

**SEATTLE PUBLIC UTILITIES
SEPA ENVIRONMENTAL CHECKLIST**

This SEPA environmental review of Seattle Public Utilities' SW Spokane St Water Main 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:

SW Spokane St Water Main Rehabilitation 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:

April 13, 2020

5. Agency requesting checklist:

Seattle Public Utilities (SPU)

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

Project construction is planned to begin during the second quarter of 2021 and conclude by the end of second quarter of 2022. The project is anticipated to require 30 working days.

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

SPU operates and maintains water mains throughout the City of Seattle. For efficiencies in contracting and construction, SPU sometimes bundles water main repairs at multiple independent sites into a single contract for competitive bidding and construction. Contracts may include repairs to water mains that are 12 inches or less in diameter as well as repairs to large-diameter (greater than 12 inches in diameter) water mains. Repairs to water mains that are 12 inches or less in diameter are typically exempted from the threshold determination

provisions of SEPA per exemptions provided in state regulations (WAC 197-11-800.23) and City of Seattle code (SMC 25.05.800.X). SEPA checklists are prepared to assess the environmental impacts of the repairs to large-diameter (greater than 12 inches in diameter) water mains.

SPU is currently preparing Water Main Rehabilitation Package 3, which bundles seven independent rehabilitation sites located in street rights-of-way and easements across the City of Seattle—including the SW Spokane St Water Main Rehabilitation Project that is the subject of this Environmental Checklist. The other six sites in Package 3 involve pipes smaller than 12 inches in diameter which are exempt from a SEPA threshold determination and are not described in this checklist. SPU currently has no other plans for repair of large-diameter water mains or for additions, expansion, or further activity related to or connected with the current proposal.

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

SPU Geotechnical Engineering. 2019 (August). Geotechnical report, SW Spokane St Water Main Project, Seattle, Washington.

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.

This SW Spokane St Water Main Rehabilitation Project would impact the street right-of-way adjacent to SPU's SW Spokane St Pump Station building—a drinking water pumping facility in West Seattle at 3214 SW Spokane St. SPU is planning to replace the pump station building and conduct other improvements on that SPU-owned property (parcel 7987400820). Construction of the pump station improvements is scheduled to begin in 2022. Coordination between that pump station project and this water main rehabilitation project may be required to manage customer and neighborhood impacts, particularly with respect to road closures, restricted access to the pump station, and water service outages.

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

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

- City of Seattle, Department of Transportation (SDOT), Major Utility Permit (type 51, major projects)
- SDOT, Street Use Permit (type 31, construction use)

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.

SPU owns and operates a drinking water feeder main on the West Seattle peninsula of the City of Seattle. The 108-year-old main is a 16-inch diameter cast iron pipe with lead joints. A section of this pipe is in the street right-of-way for SW Spokane St and is covered by a surficial course of asphalt installed by recent construction associated with adjacent residential development. SPU has identified this pipe section as having unacceptably high risk and

consequence of failure due to its shallow burial depth and a previous failure. SPU has identified a project (SPU Project C117045) that would replace the subject pipe section. The project would remove the existing main from service and abandon it in-place using a cut-and-cap procedure. The project would then install approximately 71 lineal feet of new 16-inch diameter ductile iron pipe parallel to the existing pipe and install or replace associated fittings and other appurtenances (such as valves) as required. Construction would use standard open excavation methods and equipment. The project would also install a new 16-inch diameter isolation valve in the water distribution system buried in the street right-of-way at the intersection of 34th Ave SW and SW Spokane St one block west of the pipe replacement. All demolished and damaged pavements would be restored (and additional curb ramps installed) as required by SDOT.

- 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 improved street right-of-way for SW Spokane St in the North Admiral neighborhood of West Seattle, City of Seattle (Attachment A). The work area is between 33rd Ave SW and Fauntleroy Ave SW and at the intersection of 34th Ave SW and SW Spokane St (Attachment B).

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)?

The project area has a moderate slope (3% to 8% slopes) with adjacent steep slope (40%).

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 millennia. Review of the geologic map covering the work sites (Troost et al. 2005, available at <http://pubs.usgs.gov/of/2005/1252/>) indicates the work site is underlain primarily by mass wastage, Lawton clay, and advance outwash deposits. 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 entire project location and immediately surrounding area have been completely developed and disturbed in this way. No agricultural lands of commercial significance are near the work site.

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

The project location is hilly to slightly sloping. There are no surface features such as head scarps, hummocky terrain, seepage along steep slope surfaces, bulging at the bases of slopes and/or evidence of permeable strata over relatively impermeable strata that indicate past or possible future slide activity. However, historic slides are known to have occurred on parcels immediately south and west of the work area.

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.

Project construction would excavate approximately 800 cubic yards of soil and backfill with approximately 780 cubic yards of soil and other fill material. Fill material would be obtained from purveyors of such materials licensed to conduct business in Washington. About 100 cubic yards of spoil are expected to be exported from the project area. Exported excavated material would be legally disposed at an approved upland location or, if suitable, used as fill material 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 the proposed work. A temporary erosion and sedimentation control plan would be prepared and implemented. Disturbed areas would be restored to their near-original conditions (concrete and maintained turf).

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

The proposal would demolish and replace approximately 500 square feet of asphalt street paving. No new impervious surfaces would be created by the completed project.

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

A temporary erosion and sedimentation control plan would be prepared and implemented. Best Management Practices (BMP) as identified in the City of Seattle's Stormwater Code SMC 22.800 – 22.808, Director's Rule: 2009-004 SPU/16-2009 SDCl, and Volume 2 Construction Stormwater Control Technical Requirements 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.

Mobile and stationary equipment would be used to construct the proposed project, thus generating emissions 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 normal amounts of dust from ground-disturbing activities and exhaust (that is, carbon monoxide, sulfur, and particulates) from construction equipment and are expected to be minimal, localized, and temporary.

This project would generate greenhouse gas (GHG) emissions in two ways: pipe/concrete/asphalt usage (embodied) and construction activity. Total GHG emissions for the project are estimated to be about 53.5 metric tons of carbon dioxide emission (MTCO_{2e}). The GHG emission calculations are shown in Attachment C and summarized in the table below. One metric ton is equal to 2,205 pounds.

The project would replace demolished and damaged concrete surfaces/structures. The estimated volume of replacement concrete is 9 cubic yards (500 square feet 6 inches thick). This volume of concrete is estimated to embody 25 MTCO_{2e}. Embodied energy in other materials (such as aggregate bedding, CIPP materials, and so forth) used in this project has not been estimated as part of this SEPA environmental review due to the difficulty and inaccuracy of calculating those estimates.

This project would generate GHG emissions 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 (30 working days); actual times may be less. Construction activities would generate an estimated 28.5 MTCO_{2e}.

Once operational, the project is not expected to generate GHG emissions because this water main is not expected to require maintenance over its estimated 100-year lifespan.

Summary of Greenhouse Gas (GHG) Emissions

| Activity/Emission Type | GHG Emissions (pounds of CO _{2e}) ¹ | GHS Emissions (metric tons of CO _{2e}) ¹ |
|------------------------------------|---|--|
| Buildings | 0 | 0 |
| Paving | 55,125 | 25 |
| Construction Activities (Diesel) | 55,596 | 25.2 |
| Construction Activities (Gasoline) | 7,290 | 3.3 |
| Long-term Maintenance (Diesel) | 0 | 0 |
| Long-term Maintenance (Gasoline) | 0 | 0 |
| Total GHG Emissions | 118,011 | 53.5 |

¹ Note: 1 metric ton = 2,204.6 pounds of CO_{2e}. 1,000 pounds = 0.45 metric tons of CO_{2e}

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 such as requiring contractors to use best available control technologies, proper vehicle maintenance, and minimizing vehicle and equipment idling.

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.**

There are no surface water bodies on or near this project location.

- (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 are no surface water bodies on or near this project location.

- (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. There are no surface water bodies or wetlands on or near this project location.

- (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 directed into the existing combined sewer system. The project would not change the volume, timing, or duration of those discharges.

- (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 proposal would not produce or discharge waste materials to surface waters.

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.

- (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 sandbags would be used to prevent runoff from entering the construction zone. Once construction is complete, temporary erosion control measures would be removed.

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

No waste materials from this project would enter ground or surface waters.

- (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 (concrete and managed turf) and would not create a need to manage additional stormwater runoff beyond currently existing conditions. Stormwater would follow pre-construction pathways. The current volume, timing, and duration of these stormwater flows are not known.

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 22.800 – 22.808, Director's Rule: 2009-004 SPU/16-2009 SDCI, and Volume 2 Construction Stormwater Control Technical Requirements 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:

| | | | | |
|--|---|---|----------------------------------|--|
| <input checked="" type="checkbox"/> Deciduous trees: | <input checked="" type="checkbox"/> Alder | <input checked="" type="checkbox"/> Maple | <input type="checkbox"/> Aspen | <input type="checkbox"/> Other: |
| <input checked="" type="checkbox"/> Evergreen trees: | <input checked="" type="checkbox"/> Fir | <input checked="" type="checkbox"/> Cedar | <input type="checkbox"/> Pine | <input 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: | | | | |

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

Proposed work in the street right-of-way would affect paved surfaces outside of street tree canopy drip-lines. Other areas in public rights-of-way are planted with lawn and/or ornamental landscape (tree and shrub) plantings (planting strips). Adjacent private parcels consist mostly of impervious surfaces (i.e., roofs, driveways, patios), with pervious areas vegetated with lawn, landscaping, and trees. The proposal would not remove any trees or shrubs either in public rights-of-way or on privately owned parcels.

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 November 18, 2019” (accessed at www.dnr.wa.gov), there are no documented occurrences of sensitive, threatened, or endangered plant species at or near the project site. No federally-listed endangered or threatened plant species or State-listed sensitive plant species are known to occur within Seattle’s municipal limits. The project site has 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:

The proposed work would limit plant removal, pruning, and other disturbance to that required for project construction. Project construction would not remove any trees or shrubs, but may damage or destroy managed turf. All damaged and destroyed turf would be restored as directed by SDOT.

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

No noxious weeds or invasive plant species are known to be at the project site.

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 | | | |
| 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 | | | |
| Fish: | <input type="checkbox"/> Bass | <input type="checkbox"/> Salmon | <input type="checkbox"/> Trout | <input type="checkbox"/> Herring |
| | <input type="checkbox"/> Shellfish | <input type="checkbox"/> Other: | | |

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

Based on a check of the Washington Department of Fish and Wildlife’s “Priority Habitat Species on the Web” database on March 23, 2020, no portion of the project site or adjacent areas are mapped as being within a known occurrence of any State-identified or federally listed threatened or endangered species. However, the project 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.

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

Seattle is in 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. Also, Puget Sound, the Duwamish Waterway, and Lake Washington are important water migration routes for many animal species.

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

The proposed work would limit plant removal, pruning, and other disturbance to that required for project construction. Project construction would not remove any trees or shrubs, but may damage or destroy managed turf. All damaged and destroyed turf would be restored as directed by SDOT.

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.

- 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.

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.

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

The project site is not known to have had industrial or commercial land uses that may have resulted in contamination of soil materials.

- (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 saw cutting, concrete pouring and handling, etc., would generate pollutants that could potentially enter local drainage conveyance systems. Other pollutants that may be present during construction include:

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

No toxic or hazardous chemicals would be stored, used, or produced at any time during the operating life of the constructed project.

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

No special emergency services such as confined space rescue 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 Prevention, Control, and Countermeasures Plan to control and manage spills during construction. During construction, the contractor would use standard operating procedures and BMPs identified in the City of Seattle's Stormwater Code and Manual (Title 22, Subtitle VIII of the SMC and Directors' Rules SDCI 21-2015/SPU DWW 200) to reduce or control any possible environmental health hazards. Soils discovered to be contaminated by previous land uses or 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.

As required by the Washington Department of Labor and Industries (WAC 296-843), a Health and Safety Plan would be prepared by SPU or SPU's contractor prior to work commencing. The plan would address proper employee training, use of protective equipment, contingency planning, and secondary containment of hazardous materials.

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 [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. SPU expects construction would take no more than 30 working days to complete. The completed project would generate no additional noise from equipment used for operation or maintenance.

- (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) would be enforced while the project is being constructed and during operations, except for emergencies.

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 proposed project is in improved street rights-of-way used for vehicle and pedestrian travel, and parking. Adjacent property uses are single family residential. The project would not affect current land uses on nearby or adjacent properties.

- 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 non-forest use?**

The site has not been used for agricultural purposes for at least 80 years, if at all.

- (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 the project site.

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

Adjacent property uses are single-family residential (some of which may include space for home-based occupations). Utilities are in street rights-of-way. Proposed work is associated with an existing drinking water main located in the street right-of-way used for vehicle and pedestrian travel and parking.

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

The project would not demolish any aboveground structures.

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

Single family residential.

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

Single family residential.

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

The project site is not in a Shoreline Management District.

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

The project site is mapped as being in Steep Slope, Potential Landslide, and Known Slide environmentally critical areas, as determined by the City of Seattle Department of Construction and Inspections

(<http://seattlecitygis.maps.arcgis.com/apps/webappviewer/index.html?id=f822b2c6498c4163b0cf908e2241e9c2>)

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 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 such measures are required.

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?**

All constructed structures would be buried.

- 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 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?

The proposed project is also located in improved street right-of-way used for informal recreational activities such as dog-walking, walking, jogging, and bicycling.

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

The proposed work would not permanently displace any existing recreational uses. Access to the streets affected by project construction would be more challenging, but SPU would require the project contractor to maintain safe pedestrian and vehicle access at all times.

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, pedestrian routes/access. The project would attempt to make those closures and detours as brief as possible. Project notifications through website updates, emails, and mailings would provide affected residents with limited advance notice regarding temporary 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.

To determine if National Register or State of Washington Heritage properties are in or adjacent to the project area, the project location was checked against the following registers on March 23, 2020.

- City of Seattle Landmarks
http://www.cityofseattle.net/neighborhoods/preservation/landmarks_listing.htm
- Washington Heritage Register and National Register of Historic Places and WISAARD database <https://dahp.wa.gov/historic-registers>

SPU's nearby SW Spokane Pump Station at 3214 SW Spokane St and the adjacent residential structure at 3206 SW Spokane St have been identified as eligible for the National Register of Historic Places. While the WISAARD database indicates numerous historic property reports have been submitted for various structures near the project location, none of these registers recorded any places or objects formally listed on, or proposed for, national, state, or local preservation registers on or adjacent to the project location. No architectural inventory is required for this project because no structures would be demolished or altered. The original cast iron pipe in the project area has already been removed and replaced with ductile iron pipe in the same location. The proposed project would install a deeper pipe in a new (parallel) location.

- 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 B13c below, there are no archaeological or cultural resources that have been documented to exist on the work site. The closest known archaeological site is 0.42 miles away. All ground disturbance and excavation would occur in existing transportation/utility rights-of-way areas that have been disturbed previously by installation of underground utility infrastructure. According to the Washington Department of Archeology and Historic Preservation's (DAHPP) Washington Information System for Architectural and Archaeological Research Data (WISAARD) predictive model, the work site is identified as Very High Risk for discovery of archaeological resources.

- 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 location was checked against the following registers on March 23, 2020:

- Washington Heritage Register and National Register of Historic Places: <https://dahp.wa.gov/historic-registers>
- WISAARD database: <https://wisaard.dahp.wa.gov>

- 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.**

All proposed work is in improved street rights-of-way and would not affect any buildings or structures. All ground-disturbing activity would be in areas that have been previously disturbed and filled to construct/install the existing water distribution and drainage system piping, streets, and other developments. The proposed work's location on previously disturbed and filled ground substantially reduces the chance of encountering contextually significant archaeological materials.

An approved inadvertent discovery plan will be onsite and in effect during all construction activities. Excavation at the two work sites is not likely to excavate into previously undisturbed native soil or sediments. Should 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.

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 public right-of-way for SW Spokane St. Construction of the proposed project would use existing residential streets for access, including SW Avalon Way and SW Manning St.

- 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 nearest bus stops are located on SW Admiral Way (Metro routes 56 and 57) and SW Avalon Way (Metro routes C, 21, 55, 116, 118, and 119), more than 900 feet from the project area. Construction would not impact public transit. The completed work would neither require nor affect public transit.

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

Because the proposed work involves demolishing panels in the street right-of-way, construction would require temporary closures of parking as well as travel lanes. Parking associated with street right-of-way is currently on-street, free parking managed by the City of Seattle. During construction, there may be no or restricted parking on one or both sides of the affected streets. Project construction would temporarily eliminate up to approximately 20 on-street public parking spaces adjacent to the construction zone to accommodate contractor vehicles, mobilization, construction, and local and through access. Generally, however, there is ample on-street parking available elsewhere at the project site and most nearby residences have their own off-street parking. The 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. The completed project would neither create nor eliminate any 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. 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 or occur near 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 non-passenger vehicles). What data or transportation models were used to make these estimates?**

Project construction would generate about 350 vehicle round-trips due to workers and materials being transported to and from the site during the estimated total 30 workday construction period. 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 additional vehicle round-trips beyond that normally occurring for the on-going and routine operation, maintenance, and monitoring of the municipal water system in this area. No data or transportation models were used to make these estimates.

- 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; detour routes would be properly and 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. Project construction would be required to accommodate 'all-hours' 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 to accommodate 'all-hours' 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.

During project construction, water service would be interrupted for brief periods to install and then disconnect a bypass around the affected feeder main. SPU would notify affected residents and businesses by issuing Service Disruption Notices (in the form of door hangers) at least 48hours before those outages occur.

No new utilities are being proposed. No interruptions of other utilities or services are anticipated during project construction.

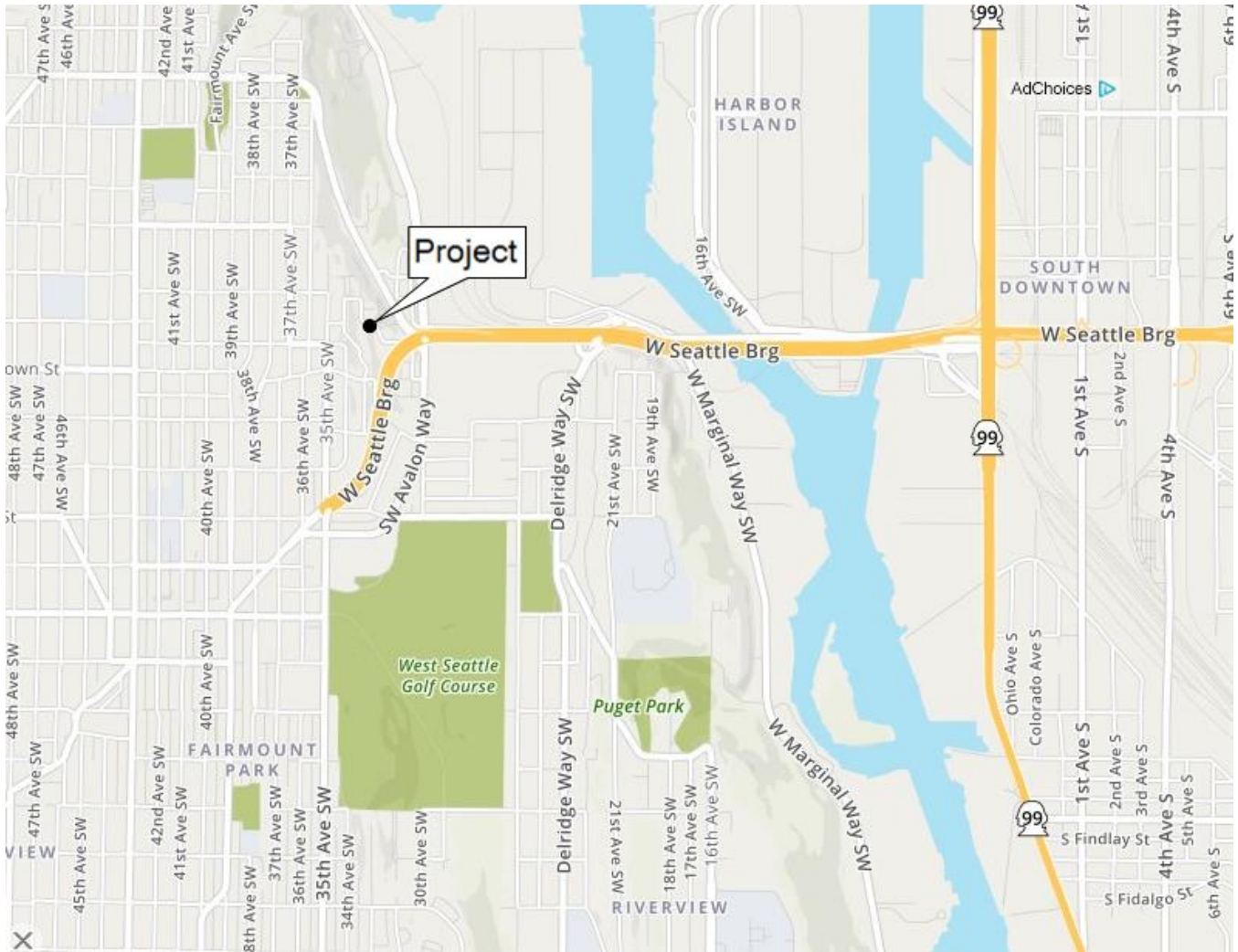
C. SIGNATURE

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: _____
Brian Eng
Project Manager

- Attachment A – Vicinity Map
- Attachment B – Project Summary Photograph
- Attachment C – Greenhouse Gas Emissions Worksheet

Attachment A – Vicinity Map



Attachment B – Project Summary Photograph



SW Spokane St Water Main Rehabilitation Project

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) | | | | | | |
| Concrete Pad (50 MTCO ₂ e/1,000 sq ft of pavement at a depth of 6 inches) | | (500 sq ft 6 inches thick) | | | | 25 |
| TOTAL Section II Pavement | | | | | | |

| Section III: Construction | |
|---------------------------------------|---------------------------------|
| (See detailed calculations below) | Emissions (MTCO ₂ e) |
| TOTAL Section III Construction | |
| | 28.5 |

| 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) | | | | | | 53.5 |
|---|--|--|--|--|--|-------------|

Attachment D – Greenhouse Gas Emissions Worksheet, continued

| Section III Construction Details | | |
|---|------------------|--|
| Construction: Diesel | | |
| Equipment | Diesel (gallons) | Assumptions |
| Excavator | 210 | 30 hours x 7 gallons/hour (345 hp engine) |
| Front-end Loader | 1,400 | 200 hours x 7 gallons/hour (345 hp engine) |
| Dump Truck and Pup (17 CY capacity) | 360 | 30 round trips x 60 miles/round trip ÷ 5mpg |
| Flat-bed Truck | 100 | 10 round trips x 50 miles/round trip ÷ 5 mpg |
| Concrete Truck (10 CY capacity) | 24 | 2 round trips x 60 miles/round trip ÷ 5mpg |
| Subtotal Diesel Gallons | 2,094 | |
| GHG Emissions in lbs CO₂e | 55,596 | 26.55 lbs CO ₂ e per gallon of diesel |
| GHG Emissions in metric tons CO₂e | 25.2 | 1,000 lbs = 0.45359237 metric tons |

| Construction: Gasoline | | |
|---|--------------------|---|
| Equipment | Gasoline (gallons) | Assumptions |
| Pick-up Trucks or Crew Vans | 300 | 30 workdays x 5 trucks x 2 round-trip/day x 20 miles/ round trip ÷ 20 mpg |
| Subtotal Gasoline Gallons | 300 | |
| GHG Emissions in lbs CO₂e | 7,290 | 24.3 lbs CO ₂ e per gallon of gasoline |
| GHG Emissions in metric tons CO₂e | 3.3 | 1,000 lbs = 0.45359237 metric tons |

| Construction Summary | | |
|-------------------------------|-----------------------------|----------------------------------|
| Activity | CO ₂ e in pounds | CO ₂ e in metric tons |
| Diesel | 55,596 | 25.2 |
| Gasoline | 7,290 | 3.3 |
| Total for Construction | 62,886 | 28.5 |

| 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 | | 26.55 lbs CO ₂ e per gallon of diesel |
| GHG Emissions in metric tons CO₂e | | 1,000 lbs = 0.45359237 metric tons |

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