

**SEATTLE PUBLIC UTILITIES
SEPA ENVIRONMENTAL CHECKLIST**

This SEPA environmental review of Seattle Public Utilities' East Montlake Pump Station and Force Main Upgrade 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:

East Montlake Pump Station and Force Main Upgrade

2. Name of applicant:

Seattle Public Utilities (SPU)

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

Grace Manzano, Project Manager
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4. Date checklist prepared:

May 13, 2019

5. Agency requesting checklist:

Seattle Public Utilities (SPU)

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

Project construction is scheduled to begin in late 2019, following receipt of all required permits and subject to any timing restrictions therein. The project is anticipated to require approximately 150 working days to be completed.

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.

- Environmentally Critical Areas (ECA) Technical Report (includes wetland and lakeshore delineation) - The Watershed Company, October 2018
- ECA Technical Memorandum (for geotechnical investigation work) - The Watershed Company, November 2018

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 any pending government approvals of other proposals that directly affect the property or rights-of-way covered by this proposal.

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

- Master Use Permit (Land Use - Shoreline), Seattle Department of Construction and Inspections (SDCI)
- ECA Technical memorandum to self-regulate for purposes of compliance with the City's ECA provisions (SMC 25.09), submitted with shoreline permit application
- Construction Permit, SDCI
- Mechanical Permit, SDCI
- Non-Purposeful Take Permit, US Fish and Wildlife Service (USFWS)
- Right of Way Use Permit, Seattle Department of Transportation (SDOT)
- Utility Major Permit, SDOT
- Partial Transfer of Jurisdiction in East Montlake Park, Seattle Parks and Recreation (SPR) and SPU
- Revocable Use Permit, SPR
- Electrical service permit, Seattle City Light
- Construction Wastewater Discharge Permit (for dewatering), King County Wastewater Treatment Division (King County)

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.

In some areas of the City of Seattle, sewage and stormwater runoff are collected in the same pipes, known as combined sewers. During storm events, sometimes the flow in these pipes exceeds the sewer system capacity. When this occurs, the system overflows at an outfall structure designed for this purpose. There are currently 84 outfalls in the City of Seattle where combined sewer overflows (CSOs) can occur.

To comply with State and Federal requirements, SPU must limit the number of CSOs at each of these outfalls to an average of no more than one per year based on a 20-year moving average. Combined sewer Basin 20 in the Montlake area currently exceeds this performance standard, averaging 2.4 CSOs per year. The goal of this project is to reduce the frequency of Basin 20 CSOs.

Basin 20 is approximately 60 acres in size, is located in the eastern portion of the Montlake area, and is bisected into northern and southern regions by State Route 520 (SR 520). See Attachments A and B for vicinity and site maps.

Combined sewage from Basin 20 flows by gravity to PS 13, located in East Montlake Park, east of Montlake Boulevard E and on the south side of the Lake Washington Ship Canal. PS 13 lifts the flows through a force main and to a connection into the King County system.

During wet weather, when flows exceed the pump station capacity, excess flows are diverted into two offline storage pipes that are located upstream of PS 13. If the flows are high enough to exceed the capacity of these offline storage pipes, a CSO occurs: the excess sewage spills over a series of weirs and flows through CSO Outfall 20 into Lake Washington Ship Canal at the northeast corner of East Montlake Park. When flows diminish, the storage pipes drain to the PS 13 wet well.

The proposed project includes the following improvements:

- Install a bypass vault to allow full bypass of PS 13 during construction or maintenance activities
- Increase peak pumping capacity at PS 13 from 1.3 million gallons per day (MGD) to 2.8 MGD by replacing the existing pumps
- Replace all infrastructure within the pump station (grating, controls, valves, piping, appurtenances)
- Upgrade the electrical systems and equipment, including the equipment that allows connection of a portable emergency generator as necessary
- Upgrade ventilation, electrical and SCADA systems to meet fire and electrical codes (NFPA 820, NFPA 70)
- Complete minor structural modifications including sealing the existing door between the dry well and wet well
- Install a dedicated wet well access hatch
- Install a dedicated dry well pump access hatch
- Provide lead paint abatement and new coatings within the pump station structure
- Install new flow meters
- Modify the overflow weir that controls CSOs if necessitated by pump modifications
- Replace the existing 8-inch diameter force main with a 12-inch diameter force main that includes inspection and cleaning access points.
- Replace or rehabilitate the existing gravity combined sewer mainline, from the Shelby St maintenance hole (terminus of the force main) to King County's SW Lake Washington Trunk line
- Restore and improve the right-of-way as needed, including a concrete walkway to achieve American with Disabilities Act (ADA) compliance

While the pump station upgrades are constructed, a temporary bypass system would divert combined sewer flows around PS 13 to the downstream maintenance hole. The temporary bypass system would be designed to maintain performance similar to or better than the existing facility, with regard to anticipated CSO frequency.

SPU has coordinated with the King County Wastewater Treatment Division (WTD) in developing and designing the project, and WTD has provided their concurrence that operation of the proposed project improvements is not anticipated to impact the operation of, or require modifications to, the West Point Treatment Plant.

SPU is evaluating the feasibility of using trenchless pipe repair/replacement techniques to replace the force main in a way that reduces disturbance to adjacent property owners. SPU plans to solicit construction bids for both trenchless and conventional (open trench) construction, and will decide which approach to use following bid opening. This checklist evaluates worst case construction impacts.

- 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 area is located along East Shelby street (between Montlake Boulevard and East Park Drive E) and in East Montlake Park at 2802 East Park Dr E; parcel #5605000646 in Section 21, Township 25 North, Range 04 East.

B. ENVIRONMENTAL ELEMENTS

1. Earth

- a. General description of the site:** *[Check the applicable boxes]*

Flat Rolling Hilly Steep Slopes Mountainous Other:

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

The site is relatively flat with localized depressions generally corresponding to wetland areas. City of Seattle mapping indicates small isolated areas of ECA designated steep slopes (40% average) within the project vicinity, but generally outside of proposed work areas.

- 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, available at <http://pubs.usgs.gov/of/2005/1252/>) indicates that the project site is underlain by peat in the park area, or Vashon till along East Shelby Street.

Urban development in this area over the last 100 years has resulted in a predominance of disturbed native soils/sediments, cut slopes, and placements of fill material. The majority of the project location and immediately surrounding areas have been developed and disturbed in some way. There are no agricultural lands of long-term commercial significance designated in the project area.

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

A portion of parcel #5605000646 is mapped as a liquefaction prone area by City of Seattle mapping and a few small, isolated steep slope ECAs are also identified.

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.

Construction is anticipated to disturb a total of approximately 11,710 square feet of ground. Assuming an open cut construction method, construction would excavate approximately 1,100 cubic yards of soil and backfill with approximately 750 cubic yards of excavated and/or imported soil, imported aggregate, and other fill material. Imported material would be obtained from purveyors of such materials licensed to conduct business in Washington. About 350 cubic yards of spoil are expected to be exported from the project area. 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:

Much of the proposed work is located within existing impervious (paved) areas or adjacent to existing residential development with minimal potential for erosion. Ground disturbance and vegetation trimming will be limited to that required for construction staging and access. Such areas will be located in existing paved areas wherever possible. Erosion and sedimentation could occur as a result of project construction, although this risk is low because most project sites are flat or relatively flat, and temporary erosion and sediment control best management practices (BMPs) would be deployed, inspected, and maintained as needed. Disturbed areas would be restored to their near-original conditions.

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

Much of the proposed work is located within existing impervious (paved) areas. Existing paved surfaces damaged by construction would be repaired. However, new impervious surfaces are proposed in the Park property as a result of reconstructing the existing pathway compliance, access road, and above-station gravel surfacing. The work would result in an increase in City of Seattle-defined "hard surfaces" of 4,200 SF, however the access road would be made of permeable pavement.

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

No filling or excavation would take place within approximately 65 feet of the lake shoreline. Best management practices (BMPs) would be used to protect the existing stormwater drainage systems and to minimize erosion and sedimentation. A temporary erosion and sedimentation control plan would be prepared and implemented. BMPs as identified in the City of Seattle's Stormwater Code (Seattle Municipal Code Title 22, Subtitle VIII), the 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

Project improvements include upgrading the ventilation system for the pump station's dry well (area containing mechanical and electrical equipment) and wet well (area containing sewage and stormwater) spaces to meet National Fire Protection Association and National Electrical Code requirements and to ensure safety of SPU crews. For the dry well, an existing 0.25 horsepower (HP) exhaust fan located within the dry well will be removed and replaced with two new fans: a 0.25 HP dry well supply fan and a 0.25 HP dry well exhaust fan. Both new fans will be located within the dry well. For the wet well, an existing passive ventilation opening (supplied by forced air from the dry well) will be plugged, and two new 0.33 HP wet well exhaust fans will be installed within new weatherproof sound enclosures on new concrete pads external to the pump station structure. The fan(s) will be tuned to maintain the existing airflow rate through the wet well (3.6 air changes per hour), such that there is no functional change in the daily volume of emissions from the wet well.

During project construction, emissions would occur from vehicles and mobile and stationary equipment at the site, such as crew vehicles, trucks, and construction equipment due to the combustion of gasoline and diesel fuels (such as oxides of nitrogen, carbon monoxide, particulate matter and smoke, uncombusted hydrocarbons, hydrogen sulfide, carbon dioxide, and water vapor). Emissions during construction would also include dust from ground-disturbing activities. Upon the completion of project construction activities, emissions related to construction would cease.

During normal pump station operation, wastewater in the dry well portion of the pump station is fully contained within 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.

Wastewater in the wet well does have some exposure to the atmosphere inside the wet well. The wet well ventilation improvements will not increase the rate and volume of air exhausted from the wet well (3.6 air changes per hour, 86 cubic feet per minute constant airflow rate). The 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, the chemical composition of the wastewater and the piping configuration and velocity of the wastewater through the pump station. By maintaining the existing air flow rate through the wet well, SPU does not anticipate any increased perception of odors external to the pump station.

Greenhouse Gas Emissions

Greenhouse gas emissions can be 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 occur at sources owned or controlled at 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 the potential for new or increased direct greenhouse gas emissions to result from construction and operation of the project, and indirect construction-related (embodied) emissions associated with the replacement of demolished and damaged concrete surfaces/structures. Embodied greenhouse gas emissions in other materials (such as aggregate, pre-cast structures, and so forth) used in this project have not been estimated as part of this SEPA environmental review due to the difficulty of accurately calculating estimates for those materials.

Construction

Estimates of direct greenhouse gas emissions related to construction of the project are presented as total metric tons of carbon dioxide (MTCO_{2e}) in Table 1. Total greenhouse gas emissions for the project are estimated to be about 538 metric tons of carbon dioxide emission (MTCO_{2e}), where one metric ton is equal to 2,205 pounds. Construction of the project would include the replacement of demolished and damaged concrete surfaces/structures. The estimated volume of replacement concrete is 105 cubic yards (2,796 square feet at an average of ten inches or 0.83 feet thick), which is estimated to embody 140 MTCO_{2e}. Construction of the project would also generate greenhouse gas emissions during the estimated 150 total working-day construction period through the operation of diesel- and gasoline-powered equipment and to transport materials, equipment, and workers to and from the site. Because project construction methods were not completely known at the time this checklist was prepared, the estimates provided here are based on daily vehicle operation times for the estimated project duration (150 working days); actual times may be less. Construction activities would generate an estimated 398 MTCO_{2e}. Please refer to Attachment D for more detailed calculations.

Operation

Operation of the project improvements would result in greater volumes of air being vented to the atmosphere from the pump station’s dry well. The amount of greenhouse gases in the air exhausted from the pump station’s dry well is expected to be negligible.

The air volume vented to the atmosphere from the pump station’s wet well would remain the same.

Maintenance

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 an existing, operational wastewater pump station, and would not result in increases to the frequency or duration of pump station maintenance visits/activities.

Summary of Greenhouse Gas (GHG) Emissions

Activity/Emission Type	GHG Emissions (pounds of CO ₂ e) ¹	GHG Emissions (metric tons of CO ₂ e) ¹
Buildings	0	0
Paving	308,214	140
Construction Activities (Diesel)	855,707	388
Construction Activities (Gasoline)	21,870	10
Long-term Maintenance (Diesel)	0	0
Long-term Maintenance (Gasoline)	0	0
Total GHG Emissions	1,185,791	538

¹Note: 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, proper vehicle maintenance, and minimizing 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 well and the dry well, 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 pump station operation.

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.

The pump station is located in East Montlake Park which is located near the shore of Lake Washington. The portion of Lake Washington near the project area is known as Union Bay. The Montlake Cut waterway is located west of Union Bay and connects Lake Washington to Lake Union.

Two wetlands have been identified in the project area. These are identified as Wetland A and Wetland B in the Environmentally Critical Areas Technical Report (The Watershed Company 2018). No streams are present in the project areas.

Wetland A is a small (2,125 square feet) depressional wetland located east of the existing sewer pump station in East Montlake Park. It is a Category III, closed depressional wetland with no surface water outlet.

Wetland B is a large (approximately 10 acres) Category II lake-fringe wetland that extends from the study area east and includes Marsh Island.

(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.

No work is proposed in or over water. However, the existing pump station is located within 200 feet of both the wetlands and the Lake Washington/Montlake Cut shoreline and upgrades will occur within this area. All of the work in East Montlake Park is within 200 feet of the Lake Washington/Montlake Cut shoreline or delineated wetland. Work in this area includes all pump station interior improvements, removal of the existing and installation of the new force main and bypass vault, trenching and installation of ducts and above-grade ventilation improvements, trenching and installation of new electrical and water services, installation of bollards, new CSO monitoring instruments and conduits, construction of a geogrid porous pavement access road and ADA-compliant park path, including rockeries, handrails, and all associated landscape restoration.

(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.

No surface water withdrawals or diversions are planned. 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 that is 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 reduce the volume and frequency of combined sewage overflows to Union Bay.

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.**

The proposed project would not withdraw, discharge, or surcharge groundwater.

Excavations may require dewatering during construction. If so, SPU would require its contractor to prepare a Temporary Construction Dewatering Plan (TDP), 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.**

Stormwater runoff may need to be managed during construction to prevent sediment from entering and leaving the construction site. Any precipitation that lands on the construction site would be contained on-site and allowed to infiltrate. Barriers such as sand bags would be used to prevent runoff from entering the construction zone. Once construction is complete, temporary erosion control measures would be removed.

The completed project would not create a need to manage additional stormwater runoff beyond current conditions. Stormwater would follow pre-construction pathways.

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

No intentional discharge of waste materials to surface waters will occur during project construction. 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 that would be prepared for the project and approved by the City of Seattle prior to the start of project construction activities.

The completed project would reduce the volume and frequency of combined sewage overflows to Union Bay.

(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 and would not create a need to manage additional stormwater runoff beyond currently existing conditions. Stormwater would follow pre-construction pathways.

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. Best management practices, as identified in the City of Seattle’s Stormwater Code (Seattle Municipal Code Title 22, Subtitle VIII), the 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 the project site during construction.

4. Plants

a. Types of vegetation found on the site:[check the applicable boxes]

<input checked="" type="checkbox"/> Deciduous trees:	<input type="checkbox"/> Alder	<input checked="" type="checkbox"/> Maple	<input type="checkbox"/> Aspen	<input checked="" type="checkbox"/> Other: Willow
<input checked="" type="checkbox"/> Evergreen trees:	<input checked="" type="checkbox"/> Fir	<input checked="" type="checkbox"/> Cedar	<input checked="" type="checkbox"/> Pine	<input type="checkbox"/> Other:
<input checked="" type="checkbox"/> Shrubs				
<input checked="" type="checkbox"/> Grass				
<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 checked="" type="checkbox"/> Other: reed canarygrass, giant horsetail, Himalayan blackberry				
<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:				

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

Much of the project area for the force main work is within paved street rights-of-way, including sidewalks and driveways. Work at these force main sites would not alter or remove vegetation except for a small area of clearing and grubbing adjacent to the East Shelby Street sidewalk which is approximately 1,531 square feet. All street trees would be protected.

Within East Montlake Park at the pump station work site, landscaped and vegetated natural areas are present. Work would require the clearing of approximately 4,482 square feet of vegetated area which includes installed shrubs, Himalayan blackberry, groundcover plants like sword fern and fringe cup, various grasses and forbs, a 32-inch diameter Silver Maple tree, and an 8-inch diameter Norway Maple tree. The Silver Maple tree meets the size threshold to be considered for exceptional tree status per Director’s Rule 16-2008; however, it has numerous serious conditions of concern. Concerns include a pronounced lean over the sidewalk with root plate lifting, codominant stems with

included bark and decay, an unbalanced crown with a low live crown ratio, numerous previous broken branches, and extensive response growth indicating decay in limbs, trunk, and roots. Using the ISA Basic Tree Risk Assessment form, the risk rating for the Silver Maple tree is high and the tree is considered a hazard. The Norway Maple tree does not meet the size threshold to be considered for exceptional tree status per DR 16-2008. It is an immature tree in good condition. However, Norway Maple is not native to the Cascadia region and is moderately invasive here.

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

No federally-listed endangered or threatened plant species or State-listed sensitive plant species are known to occur within Seattle’s municipal limits.

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

The proposed work would limit plant removal, pruning, and other disturbance to that required for project construction. As noted in Section B.4.b, project construction would require clearing approximately 6,013 square feet including removal of a 32-inch diameter Silver Maple tree and an 8-inch diameter Norway Maple tree. All vegetated areas would be restored following project construction, resulting in a net increase in the amount of native vegetation. The two existing trees would be replaced at a 2:1 ratio.

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

Himalayan blackberry (*Rubus armeniacus*), English ivy (*Helix hedera*), reed canarygrass (*Phalaris arundinacea*), and yellow-flag iris (*Iris pseudacorus*) are present in vicinity of the pump station.

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: [check the applicable boxes]

Birds: Hawk Heron Eagle Songbirds
 Other: The project area is located within the Pacific Flyway migratory corridor, adjacent to Lake Washington which is used by a variety of bird species. Occurrence of a wide variety of resident and migratory waterfowl, song birds, and raptors is expected in the project area. In addition to boxes checked, some commonly observed species include geese, ducks, crows, robins, and pigeons. A Bald Eagle nest is present in a tree directly above the pump station. No great blue heron colonies are known/documented near the project area.

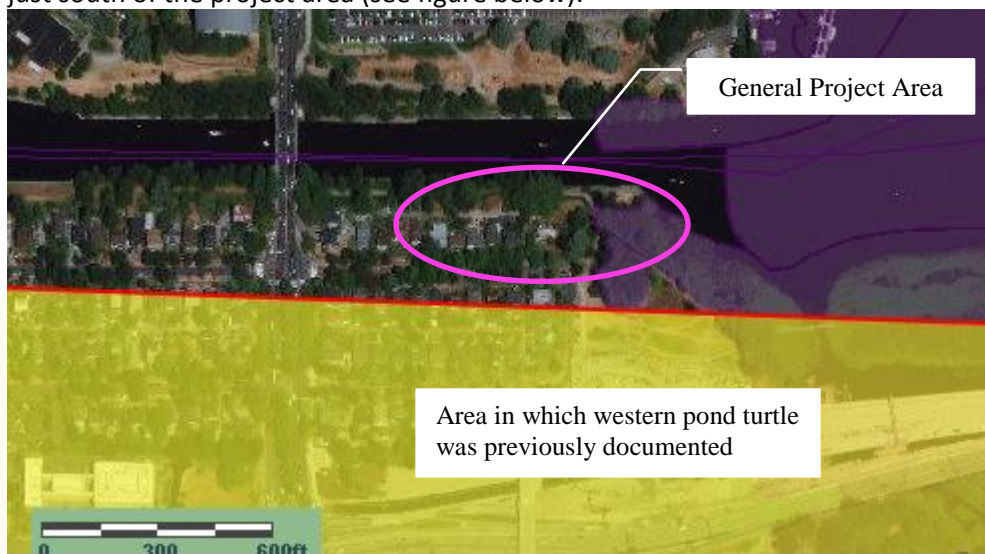
Mammals: Deer Bear Elk Beaver
 Other: Mammals within the study area are limited to animal species commonly found in urban areas and aquatic environments. Such species may include opossums, rabbits, raccoon, beaver, skunk, squirrel, rats, mice, and bats.

Fish: Bass Salmon Trout Herring
 Shellfish Other: Fish species are present in Lake Washington/Union Bay/Montlake Cut adjacent to project area.

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

Lake Washington/Union Bay/Montlake Cut provides habitat to federally-listed anadromous species including bull trout, Chinook salmon and steelhead trout.

Washington Department of Fish and Wildlife (WDFW) interactive mapping application (PHS on the Web) shows a Biodiversity Areas and Corridor within the study area, which includes a description that notes western pond turtle, a state listed endangered species, presence within the polygon. The polygon feature is very large, at over two hundred acres, extending east and south from the project area. The note about western pond turtle presence likely applies to the area within the polygon that also overlaps an area in which western pond turtle has been documented as occurring (historically) by WDFW, just south of the project area (see figure below).



Western pond turtle populations are fairly well understood throughout the state. Existing information identifies only six sites where western pond turtle populations remain, all of which are located outside of King County, part of the species' historic range. The lakeshore near the project area does provide suitable habitat for turtles, including western pond turtle. However, western pond turtles are unlikely to be present near the project area given the following:

- Lack of current documented presence despite habitat suitability and highly accessible/visible location; and
- Information regarding current distribution and range in only six sites in Mason, Pierce, Skamania, and Klickitat Counties.

Even if western pond turtles were present near the site, the project is unlikely to impact areas in which turtles would be located, nor is impact expected to bull trout, Chinook salmon or steelhead trout habitat. Construction activities will occur in and adjacent to areas of existing development, dominated by non-native and invasive plants. No in-water work is proposed.

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 and Lake Washington are important water migration routes for many animal species.

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

No in-water work is proposed. The proposed work would limit plant removal, pruning, and other disturbance to that required for project construction. All cleared areas not developed with project components would be restored following project construction, with native trees, shrubs and groundcover. The project would retain the tree in which the bald eagle nest is located. To the extent feasible project-related activities would occur outside of the bald eagle nesting window, and the project would take steps to minimize impact to birds potentially using the nest site. Any activities proposed within the nesting window would adhere to conditions stipulated in the USFWS Non-Purposeful Take Permit. The mitigation planting plan will seek to establish a dense vegetative barrier between the eagle nest and the pump station and other public access areas to minimize potential future disturbance to the birds.

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.

No energy would be required to meet the constructed project's energy needs, beyond the energy already utilized for the existing systems. The pumps are being upsized from 15 Hp to 50 Hp. The electrical service size is changing from 70 amps to 200 amps to support the larger pumps to meet the larger capacity requirements. Operational load is changing from approximately 55 amps to 140 amps. Net energy usage is expected to remain the same due to the implementation of Variable Frequency Drives (VFDs) to efficiently operate these pumps.

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

The proposed project does not involve building structures or planting vegetation that would block access to the sun for 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:

There are no conservation features or proposed measures to reduce or control energy impacts because there would be no such impacts. Use of Variable Frequency Drive (VFD) reduces the starting current of the pump and allows the pump speed to be controlled more efficiently than restricting flow with a valve. This also eliminates the possibility of brown-outs that can potentially occur at high starting currents. The dry well ventilation fans will be provided with variable speed motors that are also recognized as energy efficiency measures.

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, mainly to support vehicle and construction equipment, include gasoline and diesel fuels, hydraulic fluids, oils, and lubricants, and also may include 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.

The substances present in combined sewage could pose a potential environmental health hazard 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. The 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. The chemicals potentially present in the wastewater, and the gases they produce, are toxic to humans, and could pose a health risk to workers if exposed during project construction or during routine pump station operation and maintenance activities after construction has been completed. In high enough concentrations, the presence of 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.

The project area is not known to have environmental contamination. However, it is possible that contamination of soil or groundwater associated with past uses or activities on or near a site may be present.

- (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.**

Chemicals and pollutants that may be present during construction include:

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

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

During project construction, wastewater flows will be temporarily bypassed around the pump station as required to accomplish project work. The completed project would not affect the composition of combined sewage passing through the pump station. The 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 pump station, would be the same as prior to construction.

- (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 project 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 location.

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

The construction contractor would be required to develop and implement a Spill Plan to control and manage spills during construction. In addition, a spill response kit will be maintained at each site during construction work at that site, and all project site workers will be trained in spill prevention and containment consistent with the City of Seattle's Standard Specifications for Road, Bridge, and Municipal Construction. During construction, the contractor would use standard operating procedures and

best management practices identified in the City of Seattle’s Stormwater Code (Title 22, Subtitle VIII), the City of Seattle Director’s Rule SDCI 17-2017/SPU DWW-200, and Volume 2 Construction Stormwater Control Manual to reduce or control any possible environmental health hazards. Soils contaminated by spills during construction 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.

Additionally, workers will be required to follow the Washington State safety standards for entry and work in confined spaces (Chapter 296-809 of the Washington Administrative Code [WAC]), which includes requirements for atmospheric testing in a confined space structure prior to entry and work within the structure. Following construction, SPU workers performing routine operation and maintenance activities requiring entry to maintenance holes and other underground confined space structures will be required to follow the requirements of SPU’s Confined Space Safety Program which implements the 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 in the vicinity of 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 (Seattle Municipal Code [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. It is expected that construction would take no more than 150 working days to complete. The completed project would generate no additional noise from equipment used for operation or maintenance.

On a long term basis, two 0.33 horsepower fans ventilating the wet well will emit noise above baseline levels as there currently are no operating fans outside of the pump station. Both wet well fans will be installed external to the pump station and will include noise-reducing enclosures to minimize emitted noise. The estimated total noise from the two fans within their sound enclosures at the nearest private property line is estimated to be approximately 2 decibels (dB(A)). SMC 25.08.410.A defines the allowable maximum noise between various sound emitting land uses. The most conservative maximum allowable noise value is 55 dB(A). The noise calculations indicate that there is great certainty that the pump station’s two new

fans will not exceed this threshold, and will therefore be compliant with the City of Seattle’s noise code.

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

Construction equipment would be muffled in accordance with the applicable laws. Seattle Municipal Code Chapter 25.08, which prescribes limits to noise and construction activities, would be enforced while the project is being constructed and during operations, except for emergencies.

Seattle Municipal Code (SMC) 25.08.410 defines the Residential noise limit as 55 dB(A) at the property line and SMC 25.08.420 reduces the allowable daytime exterior sound level of 55 dB(A) for residentially-zoned receiving properties established at SMC 25.08.410 by:

- A. 10 dB(A) at night (defined as 10PM to 9AM);
- B. 5 dB(A) when the noise source has a pure tone component;
- C. 5 dB(A) when the noise source is impulsive and not measured with an impulse sound level meter

SPU is designing the ventilation and odor control systems to have a combined noise limit of 45 dB(A) (55 dB(A) – 10 dB(A) night reduction) or less at the property line.

The dry well fans will be installed below ground inside the PS structure and are anticipated to provide unnoticeable above-ground noise. The maximum noise from the wet well fans with and without a sound attenuating enclosure from a 5-foot distance is 35 dB(A) and 55 dB(A), respectively, as reported by the manufacturer of the selected ventilation equipment for the 90% Design deliverable. The project team prepared a noise analysis utilizing the Air-Conditioning and Refrigeration Institute (ARI) Standard for Application of Sound Rating Levels of Outdoor Unitary Equipment, 1997 calculation methodology (SPU Noise Calculations October 2018). This analysis serves to estimate the anticipated noise from the fans at the nearest private property line. The ARI standards are referenced by Seattle Department of Construction and Inspections noise control group.

The anticipated noise due to installation of new wet well supply and exhaust fans was calculated at the private property line to the west of the pump station, which is the closest neighbor (Evaluation Point A. See Figure 1.0). The noise calculation resulted in the following noise levels for the two design approaches:

- Evaluation Point A (With Sound Attenuating Enclosure): 2 dB(A)
- Evaluation Point A (Without Sound Attenuating Enclosure): 21.5 dB(A)

Given that SPU will install sound attenuating enclosures around the wet well exhaust fans, the anticipated noise from the new exhaust fans at the nearest private property line is estimated to be 2 dB(A). This level of noise is near the human hearing threshold. If enclosures were not included, the anticipated noise would be near 21.5 dB(A), which is consistent with rustling leaves. Noise calculations for the new wet

well fans are theoretical. However, these calculations indicate that there is a very high likelihood that the exterior fans will be well within the City's noise code tolerances, and likely barely audible to adjacent home owners. To ensure conformance to the City's noise code, SPU will perform a noise assessment at the adjacent property lines to confirm the pump station noise is below 45 dB(A). If the Pump Station is in violation of the code, the City will take additional remedial measures to ensure conformance with applicable codes.

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.

The site of the proposed force main improvements is within developed street right-of-way. The pump station is within a park (East Montlake Park). Adjacent property uses are residential and park/open space.

The project could result in short-term, temporary street lane and sidewalk closures, and/or route detours that would be experienced by individuals who live, work, or visit destinations near the project area but would not result in a permanent change to land use.

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?

The proposed project sites have not been recently used for agricultural purposes or forestry. The project would not result in land use conversion of any kind.

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

The proposed work would neither be affected by nor affect surrounding working farm or forest land normal business operations because there are no such operations at or near any of the project sites.

c. Describe any structures on the site.

The proposed work is associated with existing wastewater facilities located in improved public right-of-way and East Montlake Park. Adjacent residential properties include single family homes.

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

The project mainly proposes alterations to buried elements. Demolition of above-grade structures include removal of the existing control cabinet, elimination of the wet well ventilation stack, and demolition of the existing park path and handrails.

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

The East Montlake Park parcel (#5605000646) is zoned SF 7200. The parcels in the neighborhood surrounding the East Shelby Street work area are zoned SF 5000.

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

The comprehensive plan future land use designation for the East Montlake Park parcel is City-Owned Open Space. The neighborhood surrounding the East Shelby Street work area is designated Single Family Residential.

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

A portion of the project area is located within the 200-foot shoreline management jurisdiction of Lake Washington, and has a Conservancy Management Shoreline Environment Designation.

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

As documented in the Environmentally Critical Areas Technical Report, two wetlands are located in the project area in addition to the Union Bay shoreline. Additionally, WDFW designated Biodiversity Areas and Corridor are mapped in the project area which is considered a Fish and Wildlife Habitat Conservation Areas environmentally critical area (ECA) by the City of Seattle. Liquefaction-prone, peat settlement-prone and steep slope areas are also located within or adjacent to the project area.

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. No measures are required to ensure the proposal is 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. No measures are required to reduce or control impacts to 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?**

The proposed project includes installation or modification of primarily buried elements. Above-ground structures would be limited to installation of handrails for the ADA compliant sidewalk/trail, a new SCL electrical service cabinet, an additional mast arm on an existing light pole, above-grade fans and vents, bollards and a hose bib. The electrical service cabinet would be located near the sidewalk entrance to the park and would be the largest new above-grade utility structure. The cabinet would be approximately 6-feet wide, 6-feet tall, and 2-feet deep and would enclose the SCL electrical meter, the manual transfer switch, and the generator connection receptacle.

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

No views would be altered or obstructed.

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

No such measures are proposed because there would be no aesthetic impacts.

11. Light and Glare

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

The completed project would provide lighting for the pump station and for the proposed reconstructed walking path by adding an additional arm with a new light fixture and replacing the existing light fixture on the existing light pole (to remain) in the park.

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 only new lighting fixtures would be pole-mounted LED light cut-off fixtures, so 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?

The pump station is located within East Montlake Park which is a City of Seattle park that is the starting point for miles of waterfront trails and includes opportunities for informal recreational activities such as dog-walking, walking, jogging, and bicycling. The park is just across the Montlake Cut from Husky Stadium, and is owned and managed by Seattle Parks and Recreation.

The Lake Washington Ship Canal Waterside Trail, which is designated as a National Recreation Trail, begins in East Montlake Park and runs to West Montlake Park on the other end of the ship canal.

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

The proposed work would not permanently displace any existing recreational uses. It is anticipated that there would be a Partial Transfer of Jurisdiction (PTOJ) to SPU for the area containing SPU infrastructure. This PTOJ would not result in any changes to the currently available recreational opportunities. Access to the streets and parking areas affected by project construction would be more challenging during construction, but SPU would require the project contractor to maintain safe pedestrian and vehicle access at all times. A portion of East Montlake Park would be off-limits for the duration of project construction but access and existing park conditions would be restored after project completion.

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

Temporary closures or detours affecting vehicle and/or pedestrian routes/access may be required. The project would attempt to make those closures and detours as brief as possible.

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.

According to the publically accessible information in the Washington Information System for Architectural and Archaeological Records Data (WISAARD) website, several homes adjacent to the location of the force main have been determined to be eligible for historic status due to their age. The entire project is located within the Montlake Historic District which encompasses an approximately 50 block area bounded by the Lake Washington Ship Canal, Interlaken Park, 15th Ave E. and the Washington Park Arboretum. The district was designated June 12, 2015 and is considered significant at the local level.

- 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. All ground disturbance and excavation would occur in existing street right-of-way and developed areas that have been disturbed previously by installation of underground utility infrastructure, roads, residential structures and walkways.

- 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, the project sites were checked against the following registers on October 15, 2018:

Washington Information System for Architectural & Archaeological Research Data (WISAARD), maintained by the Washington State Department of Archaeology & Historic Preservation (found at <https://fortress.wa.gov/dahp/wisaardp3/>)

Landmark List, and Map of Designated Landmarks, maintained by the City of Seattle, Department of Neighborhoods (found at <http://www.seattle.gov/neighborhoods/programs-and-services/historic-preservation/landmarks>)

- 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.

The proposed work would not affect buildings or known cultural resources. Only portions of SPU's existing sewer and stormwater systems would be affected. The proposed work is located on previously disturbed and filled upland areas. The work's location on previously disturbed and filled ground reduces the chance of encountering contextually significant archaeological materials. Work crews would be trained to recognize

archaeological materials should they be discovered. Should evidence of cultural artifacts or human remains, either historic or prehistoric, be encountered during ground disturbance, 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.

14. 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 the existing, improved street right-of-way of East Shelby Street and within East Montlake Park which is accessed via East Park Dr E.

- 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. There is a bus stop approximately 80 feet southwest from the Montlake Blvd E and East Shelby Street intersection, within the project area, however service is expected to continue during construction. The site of improvements to the pump station is not directly served by transit, but could be accessed by any number of bus stops along Montlake Blvd. E. or the Montlake Freeway Transit Station at SR 520.

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

The completed project would neither create nor eliminate any parking spaces. However, during construction, there may be temporary on-street parking closures during construction activities. The specific timing and duration of parking closures are not known at this time, but such closures would comply with relevant policies administered by the Seattle Department of Transportation as part of the street use permitting process.

- 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 any damaged street panels, curbs, traffic aprons, or other transportation infrastructure to pre-construction conditions or better and consistent with City of Seattle Department of Transportation requirements. The proposal would not require any new or improved public or private transportation infrastructure.

- 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 or occur in the immediate vicinity of 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?**

During construction, additional trips would be generated due to workers and materials being transported to and from the site during the working day. 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 the Seattle Department of Transportation.
- 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 may not be available at all times during construction, but temporary closures would be minimized and detour routes would be properly and clearly signed. Vehicle access to private properties will be maintained, subject to temporary traffic control measures such as signage and flagging.
- 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 the Seattle Department of Transportation as part of the 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. Otherwise, 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, if any:


- None
 Electricity Natural gas Water Refuse service
 Telephone Sanitary sewer Septic system
 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.

Upon completion of the project, the force main and pump station would continue to be operated by SPU and powered with electricity provided by Seattle City Light.

C. SIGNATURE

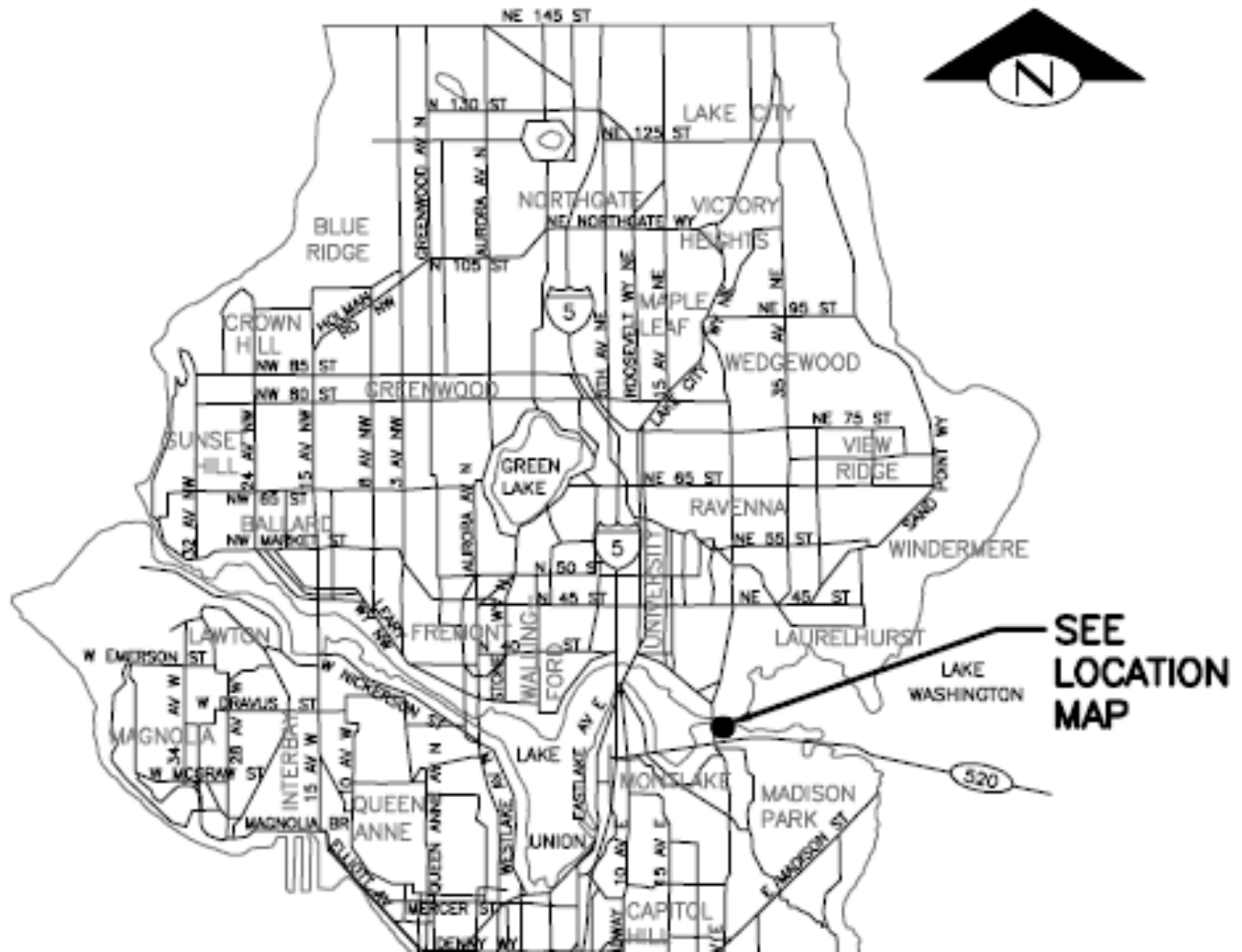
The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: 
Grace Manzano
Project Manager

Date: 5-13-19

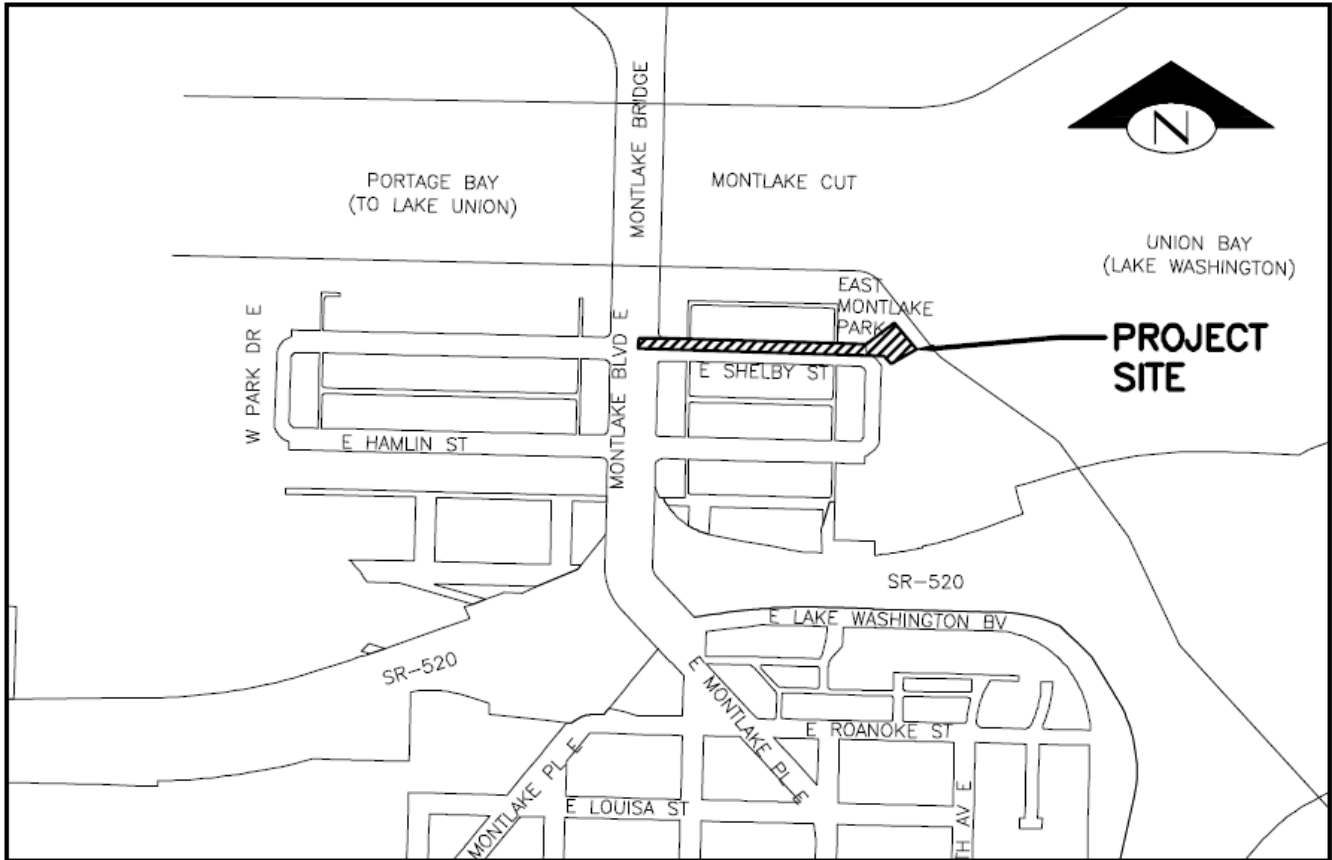
- Attachment A – Vicinity Map
- Attachment B – Location Map
- Attachment C - Greenhouse Gas Emissions Worksheet

Attachment A – Vicinity Map



Attachment B – Location Map

**East Montlake PS and Force Main Upgrade
SEPA Environmental Checklist**



**East Montlake PS and Force Main Upgrade
SEPA Environmental Checklist**

Attachment C – Greenhouse Gas Emissions Worksheet

Section I: Buildings						
			Emissions Per Unit or Per Thousand Square Feet (MTCO ₂ e)			
Type (Residential) or Principal Activity (Commercial)	# Units	Square Feet (in thousands of square feet)	Embodied	Energy	Transportation	Lifespan Emissions (MTCO ₂ e)
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 ₂ e)
Pavement (sidewalk, asphalt patch, conc pad)		2.8			139.9
Road aggregate, in cubic yards		1 cy			0.005
TOTAL Section II Pavement					140

Section III: Construction	
(See detailed calculations below)	Emissions (MTCO ₂ e)
TOTAL Section III Construction	
	398

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

TOTAL GREENHOUSE GAS (GHG) EMISSIONS FOR PROJECT (MTCO₂e)	538
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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)	31,500	2,250 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)	360	90 round trips x 20 miles/round trip ÷ 5 mpg
Subtotal Diesel Gallons	32,230	
GHG Emissions in lbs CO₂e	855,707	26.55 lbs CO ₂ e per gallon of diesel
GHG Emissions in metric tons CO₂e	388	1,000 lbs = 0.45359237 metric tons

Construction: Gasoline		
Equipment	Gasoline (gallons)	Assumptions
Pick-up Trucks or Crew Vans	900	150 workdays x 3 trucks x 2 round-trip/day x 20 miles/ round trip ÷ 20 mpg
Subtotal Gasoline Gallons	900	
GHG Emissions in lbs CO₂e	21,870	24.3 lbs CO ₂ e per gallon of gasoline
GHG Emissions in metric tons CO₂e	9.9	1,000 lbs = 0.45359237 metric tons

Construction Summary		
Activity	CO ₂ e in pounds	CO ₂ e in metric tons
Diesel	855,707	388
Gasoline	21,870	10
Total for Construction	877,577	398

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		
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