th Station Area Plan includes several strategies related to education and schools:

Strategy 3.2 Consider partnerships to expand public access to private recreational facilities and gathering spaces associated with schools and faith communities.

Strategy 8.3 Connect key community destinations like parks, schools, and businesses with multimodal improvements to enhance neighborhood circulation.

Strategy 11.4 Share information with Seattle Public Schools about affordable housing developments to promote and market affordable housing to eligible families within the service area of local schools.

Current Conditions

Citywide

The Seattle School District serves the city as a whole with 103 schools, including:

- 63 Elementary Schools
- 10 K-8 Schools

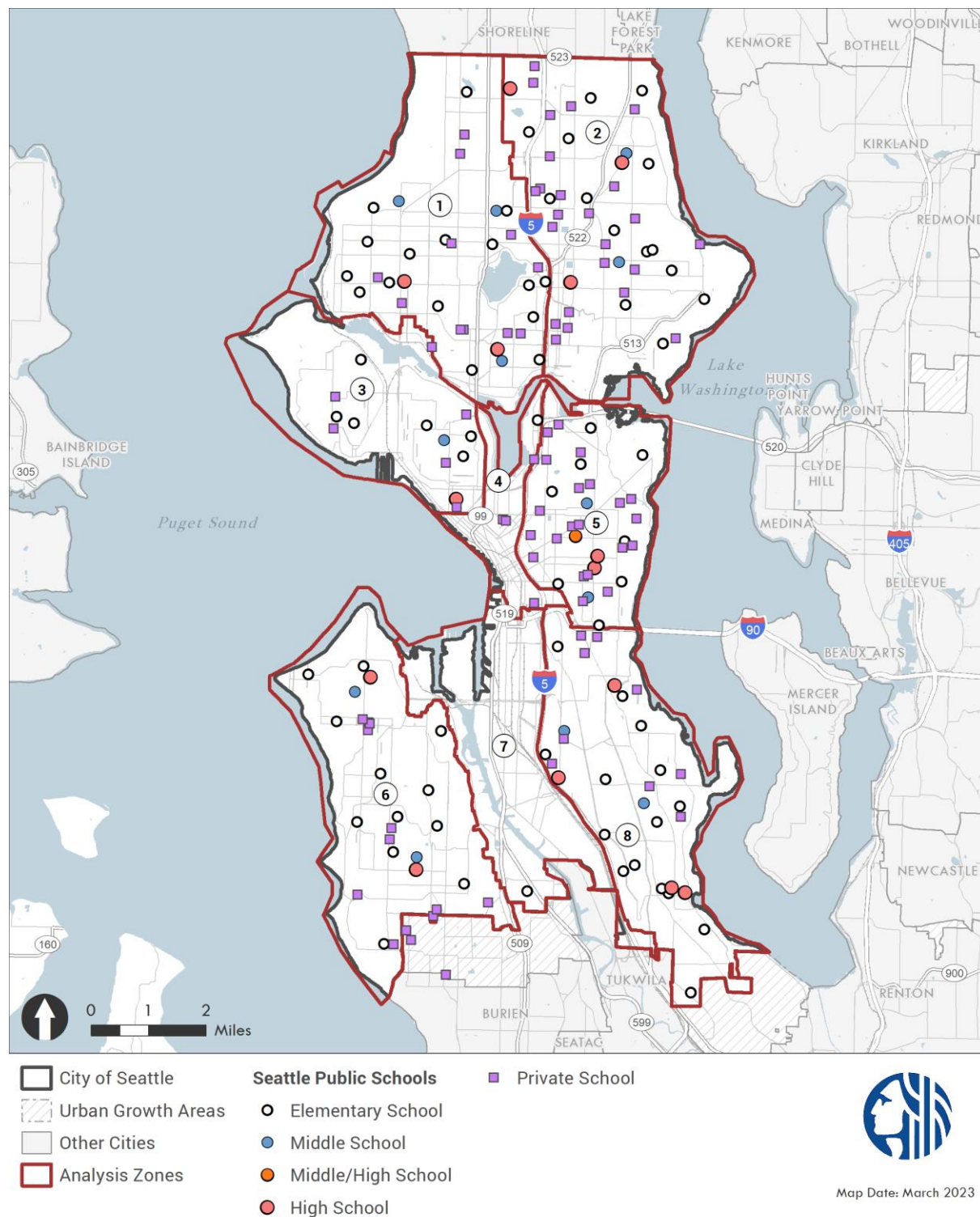
- 12 Middle Schools
- 18 High Schools (including Middle College, Interagency, South Lake, and Skills Center)

The Seattle School District employs 5,955 educators at school sites. There are currently about 23,691 elementary, 11,001 middle, and 15,364 high school students enrolled. The students are 46% white and 54% persons of color. The top languages spoken other than English include Spanish, Somali, Vietnamese, Chinese (Cantonese), Amharic, Oromo, Tigrinya, Chinese (Mandarin), Japanese, and Arabic (Seattle Public Schools 2022). The Seattle School District Administrative offices are in Area 7. Seattle Public Schools also hosts many pre-k programs in their facilities.

Private schools include secular and religious schools, found in every analysis area.

See [Exhibit 3.11-30](#) and [Exhibit 3.11-31](#).

Exhibit 3.11-30. Public and Private Schools in City and Study Areas



Source: King County GIS, 2023; BERK, 2023.

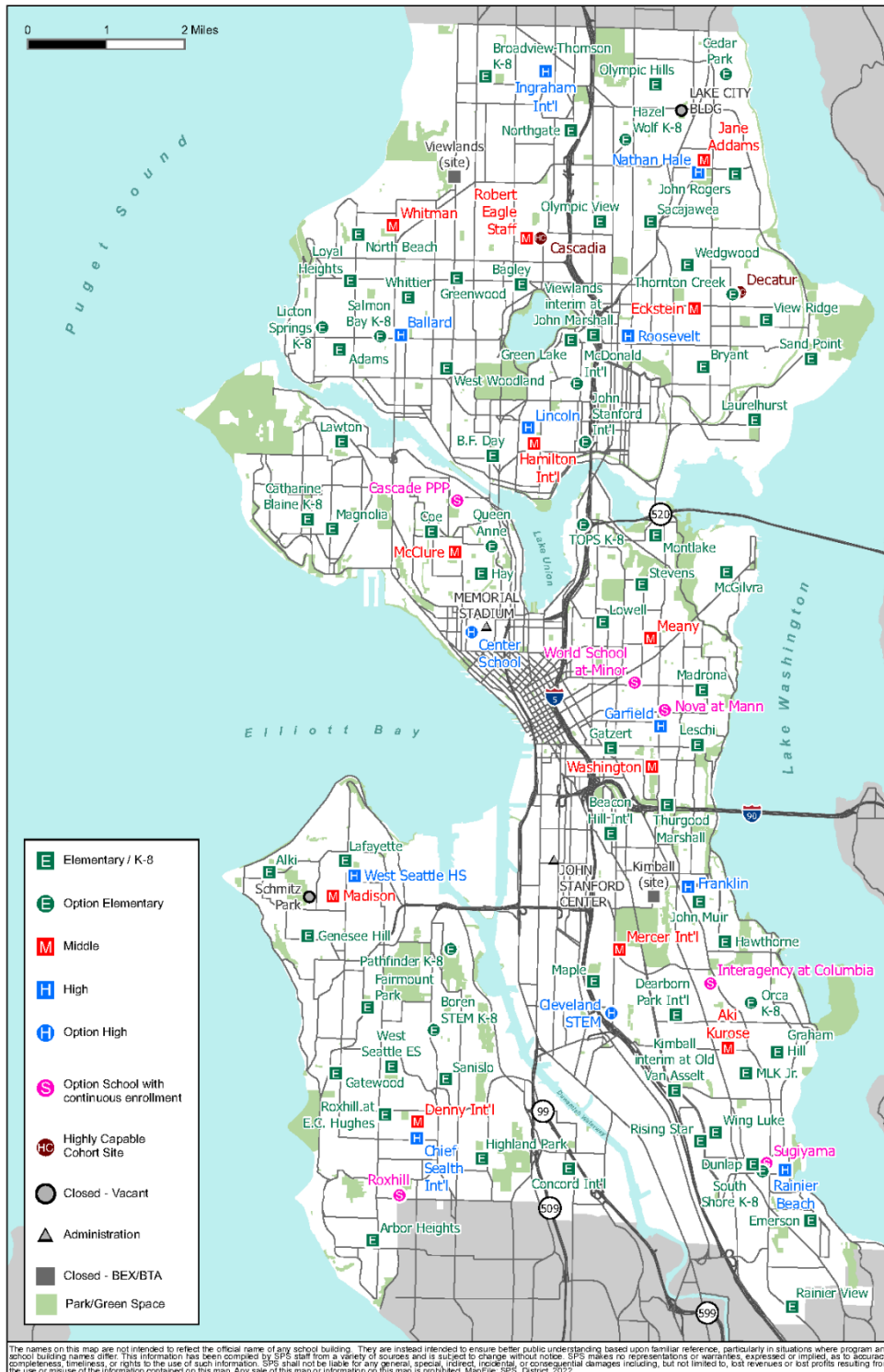
Exhibit 3.11-31. Seattle Public Schools: All District Schools

2022-23



All District Schools

Map Data:
2022-23
Last updated:
8/22/2022



Source: Seattle School District, 2022.

Capacity at each school and current enrollment is shown in [Exhibit 3.11-32](#). Most schools' capacities are higher than current enrollment. In a few instances, capacity is less than enrollment which may require portables. Schools with capacities less than enrollment by more than 10 students include: Lincoln High School, Hazel Wolf K-8, Stevens Elementary School, and Graham Hill Elementary School.

Exhibit 3.11-32. Public Schools, Enrollment, and Capacity by Area

School Name	All Students (2022-23)	Operational Analysis Capacity (2022-2023)	Capital Projects for permanent capacity (2022-2025)
Area 1: NW Seattle			
Adams Elementary School	318	549	
B F Day Elementary School	355	423	
Ballard High School	1,555	1,805	
Broadview-Thomson K-8 School	519	661	
Cascadia Elementary	473	612	
Daniel Bagley Elementary School	322	503	
Green Lake Elementary School	324	387	
Greenwood Elementary School	322	345	
Hamilton International Middle School	927	978	
Licton Springs K-8	98	360	
Lincoln High School	1,632	1,600	X
Loyal Heights Elementary School	502	572	
North Beach Elementary School	340	387	
Robert Eagle Staff Middle School	677	1000	
Salmon Bay K-8 School	660	685	
Viewlands Elementary School	272	351	X
West Woodland Elementary School	398	643	
Whitman Middle School	681	1,033	
Whittier Elementary School	363	471	
Area 2: NE Seattle			
Bryant Elementary School	484	549	
Cedar Park Elementary School	204	283	
Eckstein Middle School	1,047	1,044	
Hazel Wolf K-8	725	658	
Ingraham High School	1,418	1796	
Jane Addams Middle School	885	1175	
John Rogers Elementary School	249	342	X
John Stanford International School	429	437	
Laurelhurst Elementary School	273	369	
McDonald International School	459	471	
Nathan Hale High School	1,081	1,225	
Northgate Elementary School	191	252	X
Olympic Hills Elementary School	453	525	
Olympic View Elementary School	361	458	

School Name	All Students (2022-23)	Operational Analysis Capacity (2022-2023)	Capital Projects for permanent capacity (2022-2025)
Roosevelt High School	1,502	1765	Funding for design only
Sacajawea Elementary School	195	274	X
Sand Point Elementary	160	276	
Stephen Decatur Elementary School	209	291	
Thornton Creek Elementary School	420	586	
View Ridge Elementary School	302	538	
Wedgwood Elementary School	354	478	
Area 3: Queen Anne/Magnolia			
Cascade Parent Partnership Program (North Queen Anne School)	349	unk	X
Catharine Blaine K-8 School	452	749	
Frantz Coe Elementary School	454	503	
John Hay Elementary School	270	477	
Lawton Elementary School	336	479	
Magnolia Elementary School	320	460	
McClure Middle School	428	630	
Queen Anne Elementary	205	500	
The Center School	230	300	
Area 5: Capitol Hill/Central District			
Bailey Gatzert Elementary School	311	336	
Edmonds S. Meany Middle School	512	850	
Garfield High School	1,577	1,619	
Leschi Elementary School	276	330	X
Lowell Elementary School	322	333	
Madrona K-5 School	226	390	
McGilvra Elementary School	223	278	
Montlake Elementary School	184	251	X
Nova High School	285	400	
Seattle World School	179	360	
Stevens Elementary School	176	283	
Tops K-8 School	478	446	
Washington Middle School	555	794	
Area 6: West Seattle			
Alki Elementary School	295	336	X
Arbor Heights Elementary School	487	635	
Chief Sealth International High School	1,178	1455	
David T. Denny International Middle School	816	949	
Fairmount Park Elementary School	413	516	
Gatewood Elementary School	372	464	
Genesee Hill Elementary	523	664	
Highland Park Elementary School	289	306	
Lafayette Elementary School	469	497	
Louisa Boren STEM K-8	468	576	

School Name	All Students (2022-23)	Operational Analysis Capacity (2022-2023)	Capital Projects for permanent capacity (2022-2025)
Madison Middle School	984	1190	X
Pathfinder K-8 School	465	460	
Roxhill Elementary School	243	336	
Sanislo Elementary School	175	264	
West Seattle Elementary School	347	432	X
West Seattle High School	1,301	1357	
Area 7: Duwamish			
Concord International School	291	333	
Area 8: SE Seattle			
Aki Kurose Middle School	773	900	Funding for design only
Alan T. Sugiyama High School	31	250	
Beacon Hill International School	344	407	
Cleveland High School STEM	846	965	
Dearborn Park International School	304	354	
Dunlap Elementary School	242	303	
Emerson Elementary School	307	396	
Franklin High School	1,174	1,398	
Graham Hill Elementary School	268	391	
Hawthorne Elementary School	364	351	
John Muir Elementary School	318	342	X
Kimball Elementary School	379	408	X
Maple Elementary School	434	468	
Martin Luther King Jr. Elementary School	239	336	
Mercer International Middle School	854	1296	X
Orca K-8 School	398	456	
Rainier Beach High School	791	1,088	X
Rainier View Elementary School	240	270	
Rising Star Elementary School	309	480	
South Shore PK-8 School	558	705	
Thurgood Marshall Elementary	464	543	
Wing Luke Elementary School	282	500	
Citywide			
Bridges Transition	128	n/a	
Interagency Detention School	18	n/a	
Interagency Open Doors	84	n/a	
Interagency Programs	194	n/a	
Middle College High School	96	n/a	
Private School Services	180	n/a	
Total	50,222	61,302	

Sources: Seattle Public Schools 2023; OSPI Student Information, 2023.

Seattle Preschool Program

The Seattle Preschool Program (SPP) is levy-funded and provides an evidence-based preschool program through the Seattle Department of Education and Early Learning (DEEL). It is conducted in partnership with a network of preschool providers throughout the city, including both community-based providers and Seattle Public Schools. About 87 program sites were in use in 2022, with 1,959 students enrolled. About 77% of the students are non-white, and 105 of the seats are for children with individual education plans. About 22 classrooms are for dual language learners. (Seattle Department of Education & Early Learning 2022)

Analysis Areas

Public and private schools are identified in each area below and on maps in [Appendix I](#).

Area 1: NW Seattle

The following schools are in Northwest Seattle:

- 19 public schools with 14 elementary (K-5 and K-8) schools, 3 middle schools, and 2 high schools
- 12 private schools serving various grade levels with most religious (Catholic, Jewish) and some secular (language-based, Montessori, independent)

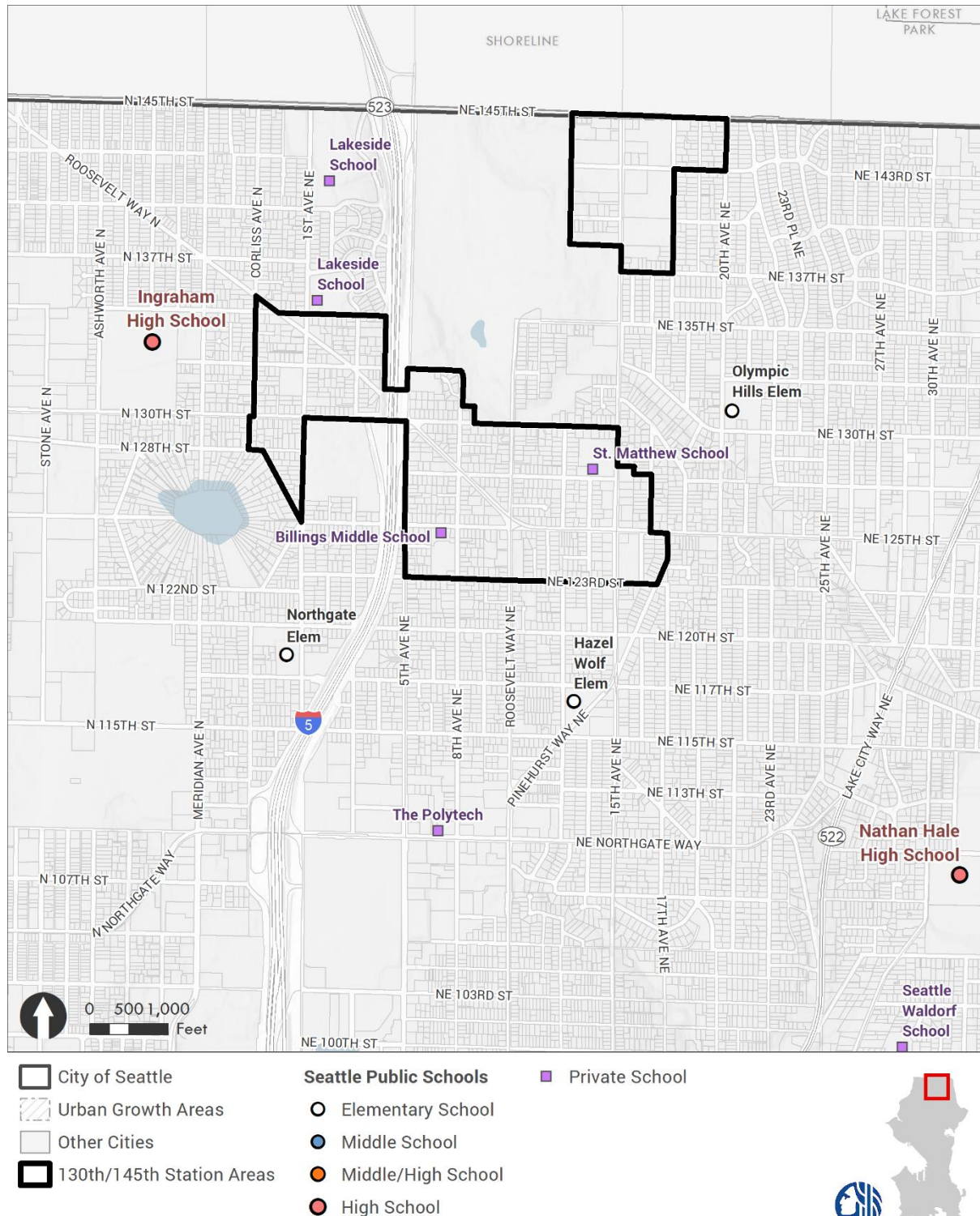
Area 2: NE Seattle

The following schools are located in Northeast Seattle:

- 21 public schools with 16 elementary (K-5 and K-8) schools, 2 middle schools, and 3 high schools
- 23 private schools serving various grade levels with most secular (language-based, Montessori, independent) and several religious (Catholic, Christian)

130th/145th Station Area. The station areas at 130th and 145th are served by several public schools (Hazel Wolf, James Baldwin, and Olympic Hills Elementary Schools; Jane Addams Middle School, and Nathan Hale High Schools). Nearby private schools include Lakeside School (middle and upper schools), Billings Middle School, and Saint Matthew School. See [Exhibit 3.11-33](#).

Exhibit 3.11-33. Schools in Vicinity of 130th/145th Station Area



Map Date: March 2023

Source: King County GIS, 2023; BERK, 2023.

Area 3: Queen Anne/Magnolia

Area 3 includes the Magnolia and Interbay areas. The following schools are located in Area 3:

- 9 public schools with 6 elementary (K-5 and K-8), 1 middle school, 1 special high school (Center School) and 1 special program (Cascade Parent Partnership Program, K-8, individual academic programs)
- 6 private schools, religious (Catholic) and secular (language-based and independent)

Area 4: Downtown/Lake Union

Area 4 includes Downtown and South Lake Union. It has 4 independent private schools.

Area 5: Capitol Hill/Central District

Area 5 includes the Capitol Hill and Montlake areas. The following schools are located in Area 5:

- 13 public schools with 8 elementary (K-5 and K-8), 1 middle school, 1 high school and 1 middle/high school focused on languages (Seattle World School)
- 6 private schools, religious (Catholic) and secular (language-based and independent)

Area 6: West Seattle

The following schools are located in West Seattle:

- 16 public schools, with 12 elementary, 2 middle schools, 2 high schools
- 9 private schools, religious (Catholic, Christian) and secular (Montessori, independent)

Area 7: Duwamish

Area 7 includes one residential community, South Park. There is one elementary school, Concord Elementary, located in Area 7.

Area 8: SE Seattle

Southeast Seattle includes Beacon Hill, Rainier Valley, and other neighborhoods in Southeast Seattle. The following schools are located in Area 8:

- 22 public schools, with 16 elementary, 2 middle schools, 4 high schools
- 10 private schools, religious (Catholic, Christian, Jewish) and secular (gender-based, independent)

Solid Waste

Seattle Public Utilities has developed the 2022 Solid Waste Plan Update. The plan contains information needed for forecasting future solid waste needs as well as information on landfill contracts, hauling contracts, capital facilities, and staffing. Currently the City of Seattle offers three streams of solid waste to commercial, residential, and self-haul customers. These three streams are garbage, compost, and recycling. Garbage is processed through City operated transfer stations and sent to landfills for long term storage in the Columbia Ridge Regional Landfill and other facilities outside of Seattle. Recycling and compost streams are processed at materials reclamation facilities (MRFs) operated by specific haulers and are sent to one of many facilities depending on the solid waste collection contractor that collected the material, and the stream that was collected. Seattle Public Utilities promotes recycling and composting by offering these services at a discount when compared to garbage collection, and limits contamination of recycling and compost through tags on receptacles and robust sorting at processing facilities.

Citywide

Inventory of Current Facilities

Seattle's Public Utilities' Solid Waste Program encompasses all residents and business owners in Seattle. The program operates a number of capital facilities seen in [Exhibit 3.11-34](#), [Exhibit 3.11-35](#), and [Exhibit 3.11-36](#). Facilities within the City of Seattle are used to sort commercial and residential garbage and recycling as well as hazardous materials. Other facilities outside of Seattle city limits are used for food and yard waste processing as well as landfilling.

Exhibit 3.11-34. Seattle Solid Waste Program, Public Facilities—Garbage Collection

City-Owned Permitted Facilities in Seattle: Operator	Facility	Type
Seattle Public Utilities	North Transfer Station	<ul style="list-style-type: none"> City-contracted residential garbage and food and yard waste collection transfer City-contracted commercial garbage and food and yard collection transfer Self-haul garbage, yard and wood waste, recycling, and reuse
Seattle Public Utilities	South Transfer Station	<ul style="list-style-type: none"> City-contracted residential garbage and food and yard waste collection transfer City-contracted commercial garbage and food and yard collection transfer Self-haul garbage, yard and wood waste, recycling, and reuse
Seattle Public Utilities	North Seattle Household Hazardous Waste Disposal Facility	<ul style="list-style-type: none"> Self-haul facility for hazardous materials Batteries, motor oil, cleaning products, paint, light bulbs, and other hazardous materials
Seattle Public Facilities	South Seattle Household Hazardous Waste Disposal Facility	<ul style="list-style-type: none"> Self-haul facility for hazardous materials Batteries, motor oil, cleaning products, paint, light bulbs, and other hazardous materials

Source: 2022 Solid Waste Plan Update, 2022.

Exhibit 3.11-35 Seattle Solid Waste Program, Private Facilities—Recycling Collection

Privately-Owned Permitted Facilities in Seattle: Operator	Facility	Type
Recology	MRF	▪ Recycling processing
Republic Services	Rabanco Recycling MRF	▪ Recycling processing ▪ Intermodal transfer of construction and demolition debris to long-haul disposal
Seadrunar	Seadrunar Recycling	▪ Recycling processing
Waste Connections	Northwest Container Service Intermodal Facility	▪ Intermodal transfer of construction and demolition debris to long-haul disposal
Waste Management Inc.	Eastmont Transfer Station	▪ Some garbage transfer. ▪ Some food and yard waste transfer ▪ Construction and demolition debris transfer
Waste Management Inc.	Alaska Reload Facility	▪ Contaminated soil transfer
Waste Management Inc.	Biomedical Waste Facility	▪ Biomedical treatment
Union Pacific Railroad (used by Waste Management Inc.)	Argo Rail Yard	▪ Intermodal transfer of construction and demolition debris and garbage to long-haul disposal

Source: 2022 Solid Waste Plan Update, 2022.

Exhibit 3.11-36 Seattle Solid Waste Program, Private Facilities—Compost Collection

Privately-Owned Permitted Facilities Outside of Seattle: Operator	Facility	Type
Cedar Grove	Cedar Grove Everett	▪ Food and yard waste composting
Cedar Grove	Cedar Grove Maple Valley	▪ Food and yard waste composting
Waste Connections	Finley Buttes Landfill	▪ Construction and demolition landfill disposal
Waste Management Inc.	Columbia Ridge Regional Landfill	▪ Landfill disposal
Republic Services	Roosevelt Landfill (Roosevelt, WA)	▪ Construction and demolition landfill disposal

Source: 2022 Solid Waste Plan Update, 2022.

Transfer Stations, MRFs, & Compost Processing Facilities

City-contracted collectors take the garbage and food and yard waste that they collect to City-owned transfer stations. They take residential recyclables to City-contracted MRFs, where materials are sorted, separated, and prepared for sale. The two Seattle Transfer stations also accept a small volume of recyclables only from self-haul customers. Occasionally, garbage and yard waste are transferred to contracted transfer facilities.

These facilities receive waste, consolidate it into loads, and send them to their next destination. Garbage is compressed and sealed into 40-foot intermodal containers and taken by truck to the Union Pacific Argo Rail Yard where the containers are taken to Columbia Ridge Landfill in Gilliam County, Oregon. As of the 2022 Seattle Solid Waste Plan Update's publication, the Columbia Ridge Landfill has an estimate 143 years of permitted capacity available and the

contract with Waste Management Inc. provides alternative transportation options and disposal options if the rail lines become temporarily unavailable.

Compostable Materials are also loaded into these containers and taken to compost processing facilities owned by either Cedar Grove or Lenz Enterprises. Cedar Grove processes roughly 30% of Seattle's compostable material at both its Everett and Maple Valley facilities and Lenz Enterprises processes the remaining 70% at its Stanwood facility.

Self-haul recyclables that are accepted at the transfer stations are taken to the Rabanco MRF for processing and marketing recyclable material.

Scale operators, floor staff, equipment operators, maintenance laborers, and administrative employees work within the transfer stations to process commercial, residential, and self-haul solid waste.

Residential, Commercial, and Public Place Solid Waste Collection

Residential Customers do not select their waste hauler as Seattle Public Utilities residential and public place solid waste collection is determined by location and is the result of a decennial competitive bid process. These boundaries ensure a high level of service, competitive rates, and efficiency in collection throughout the city. A map of these boundaries can be found in [Exhibit 3.11-37](#).

Commercial customers do not select their garbage collection but do have the ability to contract with third-party or private haulers for their recycling and composting. These haulers collect both SPU approved recyclables as well as additional materials depending on the needs of the customer.

The roughly 1,000 public place litter cans throughout Seattle are collected by contracted commercial collectors on a regular schedule and follow the same boundaries as commercial and residential solid waste. These receptacles are in commercial cores throughout the city.

Emergency Solid Waste Management

The City of Seattle provides guidelines for debris removal and processing after a debris-generating disaster in its Disaster Debris Management Plan, Emergency Operations Plan, and Continuity of Operations Plan. These plans ensure that debris generated is collected and disposed of in case of an emergency as well as ensuring that SPU will respond to emergencies and restore infrastructure and systems effected by emergencies.

Exhibit 3.11-37 Solid Waste Service Zones by Contractor—Residential and Commercial



Source: 2022 Solid Waste Plan Update, 2022.

Waste Generation Trends

Between the years 2000 and 2020, residential waste generation accounted for 38% of all non-construction and demolition waste generated in the City of Seattle per data in the 2022 Solid Waste Plan Update. About 10% of the total tonnage was generated by multi-family buildings and 28% were generated by single family households. Commercial waste generation accounted for 49% of the total waste generation during this time and 14% were attributed to self-haul customers at transfer stations. These values can be found in [Exhibit 3.11-38](#) and will be used in the impacts section to determine how solid waste generation will likely change over time.

Exhibit 3.11-38. Estimated Total Waste Generation by Non-C&D Customer Type, 2000–2020 (tons)

Year	Commercial	Single-Family Residential	Multi-Family Residential	Self-Haul	Total
2000	391,406	208,468	70,944	123,024	793,842
2001	377,927	211,982	68,611	124,453	782,974
2002	366,224	206,474	70,144	125,620	768,462
2003	339,844	205,748	72,149	123,597	741,337
2004	375,739	209,132	72,640	122,835	780,346
2005	385,093	208,675	72,325	124,364	790,456
2006	416,564	216,946	75,545	127,444	836,499
2007	418,979	220,128	77,108	132,545	848,759
2008	390,267	213,889	74,223	111,309	789,688
2009	335,992	215,015	70,524	97,893	719,424
2010	345,692	216,484	70,675	91,618	724,469
2011	351,214	212,861	70,145	81,776	715,996
2012	347,673	211,030	74,549	80,568	713,821
2013	356,480	206,603	76,960	84,341	724,385
2014	369,407	206,992	80,189	64,681	721,269
2015	370,037	204,397	78,278	67,993	720,705
2016	385,846	207,804	80,478	73,923	748,051
2017	398,422	213,709	77,150	111,098	800,380
2018	384,139	210,289	78,245	112,550	785,223
2019	355,453	207,538	80,241	114,234	757,466
2020	286,036	232,038	83,701	109,844	711,619
Average	368,973	211,724	105,034	74,992	760,722
Sum	7,748,434	4,446,202	1,574,824	2,205,710	15,975,171
% of Total	48%	28%	10%	14%	

Source: SPU 2020 Annual Waste Prevention & Recycling Report, 2021.

3.11.2 Impacts

Impacts Common to All Alternatives

Police

Growth in housing and jobs is expected to occur incrementally under all alternatives. For the purposes of the EIS analysis, increased density of population and jobs is anticipated to increase the potential demand for police services. However, many factors can influence crime rates. Literature and studies have identified population density and socioeconomic conditions (diminished economic opportunities, concentrations of poverty, high level of transiency, low levels of community participation) as factors as well as prevalent attitudes towards crime and crime reporting.

Property crimes are more prevalent than violent crimes and property crimes such as robbery and motor vehicle theft tend to occur at intersections rather than in whole neighborhoods. Victims of crimes are also more likely to be persons of color and younger; this has been observed in 2021 and 2022 Seattle Crime Reports for shootings.⁹⁸

The estimated number of officers per 1,000 residents is 1.4 in 2022. Given that SPD staffing levels are as low as they have been since 1980 based on data collected by the Washington Association of Sheriffs and Police Chiefs (WASPC), this analysis uses a rate of 1.738 officers per 1,000 residents, which is the average rate between 2010 and 2022. See [Exhibit 3.11-39](#). Though SPD is able to maintain adequate or near-adequate response times for priority 1 calls given the staffing deficiencies in recent years, an anticipated increase in property crimes (likely to be priority 2, 3, or 4 for SPD dispatch) may continue the upward trend of response times beyond acceptable standards.

Exhibit 3.11-39. Estimate of Officer FTEs per 1000 Residents

Alternative	Area 1	Area 2	Area 3	Area 4*	Area 5	Area 6	Area 7*	Area 8	Total
Current (est.)	219.0	177.7	100.5	143.3	193.1	128.0	6.3	109.3	1,077.0
Alternative 1	266.6	222.3	121.2	212.8	239.2	148.9	13.3	132.3	1,356.6
Alternative 2	283.6	242.6	128.8	212.8	250.5	160.9	14.6	136.7	1,430.5
Alternative 3	280.6	249.7	123.8	212.8	241.1	163.7	13.4	145.4	1,430.5
Alternative 4	279.3	252.8	123.5	212.8	241.3	163.2	13.4	144.1	1,430.5
Alternative 5	295.2	262.1	129.2	212.8	249.7	176.8	19.6	158.9	1,504.3
Preferred	310.0	261.1	132.3	211.1	255.6	173.2	12.0	147.2	1,502.6

Note: The level of service calculation is based on Seattle Police Department's average level of service from 2010-2022 which is 1.738 officers per 1,000 residents. The Preferred Alternative was added to this exhibit since the Draft EIS—no edits were made to Alternatives 1-5.

*Area 7 is predominantly industrial and will be regardless of alternative growth strategy.

Source: Washington Association of Sheriffs and Police Chiefs, 2023; BERK, 2024⁴³.

⁹⁸ Centers for Disease Control and Prevention (CDC), 2020; Pew Research Center, 2020; Seattle Police Department, 2023; US Department of Justice, FBI, 2011; Weisburd, 2015.

Based on population and housing growth alone Alternative 1 would have the least demand and Alternative 5 and the Preferred Alternative the most demand for police staffing. Most demand would occur in areas with the greatest planned growth in Areas 1 and 2. Area 4 Downtown may need alternative ratios with a focus on office employment as well as residential uses. Area 7 may also need other personnel depending on needs with industrially focused land use.

Fire/Emergency Medical Services

Growth in worker and residential populations in the study area is expected to lead to an increased number of calls for aid, basic and advanced life support, and other emergency services. Growth is expected to occur incrementally under all alternatives, as individual development projects are constructed. The Seattle Fire Department would attempt to maintain response times consistent with or better than current performance levels as the population grows. These performance level benefits and reduced overall response times have a strong correlation with staffing at stations and apparatus availability (Haskell, McAuslan, 2023). Over time, additional staffing and equipment within each analysis area would be required in order to maintain or improve performance levels.

Station 31 is the first of many stations that will be needed to meet the demand of its station area. This station is currently under construction and will eventually have increased unit and staff capacity. As mentioned earlier under **Fire/Emergency Medical Services** in **Section 3.11.1**, the City also anticipates it will need to replace Station 3 and the Fire Marshal office, acquire, or develop a new facility for SFD Headquarters, replace or expand the commissary and fire garage, develop a fire station in South Lake Union, and develop a freshwater marine fire suppression facility (City of Seattle 2020).

Based on growth projections of housing units, conversations with SFD staff on current deficits, and the minimum number of apparatuses to maintain a service level close to the current ratios of fire units to housing units, the resulting fire units needed are presented, and rounded to the higher whole number in **Exhibit 3.11-40**.

Exhibit 3.11-40. Apparatus Need by Alternative and Area

Alt	Units	Current Housing Unit per Fire Units	Housing Unit per Fire Unit with Growth Alternative (current app. Inventory)	Area: Fire Units Needed Based on Study Area Growth Estimates and Existing Deficiencies (Rounded)*								Total New Additional Fire Units (Estimate Rounded)	Projected Housing Units per Fire Unit if Adopted
				1	2	3	4*	5	6	7*	8		
1	Engine	12,231	14,731	1	1	1	1	1	0	0	1	6 ⁷	12,405 ⁰⁰⁷
	Ladder	32,616	39,283	0	0	1	0	0	0	1	1	3	31,426
	Medic	43,488	52,377	0	0	1	1	0	1	0	0	3	39,283
	Aid	55,913	67,342	1	0	1	0	1	1	0	1	4	42,854
	Other	19,570	23,570	1	1	0	0	0	1	1	0	4	19,641
2	Engine	12,231	15,356	1	1	1	1	1	1	1	1	8	12,285
	Ladder	32,616	40,950	0	0	1	0	0	0	1	1	3	32,760
	Medic	43,488	54,599	0	0	1	1	0	1	0	0	3	40,950
	Aid	55,913	70,199	1	1	0	0	1	1	0	1	5	40,950
	Other	19,570	24,570	1	1	0	0	0	1	1	0	4	20,475
3	Engine	12,231	15,356	1	1	1	1	1	1	1	1	8	12,285
	Ladder	32,616	40,950	0	0	1	0	0	0	1	1	3	32,760
	Medic	43,488	54,599	0	0	1	1	0	1	0	0	3	40,950
	Aid	55,913	70,199	1	1	0	1	0	1	0	1	5	40,950
	Other	19,570	24,570	1	1	0	0	0	1	1	0	4	20,475
4	Engine	12,231	15,356	1	1	1	1	1	1	1	1	8	12,285
	Ladder	32,616	40,950	0	0	1	0	0	0	1	1	3	32,760
	Medic	43,488	54,599	0	0	1	1	0	1	0	0	3	40,950
	Aid	55,913	70,199	1	1	0	1	0	1	0	1	5	40,950
	Other	19,570	24,570	1	1	0	0	0	1	1	0	4	20,475
5	Engine	12,231	15,981	2	1	1	1	1	1	1	1	9	12,473
	Ladder	32,616	42,616	0	0	1	0	1	0	1	1	4	31,962
	Medic	43,488	56,822	1	0	1	1	0	1	0	0	4	39,338
	Aid	55,913	73,056	1	1	1	0	1	1	0	1	6	39,338
	Other	19,570	25,570	1	1	0	0	0	1	1	0	4	21,308
PA	Engine	12,231	15,981	2	1	1	1	1	1	1	1	9	12,473
	Ladder	32,616	42,616	0	0	1	0	1	0	1	1	2	36,528
	Medic	43,488	56,822	1	0	1	1	0	1	0	0	3	42,616
	Aid	55,913	73,056	1	1	1	0	1	1	0	1	6	39,338
	Other	19,570	25,570	1	1	0	0	0	1	1	0	4	21,308
Fire unit increase based on LOS Calculation			Fire unit recommendations have been lowered slightly from LOS calculation to reflect needs based on minimum service provision rather than calculated current service provision								Fire unit recommendations have been raised slightly from LOS calculation to reflect needs based on minimum service provision rather than calculated current service provision		

*Areas 4 recommendations are based on current LOS deficit. Area and 7 will only partially use housing data to support additional fire unit recommendations as the current ratio is based on very few housing units and maintaining the current ratio is far beyond LOS standards due to employment characteristics.

Note: Color coding and key added since Draft EIS for additional clarification on fire unit recommendation rationale. The Preferred Alternative was added to this exhibit since the Draft EIS—minor edits to Alternatives 1–5 aside from the color coding are shown in tracks.

Sources: Seattle Fire Department Annual Report, 2022; BERK, 2024⁴³.

Additional units would need to be added to meet the current levels of service average dwelling units served by each number of apparatus and type of apparatus. However, based on Seattle Fire Department's Live dispatch dashboard as well as the SFD 2022 annual report, citywide unit additions should reflect aid unit prioritization over other fire units. Across all alternatives, each subarea or battalion should have at least a single aid unit stationed at a centrally located station to limit fire unit dispatches on aid calls.

Secondarily, the recommendations for Area 4 are consistent across all alternatives and reflect the growing need for an additional unit to fill the gap in service in the South Lake Union neighborhood. Overall, these recommendations are based on current service standards which can be greatly improved per [Exhibit 3.11-40](#)~~Exhibit 3.11-41~~.

Alternative 5 and the Preferred Alternative having the highest growth has the greatest need for apparatus. More apparatus under any of the alternatives may require additional personnel and expanded stations. Any potential future fire facility, staffing, or equipment needs will be included as part of the City's annual Budget and Capital Improvement Program process.

Building Heights and Density

Existing ladder trucks at fire stations citywide are equipped to provide services to buildings of the heights proposed under all alternatives.

Additionally, new buildings of three or more units would be required to meet the Seattle Fire Code which requires sprinklers throughout. No impacts to fire services are anticipated due to increases in building height or density.

Hazardous Materials

Industrial uses often include hazardous materials or have the potential to produce hazardous waste. Hazardous materials are defined by the City of Seattle as "those that pose an unreasonable risk to the health and safety of operating or emergency personnel, the public, and the environment if not properly controlled during handling, storage, manufacture, processing, packaging, use, disposal, or transportation" (City of Seattle 2018).

Additional industrial development under all of the alternatives could increase the amount or prevalence of hazardous materials in the study area. All new development would be required to meet the Seattle Fire Code which includes provisions for hazardous materials. Development proposals would be reviewed by the Seattle Department of Construction & Inspections as well as the SFD. Additional federal and state regulations also apply to development that includes hazardous materials or wastes—for example, WSDOT regulates off-site transportation of hazardous materials, and the Washington State Department of Ecology requires additional permits and inspections for such facilities as underground storage tanks (Seattle Industrial and Maritime Strategy EIS, 2022).

Construction

The Seattle Fire Department makes service calls related to inspection of construction projects and calls to respond to construction-related accidents. As such, increased construction activities associated with potential development under all alternatives could result in an increase in demand for fire services. Existing Fire Department staffing and equipment are anticipated to be sufficient to handle the increased services needed for construction activities.

Transportation Network and Traffic Volumes

Use of the public right of ways is critical to SFD meeting their response goals as the Department is dependent upon the capability of the city's street network to handle traffic flows. Traffic volumes are anticipated to increase under all of the alternatives and no specific transportation projects or changes to emergency access routes are proposed under any of the alternatives, but changes to the street network over time has the potential to impact the mobility of fire response vehicles.

Any street improvements must be consistent with the Seattle Fire Code Section 503 and Appendix D, which address fire apparatus access roads. Additionally, SFD reviews proposed street improvements on a project-by-project basis to identify potential negative impacts on response times. It is anticipated that these mitigation measures would adequately address the potential impacts of future changes to the transportation network under any of the alternatives.

Outreach & Additional Programming

Seattle Fire Department's education programs and fire prevention services utilize education and code enforcement as tools to lower demand on SFD firefighting and EMT resources. Fire prevention services include the Fire Investigation Unit, community risk reduction program, building/construction inspections and permitting, mobile inspections and pre-planning for fire response, plan preview, special hazards, special events and temporary assembly support, and suppression systems testing. These prevention strategies and programs help to reduce the overall demand for SFD services and can help reduce response time and potential negative outcomes from emergencies.

SFD also provides a number of outreach programs, which are necessary to reduce fire risk and increase public awareness on fire safety. These programs restarted in 2022 after a multi-year hiatus caused by the COVID-19 Pandemic. These events can give communities and individuals the tools they need to reduce fire risk and produce better outcomes in the event of emergencies.

Additional information on both fire prevention and outreach events are detailed in both the SFD 2022 Annual Report and [Equity & Climate Vulnerability Considerations](#) section below.

Parks

Demand & Level of Service

The ~~current~~ former 2017 parks level of service is 8.0 acres per 1,000 population (from Seattle 2035 and 2017 Parks and Open Space Plan). However, the city ~~is considering options for updating~~ updated the level of service as part of an update to the Parks and Open Space Plan in 2024. The 2024 Parks and Open Space Plan's adopted level of service aims to provide parks and park facilities within a 10-minute walk of all residents. As of 2023, approximately 95% of the City's population are within a 10-minute walk of a park or park facility. Within designated regional and urban centers, the City aims to provide parks and park facilities within a 5-minute walk of residents. ~~The goal of updating the level of services is to make it more consist with the City's goals and approach to acquisition.~~

~~Additional park acres would be needed under each alternative if the City maintains its 8.0 acres per 1,000 population level of service. Currently, Seattle Parks and Recreation manages 6,478 acres of parks in 2024; see Exhibit 3.11-25. The acreage needed would range from 1,312 to 1,968 acres between Alternative 1 and Alternative 5, with Alternatives 2 through 4 requiring an additional 1,640 acres. The alternatives would add more growth including within a 10-minute walk to the parks, and increase demand and use of current parkland. Alternative 1 would have the lowest additional demand with 80,000 more dwelling units and Alternative 5 and the Preferred Alternative the greater demand at 120,000 new housing units. Within each analysis area, the acres-population demand required are would be highest under the Preferred Alternative (areas 1, 3, 5) or Alternative 5 (areas 2, 6, 7, and 8), except that In Area 4, Downtown would have the same similar growth and acres-needed park demand under all studied alternatives, with a slightly lower population under the Preferred Alternative. Under each alternative, expected population growth is lowest in Area 7 due to the focus on employment (except in South Park). See Exhibit 3.11-41.~~

~~Exhibit 3.11-41. Additional Acreage Needed to Meet Parks LOS by Alternative~~

Alternative	Total Net Acreage Needed
Alternative 1	1,312
Alternative 2	1,640
Alternative 3	1,640
Alternative 4	1,640
Alternative 5	1,968

~~Notes: Converts housing units to population using a persons per household of 2.05 consistent with regional housing target efforts. The 8 acres per 1,000 population is applied to net population growth. Source: BERK, 2023.~~

The City currently has 6,478 acres of parkland. The city contains 53,651 acres and existing open space equates to approximately 12% of the city. If the city obtained the average amount of the alternatives this would raise the total open space to approximately 15% of the city. If no new

acres are added to the City's inventory, the ~~LOS-rate of acres per 1,000~~ would drop as shown in **Exhibit 3.11-41**. ~~Under this scenario, the City could acquire new park land to meet the LOS or change the LOS itself.~~ The City will address park needs within a 10-minute walk of parks.

Exhibit 3.11-41. Acres per 1,000 Population if Park Inventory Does Not Increase

	Actual 2022	Actual 2023	POS 2035	Alt. 1 2044	Alt. 2-4 2044	Alt. 5 2044	Preferred 2044
Population	762,500	779,200	802,358	966,358	862,500	1,007,358	1,007,358
Rate: Acres per 1,000 population	8.50*	8.31	8.07	6.70	6.43	6.18	6.18

Note: Adds potential population of 2.05 persons per household within new housing units to an estimated 2024 base population of 802,358 accounting for housing under construction or permitted. The Preferred Alternative was added to this exhibit since the Draft EIS—no edits were made to Alternatives 1-5.

*The acres of parks increased between 2017 and 2024 from 6,414 to 6,478. The 2024 estimate is used in this table. Sources: OFM, 2022; Seattle Parks and Recreation, 2017; BERK, 2024.

Shorelines Public Access

Greater population growth across the city could increase demand for shoreline public access. The alternatives would range in demand from the least under Alternative 1 to the most under Alternative 5 or the Preferred Alternative. Shoreline Master Program requirements for shoreline public access for non-residential development could result in more public access as development occurs in shoreline jurisdiction.

130th/145th Station Area

All alternatives would result in an increased demand for parkland in the city, with most demand under Alternative 5 and the least demand under Alternative 1 and the Preferred Alternative in the 130th Street Station Area. In the 145th Street Area, demand for parkland would be slightly higher under Alternative 2 and Alternative 5 than the No Action Alternative (with demand highest under Alternative 2). See **Exhibit 3.11-42** for a comparison using the 2017 acre metric. The additional population in Alternatives 2 and 5 would create a greater demand within 10 minutes of existing parkland compared to Alternative 1 and the Preferred Alternative.

Exhibit 3.11-42. Growth by Area and Alternative Demand for Park Acres: Station Area

	130th Street Population: Net	130th Street Park Demand (Acres)	145 th Street Population: Net	145 th Street Park Demand (Acres)
Alternative 1	399	3	1,324	11
Alternative 2	2,151	17	2,376	19
Alternative 5	3,371	27	2,171	17
Preferred	3,245	26	1,317	11

Note: Alternatives 1, 2, and 5 assume a potential population of 2.05 persons per household consistent with regional housing target efforts. The Preferred Alternative uses updated and more detailed information to calculate population growth. Existing population by center is based on OFM's 2023 SAEF April 1 census block estimate of

total population within the revised center boundaries of the Preferred Alternative. Future 2044 population by center was calculated using OFM's 2023 housing unit estimate, additional housing unit permits issued between April 1, 2023 and June 1, 2024 (since the 2023 OFM estimate), a citywide household occupancy rate of 93%, estimated existing people per household by center (per OFM's 2023 household and population estimates), and housing unit growth targets. The Preferred Alternative assumes a potential population of 2.29 persons per household in the 130th Street Urban Center and 2.02 persons per household in the 145th Neighborhood Center. The Preferred Alternative was added to this exhibit since the Draft EIS—no edits were made to Alternatives 1, 2, or 5.
Sources: Seattle Parks and Recreation, 2017; City of Seattle, 2022 and 2024; BERK, 2024³.

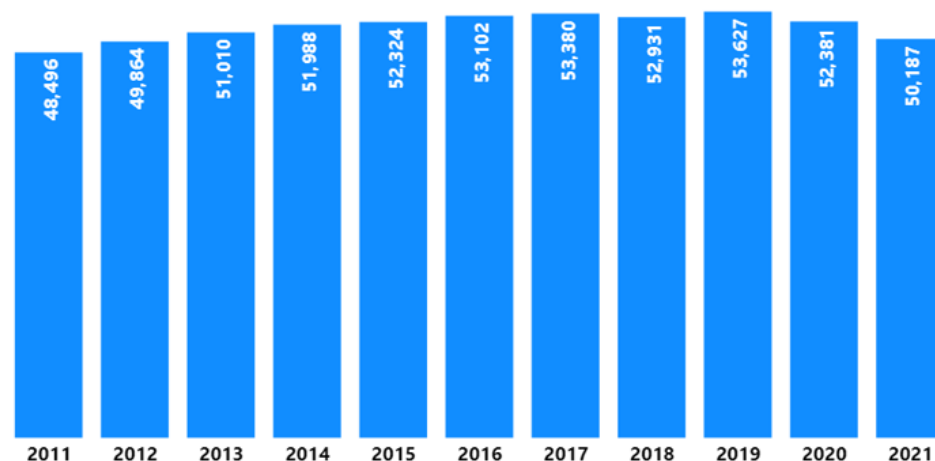
Schools

School enrollment is affected by a variety of factors including demographic trends, economic conditions, private school enrollment, and characteristics of housing stock such as size and cost.

Existing Trends

There are currently 50,056 students enrolled in Seattle Public Schools. This number represents about 80% of children enrolled in K-12 education. Over the last 10 years, enrollment in Seattle Public Schools increased from 49,900 students in 2012 to 53,600 students in 2019 and then decreased to 50,056 students by 2022. This change occurred during a period that Seattle added around 75,000 housing units. See [Exhibit 3.11-43](#).

Exhibit 3.11-43. Seattle Public School Enrollment 2012-2022



Source: SPS, 2023.

Estimates at Current Student Ratio

It is not possible to develop an accurate twenty-year projection of school needs given the wide variety of factors that influence these numbers and the recent fluctuations in public school enrollment. As a high-end estimate of potential impacts, it may be helpful to estimate the number of new classrooms that would be needed if recent trends change and the percentage of the total population enrolled in Seattle Public Schools holds steady over the next twenty years. Based on current student enrollment and city population, about 6.56% of the total population are K-12 students in the Seattle Public School District. See [Exhibit 3.11-44](#).

Exhibit 3.11-44. Students as Percentage of Total Population

	Number
Seattle School District Population (OFM 2022)	763,302
Enrollment Seattle School District OSPI 2022-2023	50,056
Students as a Percentage of Total Population	6.56%

Source: OSPI Student Information, 2023; OFM, 2022; BERK, 2023.

Applying this rate to expected population growth shows a range of 10,912-16,368 students generated by each alternative, the least under Alternative 1 and the most under Alternative 5 or the Preferred Alternative. See [Exhibit 3.11-45](#). Depending on the grade level and pace of housing and population growth, new classrooms or schools could be needed over time to accommodate growth. The total number of students is divided by 25 students per elementary school classroom to translate this number into potential elementary school classrooms—between 436 and 655 classrooms. This additional enrollment could be accommodated through a combination of accommodating students at schools that are currently under capacity, adding classrooms at existing school sites, and, potentially, adding new schools.

Exhibit 3.11-45. Housing, Population, and Potential Public School Students Assuming Current Student Percentage

Alternative	Net Change in Housing	Net Change in Population	Student Generation	Equivalent Elementary Classrooms
Alternative 1	80,000	164,000	10,755 10,912	430 436
Alternative 2	100,000	205,000	13,444 13,640	538 546
Alternative 3	100,000	205,000	13,444 13,640	538 546
Alternative 4	100,000	205,000	13,444 13,640	538 546
Alternative 5	120,000	246,000	16,132 16,368	645 655
Preferred	120,000	246,000	16,132	645

Note: Converts housing units to population using a persons per household of 2.05 consistent with regional housing target efforts. Applies 2.05 per household, 2017–2021 ACS; assumes 25 students per classroom. The Preferred Alternative was added to this exhibit since the Draft EIS—edits to Alternatives 1–5 are shown in tracks.

Source: City of Seattle, 2024~~43~~; SPS, 2021; SPS 2023; BERK, 2024~~43~~.

Under this calculation, most population growth, and therefore students, would be added in areas 1 and 2 for all of the alternatives (see [Exhibit 3.11-46](#)). Student growth in Area 4 would be the same across all Draft EIS alternatives 1 to 5 and would likely go to schools in areas 3 and 5 as there are no schools located in Downtown. Preferred Alternative students in Area 4 are slightly lower. Areas 6, 7, and 8 would have the second highest share of population and students in all the Draft EIS action alternatives. Preferred Alternative students in Areas 6-8 are slightly lower. In total the Preferred Alternative students are the same as Alternative 5.

Exhibit 3.11-46. Share of Students by Area: North, Central, and West/South Seattle Assuming Current Student Percentage

Alternative	Areas 1-2	Students (Net)	Area 4	Students (Net)	Areas 3 & 5	Students (Net)	Areas 6-8	Students (Net)	Total Students (Net)
Alternative 1	33%	<u>3,569</u> 3,621	24%	<u>2,610</u> 2,648	24%	<u>2,591</u> 2,629	18%	<u>1,985</u> 2,015	<u>10,755</u> 10,912
Alternative 2	37%	<u>4,925</u> 4,997	19%	<u>2,610</u> 2,648	24%	<u>3,280</u> 3,328	20%	<u>2,629</u> 2,667	<u>13,444</u> 13,640
Alternative 3	38%	<u>5,078</u> 5,152	19%	<u>2,610</u> 2,648	20%	<u>2,752</u> 2,793	22%	<u>3,003</u> 3,047	<u>13,444</u> 13,640
Alternative 4	38%	<u>5,141</u> 5,216	19%	<u>2,610</u> 2,648	20%	<u>2,749</u> 2,789	22%	<u>2,944</u> 2,987	<u>13,444</u> 13,640
Alternative 5	38%	<u>6,057</u> 6,146	16%	<u>2,610</u> 2,648	20%	<u>3,262</u> 3,310	26%	<u>4,203</u> 4,264	<u>16,132</u> 16,368
Preferred Alternative	41%	6,612	16%	2,571	22%	3,578	21%	3,371	16,132

Note: The Preferred Alternative was added to this exhibit since the Draft EIS—edits to Alternatives 1–5 are shown in tracks.

Source: BERK, 2024³.

Within the analysis areas, most growth would be directed to centers and villages under all alternatives and schools in those areas would be most affected. However, in Alternatives 2 through 5, more areas currently designated urban neighborhood and proposed as urban neighborhood would see growth, which may be focused around neighborhood centers, corridors, or elsewhere distributed through distributed growth of missing middle housing types.

Overall Impact

While K-12 public school enrollment has declined over the last 5 years, and is projected to continue declining through 2033, future population growth through 2044 has the potential to increase student enrollment in various areas throughout the city. Seattle Public Schools monitors changes in enrollment to track expected future needs and would adjust their enrollment projections accordingly for future planning cycle. SPS would respond to the exceedance of capacity as it has done in the past by adjusting school boundaries and/or geographic zones, adding or removing portables, adding/renovating buildings, reopening closed buildings or schools, and/or pursuing future capital programs.

130th/145th Station Areas

Under multiple alternatives, two station areas at 130th and 145th Street would be rezoned and allow greater density. There would be an increase in housing and population with most under Alternative 5 and least under Alternative 1. This increase could lead to an increase in the student population as well. Depending on alternative, the number of students could be greatest in 130th Street Station (Alternative 5) or at 145th Street (Alternative 2). See [Exhibit 3.11-47](#).

Exhibit 3.11-47. Share of Students by Station Area Assuming Current Student Percentage

Alternative	130 th Street Housing Units (Net)	Population (Net)	Students (Net)	145 th Street Housing Units (Net)	Population (Net)	Students (Net)	Total Students 130 th -145 th
Alternative 1	194	399	27	646	1,324	87	113
Alternative 2	1,049	2,151	143	1,159	2,376	156	297
Alternative 5	1,644	3,371	224	1,059	2,171	142	363
Preferred	1,500	3,245	213	652	1,317	86	299

Note: The Preferred Alternative was added to this exhibit since the Draft EIS—no edits were made to Alternatives 1–5. Source: BERK, 2024³.

Solid Waste

Growth in residential, commercial, and self-haul solid waste is expected to increase under all alternatives. For the purposes of the EIS analysis, increased density of population and jobs is anticipated to increase demand linearly. Estimates for this EIS are based on average annual tons of waste produced by sector and solid waste stream from 2020-2020. From 2000 to 2020 recycling and composting rates have increased per capita in Seattle while overall residential waste decreased every year from 2000-2019 with a slight increase in 2020 due to the COVID-19 Pandemic.

Exhibit 3.11-48 shows the most recent per capita waste generation from 2020 extracted from the 2022 Solid Waste Plan Update. Based on population, jobs, and housing growth alone Alternative 1 would have the least waste generation and Alternative 5 and the Preferred Alternative the most. Most demand would occur in areas with the greatest planned residential growth such as Areas 1 and 2 while Area 4 would see an increase in both commercial and residential solid waste. Other areas and alternatives will also see growth in solid waste service demand proportionate to growth planned.

Exhibit 3.11-48. 2020 Waste Generation Rates/Capita/Year based on 2020 Rates

	Commercial	Single-Family Residential	Multi-Family Residential	Self-Haul
Recycling + Compost	61.6%	71.2%	36.6%	11%
	1.93 lbs./employee/day (estimated)	1.62 lbs./resident/day (estimated)	0.83 lbs./resident/day (estimated)	0.19 lbs./resident/day (estimated)
Garbage	38.4%	28.8%	63.4%	89%
	1.21 lbs./employee/day (estimated)	0.65 lbs./resident/day (estimated)	1.44 lbs./resident/day (estimated)	1.54 lbs./resident/day (estimated)
Total Waste Generation Rate per capita	3.14 lbs./employee*/day (estimated)	2.27 lbs./resident/day (estimated)	2.27 lbs./resident/day (estimated)	1.73 lbs./resident/day (estimated)
Total Waste Generation in 2020	572,072,000 lbs.	464,076,000 lbs.	167,402,000 lbs.	219,688,000 lbs.

* “Employees” in this dataset refers to positions covered by the Washington Unemployment Insurance Act. The Act exempts self-employed, proprietors, and corporate officers, military personnel, and railroad workers, so those categories are not included in the dataset. Covered Employment accounts for approximately 85% to 90% of all employment. Source: Seattle 2022 Solid Waste Plan Update (Ch. 3), 2022; BERK, 2023.

Exhibit 3.11-49 and **Exhibit 3.11-50** offer estimates of each solid waste stream by customer types for alternatives based on job growth estimates and housing units. The number of people per household is variable but is estimated at 2.05 people per household for these calculations. All alternatives estimate 158,000 additional jobs in Seattle between 2024 and 2044.

Exhibit 3.11-49. Estimated Tons of Solid Waste (Garbage, Recycling, Compost) Generated by Alternative—Residential

Scenario	Resident estimates	Tons of Waste Per year estimate	Tons of Diversion at goal rate: 70%
Current: 2020	762,148	315,739	221,017
Alternative 1	966,358	400,338	282,336
Alternative 2	1,007,358	417,323	292,126
Alternative 3	1,007,358	417,323	292,126
Alternative 4	1,007,358	417,323	292,126
Alternative 5	1,048,358	434,308	304,015
Preferred	1,048,358	434,308	304,015

Note: The Preferred Alternative was added to this exhibit since the Draft EIS—no edits were made to Alternatives 1–5.
Sources: SPU, 2020 Annual Waste Prevention & Recycling Report; BERK, 2024³.

Exhibit 3.11-50. Estimated Tons of Waste Generated for Commercial Customers

Year	Employee Estimates	Tons per year based on 2020 per employee estimate	Diversion at current recycling rate: 61.6%	Diversion at goal recycling rate: 70%
2020 (per 2020 employee estimate)	499,146 employees	286,036 tons	176,198.2 tons	200,225.2 tons
2044 estimates, all alternatives	746,447 employees	427,751 tons	263,494.9 tons	299,426 tons

Sources: SPU, 2020 Annual Waste Prevention & Recycling Report; BERK, 2023.

To meet the additional need for solid waste services, contracts with waste haulers are renegotiated every 10 years. Fees charged to residential and commercial customers from Seattle Public Utilities and from waste haulers directly support the necessary capital investments needed to ensure minimum levels of service.

Equity & Climate Vulnerability Considerations

Police

SPD has developed Micro Community Policing Plans (MCP) to address the individual needs of each community. Based on the City's equity opportunity areas evaluation and engagement with the community in each area, these plans could be updated.

Police access to parts of the city could be affected by extreme precipitation, flooding, sea level rise, and landslides. Response times may be affected by climate-exacerbated natural hazards such as flooding. As police officers often work outdoors, officers may be affected by extreme heat. These considerations are expected to be similar across alternatives; alternatives with greater growth may require greater police services and may mean additional personnel and facilities that need to be adapted for climate resilience.

Fire/Emergency Medical Services

SFD leverages staff, facilities, and training resources to better address inequitable distributions of fire risk in homes, inequitable health outcomes, and the increased risk of wildfire smoke in our region.

While the Seattle Fire Department is the main firefighting entity within Seattle, most of its work is rooted in health services and fire prevention. To reduce fires in homes SFD works with communities throughout Seattle to distribute fire prevention flyers that have been translated in the top seven spoken languages in Seattle to ensure compliance with fire safety standards regardless of language.

Fire prevention outreach also helps alleviate racial and social inequities. There is a correlation between age of housing units and high prevalence of disadvantages related to Race and Socio-economic status. Data gathered via Seattle’s Market Rate Housing Needs and Supply Analysis (2021) as well as the Seattle Racial and Social Equity Index (2018) indicate that housing structures in the Southwest, Southeast, and East Central regions of the city are more likely to be older and to potentially benefit from fire prevention outreach. These areas are also more disadvantaged than elsewhere in the city per the Racial and Social Equity Index. Targeting fire prevention outreach in these areas is vital to alleviating fire safety inequity.

Aside from outreach and prevention, SFD also performs fire inspections on existing homes as well as required inspections on new development. Each growth alternative will result in an increase in the number of multi-family units and may require additional staff to adequately provide fire prevention services to the growing population. Alternative 5 and the Preferred Alternative would have more demand than Alternatives 2-4 and Alternative 1. See [Exhibit 3.11-40](#).

Aid and medical response are also duties of SFD. Negative health outcomes as a result of certain environmental and climatic conditions are inequitably distributed in historically disadvantaged communities such as poor air quality or wildfire smoke leading to respiratory and cardiovascular diseases. Poor air quality may result in more serious chronic medical conditions that require emergency medical transport more often as well as Basic or Advanced life support for acute medical emergencies. Air quality hazards are exacerbated by climate change, vehicular traffic, and the increased wildfire smoke risk facing Washington State in recent years (Seattle & King County Public Health 2021). The potential for each alternative to locate growth near sources of pollution like major highways is addressed in [Section 3.2 Air Quality & GHG Emissions](#).

Parks

Alternatives & Parks in Highest Equity Priority Areas

Parks are important for community health and well-being and a key amenity in growth areas. The City developed an overlay of public space priority areas considering race and social equity, density and growth, and health outcomes in [Exhibit 3.11-51](#). Areas of centers/ urban centers are considered a priority for 5-minute walks to parks and areas outside of centers/ urban centers are considered a priority for 10-minute walk to parks.

Since the 2020 evaluation of “Outside Citywide” the City has updated its Racial and Social Equity Index in with ACS 5-Year data 2017-2021; see [Chapter 1](#). Areas of the highest priority for plans/programs/investments based on Race and Social Equity are generally in the south end of the City including Delridge (Area 6), South Park (Area 7), and Southeast Seattle (Area 8), as well as locations generally north of NE 85th Street along NE 145th Street/SR 523 (Area 1) and along Lake City Way/SR 522 (Area 2), and central areas like Pioneer Square, International District, and Central District (Areas 4 and 5). The University District has a high share of students who likely have lower incomes. Area 3 does not have highest or second highest equity priority areas.

Urban centers considered to be park priority investment areas in [Exhibit 3.11-51](#) are not necessarily considered highest equity priority considering the Racial and Social Equity Index alone, including Ballard, West Seattle Junction, and Morgan Junction.

Exhibit 3.11-51. Racial and Social Equity Index: Highest Equity Priority

Analysis Area	General Areas of Concern	Areas Subject to Urban Centers Walkability Policy in POS Plan
1	Bitter Lake, N 105th Street	Bitter Lake
2	Northgate, and Lake City Way University District	Lake City, Northgate U District
3	None	None
4	Downtown, Pioneer Square, and International District	Downtown
5	Yesler Terrace and Atlantic neighborhoods	First Hill/Capitol Hill 23rd & Union Jackson
6	High Point, South Delridge, Roxhill, Highland Park	Westwood-Highland Park
7	Greater Duwamish and South Park	South Park

Source: BERK, 2023.

Alternative 5 and the Preferred Alternative have ~~has~~ the most growth of the studied alternatives and generally would distribute the most growth and demand for parks under all areas except Area 4 Downtown where proposed growth is consistent across all alternatives and Area 5

(Central/East) where Alternative 2 has the most growth proposed. Where growth is focused, there could be more investment in parkland to serve the growth including in Race and Social Equity priority areas, particularly if the City requires provision of open space or contribution to city parks by new development. However, if growth outpaces investment in parks, there could be a degradation of acres per capita and greater demand on existing facilities.

Parks & Heat Islands

The areas considered to have greater heat islands due to impervious areas and less tree canopies are shown on [Exhibit 3.11-52](#). Particularly warm areas morning and evening include Downtown, Greater Duwamish MIC, and Southeast Seattle, portions of which are considered to be Highest Equity Priority in part. Adding parkland and improving tree canopy in parkland and other public property like rights of way could also improve climate resilience and community health.

Exhibit 3.11-52. Heat Islands in Seattle



Notes: The morning index illustrates areas with the most concrete and building mass such as downtown Seattle are warm and likely retaining heat and emitting the previous day's heat through the nighttime. The afternoon map shows cooler temperatures; mid-day shadowing from buildings could cool temperatures in downtown. The evening temperatures are relatively high again with greater areas of concrete retaining heat into the evening. Source: CAPA/NIHHIS. 2022. "Heat Watch Seattle & King County." OSF. August 2. osf.io/mz79p.

Schools

Seattle's Racial and Social Equity Index identifies Highest or Second Highest Equity Priority Areas around Rainier Valley, Beacon Hill, Delridge, High Point, Downtown, Central Area, University District, Greenwood, Bitter Lake/Haller Lake, and Lake City. More of the priority areas are in study areas 6, 7, and 8 in the southern portion of the city.

The City's responsibility in planning for schools is to coordinate with the School District in planning for growth and modernization. The City is also responsible for implementing zoning and development standards regulating new development on school property. The City also plays a role in ensuring access to schools with safe travel routes. Equitable access improvements would help all local students in priority areas for race and social equity. The latest 2021-2025 action plan includes priorities for communities of color, low-income communities, immigrant, and refugee communities, those with disabilities, homeless, LGBTQ communities, and girls.

Solid Waste

Seattle Public Utilities' Solid Waste Division has staff and contractors that are at high risk for the negative impacts of extreme weather events. Many of these workers are subject to extreme heat and extreme precipitation events that are made more severe and common by climate change. These hazards are mitigated through contracts with waste hauling entities to ensure the health and safety of staff that are at risk.

SPU has also joined with Seattle City Light to mitigate cost burden of utility services on low-income households through the Utility Discount Program. This program ensures that cost will not be a barrier for households to receive services provided by Seattle Public Utilities and Seattle City Light. This program's application process, as well as all outreach material created by Seattle Public Utilities, are translated into a number of languages to serve non-English speakers in Seattle and to lower the barrier to these vital public services.

The Clean City Division of SPU also provides necessary debris clearance in the event of climate emergencies and ensure equitable distribution of resources by utilizing Seattle's Racial Equity Toolkit in program planning and implementation. This toolkit and the division ensure that public litter receptacles, litter abatement routes, and encampment solid waste collection (purple bag program) are equitably distributed throughout the city and are not prioritized in highly resourced communities.

Impacts of Alternative 1: No Action

Police

Alternative 1 will concentrate growth on already existing urban centers. These urban centers could see an increase in demand for police services in these higher growth areas. Alternative 1

represents the lowest increase in demand for Seattle Police Department services but still a slight increase in number of officers.

Fire/Emergency Medical Services

Alternative 1 will concentrate growth on already existing urban centers in Downtown, University District, and Northgate areas and urban centers throughout the city. Current demand for additional aid units in urban centers will increase incrementally and will likely require additional unit to make up apparatus and staff deficits in Area 4. Concentrated growth in Area 4 with multifamily dwellings and less growth in areas will not increase the risk of fire but may increase the number of false alarms that still require dispatch by SFD. Current inspections staff should be adequate in meeting the construction inspections demand.

Parks

Alternative 1 studies the lowest overall growth of the Draft and Final EIS alternatives and would thus result in the lowest amount of required new park acres. The No Action Alternative emphasizes growth in Downtown with the greatest demand for parkland there, followed by areas 1, 5, and 2. The least amount of growth would be in areas 6, 7, and 8 in southwest and southeast Seattle.

Schools

Alternative 1 has the lowest growth overall citywide and the lowest student generation. Most growth would be located in areas 1 and 2 and in the north portion of the city. Most schools have capacity for more students but if the net growth is on top of existing students more school capacity could be needed.

Solid Waste

Alternative 1 will concentrate growth in urban centers which will increase demand for Recology waste hauling service as they are the main hauler of residential customers in these areas. Of the new housing units estimated, roughly 67,000 are estimated to be multifamily customers and the remaining 13,000 are estimated to be single-family solid waste customers. Because multi-family customers have lower overall recycling rates, in order for the City to reach its 70% recycling goal SPU would need to increase its emphasis on education and outreach.

New infill and other residential development will also require additional waste hauling staff to meet the minimum levels of service of weekly garbage and compost collection and bi-weekly recycling collection for residential customers.

130th/145th Station Area

Police

The net population of the area is anticipated to be over 400 over the 20-year planning period. It is anticipated that growth would lead to incremental demand in Area 2.

Fire/Emergency Medical Services

The impacts of this station are not anticipated to increase with minimal zoning changes. However, this area is currently identified as potentially needing additional units at the Bitter Lake fire station to meet minimum service standards. This likely would not require a new station given that nearly all development is targeted at urban centers and the Northgate station is already well equipped with support units in case of multiple calls to the transit station area.

Parks

There would be relatively low additional demand for parkland in the 130th and 145th Street Station Areas under this scenario.

Schools

Alternative 1 produces a small residential growth number and similarly low number of students. The number of students would be spread to three elementary schools near to the stations and one middle school and one high school. It is unlikely to require changes to local school capacities or attendance boundaries.

Solid Waste

Alternative 1 produces a small residential growth number. The number of dwelling units would change the type of service but would not significantly impact levels of service.

Impacts of Alternative 2: Focused

Police

Alternative 2 would add 100,000 in new housing units and 205,000 in population. The 20,000 dwellings above Alternative 1 would largely be added in neighborhood centers, small mixed use nodes Alternative 2 could require a maximum of 1,430 police officers (FTEs) to meet potential additional demand, and most would serve the added growth in centers and newly designated nodes. Most growth though would be in the northern portion of the city in Areas 1 and 2.

Alternative 2 would add 158,000 employees like all other alternatives, with most in downtown neighborhoods. Unlike Alternative 1 a small share of jobs (~10%) would be located in

neighborhoods to serve the greater residential growth. Thus, a slightly higher potential for calls for service in the neighborhoods beyond centers could occur, such as the neighborhood centers.

Fire/Emergency Medical Services

The addition of neighborhood centers in this alternative creates a higher need for fire units and additional staff in Areas 1 and 2. Based on the assessment, current LOS might be met with an additional station that includes at least one engine and one ladder unit. One of these two stations should also receive either an aid or medic car to provide BLS or ALS.

New growth would be developed in accordance with fire codes. Over the planning period to 2044, structures that are retained would continue to age and SFD fire prevention outreach would continue to be important.

City investments in climate resilience in areas with heat islands (see [Exhibit 3.11-52](#) in Parks evaluation) could reduce the potential for emergency aid calls during extreme heat. The development added to centers and new neighborhood centers as well as the City's tree canopy goals and strategies on public and private lands could support improved climate resilience. There are added neighborhood centers in Areas 6 and 7; although there are relatively fewer neighborhood centers in Area 8 there are centers where growth could be focused.

See [Section 3.2 Air Quality & GHG Emissions](#) regarding equity and climate resilience and air quality such as buffers from high-volume roads and filtration of dwellings.

Parks

Growth under Alternative 2 would ~~require 1,664 additional acres of~~ create more demand for parks across the city. More growth is planned in areas 1 and 2 and so those analysis areas would create the most demand for parks. Growth under Alternative 2 would also result in more demand for parkland in Area 5 than any of the other alternatives.

Schools

Alternative 2 would place the most growth in areas 1 and 2 like Alternative 1. With a higher level of housing and student growth there would be increases in areas 3 and 5-8 compared to Alternative 1. The same level of growth is planned in Centers and Villages, and more growth would be in neighborhood centers across the city, incrementally affecting nearby schools, and less in lands outside these areas of focus. Existing schools may need added classrooms, schools, or attendance boundary changes depending on the rate of growth.

Solid Waste

Alternative 2 would add an estimated 100,000 new housing units in neighborhood centers, small mixed-use nodes, as well as the Downtown Core. About 90% of these units are estimated to be multifamily solid waste customers while the remaining units would be single family

customers. This alternative would also require an increase in education and outreach. It will increase demand for solid waste haulers and would put additional strain on other solid waste services such as illegal dumping and public place litter and recycling. However, the overall capacity of the solid waste system is anticipated to be adequate.

130th/145th Station Area

Police

Under Alternative 2, population would increase by over 2,100 and nearly double the demand for services in the subarea and contribute to more service needs in Area 2.

Fire/Emergency Medical Services

Fire services at the station area would require either a new station or additional units at Bitter Lake to support higher density housing, which results in additional aid calls as well as one additional firefighting unit as is customary at new stations. SFD has identified this area as a hole in service that falls just outside of the minimum response buffer of two different stations; providing additional units at one or both stations could better equip them to handle increased demand.

Parks

Under Alternative 2, growth would contribute to citywide demand for parks. There could be more residents using existing parks in the study area at nearly twice planned as under Alternative 1, and a greater need to improve existing parks to address the greater demand.

Schools

There would be a greater than doubling of expected students, though relatively low compared to Area 2 and citywide growth. There may need to be capacity changes to one or more existing schools or changes to attendance boundaries.

Solid Waste

Alternative 2 produces a larger number of residential units. The number of dwelling units would change the type of service but would not significantly impact levels of service. Multi-family dwellings require more garbage service relative to recycling and composting when compared to single family dwellings.

Impacts of Alternative 3: Broad

Police

Impacts of Alternative 3 on demand for officers would be similar to Alternative 2 with similar growth numbers and need for officers. Most growth would continue to be in centers, but the 20,000 additional residential dwellings would be distributed in a less dense fashion across the NR designation in middle housing types and calls for service may likewise be more diffuse.

Fire/Emergency Medical Services

This alternative will distribute more households throughout the city and will potentially increase needs in Area 1 and Area 2. However, because Area 1 has the highest number of units of any of the service areas, it would be a better use of resources to support aid units in Area 2, Area 4, and Area 8. Additionally, each area of this alternative aggregates to one additional firefighting specific unit depending on the density of the area. This may result in an additional station in South Lake Union to support an additional engine, or possibly increased usage of existing stations.

Investments in climate resilience to address health/emergency services would be likely focused where growth is concentrated in centers, as well as in rights of way and public and private lands (e.g., green infrastructure, tree canopy).

Parks

Alternative 3 distributes a similar amount of growth as Alternatives 2 and 4 but emphasizes growth in areas 1 and 2. Impacts would be similar to those described under Alternative 2.

Schools

Alternative 3 would place the most growth in areas 1 and 2 like Alternatives 1 and 2 and also place a similar amount of growth in centers and villages as these alternatives. The difference in growth is distributed across urban neighborhood areas in each alternative, and there could be incremental demand increases at all schools. Existing schools may need added classrooms, schools, or attendance boundary changes depending on the rate of growth.

Solid Waste

Impacts of this alternative would be similar to Alternative 2 in terms of amount of housing units estimated. However, the distribution of the units is broader across the city and would impact both solid-waste haulers more equally in terms of demand. The number of single-family customers would increase with the increase in in-fill development, but a large proportion of the growth (~68%) would still be in the number of multifamily customers. Education and outreach demand would increase at a slightly lower level than Alternative 2 but would still be required

to meet diversion targets of 70% in residential solid waste. However, the overall capacity of the solid waste system is anticipated to be adequate.

130th/145th Station Area

Not applicable. Under Alternative 3, the station area plan would not be implemented and citywide place types would apply. See the cumulative evaluation under Alternative 3 in Area 2.

Impacts of Alternative 4: Corridor

Police

Impacts of Alternative 3 on demand for officers would be similar to Alternative 2 with similar growth numbers and need for officers. Most growth would continue to be in centers, but the 20,000 additional residential dwellings would be distributed in a less dense fashion across the NR designation in middle housing types and calls for service may likewise be more diffuse.

Fire/Emergency Medical Services

This alternative will distribute more households throughout the city and will potentially increase needs in Area 1 and Area 2. However, because Area 1 has the highest number of units of any of the service areas, it would be a better use of resources to support aid units in Area 2, Area 4, and Area 8. Additionally, each area of this alternative aggregates to one additional firefighting specific unit depending on the density of the area. This may result in an additional station in South Lake Union to support an additional engine, or possibly increased usage of existing stations.

Investments in climate resilience to address health/emergency services would be likely focused where growth is concentrated in centers, as well as in rights of way and public and private lands (e.g., green infrastructure, tree canopy).

Parks

Alternative 4 distributes a similar amount of growth as Alternatives 2 and 3 but emphasizes growth in areas 2, 6, and 8. Impacts would be similar to those described under Alternative 2 with more parkland needed in areas 2, 6, and 8.

Schools

Alternative 4 would place the most growth in areas 1 and 2 like Alternatives 1, 2, and 3, and also place a similar amount of growth in centers and villages as these alternatives. The difference in growth is distributed along corridors in urban neighborhood areas, and there could be incremental demand increases at serving schools. Given the size of attendance

boundaries, there is likely not much difference in increased demand between Alternatives 3 and 4. Existing schools may need added classrooms, schools, or attendance boundary changes depending on the rate of growth.

Solid Waste

Impacts of this alternative would be similar to Alternative 2 in terms of amount of housing units estimated. However, the distribution of the units is broader across the city and would impact both solid-waste haulers more equally in terms of demand. The number of single-family customers would increase with the increase in in-fill development, but a large proportion of the growth (~68%) would still be in the number of multifamily customers. Education and outreach demand would increase at a slightly lower level than Alternative 2 but would still be required to meet diversion targets of 70% in residential solid waste. However, the overall capacity of the solid waste system is anticipated to be adequate.

130th/145th Station Area

Not applicable. Under Alternative 3, the station area plan would not be implemented and citywide place types would apply. See the cumulative evaluation under Alternative 3 in Area 2.

Impacts of Alternative 5: Combined

Police

Alternative 5 would have the greatest demand for additional police services by adding 40,000 more dwellings than Alternative 1 for total new growth of 120,000 or 246,000 new residents. The Alternative maximizes growth in all centers, nodes, corridors, and NR designations. It could require investment in police stations in all areas.

Fire/ Emergency Medical Services

This alternative presents the greatest number of additional dwelling units as well as the highest potential to overload existing fire stations. Growth is spread throughout the city and is maximized as this alternative more evenly distributes higher density housing and increased targeted growth.

Additional stations could be added to fill the holes in service near Area 1 or 2, I-5 corridor, or North Seattle, as well as in Area 5 near South Lake Union. Additionally extra units may be leveraged in Area 8 to support the larger geographic area whose growth may be achieved through smaller multifamily dwellings that are exempt from certain fire suppression measures.

The potential opportunities for investment in climate resilience particularly addressing extreme heat would be greatest (e.g. green infrastructure, tree canopy, etc.). More buildings could be designated for passive cooling and air filtration.

Parks

Demand for additional parkland would be highest under Alternative 5 with 40,000 more dwellings than Alternative 1 and 20,000 more than Alternatives 2 and 3. Alternative 5 matches or exceeds growth of the other alternatives in each area except in Area 5 where growth is slightly lower than Alternative 2.

Schools

Alternative 5 has the greatest population growth and the greatest demand for schools. All areas of the city would see more growth, though still focused in areas 1 and 2. All place types—centers, corridors, and residential districts would see growth and require increased educational services. More than other studied alternatives, existing schools may need added classrooms, schools, or attendance boundary changes depending on the rate of growth.

Solid Waste

This alternative presents the greatest number of additional dwelling units citywide. Growth is spread throughout the city and is maximized as this alternative more evenly distributes higher density housing and increased targeted growth. There would be additional need for outreach and engagement in multifamily residential developments, additional stress on public place litter and recycling and illegal dumping contractors, as well as increases in the number of routes needed to reach minimum levels of service for residential and commercial customers.

Even under the highest growth, the overall capacity of the solid waste system is anticipated to be adequate provided the solid waste plan is implemented. The plan is anticipated to be updated over time as the city grows over the 20-year period.

130th/145th Station Area

Police

Population would equal over 3,400 and more than double the current population, and lead to the highest level of demand in the station area and contribute to overall demand in Area 2.

Fire/Emergency Medical Services

This alternative presents that largest increase in unit needs for the transit stations areas. If an additional aid unit is provided at each of the nearby stations at Bitter Lake and Lake City, SFD can maintain and even improve the service levels of the station area without being forced to cross Interstate-5 which may present a challenge depending on the time of day.

Parks

Demand in the study area would contribute to the higher citywide demand for parks. Locally, Alternative 5 has the most residential growth in 130th Street Station Area. Growth and demand for parks in the 145th Street Station Area is second highest under Alternative 5. There could be increased usage at local parks and a need to increase capacity.

Schools

Under Alternative 5, impacts to schools immediately in the station areas would be similar to and slightly greater than Alternative 2 with a small difference in expected students.

Solid Waste

Under Alternative 5, impacts to solid waste would be similar to and slightly greater than Alternative 2 with a small increase in the number of dwelling units and waste volume.

Impacts of Preferred Alternative

Note: The impacts analysis for the Preferred Alternative was added since the Draft EIS.

Police

Similar to Alternative 5, the Preferred Alternative would have the greatest demand for additional police services by adding 40,000 more dwellings than Alternative 1 for total new growth of 120,000 or approximately 246,000 new residents. The Alternative maximizes growth in all regional centers, urban centers, neighborhood centers, corridors, and urban neighborhood designations. It could require investment in police stations in all areas. Areas 1 and 2 would have the most residential growth.

Fire/ Emergency Medical Services

This alternative presents the greatest number of additional dwelling units as well as the highest potential to overload existing fire stations. Growth is spread throughout the city with most in Areas 1 and 2.

Additional stations could be added to fill the holes in service near Area 1 or 2, I-5 corridor, or North Seattle, as well as in Area 5 near South Lake Union. Additionally extra units may be leveraged in Area 8 to support the larger geographic area whose growth may be achieved through smaller multifamily dwellings that are exempt from certain fire suppression measures.

The potential opportunities for investment in climate resilience particularly addressing extreme heat would be greatest (e.g. green infrastructure, tree canopy, etc.). More buildings could be designated for passive cooling and air filtration.

Parks

Demand for additional parkland would be like Alternative 5 and would have 40,000 more dwellings than Alternative 1 and 20,000 more than Alternatives 2 and 3. The Preferred Alternative matches or exceeds growth of the other alternatives in each area except in Area 5 where growth is slightly lower than Alternative 2.

Schools

Along with Alternative 5, the Preferred Alternative has the greatest population growth and the greatest demand for schools. All areas of the city would see more growth, though still focused in Areas 1 and 2. All place types—centers, corridors, and residential districts would see growth and require increased educational services. More than Alternatives 1-4, and similar to Alternative 5, existing schools may need added classrooms, schools, or attendance boundary changes depending on the rate of growth.

Solid Waste

This alternative presents the greatest number of additional dwelling units citywide similar to Alternative 5. Growth is spread throughout the city and is maximized as this alternative more evenly distributes higher density housing and increased targeted growth. There would be additional need for outreach and engagement in multifamily residential developments, additional stress on public place litter and recycling and illegal dumping contractors, as well as increases in the number of routes needed to reach minimum levels of service for residential and commercial customers.

Even under the highest growth, the overall capacity of the solid waste system is anticipated to be adequate provided the solid waste plan is implemented. The plan is anticipated to be updated over time as the city grows over the 20-year period.

130th/145th Station Area

Police

Population growth in the 130th Street Station Area would equal about 3,245, which would about double the current population. This would lead to the second highest level of demand in the station area and contribute to overall demand in Area 2.

Fire/Emergency Medical Services

This alternative presents that largest increase in unit needs for the transit stations areas. If an additional aid unit is provided at each of the nearby stations at Bitter Lake and Lake City, SFD can maintain and even improve the service levels of the station area without being forced to cross Interstate-5, which may present a challenge depending on the time of day.

Parks

Demand in the study area would contribute to the higher citywide demand for parks. Locally, The Preferred Alternative has the most residential growth in 130th Street Station Area. Growth and demand for parks in the 145th Street Station Area is second highest under the Preferred Alternative. There could be increased usage at local parks and a need to increase capacity.

Schools

Under the Preferred Alternative, impacts to schools immediately in the station areas would be similar to and slightly greater than Alternative 2 with a small difference in expected students.

Solid Waste

Under the Preferred Alternative, impacts to solid waste would be similar to and slightly greater than Alternative 2 with a small increase in the number of dwelling units and waste volume.

3.11.3 Mitigation Measures

Incorporated Plan Features

The action alternatives would update the Parks and Recreation Element of the Comprehensive Plan, which would result in refreshed policies. The POS Plan is being updated in parallel with the Comprehensive Plan, and it is anticipated that the plan will address levels of service and priorities for implementation.

The City is updating its Comprehensive Plan including its public services policies and coordinating with service providers regarding growth estimates.

Compact growth in centers under all alternatives and in other areas of focus like centers and corridors in Alternatives 2 and 4 could result in more efficient service delivery. More diffuse growth in urban neighborhood areas in Alternatives 3 and 5 and the Preferred Alternative could distribute the demand more incrementally and locate more housing near existing infrastructure like schools, parks, and fire stations.

Regulations & Commitments

Police

- SPD has Crime Prevention Coordinators (CPCs) who are experts in crime prevention techniques. SPD also advises on natural surveillance and other techniques to provide design of development and landscaping that allows for visibility and increase safety.

- SPD has developed Micro Community Policing Plans (MCP) with community engagement and considering crime data to help direct police services to address the individual needs of each community.
- SPD has a Professional Standards Bureau to guide Seattle's Police Reform. Goals include:
 - Reduce Crime and Disorder: The Seattle Police Department strives to move beyond just responding to crime after it has occurred to proactively working toward reducing the opportunity for and disorder associated with criminal activity.
 - Service Excellence: Enforcing the law is only a portion of what the Seattle Police Department does each day. Providing service to individuals happens much more frequently than arrests. To this end, the men and women of the Seattle Police Department are continuously looking for better and more effective ways to advance policing.
 - Honor and Professionalism: Public trust, Courtesy, and Respect remain a top priority for the Department. All SPD personnel understand that this is a shared responsibility and is critical in building strong relationships with the communities of Seattle.
 - Business Efficiency: SPD has a duty to administer the resources granted to it in a responsible and effective manner and is always looking toward implementing best business practices to provide effective and skillful police services.
 - Data Driven Policies and Practices: Effective, modern policing is grounded in agile, data-driven strategies. SPD is committed to using multi-disciplinary solutions for improving the livability of the City.

Fire/Emergency Medical Services

- The Seattle Fire code specifies that any street improvements must be consistent with the Seattle Fire Code Section 503 and Appendix D, which address fire apparatus access roads and minimum standards for public right of way design to not inhibit response.
- Seattle Fire Code Section 9 also specifies that buildings of certain numbers of housing and commercial units that will be required to meet targeted growth require means of egress, sprinkler systems, and other fire protection measures. The code also specifies certain characteristics of each of these fire protection measures in new development and inspections on existing housing and commercial spaces.
- Response time commitments are available under **Response Time** in **Section 3.11.1** or as follows:
 - Call Processing Time: 60 seconds for phone answered to first unit assigned for 90% of calls.
 - Fire Response Time: Arrival within 4 minutes for the first-arriving engine at a fire for 90% of calls, and arrival within 8 minutes of the full first alarm assignment of 15 firefighters, for 90% of calls.
 - Basic Life Support: Arrival within 4 minutes of the first medical unit with two EMTs, for 90% of calls.
 - Advanced Life Support: Arrival within 8 minutes for 90% of call
- Seattle Fire has committed to limiting the number of dispatches/runs per unit to 2500 annually based on national standards and regulations (Haskell, McAuslan, 2023). This is to

ensure that staff are not overburdened, units remain in good condition, and overburdened units can be identified.

Parks

- The Seattle Land Use Code (Seattle Municipal Code [Title 23](#)) contains development regulations, including standards governing the design and placement of exterior site and building illumination and recreation/open space. The LUC also provides for SPR review when subdivisions over a certain size are proposed.
- The Seattle Shoreline Master Program requires shoreline public access for development that creates a demand.

Schools

- Ongoing Seattle School District capital facilities management planning would be required to address increases in student population. The Seattle School District prepares capital plans and projects are funded by levies.

Solid Waste

- Seattle Solid Waste develops a Solid Waste Management Plan at consistent intervals to ensure that departmental policies align with their stated goals. The most recent draft update to this plan commits to a zero-waste vision in which Seattleites produce and use less to ensure reduced impacts to human health and the environment.
- Seattle Public Utilities produces strategic business plans every 5 years which include solid waste elements and ways in which SPU can support the Solid Waste Division through investments to reach its stated goals from the Solid Waste Management Plan.
- The City produces several resources on specific hazardous waste, single use plastics, food waste, and waste composition studies which create regulations and policies that limit environmental impacts from pollution, microplastics entering into the food system, and waste disposal. These studies have culminated in specific policies such as the single use plastic bag ban, prioritization of durables (metal or reusable tableware) in restaurants, and a number of pilot projects aimed at creating more opportunities to recycle and compost in all parts of the city.

Other Potential Mitigation Measures

Police

SPD could update its MCPP described under “Incorporated Plan Features” or create updated police service programs to engage the community in police services that equitably and justly meet community needs.

Fire/Emergency Medical Services

Additional fire/emergency medical services mitigation measures could include:

- SFD could explore options to decrease call times through new station placement strategies that limit East/West travel which has historically been challenging for fire units during busier times of day.
- SFD could explore smaller, more nimble fire units that are better equipped to navigate Seattle's complex topography to decrease response times while still ensuring SFD's excellent standard of service for emergency medical and fire response.
- SFD could convert peak aid units that are available at certain times to full time aid units.
- SFD could add aid units in underserved areas.
- **130th/145th Station Area:** If an additional aid unit is provided at each of the nearby stations at Bitter Lake and Lake City, SFD can maintain and even improve the service levels of the station area ~~and~~ while avoiding crossing Interstate-5 at congested times of the day.

Parks

- The City could explore a population density or access-based level of service approach given the urban nature of the city as identified in the ~~draft~~ Parks and Open Space Plan ~~March~~ May 2024.
- The City could add additional or improve existing park space including:
 - Expanding existing parks or adding capacity on existing parks (e.g., expanded play or sports facilities),
 - Creating linear parks and trails,
 - Increasing tree canopy coverage in rights-of-way or public parks and open space to reduce urban heat island effects,
 - Developing recreation facilities on building rooftops to provide sports courts, athletic fields, off-leash dog areas, etc.,
 - Developing community gardens (permitted on some rooftops in individual zones) as a way to provide open space and urban agricultural use,
 - Increasing frequency of maintenance to offset an increase in park usage.
- The City could implement a parks impact fee to help pay for the development of new park land if needed in the future.
- The City could also explore transportation to and from parks and potentially increase connectivity between parks in areas of high equity opportunity.

Schools

- The City could implement a school impact fee to help pay for the development of new classrooms if they are needed in the future.
- The City could help identify interim uses for existing underutilized classrooms so that the school district can hold onto them in case they are needed in the future.
- The City could incentivize provision of public schools in centers in vertical formats, where new schools are needed. The City could also allow for greater heights at existing school

locations where demand increases. Goals would be to protect recreation and tree canopy while allowing for more student classroom capacity.

- The City could update development standards and review processes for new schools in order to make it easier to add classrooms or build new schools if they are needed in the future.
- As part of development standards for new place types such as neighborhood centers and corridors, the City could enhance street crossing including walking routes to schools in areas with added housing.
- The City could identify specific objectives to assist Seattle Public Schools in acquiring and developing new schools if needed.

Solid Waste

Additional solid waste mitigation measures may be needed to help the City reach its goals of 70% diversion of waste to recycling and compost. These measures are as follows:

- Increasing budget for education and outreach services for multi-family residents.
- Establishing more significant penalties for those who do not adhere to recycling and composting standards while increasing financial benefits for households and multi-family residents who opt for recycling and compost over landfill waste disposal.
- Require specific standards in solid waste hauling contracts to protect employees from adverse health impacts of their work during extreme weather events.

3.11.4 Significant Unavoidable Adverse Impacts

Police

There will be an increase in population and jobs and an increase in demand for police services. However, there are mitigation measures to invest in resources to address needs and provide adequate services.

Fire/Emergency Medical Services

It is anticipated that increased demand for fire/emergency medical services can be accommodated due to ~~the~~ changes in staffing for fire prevention education, increased capacity at station facilities, and either redistributing or increasing the number of units at each station. Consequently, no significant unavoidable adverse impacts are to be expected.

Parks

All alternatives will exceed the existing level of service and increase demand for parks and recreation facilities. With mitigation (adding parks, making better use of existing parks, or ~~updating~~ implementing the updated parks LOS) significant adverse impacts can be avoided.

Schools

All studied alternatives would result in increases in students. This could require additional school capacity unanticipated in current district plans. However, it is anticipated that Seattle Public Schools could respond to any new growth that may occur through regular capital planning and coordination. Consequently, no significant unavoidable adverse impacts are anticipated.

Solid Waste

It is anticipated that Seattle Solid Waste will be able to accommodate expected increases in solid waste service through regular contract renegotiation and ongoing maintenance and upkeep of capital facilities. Consequently, no significant adverse impacts are anticipated.

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