



January 18, 2024

TO: Recipients of the 430 Drinking Water Transmission Pipeline Project SEPA DNS/Checklist

FROM: Nathan Hart, SEPA Responsible Official

SUBJECT: Addendum to the 430 Drinking Water Transmission Pipeline Project SEPA Environmental Checklist and Determination of Non-Significance

PURPOSE OF THIS ADDENDUM

In July 2019, Seattle Public Utilities (SPU) prepared a State Environmental Policy Act (SEPA) Environmental Checklist that analyzed environmental impacts of the proposed 430 Drinking Water Transmission Pipeline Project. The 430 Pipeline is a 4-mile long, 42-inch diameter pipeline connecting the Maple Leaf and Volunteer water pressure zones in the City of Seattle (Attachment A). The pipeline is contained in a utility tunnel structure (utilidor) buried in the bed of the Lake Washington Ship Canal as the pipeline crosses under the Ship Canal. The SEPA Checklist evaluated specific repairs and upgrades at twenty-one locations along and near the pipeline. As lead agency for SEPA, SPU issued a Determination of Non-Significance (DNS) for the project on July 18, 2019.

During subsequent project design, several potential additional design elements were identified, including:

1. The original project scope did not include pipeline relining in the Ship Canal utilidor or access shafts leading to the utilidor. SPU revised the proposed contract documents to include an alternate bid item for cleaning the interior of the pipe in the utilidor (including north and south shafts) to remove any existing lining material and then potentially lining the pipe with a polymeric resin using mechanical equipment. There would be no alterations to the utilidor itself.
2. The original project scope included installation of larger access hatches at 12 locations for worker safety. SPU identified several additional improvements that addressed worker access and safety issues in the vicinity of the utilidor's south shaft. These included construction of timber-crib-style access stairs, new steel framing and grating over the south shaft opening, and an improved pedestrian guardrail. An additional access hatch on the pipeline just south of the south shaft would be constructed if the second alternate bid item was implemented.

SPU subsequently issued a SEPA Addendum on April 27, 2020, to document that additional work and to assess how it affected analyses in the SEPA Environmental Checklist.

Project construction in 2022 and 2023 rehabilitated the failing cement mortar lining inside 27% of the pipeline. During construction, SPU discovered a significantly greater amount of cement mortar lining rehabilitation was required than assessed by the initial CCTV inspection in 2018. Cement mortar lining was completed to 140% of the contract's bid item quantity and then stopped. At that time, SPU determined: 1) the remaining portion of the pipeline should be fully relined instead of spot-repaired as initially planned; 2) cost to complete the work and change scope was greater than could be allowed for a

change order; and 3) remaining work would need to be bid as a new construction project.

As a result, SPU has now developed an additional scope of work addressing the complete relining of approximately 15,500 lineal feet of pipeline with cement mortar, as described below. As lead agency, SPU has reviewed the findings and concluded the potential additional work does not substantially alter impact analyses in the SEPA Environmental Checklist and will not result in any significant environmental impacts. This Addendum has been prepared in accordance with the authority provided in Seattle Municipal Code (SMC) 25.05.600 and in accordance with the procedures described in SMC 25.05.625.

UPDATED PROJECT INFORMATION

The additional scope of work would address the complete relining of approximately 15,500 lineal feet of the pipeline with cement mortar. Also, an additional access hatch was added at the north end of Federal Ave E near State Route (SR) 520. In addition, the existing maintenance hole cover to the access hatch at E Galer St and Federal Ave E was replaced with a larger cover. The contractor would stage within roadways at 13 access sites between NE 62nd St/12th Ave NE and Federal Ave E and E Galer St in the City of Seattle. The contractor may also stage at the access hatch in front of the Maple Leaf Gate House just north of NE 82nd St and 12th Ave NE. This work would consist of: 1) test mock-up of complete mortar installation; 2) complete mortar removal; 3) surface preparation; 4) cleaning of pipe; 5) inspection; 6) structural and non-structural pipe repairs, as required; 7) cement mortar lining installation; 8) curing and inspection; 9) final cleaning; 10) disinfection and flushing north of SR 520; and 11) bringing the pipeline back into service north of SR 520. Construction for this second phase of work is anticipated to start in 2024 and finish in 2026. All other work would be as described in the 430 Drinking Water Transmission Pipeline Project SEPA Environmental Checklist and previous Addendum. No additional technical reports have been prepared that directly relate to this proposal.

CHANGES TO ENVIRONMENTAL ELEMENTS

Environmental Checklist Section B2: Air

The SEPA Environmental Checklist estimated the project's total greenhouse gas (GHG) emissions to be 425.55 metric tons of carbon dioxide emission (MTCO₂e). The GHG emissions calculations were included in the Checklist's Attachment C and are summarized here in Table 1.

Table 1. 2019 Environmental Checklist Summary of GHG Emissions

Activity/Emission Type	GHG Emissions (pounds of CO ₂ e) ¹	GHS Emissions (metric tons of CO ₂ e) ¹
Buildings	0	0
Paving	822,867	373.25
Construction Activities (Diesel)	69,136	31.36
Construction Activities (Gasoline)	46,170	20.94
Long-term Maintenance (Diesel)	0	0
Long-term Maintenance (Gasoline)	0	0
Total GHG Emissions	938,173	425.55

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

SPU's April 27, 2020, Addendum estimated project changes would result primarily in additional

working days and vehicle round trips that would require approximately 40 and 200 gallons of diesel and gasoline fuels, respectively, resulting in generation of an additional 2.68 MTCO₂e of GHG emissions. The April 27, 2020, Addendum estimated the project's revised total GHG emissions to be 428.23 MTCO₂e, as summarized in Table 2.

Table 2. Revised Summary of GHG Emissions (Addendum issued April 27, 2020)

Activity/Emission Type	GHG Emissions (pounds of CO₂e)¹	GHS Emissions (metric tons of CO₂e)¹
Buildings	0	0
Paving	822,867	373.25
Construction Activities (Diesel)	70,198	31.84
Construction Activities (Gasoline)	51,030	23.14
Long-term Maintenance (Diesel)	0	0
Long-term Maintenance (Gasoline)	0	0
Total GHG Emissions	944,095	428.23

SPU estimates the revisions described in this Addendum would result primarily in additional working days and vehicle round trips that would require approximately 400 and 2,800 gallons of diesel and gasoline fuels, respectively, resulting in generation of an additional 35.7 MTCO₂e of GHG emissions. The project's revised total GHG emissions are estimated to be approximately 464 MTCO₂e, as summarized in Table 3.

Table 3. Revised Summary of GHG Emissions (current Addendum)

Activity/Emission Type	GHG Emissions (pounds of CO₂e)¹	GHS Emissions (metric tons of CO₂e)¹
Buildings	0	0
Paving	822,867	373.25
Construction Activities (Diesel)	80,818.2	36.7
Construction Activities (Gasoline)	119,070	54
Long-term Maintenance (Diesel)	0	0
Long-term Maintenance (Gasoline)	0	0
Total GHG Emissions	1,022,755.2	463.95

Environmental Checklist Section B14: Transportation

The SEPA Environmental Checklist estimated approximately 900 vehicle round trips would be generated by project construction due to workers and materials being transported to and from the sites. The Addendum issued April 27, 2020, anticipated proposed design changes would generate an additional 30 vehicle round trips. SPU estimates the revisions described in this Addendum would generate an estimated 1,500 additional vehicle round trips due to workers and materials being transported to and from work sites.

If you have questions about the proposed work, please call or email:

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Any comments must be submitted via email no later than February 2, 2024 to:

Nathan Hart, SEPA Responsible Official
Seattle Public Utilities
Nathan.Hart@Seattle.gov

Signature: _____

Attachment A – Vicinity Map

