

SEATTLE PUBLIC UTILITIES
SEPA ENVIRONMENTAL CHECKLIST

This SEPA environmental review of Seattle Public Utilities' Pump Stations 62, 63, and 71 Improvements Project has been conducted in accord with the Washington State Environmental Policy Act (SEPA) (RCW 43.21C), State SEPA regulations [Washington Administrative Code (WAC) Chapter 197-11], and the City of Seattle SEPA ordinance [Seattle Municipal Code (SMC) Chapter 25.05].

A. BACKGROUND

1. Name of proposed project:

Pump Stations 62, 63, and 71 Improvements Project

2. Name of applicant:

Seattle Public Utilities (SPU)

3. Address and phone number of applicant and contact person:

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4. Date checklist prepared:

September 13, 2021

5. Agency requesting checklist:

Seattle Public Utilities (SPU)

6. Proposed timing or schedule (including phasing, if applicable):

Project construction is scheduled to begin during December 2022 and conclude by the end of April 2024 and require approximately 330 working days to complete based on average Northwest weather conditions. Construction would proceed sequentially by station as follows. This schedule is preliminary and may change.

- Station 62: October 2023 to February 2024
- Station 63: May 2023 to October 2023
- Station 71: December 2022 to May 2023

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

SPU currently has no plans for future additions or expansions related to the proposed project.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

Herrera Environmental Consultants. 2020 (August 21). Draft Technical Memorandum: Results from Odor Monitoring at PS-71, PS-76, and PS-118.

Herrera Environmental Consultants. 2020 (October 16). Draft Technical Memorandum: Results from Odor Monitoring at PS-62, PS-63, and PS-38.

Herrera Environmental Consultants. 2021 (June 30). Pump Station 63 Upgrade Project – Site Characterization and Recommendations for Waste Management and Protecting Worker Health and Safety. (Document is contained in the project’s Geotechnical Report [SPU Geotechnical Engineering 2021].)

SPU. 2021 (July 1). Preliminary Drainage Report (draft based on 60% design).

SPU Geotechnical Engineering. 2021 (August). Geotechnical Report, Pump Station Improvements Phase 2, Design Package 2.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

SPU is not aware of pending government approvals of other proposals that directly affect the properties covered by this proposal.

10. List any government approvals or permits that will be needed for your proposal, if known.

Implementation of this project may require some or all the following permits and approvals:

- Utility Major Permits (type 51, major projects) and Street Use Permits, City of Seattle, Department of Transportation (SDOT) (includes traffic control plans)
- Public Amenity Permit, SDOT (for Station 71 to install a bench)
- Electrical Service Applications, Seattle City Light (SCL)
- Shoreline Substantial Development Permit Exemption, City of Seattle Department of Construction and Inspections (SDCI) (for Station 71)
- Construction Wastewater Discharge Permits (for dewatering), King County Wastewater Treatment Division (King County)
- Memorandum of Agreement to be developed between SPU and Puget Sound Energy, for relocation of natural gas utility services.

11. Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

As part of SPU’s ongoing Pump Station Improvement Program, this project would make targeted improvements at 3 existing buried (below-ground) wastewater pump stations to improve safety and compliance and extend the useful life of these facilities. Proposed improvements vary between sites but generally consist of mechanical, electrical, and

structural upgrades. This also includes modifications to improve maintenance access, improve ventilation, update instrumentation, and comply with current codes to the maximum extent feasible. Excavations would be standard open-trench cut-and-cover methods. Odor control facilities would be provided at Station 62. For Stations 62 and 63, the sites would be restored to the existing condition with no change in surface treatments or runoff characteristics. Station 71 would receive additional surface improvements and restorations to increase the usability of the space for the public, including replacing approximately 1,121 square feet of unvegetated compacted soil/gravel with native plantings on the northwest side of the project site and placing several pieces of large woody material (logs) along the seawall to further enhance ecological function. To construct the proposed improvements, each station would be fitted with a flow bypass system to keep sewage flowing around the work area with minimal disruption to traffic and adjacent properties. All 3 stations are located entirely in City of Seattle street rights-of-way and are generally described below.

Station 62 near 1103 Fairview Ave N

Station 62 was built in 1965 and collects flow from a relatively small partially separated basin along the Lake Union shoreline. Land use in this basin is primarily commercial (maritime, restaurants, and other light uses). The station conveys combined sewage across Fairview Ave N to the next leg of SPU's system, where it flows by gravity for several blocks to the southwest before entering King County's wastewater system at the Lake Union Tunnel. Site work at this station includes landscape, pavement, and surface restoration to accommodate access hatch installation, bypass construction, new ventilation ducts, and new sewer lines. Excavations would range from 3 to 16 feet in depth. Construction erosion control measures would include straw wattles, inlet filter socks, and site sweeping. All demolished and damaged landscaping and paved surfaces would be restored in-kind and as directed by SDOT. Disturbed site soils not otherwise stabilized would be compost-amended per City of Seattle Standard Plan 142.

Station 63 near 140 E Blaine St

Station 63 was built in 1964 and collects flow from a small partially separated basin along the Lake Union shoreline. Land use in this basin includes commercial (office), residential (houseboats), and industrial (shipyards). The station lifts combined sewage a short distance to Eastlake Ave N, where it then travels by gravity to the southwest through SPU's system and eventually enters King County's system at the Lake Union Tunnel. Site work at this station includes pavement and surface restoration to accommodate access hatch installation, bypass construction, new ventilation ducts, and new sewer lines.

Station 71 near 5190 SW 98th St

Station 71 was built in 1965 and collects flow from a waterfront sanitary sewer basin in southwest Seattle. Land use in this basin is entirely residential. The station lifts wastewater along SW 98th St to 51st Ave SW, where it flows north by gravity through another basin to SPU's Station 70 and into King County's system at the adjacent Barton Street Pump Station. Site work at this station includes landscaping, pavement and roadway reconfiguration, and surface restoration to accommodate station improvements and installation of public amenities in the street end. Excavations would range from 3 to 10 feet in depth. Construction erosion control measures would include straw wattles, inlet filter socks, and site sweeping. Disturbed soils not otherwise paved stabilized would be compost-amended per Standard Plan 142 and revegetated.

12. **Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.**

The project is in public street rights-of-way in the City of Seattle, Washington (Attachments A and B). The stations do not have addresses. Station 62 is in street right-of-way for Fairview Ave N and Yale Ave N near 1103 Fairview Ave N. Station 63 is in street right-of-way for E Blaine St near 140 E Blaine St. Station 71 is in street right-of-way for SW 98th St near 5190 SW 98th St.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site:

Flat Rolling Hilly Steep Slopes Mountainous Other:

b. What is the steepest slope on the site (approximate percent slope)?

All 3 stations are in areas of flat terrain.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing these soils.

The general geologic condition of the Puget Sound region is a result of glacial and non-glacial activity that occurred over the course of millions of years. Review of the geologic map covering the project sites (Troost *et al.* 2005; <http://pubs.usgs.gov/of/2005/1252/>) indicates the project sites are underlain primarily by Vashon till and recessional outwash deposits. Glacial till is a mix of poorly sorted silt, sand, and sub-rounded to well-rounded gravels and cobbles that are transported by the glacier and deposited under the ice resulting in a very dense to over consolidated deposit. Recessional outwash consists of well sorted sand and gravel that was transported by glacial meltwater as the glacier receded. Stations 62 and 63 are also underlain by lake sediment deposits associated with Lake Union. Station 71 is underlain by Pleistocene-age interbedded sands and gravels deposited in former shoreline environments of Puget Sound. However, urban development in these parts of the City and on and around these project sites over the last 100 years has resulted in a predominance of disturbed native soils/sediments, cut slopes, and placements of fill material throughout each project site and immediately surrounding area. Surficial soils consist of placements of fill material.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe:

All 3 project sites are flat and have no indications or histories of unstable soils. SDCI's GIS map (<https://seattlecitygis.maps.arcgis.com/apps/webappviewer/index.html?id=f822b2c6498c4163b0cf908e2241e9c2>) indicates all 3 stations are in Liquefaction Environmentally Critical Areas (ECA).

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate the source of fill.

Estimated disturbance areas (including staging areas) and estimated volumes of excavation and fill are listed below.

- Station 62
 - Disturbance: 4,500 square feet (SF)
 - Excavation: 260 cubic yards (CY)
 - Fill: 260 CY
- Station 63
 - Disturbance: 7,600 SF
 - Excavation: 320 CY
 - Fill: 320 CY
- Station 71
 - Disturbance: 9,950 SF
 - Excavation: 200 CY
 - Fill: 200 CY

All excavation would be within the boundaries of existing street rights-of-way that have been previously disturbed. Imported material would be obtained from purveyors of such materials licensed to conduct business in Washington. All excavated materials would be removed and disposed, and new fill materials imported to the site. All exported excavated material would be legally disposed at an approved upland location or used as fill material (if suitable) at sites approved for filling and grading.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe:

No significant erosion is anticipated during construction. A Construction Stormwater and Erosion Control Plan (CSECP) would be prepared and implemented. Disturbed areas would be restored to their near-original conditions and disturbed ground not covered by pavement or other impervious surfaces would be vegetated and protected from erosion. The project would comply with applicable provisions of the City of Seattle’s Stormwater Code SMC Title 22, Subtitle VIII, City of Seattle Director’s Rule SDCI 17-2017/SPU DWW-200, and Volume 2 Construction Stormwater Control Manual. The completed project is not expected to be subject to erosion.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Existing paved and vegetated surfaces damaged or demolished by construction would be restored. The proposed work would not result in an increase in impervious surfaces. Surface improvements at Station 71 would result in a slight decrease in impervious surface area by replacing approximately 1,121 SF feet of unvegetated compacted soil/gravel with native plantings on the northwest side of the project site. In addition, several pieces of large woody material (logs) would be placed along the seawall to further enhance ecological function.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

A CSECP would be prepared and implemented. Best Management Practices (BMP) as identified in the City of Seattle’s Stormwater Code SMC Title 22, Subtitle VIII, City of Seattle Director’s Rule SDCI 17-2017/SPU DWW-200, and Volume 2 Construction Stormwater Control Manual would be used to manage stormwater runoff, construction disturbance, and erosion during construction.

2. Air

a. What types of emissions to the air would result from the proposal [e.g., dust, automobile, odors, industrial wood smoke, greenhouse gases (GHG)] during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Air Quality and Odors

Construction

During construction, emissions would occur from vehicles and mobile and stationary equipment that combust gasoline and diesel fuels, such as crew vehicles, trucks, and construction equipment. Those emissions would include oxides of nitrogen, carbon monoxide, particulate matter and smoke, uncombusted hydrocarbons, hydrogen sulfide, carbon dioxide, and water vapor. Emissions during construction could also include fugitive dust related to ground-disturbing activities.

Operation and Odor Control

Ventilation systems in pump stations are governed by National Fire Protection Association (NFPA) Standard 820 (Standard for Fire Protection in Wastewater Treatment and Collection Facilities). For this project, ventilation systems would be sized only for code compliance and would not guarantee a safe atmosphere for continuous human occupation. As a result, crews operating within the completed project would continue to follow requirements of SPU’s Confined Space Safety Program, which implements requirements of WAC Chapter 296-809.

During normal pump station operation, wastewater in the dry well portion of the pump stations is fully contained in piping, valves, and pumps and is not exposed to the air inside the dry well, thereby minimizing or eliminating the potential for the generation of airborne odor producing molecules. Therefore, no increased perception of odors would be expected as a result of the dry well ventilation improvements. All stations in this project have existing dry well ventilation systems compliant with SPU Design Standards and Guidelines (DSG) for unclassified spaces. These systems were installed in 2018-2019 as part of SPU’s system-wide Pump Station Ventilation Project. Proposed work would install moisture filters on dry well supply fans at Station 71 where supply air tends to be more humid due to the waterfront location. No further modifications to dry well ventilation systems would be made as part of this project.

Wastewater in wet wells does have some exposure to the atmosphere. Wet well ventilation would be added at each station to minimize corrosion and protect equipment. Proposed wet well ventilation improvements would increase the rate and

volume of air exhausted from the wet well, which could potentially result in an increase in the emission of odors from the pump stations. Per SPU DSG, design flow for wet well ventilation would be the greater of 4 air exchanges per hour or the influent flow rate. However, generation and transmission of odor-producing molecules in outdoor air is determined by many factors, including environmental and atmospheric conditions, physical landscape, and in the case of wastewater pump stations, chemical composition of the wastewater and the piping configuration and velocity of the wastewater through the pump station. Additionally, the higher rate of air flow that would result from the ventilation improvements may result in a dilution effect associated with reducing the concentration of odor-causing molecules in air exhausted from wet wells. To the extent the concentration of odor-causing molecules is reduced because of increased air flow, project improvements may result in no increase of emitted odors.

Field studies were conducted at each site to determine potential for odor generation and its related impact to adjacent properties. Hydrogen sulfide (H₂S) levels were monitored in the wet wells at each station. Wind patterns were monitored at each station where possible. Where weather monitoring equipment could not be installed, publicly available data were used. Monitoring took place for a period of two weeks. H₂S levels of up to 4 ppm were detected at Station 62. No H₂S was detected at Station 71 and minimal amounts (0.1 ppm) were detected at Station 63.

Odor control requirements for this project were determined by SPU's Line of Business Representative with guidance from the CSO Reduction Program Odor Management Guidelines prepared for SPU by TetraTech in 2019. Odor control facilities would be provided only at Station 62. Standard wet well ventilation would be provided at Stations 63 and 71 as discussed earlier in this section. Small-scale odor control equipment is generally in the pilot phase at SPU. Typical systems consist of a fan, a mist and grease separator, and a prefabricated vessel loaded with carbon media (or similar). SPU would gather pilot data on small systems installed at Stations 22 and 118 in 2020 and 2021 to inform final design of odor control facilities for this project. Final design of the system would be prepared by the Contractor to fit in a designated footprint. The design flow rate for odor control at Station 62 would match the proposed wet well ventilation rate.

Where possible, wet well fans would be located above-grade in weather-resistant noise-dampening enclosures. For some sites, fans may be installed in the wet well to mitigate noise concerns. Fans installed in wet wells tend to deteriorate faster and require more frequent replacement. Odor control fans would be co-located with the media vessel and installed with a noise-dampening enclosure and/or muffler. Stainless steel enclosures would be used where feasible to do so while meeting the requirements of the SMC for noise levels at receiving properties. Moisture and grease eliminating filters would be provided on the intake side of wet well exhaust fans.

Greenhouse Gas Emissions

Greenhouse gas emissions are characterized as 'direct' (emissions from sources owned or controlled by the reporting entity) and 'indirect' (emissions from sources that are a consequence of the reporting entity, but which occur at sources owned or controlled by another entity [e.g., electricity purchased to operate facilities and equipment and

embodied emissions associated with the manufacture of purchased materials]). This Checklist provides information regarding potential for new or increased direct greenhouse gas emissions resulting from construction and operation of the project, including indirect construction-related (embodied) emissions associated with replacement of demolished and damaged concrete/asphalt surfaces and structures. Embodied greenhouse gas emissions in other materials such as aggregate and pre-cast structures to be used in this project have not been estimated as part of this environmental review due to the difficulty of accurately calculating those emissions.

Construction

Construction would generate greenhouse gas emissions during the estimated 330 working-days via the operation of diesel- and gasoline-powered equipment and the transport of materials, equipment, and workers to and from the site. Because project construction methods were not completely known at the time this Checklist was prepared, estimates provided here are based on daily vehicle operation times for the estimated 330 working-day duration; actual times may be less. The project's direct greenhouse gas emissions related to construction are presented as total metric tons of carbon dioxide (MTCO_{2e}), calculated in Attachment C, and summarized in Table 1. Total greenhouse gas emissions for the project are estimated to be about 763.6 metric tons of carbon dioxide emission (MTCO_{2e}), where one metric ton is equal to 2,205 pounds.

Operation and Maintenance

Operation of the project improvements would result in greater volumes of air being vented to the atmosphere from the stations' wet wells. Depending on concentrations of greenhouse gases such as carbon dioxide or methane in air exhausted from wet wells, there is potential for an incremental increase of greenhouse gas released to the atmosphere due to increased wet well ventilation air flow resulting from the project. However, the amount of any greenhouse gas currently being released to the atmosphere during operation of the stations is not known. There is currently no widely-accepted general model or methodology for estimating the effect of ventilation, or changes in ventilation, on greenhouse gas emissions associated with releases to the atmosphere from wastewater collection and conveyance facilities. Therefore, the magnitude of potential changes in direct greenhouse gas emissions associated with operation of the project has not been estimated here.

Long-term maintenance of the project improvements would not result in increases in greenhouse gas emissions above current levels. The project would be constructed at existing, operational wastewater pump stations and would not result in increased frequency or duration of pump station maintenance visits/activities.

Table 1. Summary of Greenhouse Gas (GHG) Emissions

Activity/Emission Type	GHG Emissions (pounds of CO ₂ e) ¹	GHS Emissions (metric tons of CO ₂ e) ¹
Buildings	0	0
Paving	882,000	400
Construction Activities (Diesel)	753,754.8	341.8
Construction Activities (Gasoline)	48,114	21.8
Long-term Maintenance (Diesel)	0	0
Long-term Maintenance (Gasoline)	0	0
Total GHG Emissions	1,683,868.8	763.6

¹ Note: 1 metric ton = 2,204.6 pounds of CO₂e. 1,000 pounds = 0.45 metric tons of CO₂e

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

There are no known off-site sources of emissions that may affect this proposal.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

During construction, impacts to air quality would be reduced and controlled through implementation of standard federal, state, and local emission control criteria and City of Seattle construction practices. These would include requiring contractors to use best available control technologies, ensure proper vehicle maintenance, and minimize vehicle and equipment idling. The project includes sealing electrical conduits, access openings, and other penetrations to create a gas-tight seal between the pump station wet wells and dry wells, which would prevent wet well air and any associated odors from directly entering the dry well and then being exhausted from the dry well to the outside air during station operation. Additional measures to reduce or control emissions to air are discussed in Part B.2.a.

3. Water

a. Surface:

(1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If so, describe type and provide names. If appropriate, state what stream or river it flows into.

Station 71 is adjacent to the shoreline of Puget Sound and is protected by an existing seawall. Stations 62 and 63 are more than 200 feet from Lake Union.

(2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If so, please describe, and attach available plans.

There would be no work over or in any waterbodies. At Station 71 all work would be upland of the existing shoreline seawall.

- (3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

No material would be placed in or removed from surface water or wetlands.

- (4) Will the proposal require surface water withdrawals or diversions? If so, give general description, purpose, and approximate quantities if known.**

Stormwater runoff from the project area is collected via existing stormwater catch basins and directed into the combined sewer system. The completed project would not change the volume or timing of stormwater runoff directed to the combined sewer system.

- (5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

No portion of the project lies within a 100-year floodplain.

- (6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

The proposed project would not produce or discharge waste materials to surface waters. The completed project would not affect volumes or destinations of wastewater passing through the stations.

b. Ground:

- (1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.**

Excavations may require dewatering during construction. If so, SPU would require its contractor to prepare a Temporary Construction Dewatering Plan and collected water would be managed according to the Plan. Quantities of water that could potentially be collected during temporary construction dewatering and the discharge location(s) of that water are unknown. The project would not otherwise withdraw, discharge, or surcharge groundwater.

- (2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: domestic sewage; industrial, containing the following chemicals...; agricultural, etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

No waste material would be discharged to groundwater for this project.

c. **Water Runoff (including storm water):**

- (1) **Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

Project area stormwater runoff from paved surfaces within the street rights-of-way and from roof and yard drains from adjacent private properties is collected via existing stormwater catchbasins and directed into SPU's combined sewer system or discharged directly to Puget Sound or Lake Union.

During project construction, stormwater runoff may need to be managed to prevent sediment from entering and leaving the construction site. Precipitation that lands on construction sites would be directed to the existing stormwater collection and distribution system or contained on-site and allowed to infiltrate. Barriers such as sandbags, wattles, and catchbasin inserts would be used to prevent sediments from entering and leaving the construction area. Once construction is complete, temporary erosion control measures would be removed.

Disturbed areas would be restored to their near-original conditions and disturbed ground not covered by pavement or other impervious surfaces would be vegetated and protected from erosion. Generally, the completed project would be re-covered with concrete and/or asphalt, but would not create additional impervious surfaces or a need to manage additional stormwater runoff beyond currently existing conditions. Stormwater runoff on and adjacent to each project site would follow pre-construction drainage pathways. Station 71 would receive additional surface improvements and restorations to increase the usability of the space for the public, including replacing approximately 1,121 square feet of unvegetated compacted soil/gravel to native plantings on the northwest side of the project site and placing several pieces of large woody material (logs) along the seawall to further enhance ecological function.

- (2) **Could waste materials enter ground or surface waters? If so, generally describe.**

No part of the proposed work involves discharging waste materials to surface or ground waters. However, several construction activities such as sawcutting, concrete pouring and handling, etc., would generate pollutants that could potentially enter local drainage conveyance systems. Non-sediment pollutants that may be present during construction include:

- Petroleum products including fuel, lubricants, hydraulic fluids, and form oils
- Paints, glues, solvents, and adhesives
- Concrete and concrete washwater
- Chemicals associated with portable toilets.

Procedures to prevent and control pollutants, including hazardous materials such as hydrocarbons and pH-modifying substances, would be described in a spill prevention, control, and countermeasures plan prepared for the project and approved by the City of Seattle prior to the start of construction.

(3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

The completed project would restore disturbed areas to near-original condition (primarily concrete and/or asphalt) and would not create a need to manage additional stormwater runoff beyond currently existing conditions. Stormwater would follow pre-construction drainage pathways. Impervious surfaces would be reduced at Station 71, as described above.

d. Proposed measures to reduce or control surface, ground, runoff water, and drainage impacts, if any:

No adverse impacts to surface, ground, or runoff water are anticipated. BMPs, as identified in the City of Seattle’s Stormwater Code SMC Title 22, Subtitle VIII, City of Seattle Director’s Rule SDCI 17-2017/SPU DWW-200, and Volume 2 Construction Stormwater Control Manual, would be used as needed to control erosion and sediment transport from and to each project site during construction.

4. Plants

a. Types of vegetation found on the site:

<input checked="" type="checkbox"/> Deciduous trees:	<input type="checkbox"/> Alder	<input checked="" type="checkbox"/> Maple	<input type="checkbox"/> Aspen	<input checked="" type="checkbox"/> Other: black cottonwood
<input checked="" type="checkbox"/> Evergreen trees:	<input type="checkbox"/> Fir	<input type="checkbox"/> Cedar	<input type="checkbox"/> Pine	<input checked="" type="checkbox"/> Other:
<input checked="" type="checkbox"/> Shrubs				
<input checked="" type="checkbox"/> Grass (turf)				
<input type="checkbox"/> Pasture				
<input type="checkbox"/> Crop or grain				
<input type="checkbox"/> Orchards, vineyards, or other permanent crops				
<input type="checkbox"/> Wet soil plants:	<input type="checkbox"/> Cattail	<input type="checkbox"/> Buttercup	<input type="checkbox"/> Bulrush	<input type="checkbox"/> Skunk cabbage
<input type="checkbox"/> Other:				
<input type="checkbox"/> Water plants:	<input type="checkbox"/> water lily	<input type="checkbox"/> eelgrass	<input type="checkbox"/> milfoil	<input type="checkbox"/> Other:
<input type="checkbox"/> Other types of vegetation: weeds				

b. What kind and amount of vegetation will be removed or altered?

Vegetated areas in affected public rights-of-way are vegetated with street trees, lawns, short shrubs, and weeds. Adjacent private parcels consist mostly of impervious surfaces (i.e., roofs, driveways, and patios) and pervious areas vegetated with lawn, landscaping, and trees. Street trees are present in improved street rights-of-way affected by this project. Proposed work at Station 62 may need to remove up to 2 small street trees (butterfly bush [*Buddleja davidii*] and Washington Hawthorn [*Crataegus phaenopyrum*]). Trees and shrubs in the right-of-way may need to be pruned to accommodate construction.

c. List threatened or endangered species known to be on or near the site.

According to a review of the Washington Department of Natural Resources (WDNR) Natural Heritage Program’s document called “Sections that Contain Natural Heritage Features, Current as of July 15, 2021” (accessed at www.dnr.wa.gov), there are no

documented occurrences of sensitive, threatened, or endangered plant species at or near the project sites. No federally-listed endangered or threatened plant species or State-listed sensitive plant species are known to occur within Seattle’s municipal limits. Project sites have been intensively disturbed by development and redevelopment over the last 100 years and has been extensively excavated, filled, paved, or occupied by street, utility, and other constructed features. There is no habitat for threatened or endangered plants.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

All street trees would be protected during construction except that up to 2 street trees may need to be removed at Station 62. Any removed tree would be replaced at a 2-for-1 basis and as directed by SDOT. All disturbed landscaping in street rights-of-way would be amended with suitable soil-improving materials (e.g. compost) and revegetated as directed by SDOT. Surface improvements at Station 71 would result in a slight decrease in impervious surface area by replacing approximately 1,121 SF feet of unvegetated compacted soil/gravel with native plantings on the northwest side of the project site. In addition, several pieces of large woody material (logs) would be placed along the seawall to further enhance ecological function.

e. List all noxious weeds and invasive species known to be on or near the site.

A review of information maintained by the King County Noxious Weed Program (available at King County iMap interactive online mapping program, <http://gismaps.kingcounty.gov/iMap/>) did not identify documented occurrences of any noxious weeds within 200 feet of the project sites.

5. Animals

a. List any birds and other animals that have been observed on or near the site or are known to be on or near the site:

Birds:	<input checked="" type="checkbox"/> Hawk	<input checked="" type="checkbox"/> Heron	<input checked="" type="checkbox"/> Eagle	<input checked="" type="checkbox"/> Songbirds
	<input checked="" type="checkbox"/> Other: crow, pigeon, gull			
<hr/>				
Mammals:	<input type="checkbox"/> Deer	<input type="checkbox"/> Bear	<input type="checkbox"/> Elk	<input type="checkbox"/> Beaver
	<input checked="" type="checkbox"/> Other: possum, raccoon, squirrel, marine mammals			
<hr/>				
Fish:	<input type="checkbox"/> Bass	<input checked="" type="checkbox"/> Salmon	<input checked="" type="checkbox"/> Trout	<input checked="" type="checkbox"/> Herring
	<input checked="" type="checkbox"/> Shellfish	<input type="checkbox"/> Other:		
<hr/>				

b. List any threatened or endangered species known to be on or near the site:

Station 71 is adjacent to Puget Sound. Endangered Species Act-listed species for this area of Puget Sound and the Puget Sound (PS) region are Chinook salmon (*Oncorhynchus tshawytscha*, Threatened PS), steelhead (*O. mykiss*, Threatened PS), bull trout (*Salvelinus confluentus*, Threatened PS), bocaccio (*Sebastes paucispinis*, Endangered PS), yelloweye rockfish (*Sebastes ruberrimus*, Threatened, PS), Southern Resident orca whale (*Orcinus orca*, Endangered PS), marbled murrelet (*Brachyramphus marmoratus*, Threatened), streaked horned lark (*Eremophila alpestris strigata*, Threatened), yellow-billed cuckoo

(*Coccyzus americanus*, Threatened), and gray wolf (*Canis lupus*, Proposed Endangered). Because the project is not proposing any in-water work and none of the project sites provide habitat for any threatened and endangered species, the project is expected to have no adverse effect on those species.

A check of the Washington Department of Fish and Wildlife’s “Priority Habitat Species on the Web” database on August 24, 2021, indicates Puget Sound adjacent to Station 71 includes Pacific geoduck (*Panopea abrupta*) and Pacific sand lance (*Ammodytes hexapterus*)—both State-listed Priority Species. The site is known to be (but not mapped as being) within the habitat of bald eagle (*Haliaeetus leucocephalus*) and great blue heron (*Ardea herodias*)—priority species in Washington. There are no known nests in the vicinity of the project.

c. Is the site part of a migration route? If so, explain.

Seattle is located within the migratory route of many birds and other animal species and is part of the Pacific Flyway, a major north-south route of travel for migratory birds in the Americas extending from Alaska to Patagonia, South America. Also, Puget Sound, Lake Washington, the Lake Washington Ship Canal, and the Duwamish Waterway are important water migration routes for many animal species.

d. Proposed measures to preserve or enhance wildlife, if any:

The proposed work involves no in-water or over-water work in Puget Sound or other waterbodies. All disturbed ground intended to be landscaped would be amended with suitable soil-improving materials (e.g., compost) and revegetated as directed by SDOT. Surface improvements at Station 71 would result in a slight decrease in impervious surface area by replacing approximately 1,121 SF feet of unvegetated compacted soil/gravel with native plantings on the northwest side of the project site. In addition, several pieces of large woody material (logs) would be placed along the seawall to further enhance ecological function.

e. List any invasive animal species known to be on or near the site.

King County lists the European starling, house sparrow, Eastern gray squirrel, and fox squirrel as terrestrial invasive species for this area (<http://www.kingcounty.gov/services/environment/animals-and-plants/biodiversity/threats/Invasives.aspx>).

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

The project would improve existing wastewater pump stations that currently use electrical energy during normal operation. The new equipment installed by the project would also be electrically powered.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

The completed project would not affect the potential use of solar energy by adjacent properties. No elements of the project would cast shade on adjacent properties.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

The project would meet the applicable requirements of the Washington State and City of Seattle Energy Codes. No additional energy conservation measures are proposed.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe:

Small amounts of materials likely to be present during construction include gasoline and diesel fuels, hydraulic fluids, oils, lubricants, solvents, paints, and other chemical products. A spill of one of these chemicals could potentially occur during construction due to equipment failure or worker error. Though unlikely, contaminated soils, sediments, or groundwater could also be exposed during excavation. If disturbed, contaminated substances could expose construction workers and potentially other individuals in the vicinity through blowing dust, stormwater runoff, or vapors.

Substances present in combined sewage could pose potential environmental health hazards during construction and operation of the project improvements. Combined sewage typically consists of a mixture of substances such as human waste, food scraps, oils, soaps, and chemicals. Decomposition of organic household or industrial wastes present in wastewater can produce gases including hydrogen sulfide, ammonia, methane, carbon monoxide, sulfur dioxide, and nitrogen oxides. Many of these gases are heavier than air and tend to settle in low areas. Chemicals potentially present in wastewater, and the gases they produce, are toxic to humans and could pose health risks to workers if exposed during construction or during routine station operation and maintenance activities after construction has been completed. In sufficiently high concentrations, gases produced by the substances in wastewater can also be flammable, creating a risk of fire or explosion if ignited.

(1) Describe any known or possible contamination at the site from present or past uses.

Stations 62 and 71 are not known to have had industrial or commercial land uses that may have resulted in contamination of soil materials. Station 63 is known to be within a quarter mile of sites known to have contamination from previous industrial or commercial uses. Soil sampling at Station 63 revealed slightly elevated concentrations of gasoline-range total petroleum hydrocarbons (TPH), which slightly exceeded Model Toxics Control Act (MTCA) Method A cleanup level (CUL) of 100 mg/kg). Diesel-range TPHs were detected, but below MTCA Method A CUL. Lube-oil-range TPHs were detected at elevated concentrations ranging from 4,100 to 5,300 mg/kg, exceeding MTCA Method A CUL of 2,000 mg/kg. Six different volatile organic

compounds were detected, but all concentrations were below MTCA Method B CULs. Five metals (barium, cadmium, chromium, lead, and mercury) were detected, but only one sample had elevated concentrations of lead and mercury (6,400 and 16 mg/kg, respectively) that exceeded the respective MTCA Method A CULs of 250 and 2 mg/kg. Station 62 is within 300 feet of a known contaminated site, but SPU determined sampling at this station was not necessary.

(2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

There are no known hazardous chemicals or conditions that might affect project development and design.

(3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

Construction activities such as sawcutting, concrete pouring and handling, etc., would generate pollutants that could potentially enter local drainage conveyance systems. Non-sediment pollutants that may be present during construction include:

- Petroleum products, including fuel, lubricants, hydraulic fluids, and form oils
- Paints, glues, solvents, and adhesives
- Concrete and concrete washwater
- Chemicals associated with portable toilets.

During project construction, wastewater flows would be temporarily bypassed around the stations as required to accomplish project work. The completed project would not affect the composition of combined sewage passing through the stations. Potential for hazardous chemicals to be produced by or associated with substances present in, or chemical processes occurring in, the combined sewage being conveyed through the station, would be the same as prior to construction.

During normal operation of the project improvements, no toxic or hazardous chemicals would be stored at any time at the project site. However, SPU workers may use small quantities of the above items as part of routine operation and maintenance activities.

(4) Describe special emergency services that might be required.

No special emergency services would be required during construction or operation of the project. Possible fire or medic services could be required during construction, as well as possibly during operation of the completed project. However, the completed project would not demand higher levels of special emergency services than already exist at the project locations.

(5) Proposed measures to reduce or control environmental health hazards, if any:

Based on soil sampling results at Station 63, SPU assumes all fill material at that site contains contaminants at concentrations that require offsite disposal if excavated.

During construction at that station, all fill material encountered above native soils would be directly loaded into trucks or containers and disposed offsite at a RCRA Subtitle D landfill licensed to accept such material. All trucks and trailers used to haul those excavated soils would be lined with plastic sheeting and covered during transport. Standard BMPs would be implemented during construction to prevent spreading contaminated soils beyond immediate excavation or loading areas. Examples of BMPs include straw wattle perimeter protection, catch basin inlet protection or temporarily blocking catch basin inlets with plastic, plastic sheeting on pavement to capture soils spilled while loading trucks or containers, and street sweeping. A similar approach would be used at Stations 62 and 71 if soil is discovered to be contaminated by previous land uses or by spills during construction. All contaminated soils would be excavated and disposed of in a manner consistent with the level and type of contamination, in accordance with federal, state, and local regulations, by qualified contractor(s) and/or City staff.

SPU's construction contractor would be required to develop and implement a Spill Plan to control and manage spills during construction. During construction, the contractor would use standard operating procedures and BMPs identified in the City's Stormwater Code SMC Title 22, Subtitle VIII, City of Seattle Director's Rule SDCI 17-2017/SPU DWW-200, and Volume 2 Construction Stormwater Control Manual to reduce or control possible environmental health hazards. In addition, a spill response kit would be maintained at each station during construction and all workers would be trained in spill prevention and containment consistent with the City of Seattle's Standard Specifications for Road, Bridge, and Municipal Construction.

In recognition of the potential fire and explosion hazards associated with wastewater facility environments, NFPA has published NFPA 820, a standard for Fire Protection in Wastewater Treatment and Collection Facilities. In part, the purpose of the proposed project is to improve pump station ventilation systems to ensure a safe working environment for SPU personnel and to achieve ventilation system performance consistent with NFPA 820. The project activities intended to accomplish this are discussed in Part B.2.a of this Checklist.

To ensure workers are not exposed to harmful substances that can be present in wastewater or unsafe concentrations of wastewater gases or vapors during construction, wastewater flows would be bypassed around the stations as needed to facilitate project work in, on, and around the station structures. Additionally, workers would be required to follow the Washington State safety standards for entry and work in confined spaces (WAC Chapter 296-809), which includes requirements for atmospheric testing in a confined space structure prior to entry and work within the stations. Following completion of construction, SPU workers performing routine station operation and maintenance activities would be required to follow the requirements of SPU's Confined Space Safety Program, which implements requirements of WAC 296-809.

b. Noise

- (1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?**

Noise that exists in the area would not affect the project.

- (2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.**

Noise levels near project construction would temporarily increase during construction. Short-term noise from construction equipment would be limited to the allowable maximum levels of applicable laws, including the City of Seattle's Noise Control Ordinance [SMC Chapter 25.08.425—Construction and Equipment Operations]. Within the allowable maximum levels, SMC 25.08 permits noise from construction equipment between the hours of 7 a.m. and 7 p.m. weekdays, and 9 a.m. and 7 p.m. weekends and legal holidays. Construction is estimated to require approximately 330 working days. The project would upgrade the stations' ventilation system to satisfy NFPA code by installing continuously operating exhaust fans in wet wells. As a result, operation of the completed project would generate low levels of noise.

- (3) Proposed measures to reduce or control noise impacts, if any:**

Construction equipment would be muffled in accordance with the applicable laws. SMC Chapter 25.08 (which prescribes limits to noise and construction activities) and Washington State Maximum Environmental Noise Levels (WAC Chapter 173-60) would be enforced while the project is being constructed and operated (except for emergencies). Where possible, wet well fans would be located above-grade in weather-resistant noise-dampening enclosures. For some stations, fans may be installed in the wet well to mitigate noise concerns. Fans installed in wet wells tend to deteriorate faster and require more frequent replacement. Odor control fans would be co-located with the media vessel and installed with a noise-dampening enclosure and/or muffler. Stainless steel enclosures would be used where feasible to do so while meeting the requirements of the SMC for noise levels at receiving properties. Moisture and grease eliminating filters would be provided on the intake side of wet well exhaust fans.

8. Land and Shoreline Use

- a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.**

Proposed station improvements are in improved street rights-of-way used for vehicle and pedestrian travel and vehicle parking. Land use near Station 62 is primarily commercial (maritime, restaurants, and other light uses). Land use near Station 63 includes commercial (office), residential (houseboats), and industrial (shipyards). Land use near Station 71 is entirely residential.

- b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?**

There is no documented history of the sites having ever been used for agricultural purposes.

- (1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversized equipment access, the application of pesticides, tilling, and harvesting? If so, how?**

There are no working farm or forest land business operations at or near project sites.

- c. Describe any structures on the site.**

The proposed work is associated with existing wastewater facilities in improved street rights-of-way used for vehicle and pedestrian travel and vehicle parking. Adjacent property uses are commercial, industrial, and residential (some of which may include space for home-based occupations). Utilities are in street rights-of-way.

- d. Will any structures be demolished? If so, what?**

The project would not demolish any structures.

- e. What is the current zoning classification of the site?**

Station 62: Mixed-Use zones (C2-40 and SM-SLU 145) where both residential and commercial development are allowed

Station 63: Commercial and Industrial

Station 71: Single Family Residential (9,600 square foot lots)

- f. What is the current comprehensive plan designation of the site?**

Station 62: South Lake Union Urban Center

Station 63: Eastlake Residential Village

Station 71: Single Family Residential

- g. If applicable, what is the current shoreline master program designation of the site?**

Station 62 is adjacent to the City's Urban Commercial Shoreline Management District.

Station 71 is in the City's Urban Residential Shoreline Management District and adjacent to the Conservation Recreation Shoreline Management District.

- h. Has any part of the site been classified as an "environmentally critical" area? If so, specify.**

SDCI's GIS map

(<https://seattlecitygis.maps.arcgis.com/apps/webappviewer/index.html?id=f822b2c6498c4163b0cf908e2241e9c2>) indicates all 3 stations are in Liquefaction Environmentally Critical Areas (ECA).

i. Approximately how many people would reside or work in the completed project?

No people would reside or work in the completed project.

j. Approximately how many people would the completed project displace?

The project would not displace any people.

k. Proposed measures to avoid or reduce displacement impacts, if any:

There would be no displacement impacts.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The project would be compatible with existing and projected land uses and plans.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

There are no nearby agricultural and forest lands of long-term commercial significance.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

The proposed project would not construct any housing units.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

The proposed project would not eliminate any housing units.

c. Proposed measures to reduce or control housing impacts, if any:

No measures are proposed because there would be no housing impacts.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas? What is the principal exterior building material(s) proposed?

Primarily, the project proposes to install or modify buried elements. Surface features at Station 71 would include new and replaced access hatches, new intake and exhaust ports for ventilation, new utility cabinets, a new security fence, and new landscaping and pavement treatments.

b. What views in the immediate vicinity would be altered or obstructed?

Primarily, the project proposes to install or modify buried elements. An 8-foot tall security fence and 3 new trees are proposed at Station 71; those elements would be sited such that views from adjacent private properties are not obstructed. The proposed project would not alter or obstruct views.

c. Proposed measures to reduce or control aesthetic impacts, if any:

No measures to reduce or control aesthetic impacts are proposed because the project would not alter or obstruct views.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

The constructed project would not produce light or glare. No new street lights are proposed or required. During construction, if an emergency situation calls for after-dark work, the construction contractor may deploy portable lights that temporarily produce light and glare.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

The completed project would not create light or glare.

c. What existing off-site sources of light or glare may affect your proposal?

There are no existing off-site sources of light and glare that would affect the proposal.

d. Proposed measures to reduce or control light and glare impacts, if any:

No measures are needed to reduce or control light and glare impacts because no impacts would occur. If an emergency requires after-dark work during construction, portable lighting would be adjusted as feasible to minimize glare.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

There are no designated recreational opportunities in the immediate vicinity of any of the 3 project sites, which are located in improved street right-of-way used for informal recreational activities such as dog-walking, walking, jogging, and bicycling. Station 71 is in a designated Shoreline Street End, which are City-designated portions of public rights-of-way that serve as community assets providing citizens and visitors with opportunities to experience and enjoy Seattle's shorelines as defined in SMC 23.60A.578. SDOT manages the City's Shoreline Street Ends Program to improve public access, protect unique views, enhance habitat, support maritime industry, and foster stewardship to create long-lasting community assets.

b. Would the proposed project displace any existing recreational uses? If so, describe.

The proposed work would not permanently displace any existing recreational uses. Project construction activities could result in short-term, temporary impacts to access and use of nearby parks, formal and informal trails and open space areas, and street end shoreline access locations. Project construction activities would result in short-term temporary lane closure and detour impacts to the use of the affected streets, and potentially the adjacent sidewalks, by walkers, runners, and bicyclists.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Construction would require temporary lane and sidewalk closures. Such closures would comply with relevant policies administered by SDOT as part of their Street Use permitting process. There are numerous route alternatives for pedestrians, joggers, and bicyclists at these sites. The project would attempt to make those closures and detours as brief as possible. Project notifications through emails and mailings would provide affected residents with advance notice regarding temporary closures and detours. At Station 71, the project would enhance passive recreational opportunities by increasing native plantings, reducing impervious surfaces, improving seating, and adding bicycle appurtenances. At that location, the completed project would maintain a more open, welcoming, and safe environment for street end visitors and provide improved opportunities for viewing Puget Sound. In addition, SPU would take the following measures to avoid or reduce projects impacts on recreation activities:

- Coordinate all project work affecting streets and sidewalks, including the designated Street End Shoreline location, in advance with SDOT;
- Comply with required SDOT Street Use Permits issued for the project;
- Ensure that safe pedestrian and bicycle routes are maintained at all times consistent with approved street use permits, and traffic control plans; and
- Place temporary project signs along affected streets and sidewalks prior to project construction to provide local residents with advance notice regarding temporary street and sidewalk closures and detours.

13. Historic and Cultural Preservation

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.

The project proposes to construct improvements at 3 existing buried wastewater pump stations. There are numerous residential and commercial buildings over 45 years old located in the vicinity of the project site, most of which have not been evaluated for cultural/historic significance. The project was checked against the registers listed in Item B.13.c below. None of these registers recorded any places or objects listed on, or proposed for, national, state, or local preservation registers located on or adjacent to the project site. However, aside from the proposed pump station improvements, no buildings or structures would be disturbed by the project. The project proposes to construct modifications and improvements at pump stations older than 45 years. None of the subject stations have been substantially modified since that time, and none have been evaluated for eligibility for listing in national, state, or local preservation registers.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

According to the information sources listed in Item B.13.c below, there are no such cultural resources at or near the project site. According to the Washington State

Department of Archaeology and Historic Preservation's Landscape Predictive Model, the project sites are in areas of Very High Risk for discovery of cultural resources. However, all ground disturbance and excavation would occur in existing street right-of-way and developed areas that have been disturbed previously in recent times by installation of underground utility infrastructure, roads, seawalls, and residential structures. All 3 project sites are located within a designated National Maritime Heritage Area. National Heritage Areas are special places recognized by the U.S. Congress as having nationally important heritage resources and operated locally to benefit local communities and support local heritage organizations.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the Department of Archaeology and Historic Preservation, archaeological surveys, historic maps, GIS data, etc.

To determine if National Register or Washington Heritage properties are in or adjacent to the project site, the project locations were checked against the following registers on August 24, 2021:

- Washington Information System for Architectural & Archaeological Research Data (WISAARD) maintained by the Washington State Department of Archaeology and Historic Preservation <https://wisaard.dahp.wa.gov/>
- King County and City Landmarks List maintained by the King County Historic Preservation Program, https://www.kingcounty.gov/~media/services/home-property/historic-preservation/documents/resources/T06_KCLandmarkList.ashx?la=en
- Landmark List, and Map of Designated Landmarks, maintained by the City of Seattle, Department of Neighborhoods, accessed May 6, 2021 <http://www.seattle.gov/neighborhoods/programs-and-services/historic-preservation/landmarks/landmarks-map>

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

Proposed work would not affect buildings or known cultural resources. Only portions of SPU's municipal wastewater system would be affected. None of those objects are considered historically or culturally important. Also, proposed work is located on previously disturbed and filled upland areas, which significantly reduces the chance of encountering contextually significant archaeological materials. However, an inadvertent discovery plan would be in effect and on-site during all ground-disturbing activity. Work crews would be trained on inadvertent discovery protocols should archaeological material be discovered. If evidence of cultural artifacts or human remains (either historic or prehistoric) be encountered during excavation, work in that immediate area would be suspended and the find would be examined and documented by a professional archaeologist. Decisions regarding appropriate mitigation and further action would be made at that time.

s14. Transportation

- a. Identify public streets and highways serving the site or affected geographic area, and describe proposed access to the existing street system. Show on site plans, if any.**

The project would occur in existing, improved street rights-of-way for Fairview Ave N and Yale Ave N near 1103 Fairview Ave N; E Blaine St near 140 E Blaine St; and SW 98th St near 5190 SW 98th St. Project would require traffic control plans approved by SDOT.

- b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?**

The proposed project is not expected to impact public transit service. Stations 62 and 63 are served by Metro trolleybus Route 70 that runs on Fairview Ave N and Eastlake Ave N. Bus stops are located approximately 75 feet southeast (northbound) and approximately 275 feet southwest (southbound) of Pump Station 62 on Eastlake Ave N. Station 63 is approximately 500 feet from the nearest bus stop serving trolleybus Route 70 on Eastlake Ave N. The Seattle Streetcar Line terminates approximately 170 feet southwest of Station 62 in Fairview Ave N. Station 71 is not served by public transit.

- c. How many additional parking spaces would the completed project or nonproject proposal have? How many would the project or proposal eliminate?**

Because the proposed work involves demolishing panels and other work in the street right-of-way, construction would require temporary closures of parking as well as travel lanes. Parking associated with street rights-of-way is currently on-street, free/paid parking managed by the City of Seattle. During construction, there may be no or restricted parking on one or both sides of affected streets. Project construction would temporarily eliminate up to approximately 30 on-street public parking spaces (on a rolling basis) adjacent to the construction zone to accommodate contractor vehicles, mobilization, construction, and local and through access. Generally, however, there is ample on-street and off-street parking available elsewhere at these project sites and most adjacent and nearby residences and businesses have their own off-street parking. Specific timing and duration of parking and lane closures are not known at this time, but such closures would comply with relevant policies administered by SDOT as part of its street use permitting process. At Station 71, the project would construct a hammerhead turnaround. This would eliminate up to 5 informal (that is, unmarked spaces on the graveled shoulders) parking spaces. Otherwise, the completed project would neither create nor eliminate parking spaces.

- d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).**

The project would restore all demolished and damaged street panels, curbs, sidewalks, and traffic aprons to pre-construction conditions or better, as required by SDOT. No new permanent roads or streets would be constructed as part of the project.

- e. **Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.**

The proposed project would not use water, rail, or air transportation.

- f. **How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?**

Project construction would generate about 3,100 daily vehicle trips due to workers and materials being transported to and from the site during the estimated total 330-working-day construction period based on normal Northwest weather conditions. Most of those trips would occur during business hours (between 7 a.m. and 6 p.m.) on weekdays (Mondays through Fridays) but trips may occur at other times including weekend days. The completed project would not generate any additional vehicle trips beyond that which would normally occur for the on-going and routine operation, maintenance, and monitoring of the municipal combined sewer system in this area.

- g. **Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.**

The proposal would not interfere with, affect, or be affected by the movement of agricultural and forest products on roads or streets in the area.

- h. **Proposed measures to reduce or control transportation impacts, if any:**

The following measures would be used to reduce or control transportation impacts:

- SPU would require the construction contractor to submit a traffic control plan for approval and enforcement by SPU and SDOT.
- SPU would conduct public outreach before and during project construction to notify residents, local agencies, Metro, and other stakeholders of work progress and expected disruptions or changes in traffic flow.
- Access for emergency-response vehicles would be maintained at all times.
- Through access and vehicle access to private properties may not be available at all times during construction, but temporary closures would be minimized, and detour routes would be clearly signed.
- Alternative routes for pedestrians, bicyclists, and those with disabilities would be identified and clearly signed, as needed.

15. Public Services

- a. **Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.**

The proposed project is not expected to create an increased need for public services. The project would be required at all times to accommodate emergency access for buildings accessed via the affected streets. Emergency access would comply with relevant policies administered by SDOT as part of its Street Use permitting process.

b. Proposed measures to reduce or control direct impacts on public services, if any.

During construction, the project would be required at all times to accommodate emergency access for structures accessed via affected street rights-of-way. The project would avoid impacting known buried and overhead utilities, which include overhead electrical and communications utilities and buried gas, water and sewers. No mitigation is being proposed because the project would have no adverse impacts on public services.

16. Utilities

a. Check utilities available at the site:

- | | | | | |
|-------------------------------|--|--|---|--|
| <input type="checkbox"/> None | <input checked="" type="checkbox"/> Electricity | <input checked="" type="checkbox"/> Natural gas | <input checked="" type="checkbox"/> Water | <input checked="" type="checkbox"/> Refuse service |
| | <input checked="" type="checkbox"/> Telephone | <input checked="" type="checkbox"/> Sanitary sewer | <input type="checkbox"/> Septic system | |
| | <input checked="" type="checkbox"/> Other: cable, fiber optics | | | |

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

During construction, this proposed work is not expected to interrupt or reconstruct other utilities. However, inadvertent damage to underground utilities could occur during construction. While such incidents do not occur frequently, they could temporarily affect services to customers served by the affected utility while emergency repairs are made. No other interruptions to regular utility services are expected during construction. The completed project would enhance life and serviceability of critical wastewater facilities and would continue to be owned, operated, and maintained by SPU and powered with electricity provided by SCL.

C. SIGNATURE

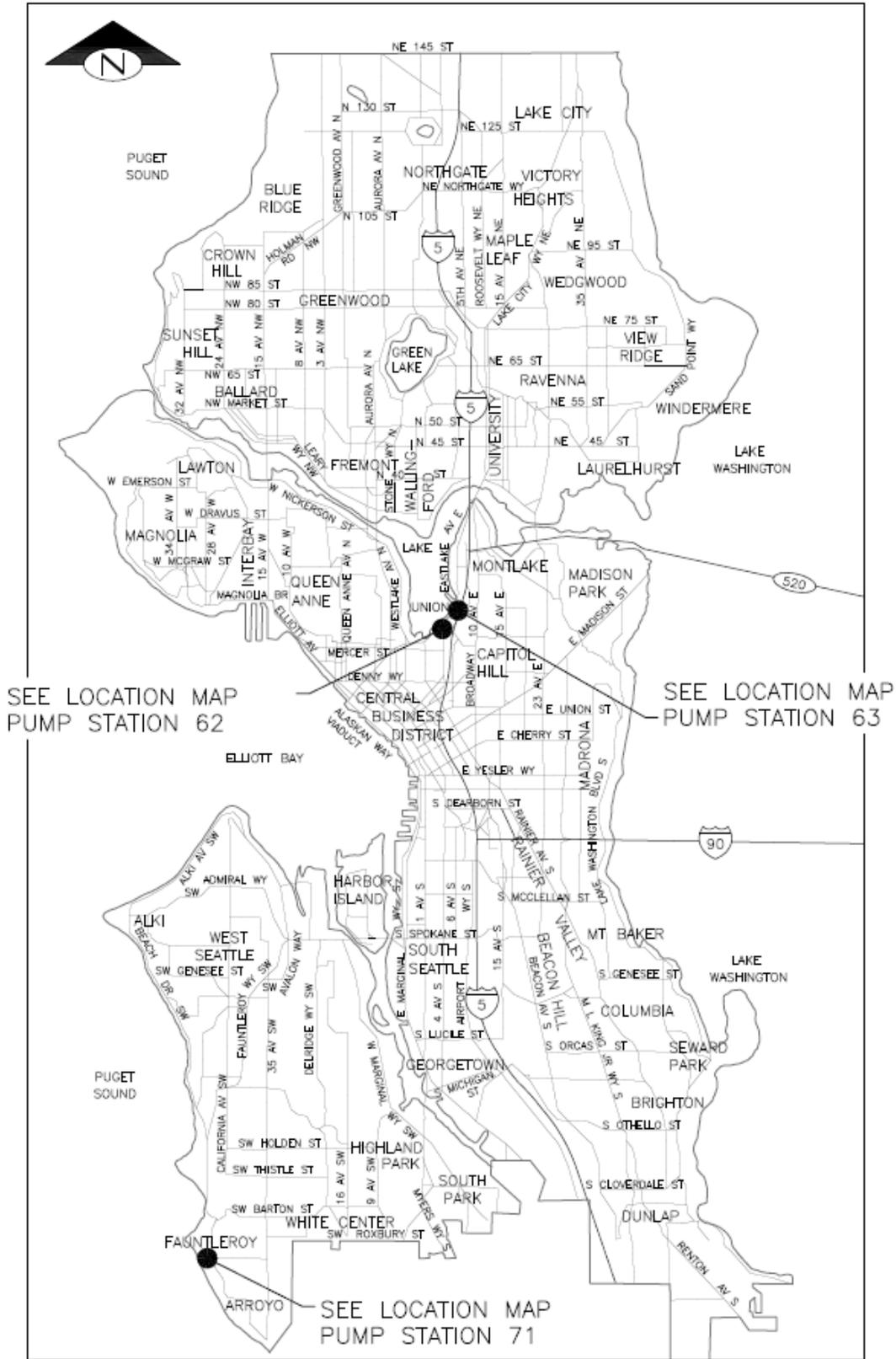
The above answers are true and complete to the best of my knowledge. I understand that SPU as SEPA Lead Agency is relying on them to make its decision.

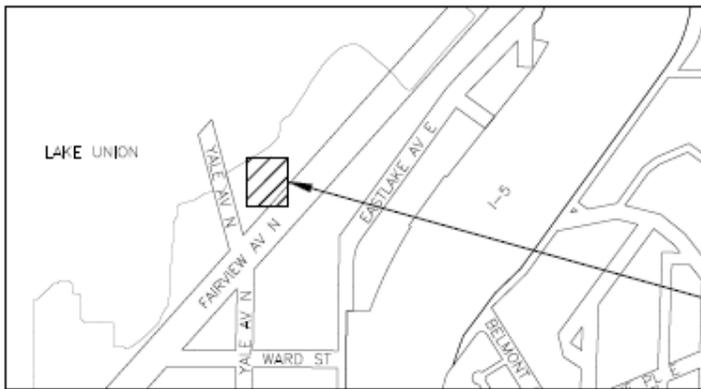
Signature: _____

Katie Wilson
Project Manager

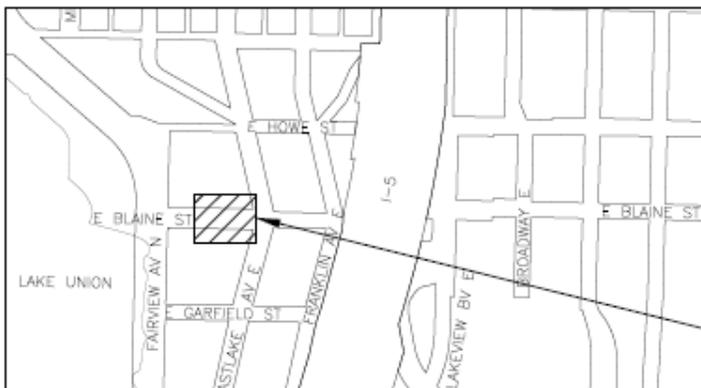
- Attachment A: Vicinity Map
- Attachment B: Location Map
- Attachment C: Greenhouse Gas Emissions Worksheet

Attachment A: Vicinity Map

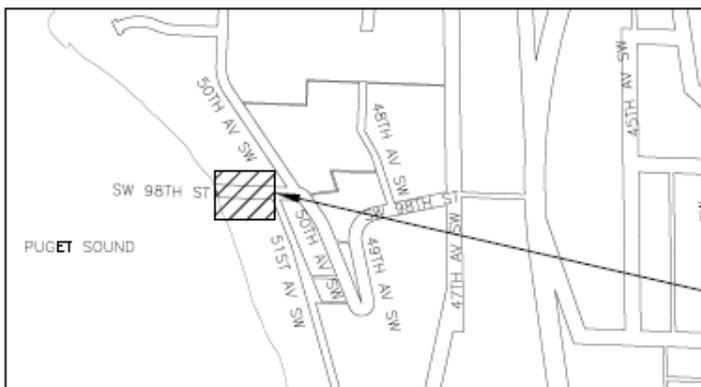




PUMP STATION 62
YALE AVE N



PUMP STATION 63
E BLAINE ST



PUMP STATION 71
SW 98TH ST

**Pump Stations 62, 63, and 71 Improvements
SEPA Environmental Checklist**

Attachment C: Greenhouse Gas Emissions Worksheet

54.8 Section I: Buildings						
			Emissions Per Unit or Per Thousand Square Feet (MTCO _{2e})			
Type (Residential) or Principal Activity (Commercial)	# Units	Square Feet (in thousands of square feet)	Embodied	Energy	Transportation	Lifespan Emissions (MTCO _{2e})
Single-Family Home	0		98	672	792	0
Multi-Family Unit in Large Building	0		33	357	766	0
Multi-Family Unit in Small Building	0		54	681	766	0
Mobile Home	0		41	475	709	0
Education		0.0	39	646	361	0
Food Sales		0.0	39	1,541	282	0
Food Service		0.0	39	1,994	561	0
Health Care Inpatient		0.0	39	1,938	582	0
Health Care Outpatient		0.0	39	737	571	0
Lodging		0.0	39	777	117	0
Retail (Other than Mall)		0.0	39	577	247	0
Office		0.0	39	723	588	0
Public Assembly		0.0	39	733	150	0
Public Order and Safety		0.0	39	899	374	0
Religious Worship		0.0	39	339	129	0
Service		0.0	39	599	266	0
Warehouse and Storage		0.0	39	352	181	0
Other		0.0	39	1,278	257	0
Vacant		0.0	39	162	47	0
TOTAL Section I Buildings						0

Section II: Pavement						
						Emissions (MTCO _{2e})
Pavement (sidewalk, asphalt patch)						
Concrete Pad (50 MTCO _{2e} /1,000 sq ft of pavement at a depth of 6 inches or 18.5 CY)		(4,000 sq ft 12 inches thick)				400
TOTAL Section II Pavement						400

Section III: Construction						
						Emissions (MTCO _{2e})
(See detailed calculations below)						
TOTAL Section III Construction						363.6

Section IV: Operations and Maintenance						
						Emissions (MTCO _{2e})
(See detailed calculations below)						
TOTAL Section IV Operations and Maintenance						0

TOTAL GREENHOUSE GAS (GHG) EMISSIONS FOR PROJECT (MTCO_{2e})						763.6
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Attachment C: Greenhouse Gas Emissions Worksheet, continued

Section III Construction Details		
Construction: Diesel		
Equipment	Diesel (gallons)	Assumptions
Front-end Loaders/Excavators (2)	28,000	2,000 hours x 7 gallons/hour x 2 (345 hp engine)
Dump Truck (17 CY capacity)	200	100 round trips x 10 miles/round trip ÷ 5 mpg
Flat-bed Truck	120	30 round trips x 20 miles/round trip ÷ 5 mpg
Drum Compactor	50	100 hours x 0.5 gallons per hour
Concrete Truck (10 CY capacity)	20	5 round trips x 20 miles/round trip ÷ 5 mpg
Subtotal Diesel Gallons	28,390	
GHG Emissions in lbs CO₂e	753,754.5	26.55 lbs CO ₂ e per gallon of diesel
GHG Emissions in metric tons CO₂e	341.8	1,000 lbs = 0.45359237 metric tons

Construction: Gasoline		
Equipment	Gasoline (gallons)	Assumptions
Pick-up Trucks or Crew Vans	1,980	330 working days x 3 trucks x 2 round-trip/day x 20 miles/round trip ÷ 20 mpg
Subtotal Gasoline Gallons	1,980	
GHG Emissions in lbs CO₂e	48,114	24.3 lbs CO ₂ e per gallon of gasoline
GHG Emissions in metric tons CO₂e	21.8	1,000 lbs = 0.45359237 metric tons

Construction Summary		
Activity	CO ₂ e in pounds	CO ₂ e in metric tons
Diesel	753,754.8	341.8
Gasoline	48,114	21.8
Total for Construction	801,868.8	363.6

Section IV Long-Term Operations and Maintenance Details		
Operations and Maintenance: Diesel		
Equipment	Diesel (gallons)	Assumptions
Subtotal Diesel Gallons	0	
GHG Emissions in lbs CO₂e	0	26.55 lbs CO ₂ e per gallon of diesel
GHG Emissions in metric tons CO₂e	0	1,000 lbs = 0.45359237 metric tons

Operations and Maintenance: Gasoline		
Equipment	Gasoline (gallons)	Assumptions
Subtotal Gasoline Gallons	0	
GHG Emissions in lbs CO₂e	0	24.3 lbs CO ₂ e per gallon of gasoline
GHG Emissions in metric tons CO₂e	0	1,000 lbs = 0.45359237 metric tons

Operations and Maintenance Summary		
Activity	CO ₂ e in pounds	CO ₂ e in metric tons
Diesel	0	0
Gasoline	0	0
Total Operations and Maintenance	0	0