King County
Department of Natural Resources and Parks
Wastewater Treatment Division
King Street Center, KSC-NR-0505
201 South Jackson Street
Seattle, WA 98104

Environmental Checklist

for

North Mercer Island Interceptor and Enatai Interceptor Upgrade Project

May 13, 2019

Prepared in compliance with the State Environmental Policy Act (SEPA) (RCW 43.21C), the SEPA Rules (WAC 197-11), and Chapter 20.44 King County Code, implementing SEPA in King County procedures.

This information is available in accessible formats upon request at (206) 477-5371 (voice) or 711 (TTY).

ENVIRONMENTAL CHECKLIST

A. BACKGROUND

1. Name of proposed project, if applicable:

North Mercer Island Interceptor and Enatai Interceptor Upgrade Project (the Project)

2. Name of applicant:

King County Department of Natural Resources and Parks, Wastewater Treatment Division (WTD)

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

King County Wastewater Treatment Division
201 South Jackson Street, Mailstop: KSC-NR-0505
Seattle, WA 98104-3855

CONTACT: Jim Sussex, Water Quality Planner/Project Manager
Phone: (206) 447-3556
Email: Jim.Sussex@kingcounty.gov

4. Date checklist prepared:

May 13, 2019

5. Agency requesting checklist:

King County Wastewater Treatment Division

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

Project construction is expected to begin in 2020 and last through 2024. The timing and duration of construction for specific project segments will vary within that overall timeframe.

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

There are no plans for future additions, expansion, or further activity connected with this proposal.

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

Environmental information prepared for and related to this proposal is included in the reference list at the end of this document (Section D).

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.

No pending approvals have been identified for other project applications that will directly affect the properties associated with this proposal. There is ongoing coordination with Sound Transit, Washington State Department of Transportation (WSDOT), and the cities of Mercer Island and Bellevue to avoid conflicts with other foreseeable projects. Bellevue is developing an update to the master plan associated with future improvements to Enatai Beach Park, and Mercer Island is developing a master plan associated with Aubrey Davis Park that includes the I-90 Trail. There are no immediate plans to apply for government approvals to implement either of these master plans; however, King County is coordinating with both cities to ensure that relevant Project design elements are compatible with the respective master plans. In particular, King County will continue to coordinate with Mercer Island and WSDOT regarding trail restoration designs for pertinent segments of the I-90 Trail that will satisfy WSDOT requirements, as well as the anticipated design for the Aubrey Davis Park Trail Master Plan to the maximum extent practicable. There is also ongoing coordination with Mercer Island to include the installation of a fiber optic cable along part of King County's proposed pipeline alignment under the I-90 Trail when those Project segments are constructed, although Mercer Island has not yet applied for the necessary government approvals.

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

- Federal
  - Department of the Army (DA) Permit, Clean Water Act (CWA) Section 404 and Rivers and Harbors Act (RHA) Section 10.
  - Endangered Species Act (ESA) Compliance (Section 7)
  - Section 106 of National Historic Preservation Act (NHPA)
  - Dredged Material Management Program (DMMP) Authorization
  - Federal Navigation: Local Notice to Mariners (LNM) and Private Aids to Navigation (PATON)

- State
  - Water Quality Certification (WQC), CWA Section 401 Permit
  - Coastal Zone Management (CZM) Consistency
  - Hydraulic Project Approval (HPA)
  - Department of Natural Resources (DNR) Aquatic Lands Lease
  - DNR Open Water Disposal Site Authorization
  - Recreation and Conservation Office (RCO) Approval
  - WSDOT Utility Franchise Agreement

- Local
  - King County
    - Industrial Wastewater Discharge Authorization
  - City of Bellevue
    - Critical Areas Land Use Permit (CALUP)
    - Conditional Use Permit (CUP)
    - Shoreline Conditional Use Permit (SCUP)
    - Substantial Shoreline Development Permit (SSDP)

- Clearing and Grading Permit
- Minor Project Building Permit
- Developer Extension Agreement
- Right of Way (ROW) Permit
- Parks Special Use Agreement

- City of Mercer Island
  - Critical Areas Land Use Approval
  - Substantial Shoreline Development Permit (SSDP)
  - Building Permit
  - Right of Way (ROW) Permit
  - Tree Permit
  - Parks Use Agreement

11. Give 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.

The King County Wastewater Treatment Division's (WTD) Conveyance System Improvements Program identified a need for capacity upgrades for the North Mercer Island and Enatai interceptors. The Project will improve reliability, performance, and efficiency of the existing components of the regional wastewater system to convey the 20-year peak wastewater flows projected through the year 2060 from sewer basins in North Mercer Island, the southwest portion of the City of Bellevue, and the Town of Beaux Arts Village. The existing system is not providing a level of service that meets the County standards.

Project construction will include approximately 17,210 linear feet of new sewer pipeline and related features starting at King County's North Mercer Pump Station (NMPS) in Mercer Island, and proceeding through an upland alignment on a portion of Mercer Island mostly following the I-90 greenway trail/park (I-90 Trail). The pipeline will then enter Lake Washington and run several feet under the lakebed from north Mercer Island, across the East Channel of Lake Washington, to Enatai Beach Park in Bellevue. From Enatai Beach Park, a new sewer pipeline will be installed using horizontal directional drilling (HDD) technology under the Enatai hillside to King County's Sweyolocken Pump Station (PS) adjacent to Mercer Slough. The Project will also rehabilitate the existing Enatai Interceptor pipeline that is located in Lake Washington, from Enatai Beach Park, through Mercer Slough, to the Sweyolocken PS. The NMPS will be upgraded in order to support the new pipeline, and Mercer Island's Lift Station 11 and some Mercer Island-owned local sewer lines will be modified in order to continue to convey flows from Mercer Island's sewer system.

An overview of the Project and the existing pipeline alignment are shown in Figure 1. The main components of the Project are described in greater detail below.

<u>North Mercer Pump Station</u>
The existing NMPS facility will be upgraded to accommodate the increased flow and pumping head that will be required for the proposed pipeline improvements. In addition to installing new pumps, other NMPS improvements will include upgrading the electrical service, heating, ventilation, and air conditioning (HVAC), water system, odor control, and stormwater management. A new structure and concrete pad will be constructed adjacent to the existing pump station building to house a new standby generator and fuel tank, electrical service equipment, and

restroom. The fuel tank and odor control will be located outside the new structure within a fenced enclosure. A temporary pump station will be built to manage flows during construction. Access improvements into the facility from SE 22nd Street will also be constructed. Areas disturbed during construction will be fully restored with suitable landscaping and habitat restoration.

Mercer Island Conveyance

A new pipeline will be constructed generally adjacent to Interstate 90 (I-90) on Mercer Island. This will replace the existing King County pipeline that largely runs under Lake Washington along the northeast shoreline of Mercer Island. The general means of construction for the new pipeline will be open-cut and cover trenching methods along the upland alignment areas from the NMPS to the Mercer Island shoreline near the I-90 East Channel Bridge.

The existing single-pipe force main at NMPS will be replaced with two parallel pipe force mains (approximately 16-inch and 18-inch diameters). From their connection at the NMPS, the new North Mercer Island Force Mains will continue predominantly southeast for approximately 7,100 linear feet, generally parallel to I-90, to the east end of 90th Place SE. From a below-grade structure at that location, the conveyance transitions to become the new North Mercer Island Interceptor, a single-pipe gravity sewer (24-inch to 30-inch diameter), that will continue eastward, primarily along the I-90 Trail, to a below-grade siphon inlet structure at SE 35th Street just west of East Mercer Way where it transitions into the East Channel Siphon. Along the way, the interceptor will receive additional flow from a siphon pipe that crosses I-90 from the south, and from the City of Mercer Island's Lift Station-11.

The alignment of the new North Mercer Island Interceptor will necessitate some modifications to the City of Mercer Island's sewer system that contributes flows to the County system. An existing pipeline segment will be converted to a sewer siphon, identified as the 96th Avenue Siphon, to convey flows from east Mercer Island into the new North Mercer Island Interceptor. Mercer Island's Lift Station 11 (LS-11), in Fruitland Landing Park at the end of 97th Avenue SE, will be modified to pump flows to the new North Mercer Island Interceptor. These improvements to LS-11 will redirect flows away from the existing County pipeline in Lake Washington, which will allow the existing pipe to be decommissioned.

East Channel Siphon

New pipes will be installed across the East Channel of Lake Washington, identified as the East Channel Siphon. From the new siphon inlet structure noted above, the East Channel Siphon (consisting of three parallel pipes approximately 12-inch to 16-inch diameter) will be installed parallel to north side of the I-90 East Channel Bridge across the East Channel to Enatai Beach Park in Bellevue. The pipes will be installed using open-cut-and-cover trenching in both upland and in-water areas.

Upland areas on either side of the channel crossing, in both Mercer Island and Bellevue, will be restored with landscaping. Portions of the existing concrete bulkhead along the Mercer Island shoreline will be replaced with a more natural shoreline stabilization system. New natural shoreline stabilization will be installed on the Bellevue side. Below the ordinary high water mark (OHWM) of Lake Washington, all disturbed areas of the lake bed will be restored with fish mix gravels.

Bellevue Conveyance

Enatai Siphon

A new siphon pipe, the Enatai Siphon, will be installed between Enatai Beach Park and Sweyolocken PS. The Enatai Siphon will convey flows from the East Channel Siphon. The Enatai Siphon will be an approximately 36-inch, high-density polyethylene (HDPE) pipe installed under the Enatai hillside using horizontal directional drilling (HDD) methods. The drilling process will be primarily staged from Sweyolocken PS. Drilling will start with a pilot bore, which will then be progressively reamed by multiple drill passes to incrementally expand the diameter for pipe installation. The 36-inch-diameter HDPE siphon pipe will be welded together and floated into place temporarily on Lake Washington before being pulled back through the bore hole from Enatai Beach Park to the Sweyolocken PS.

Enatai Beach Park Connections

At the eastern terminus of the East Channel Siphon, Project facilities will be installed to connect the East Channel Siphon to new siphon outlet and flow diversion structures in Bellevue's Enatai Beach Park, which will route low flows to the existing Enatai Interceptor and high flows to the new Enatai Siphon. This construction will occur within and adjacent to Enatai Beach Park generally under the overhead spans of the I-90 East Channel Bridge. The main components that will be constructed include three new below-grade vaults, including an odor control vault, a siphon outlet and flow diversion combined vault. Some above-grade features will be visible following installation, such as a fresh air intake, vent stack, and access hatch. In addition, a maintenance access road will be installed that will provide permanent access to the new facilities from the park entrance area.

Enatai Interceptor

The County's existing Enatai Interceptor will continue to carry flows from portions of western Bellevue and the low flows from Mercer Island, flowing eastward and discharging to the Sweyolocken PS. The proposed rehabilitation will use three different approaches to extend the service life of the Enatai Interceptor: replacement, sliplining, and ultraviolet (UV) cast-in-place-pipe (CIPP) lining.

A 120-linear-foot section of the Enatai Interceptor alignment will be replaced at the Enatai Beach Park swim beach. This work will require temporarily isolating and dewatering a work zone below the OHWM of Lake Washington.

Just east of the replaced section described above, a 100-linear-foot section of the existing Enatai Interceptor will be sliplined with a smaller diameter HDPE pipe. To allow for sliplining, the pipe will need to be accessed from an existing angle structure and an existing maintenance hole.

East of Enatai Beach Park, portions of the existing CIPP liner will be removed and rehabilitate the sections of the existing pipeline with a UV-CIPP liner technique. Lining the existing pipeline will occur at various locations along the Enatai shoreline and through Mercer Slough. The CIPP rehabilitation process uses a fabric sock saturated with polyester resin that is inserted into a dry sewer pipe through existing maintenance holes and expanded to the pipe wall. This new CIPP liner will be pulled into the existing pipe using a winch, inflated to the full diameter of the pipe, and cured at a rate of a few feet per minute using a UV light train.

Construction staging and access for the CIPP work will be provided by barges at some locations, and via the I-90 Trail (primarily from the east end of SE Lake Rd). Construction will require vegetation clearing and temporary ground stabilization in some areas adjacent to the I-90 Trail. Most of the relining work will occur by access through existing maintenance holes that do not require containment for in-water excavation, although up to two angle structures on the existing Enatai Interceptor will need to be accessed using temporary containment areas in Mercer Slough. Some existing maintenance holes are currently covered by docks. Portions of the decking associated with existing docks will need to be removed to access these locations and then restored following construction. Temporary sewer bypass systems will be installed during construction to maintain sewer service to affected homes along the Enatai shoreline as necessary.

Sweyolocken Pump Station

The Sweyolocken PS sends wastewater from Bellevue and Mercer Island to a major wastewater pipeline called the Eastside Interceptor. That pipeline then carries wastewater from all Eastside communities to King County's South Treatment Plant in Renton. The Project will make minor upgrades to the pump station. Following completion of the HDD construction activities for the new Enatai Siphon, a maintenance hole will be installed at its terminus and new pipe with access maintenance holes will be installed using open-cut and cover methods to connect the new Enatai Siphon to the Sweyolocken PS.

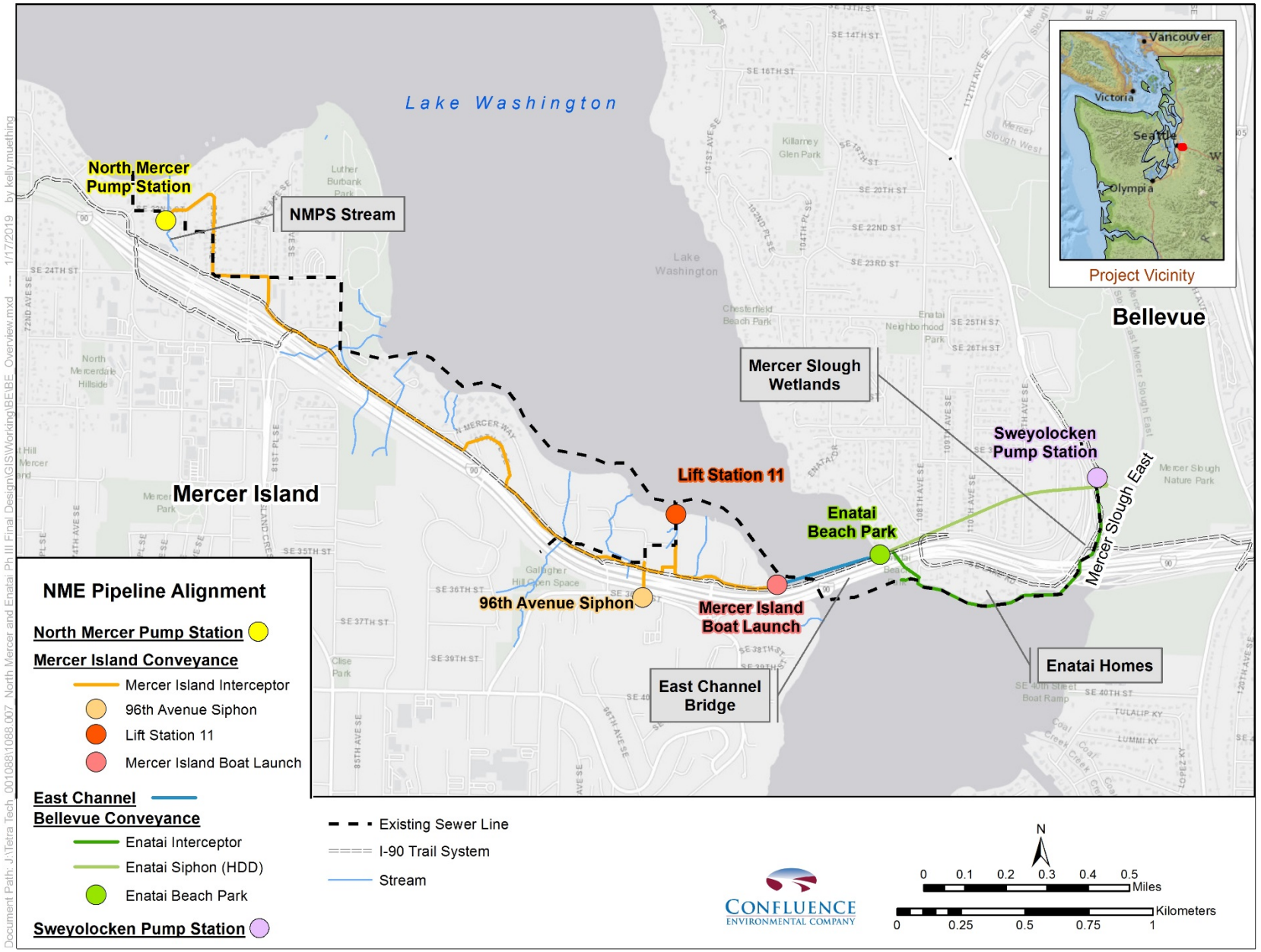

Figure 1. Project Overview

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 spans multiple private and public tax parcels, occurring at the following land survey quarters: SE ¼, sec. 7, T. 24 N, R. 5 E; SE ¼, sec. 8, T. 24 N, R. 5 E; SE ¼, sec. 1, T. 24 N, R. 4 E; NE ¼, sec. 12, T. 24 N, R. 4 E; NW ¼, sec. 7, T. 24 N, R. 4 E; NW ¼, sec. 7, T. 24 N, R. 5 E; SW ¼, sec. 8, T. 24 N, R. 5 E; NE ¼, sec. 8, T. 24 N, R. 5 E.

As depicted in Figure 1, the Project is a linear pipeline, generally extending from west to east, and divided into the following construction segments:

- **NMPS**
  - NMPS: 7627 SE 22nd Street, Mercer Island, WA 98040
- **Mercer Island Conveyance (Starting from NMPS)**
  - From NMPS: along streets and the I-90 Trail
  - Lift Station 11: 97th Avenue SE & SE 34th Street, Mercer Island, WA 98040
  - 96th Ave Siphon: 96th Ave SE and SE 36th St, Mercer Island, WA 98040
  - Mercer Island Boat Launch (eastern extent): 3600 East Mercer Way, Mercer Island, WA 98040
  - Mercer Island Boat Launch (western extent): 3600 East Mercer Way, Mercer Island, WA 98040
- **Bellevue Conveyance**
  - Enatai Beach Park (eastern extent): 3519 108th Avenue SE, Bellevue, WA 98004
  - Enatai Beach Park (western extent): 3519 108th Avenue SE, Bellevue, WA 98004
  - Sweyolocken PS (eastern extent): 3000 Bellevue Way SE, Bellevue, WA 98004

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site:

(circle one): Flat, rolling, hilly, steep slopes, mountainous, other _____

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

Mercer Island: The steepest slopes along the pipeline alignment are on Mercer Island between 97th Ave SE and SE 35th Pl, and then south of 90th Pl SE; both of these are approximately 50% slopes. There is also an approximately 36% slope along the pipeline alignment at the shoreline near the Mercer Island Boat Launch.

Bellevue: The Enatai Siphon (HDD) segment of the Project intersects some relatively small, isolated areas mapped as "steep slope" (i.e., greater than 40%), between 112th Ave SE and the Sweyolocken PS. The HDD installation methods avoid risk associated with steep slopes because the pipeline installation work all occurs subsurface. There are also steep slopes along Mercer Slough where access and staging is proposed to support the Enatai Interceptor (CIPP) work.

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 any of these soils.

Soils along the upland portions of the pipeline alignment consist of Holocene deposits as well as Vashon and Pre-Vashon units (glacial and non-glacial). Holocene units include fill, alluvium, peat, and landslide deposits. Vashon units include recessional outwash, ice-contact deposits, recessional lacustrine deposits, ablation till, till, advance outwash, glaciolacustrine deposits, and till-like deposits (diamict). Pre-Vashon units include fluvial deposits, lacustrine deposits, till-like deposits (diamict), glaciolacustrine deposits, outwash, and till (Shannon & Wilson 2018a).

The Natural Resources Conservation Service (NRCS) has mapped the soils in the area adjacent to Mercer Slough as Snohomish silt loam, classified as a hydric/non-hydric soil.

There is no agricultural land of long-term commercial significance along the pipeline alignment or at either of the pump stations.

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

No surface indications of unstable soils are visible along the pipeline alignment, and no history of unstable soils is known. The City of Mercer Island (2018) has identified erosion hazard areas (known and suspected) along the Mercer Island Conveyance (overlapping with class ix [40-79%] and class v [>80%] slope areas), but does not map any areas along the pipeline alignment as potential slide areas. The City of Bellevue (2018) has identified areas (mostly along Lake Washington's shoreline) of moderate to high liquefaction hazard within the project area, but does not map any areas of very severe soil erosion hazard within the Project site.

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

The Project's total affected area is estimated to be 924,100 square feet or approximately 21 acres, including: approximately 811,000 square feet of disturbance to install the new North Mercer Island Interceptor and East Channel pipeline, approximately 77,200 square feet to rehabilitate the existing Enatai Interceptor and install the new Enatai Siphon (HDD), and approximately 35,900 square feet of grading associated with other areas (facility improvements at NMPS and LS-11, access improvements at NMPS and Enatai Beach Park, and the installation of new odor control vaults).

Construction in upland areas (above OHWM) for the entire Project will require the excavation of approximately 52,630 cubic yards of soil. Fill in these areas will include approximately 41,820 cubic yards and will be clean excavated materials or clean material from off-site sources. The excavated materials from areas above the OHWM that are not reused as backfill will be transferred to an approved upland disposal location.

At NMPS, the North Mercer Island Force Mains will be installed using open-cut-and cover trenching across an unnamed stream, referred to as the NMPS stream. The NMPS stream crossing will include approximately 20 cubic yards of excavation below the OHWM, and approximately the same amount to fill. Fill will include clean backfill materials or clean material from off-site sources. For locations below OHWM in Lake Washington and Mercer Slough, approximately 13,140 cubic yards of dredged materials will be temporarily stored on barges and transported to Elliott Bay for open-water disposal pursuant to applicable requirements (e.g., DNR Site Use Authorization and DMMP approval for unconfined open-water disposal). Excavated areas will be backfilled, as necessary, with approximately 12,600 cubic yards of new clean fill material.

At a minimum, the top six-inches of backfill material in Lake Washington will be Washington Department of Fish and Wildlife (WDFW)-approved gravel substrate, to improve habitat conditions for fish species in the lake.

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

There is potential for erosion to occur during construction, primarily in areas where temporary clearing, grading, and excavation will occur in various locations throughout the project area. According to the cities of Bellevue and Mercer Island Critical Areas and Shorelines Ordinances, portions of the Project are located within areas mapped as particularly susceptible to increased erosion as a result of development. Potential site erosion will be prevented or minimized through the use of suitable best management practices (BMPs) throughout Project construction described in section B.1.h below. Erosion is not expected to occur from the use of the Project following the completion of construction.

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

Changes to impervious surface area are expected to be relatively minor compared to the existing baseline conditions with the exception of changes at NMPS. Overall, there is a total net increase in impervious surface area above existing baseline conditions of approximately 4,510 square feet at NMPS and 10,030 square feet along the pipeline alignment. Most of the areas along the new pipeline alignment already have impervious surfaces, so the additional impervious surface area represents an approximately 12% increase at NMPS and an approximately 1% increase along the pipeline alignment.

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

The BMPs for erosion control include, but are not limited to the following:

- A Temporary Erosion and Sediment Control Plan and a Construction Stormwater Pollution Prevention Plan (CSWPPP) Source Control Plan will be developed and implemented to

ensure the risk of erosion is avoided and minimized during all clearing, vegetation removal, grading, ditching, filling, soil compaction, or excavation. The BMPs in the plans will be used to control sediments from all vegetation removal or ground disturbing activities. These plans will be evaluated for consistency with design practices specific to each construction segment.

- Qualified project staff will develop the Erosion and Sediment Control Plan and construction.
- The contractor will designate at least one employee as the erosion and spill control (ESC) lead. The ESC lead will be responsible for the installation and monitoring of erosion control measures and maintaining spill containment and control equipment. The ESC lead will also be responsible for ensuring compliance with all local, state, and federal erosion and sediment control requirements.
- All temporary and permanent erosion and sedimentation control measures will be inspected, maintained, and repaired on a regular basis to assure continued performance of their intended function. Silt fences will be inspected immediately after substantial rainfall, and at least daily during prolonged rainfall. Sediment will be removed as it collects behind the silt fences and prior to their final removal.
- Regular street cleaning will occur where necessary to control mud and dust, and measures will be taken to minimize tracking of sediment onto public roadways by construction vehicles.
- Erosion control blankets will be installed on steep slopes that are susceptible to erosion and where ground-disturbing activities have occurred. This will prevent erosion and assist with establishment of native vegetation.
- All exposed soils will be stabilized during the first available period, and no soils will remain without stabilization for more than two days from October 1 to April 30, and for more than seven days from May 1 to September 30.
- Should any BMPs not function as intended, additional action will be taken to minimize erosion, maintain water quality, and achieve the intended environmental performance.

2. Air

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Construction of the Project will involve temporary construction-related air emissions, particularly from the use of various types of heavy equipment that will be required to construct the Project. These include: excavators, backhoes, dump trucks with trailers, vactor trucks, trench compactors, and construction barges. Heavy equipment will be used for various periods at various locations throughout the 4 year construction period along the pipeline alignment.

Preventing nuisance odor impacts is a major goal for the operation of this project. The existing odor control system at NMPS will be replaced with a more reliable carbon scrubber system. The carbon scrubber system combined with the existing injection of inorganic salt solution into the wastewater at NMPS will control and treat odors at the pump station site.

Several new odor control facilities will be installed at key locations along the pipeline alignment (within underground vault structures) in order to minimize odors from emissions

during the operation phase. Two passive odor control systems will treat potential emissions from air release valves along the force main portion of the pipeline. Three active odor control systems will be located along the pipeline to treat potential odors from the hydraulic structures with turbulent flows, such as the force main discharge and siphon inlet and outlet structures. The active odor control facilities, located at 90th Place cul-de-sac, Mercer Island shoreline and Enatai Beach Park, will consist of forced ventilation through carbon scrubbers, to ensure odors are not expelled. Each of these facilities will be located primarily below grade, with above-grade odor control stacks. The above grade portion will be located above the nearest odor receptors (more than 6 feet in height).

A King County Greenhouse Gas Emissions Worksheet is attached (Appendix A).

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 air emissions or odors that may affect the Project.

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

BMPs will be implemented for the proper use, storage, and disposal of equipment and materials within the construction limits. These BMPs will minimize or eliminate the discharge of potential pollutants that may contribute to exceeding applicable air quality standards.

Structures and pipelines will be hydraulically designed to reduce potential emissions during operation, particularly by reducing turbulence in waste water conveyance components, thus reducing the release of dissolved hydrogen sulfide (the primary source of odors) at the force main discharge and siphon structures.

Operational and maintenance practices that will be implemented to control odor and emissions include the following:

- Operate pumps daily at a high capacity to produce scouring velocities in the pump station force mains
- Use fresh water to scour and flush the force mains
- Ensure force main check valves are leak tight
- Install pigging (i.e., pipeline cleaning) station in the force mains

Active odor control systems will be installed at four locations to minimize air impacts to the community: NMPS, at the force main discharge near 90th Place SE Place (Mercer Island), at the East Channel Inlet near the I-90 Trail close to SE 35th Place (Mercer Island), and at the Enatai Beach Park (Bellevue). Carbon scrubber odor control systems will be designed to ensure high level odor prevention and ensure emission levels are held below the existing conditions. The carbon media proposed to be used in these systems is a highly reliable odor control technology with minimal risk and is effective for removal of the hydrogen sulfide gases.

3. Water

a. Surface Water:

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 yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Portions of the Project are located in and adjacent to Lake Washington and Mercer Slough. The Project will also temporarily affect an unnamed tributary to Lake Washington (Type S Stream; identified as the NMPS stream). There are seven other tributary streams (City of Mercer Island Stream Classification Type 1 and Type 2) crossing beneath the proposed pipeline alignment on Mercer Island as they flow from the south side of I-90 into Lake Washington on the north side of I-90 (see Figure 1). These streams will not be impacted, because they are piped below ground where they intersect with the new pipeline. The mainstem of Mercer Slough (Type S Stream) is also a tributary to Lake Washington. Wetland areas along Mercer Slough (Category II; known as Mercer Slough Wetland) that will be temporarily impacted are within the Mercer Slough Wetland Complex.

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

The Project will require work in, over, and adjacent to Lake Washington, Mercer Slough and the NMPS stream for which there will be unavoidable temporary construction impacts. There will be no permanent adverse impacts to surface waters from work in Lake Washington, Mercer Slough, or the NMPS stream.

The following construction components are related to work in, over, or adjacent to (within 200 feet) surface waters:

<u>NMPS Stream Crossing</u>
The NMPS stream is expected to have an extremely low likelihood of salmonid presence due to poor water quality (headwaters are primarily stormwater runoff), channelized and armored banks and bed, and challenges to anadromy (including a 700-foot culvert from Lake Washington to the NMPS parcel). Dewatering of the NMPS stream work area will be used to establish a dry work zone and avoid releasing excessive turbidity during open-cut and cover pipeline installation through the stream channel. Prior to excavation, the stream will be isolated using block nets and fish will be removed from the construction area using a seine. Barriers will be installed upstream and downstream of the excavation area to isolate the construction area from the surrounding environment. A gravity bypass system will be installed in the construction and flow will be returned downstream of the construction area. The timing for the work will be during the approved in-water work window, targeting the low flow period when fish are unlikely to be present.

<u>Lift Station-11</u>
Lift station improvement activities will require construction within five feet of the OWHM of Lake Washington; however, the work will be done almost entirely below ground and

largely within existing structures. Consequently, it will not affect Lake Washington or any shoreline features, such as riparian vegetation.

Mercer Island Boat Launch Shoreline

Within 200 feet of the Lake Washington shoreline on Mercer Island, construction of the East Channel Siphon will involve open-cut and cover trenching as well as clearing, grading within the adjacent work areas. A portion of the existing concrete bulkhead will be replaced with more natural shoreline stabilization, and disturbed lakebed areas along the shoreline will be restored with suitable gravel to enhance fish spawning habitat. Work required below OHWM will occur during approved in-water work windows.

East Channel Crossing

The East Channel Siphon will be constructed across the East Channel of Lake Washington near its narrowest point (approximately 1,400 feet) using open-cut and cover construction methods with special considerations for in-water work. Suitable BMPs will be used to minimize potential impacts to water quality, particularly during dredging and backfilling activities from barges, and at the shoreline transition work areas. Timing of this work will be during approved in-water work windows.

Enatai Beach Park Shoreline

Within 200 feet of Lake Washington shoreline at the Enatai Beach Park, construction of the East Channel Siphon and new pipe connections and appurtenances will involve open-cut and cover trenching as well as clearing, grading within the adjacent work areas. A portion of the shoreline will be restored with bio-engineered shoreline stabilization restoration landscaping in adjacent upland areas. Areas of lakebed excavated near the shoreline will be restored with suitable gravel to enhance fish spawning habitat. Work required below OHWM will occur during approved in-water work windows.

Enatai Beach Park Swim Beach

Reconfiguring the existing sewer pipelines that are within the swim beach of Enatai Beach Park will require open-cut and cover trenching and sliplining work below and adjacent to the OHWM of Lake Washington. Directly following construction activities, the temporarily affected shoreline area will be restored to original conditions. Work required below OHWM will occur during approved in-water work windows.

Enatai Interceptor

Rehabilitation work to reline the existing Enatai Interceptor pipeline will occur within and adjacent to Lake Washington and Mercer Slough. Relining work for the buried pipeline will be primarily occur at existing maintenance holes and angle structures located along the existing pipeline within Lake Washington and Mercer Slough. The work areas will be accessed using barges or from adjacent shoreline areas. Suitable BMPs such as turbidity curtains and silt fences will be used to control turbidity and erosion respectively. Access to maintenance holes and angle structures in Mercer Slough will require clearing of vegetation and the placement of swamp mats during construction with 200 feet of the shoreline. In addition, up to two angle structures on the existing Enatai Interceptor will need to be accessed using temporary in-water containment areas in Mercer Slough. Work below OHWM that is not fully isolated from adjacent water (e.g., within existing pipeline structures, or temporary containment features) will occur during permitted in-water work windows.

Sweyolocken PS

Project construction activities will occur at Sweyolocken PS located upland of Mercer Slough in Bellevue that is within 200 feet of the shoreline of Mercer Slough and within the Mercer Slough Wetland Complex. These activities will include HDD staging and installation for the new Enatai Siphon, trenching to connect the new Enatai Siphon to the pump station, and restoration of disturbed areas following construction.

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.

The Project will require the excavation of approximately 13,100 cubic yards in Lake Washington (including the East Channel and Bellevue Conveyance segments), 40 cubic yards in Mercer Slough, and 20 cubic yards in the NMPS stream. The pipe will occupy a portion of the excavation area, and therefore less fill will be placed back in the area excavated compared to the volume removed. In addition, appropriately sized, clean, rounded gravels (i.e., fish mix) will be placed in areas of Lake Washington to improve fish habitat. The fill material for these areas will be obtained from a King County approved off-site source.

The approximate areas of the water bodies that will be directly affected is as follows: 116,350 square feet in Lake Washington (including the East Channel and Bellevue Conveyance segments), 2,300 square feet in Mercer Slough, and 580 square feet in the NMPS stream. All impacts will be temporary during construction, and the sites will be restored to baseline (or better conditions).

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

Two types of surface water withdrawals or diversions are proposed during construction: (1) the temporary bypass of the NMPS stream, and (2) temporary dewatering of isolated work areas in Lake Washington.

The bypass of the NMPS stream work area is necessary to establish a dry work zone and avoid siltation and turbidity effects to the stream during open-cut and cover pipeline installation across the stream channel. The work area will be isolated by diverting stream flows around the work area through a temporary bypass pipe system.

Dewatering will be needed within isolated areas of Lake Washington along the existing Enatai Interceptor for pipeline access and construction at Enatai Beach Park and to provide dry construction access at existing angle structures in Mercer Slough. Each area will be isolated from Lake Washington by a containment system in order to conduct replacement of the existing pipeline (i.e., at the Enatai Beach Park swim beach) or the UV-CIPP rehabilitation work (in Mercer Slough) along the existing pipeline route.

Proposed methods of dewatering include pumping of water out of the primary isolation area before discharging back into Lake Washington or Mercer Slough within the turbidity curtain. Any discharges to surface waters will comply with State Water Quality standards.

For fish-bearing waterbodies, fish exclusion from the dewatered area, and pump intake screening will be done in accordance with applicable regulations. The contractor will be responsible for determining the exact method for establishing a dewatering zone as part of the dewatering plan to be submitted in the CSWPPP and criteria established by Ecology through the Section 401 water quality certification permitting process. The anticipated methods of containment and disposal for each location are described below in Section 4.d.

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

Lake Washington is a controlled system, and is not considered to be within a 100-year floodplain. Portions of the existing Enatai Interceptor pipeline alignment, on the east side of Lake Washington along Mercer Slough, are located in a 100-year floodplain. Since these portions of the pipeline alignment are almost entirely buried below ground, and are not being reconfigured, the Project will not affect floodplain function or be affected by flooding.

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.

No waste material will be discharged to surface waters. The sewer pipeline is a closed system.

b. Ground Water:

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.

Groundwater withdrawals during dewatering will be necessary at several points along the pipeline alignment in Mercer Island and Bellevue during the open-cut and cover construction. Sump pumps and wells may be used at the discretion of the contractor to temporarily dewater these work areas where the excavation depths are within approximately three feet below the groundwater table. In limited areas where the depth below the water table exceeds three feet, dewatering will most likely be done with well points. Turbid water will be held in Baker tanks before discharge in accordance with applicable permit requirements.

Dewatering discharges will be made to storm drains or the sanitary sewer according to local area permit conditions. No discharges will be made into the groundwater.

The approximate total quantity of groundwater estimated to be withdrawn for work on Mercer Island is 14,702,000 gallons. The approximate total quantity of groundwater estimated to be withdrawn for work in the City of Bellevue is 7,783,000 gallons.

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 is anticipated to be discharged into the ground. The Project involves the installation of a fully contained replacement sewer line.

c. Water runoff (including stormwater):

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 during construction will occur at semi-pervious and impervious areas within the limits of construction, and in some locations from adjacent upland areas. Quantities will vary based on precipitation events, and when construction will occur at various locations during the four years of construction. Stormwater runoff will discharge to surface drainage features, such as streams and ditches and ultimately flow into stormwater conveyance systems and/or Lake Washington.

The increase of impervious surface area associated with the NMPS facility improvements will result in a minor increase in stormwater runoff that flows into the NMPS stream and then into Lake Washington. Based on initial calculations for the 100-year flow using the Western Washington Hydrology Model (WWHM2012) with an hour time step, the increase in stormwater is likely to be less than 0.1 cubic feet per second, which is a negligible increase.

The increase of impervious area associated with the changes that the Project will be making along the I-90 Trail will result in an increase in stormwater runoff. Stormwater runoff will infiltrate, discharge to surface drainage features, or be collected in a conveyance system and ultimately flow into existing stormwater conveyance systems and/or Lake Washington.

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

No waste material will be intentionally discharged into the ground. The Project involves the installation and rehabilitation of an existing sewer line. BMPs will be in place to avoid unanticipated releases of sewage during construction.

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

The Project is not anticipated to affect drainage patterns in the vicinity of the pipeline alignment after construction is complete. Minor changes to drainage patterns will occur temporarily in small areas during construction; however, these will generally be restored to their existing patterns following construction.

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

The following BMPs, in addition to what is identified in Section B.1.h, will be implemented to reduce or control surface, ground, and runoff water, and drainage impacts:

- Storing fuels and other potential contaminants in secured containment areas.
- Containing equipment, materials, and wash water associated with construction.
- Conducting regular inspections, maintenance, and repairs of fuel hoses, hydraulically operated equipment, lubrication equipment, and chemical/petroleum storage containers.
- Maintaining spill containment and clean up material at construction sites.
- Establishing a communication protocol for handling spills (e.g., ESC lead).
- If warranted, an impervious material will be placed over concrete or asphalt after pouring to avoid direct contact with stormwater as the pavement cures.
- Washout from concrete trucks will not be dumped into storm drains or onto soil or pavement that carries stormwater runoff.
- During construction, the contractor will control stormwater so that peak and base flows in potentially impacted streams are not adversely affected by treated stormwater discharge from the expanded impervious surface areas created by the Project.
- During the Enatai Interceptor rehabilitation component, a damaged pipe contingency plan will be developed by the contractor that outlines responses should there be unexpected damage to the pipeline during the rehabilitation process. The contingency plan will include additional materials and methods to repair any unexpected pipe damage.
- During Enatai Siphon HDD construction activities, a mud pit will be established outside of sensitive areas to contain the borehole drilling materials. Mud pumps and a solids control/drilling fluid filter system will remove excess mud from the borehole, and a pressure relief well will be installed to ensure that the surrounding area is not contaminated from a hydrofracture during HDD work.
- In addition to the above BMPs, the contractor will be responsible for submitting the CSWPPP according to the criteria established by Ecology through the Section 401 permitting process.

4. Plants

a. Check the types of vegetation found on the site:

x deciduous tree: alder, maple, aspen, other
x evergreen tree: fir, cedar, pine, other
x shrubs
x grass
__ pasture
__ crop or grain
__ Orchards, vineyards or other permanent crops.
x wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
x water plants: water lily, eelgrass, milfoil, other
x other types of vegetation

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

Construction of the Project will temporarily impact up to approximately 300,000 square feet of vegetated area and permanently remove up to approximately 2,000 square feet of vegetated area. The Project will remove up to approximately 200 trees. The exact extent of tree and vegetation removal or alteration will be based on construction methods and surface restoration requirements from regulatory agencies and local jurisdictions. In particular, the County is coordinating with the City of Mercer Island and WSDOT to establish a restoration plan for the areas of the Project that will affect the I-90 Trail on Mercer Island, consistent with WSDOT standards and City of Mercer Island's Aubrey Davis Park Master Plan. Habitat enhancements to account for these impacts are discussed in Section B.4.d below.

Existing vegetation that will be removed or altered by Project construction varies across the project area for which the main locations are described below.

Mercer Island: The island is surrounded by Lake Washington, and the shoreline is nearly completely developed with residential properties. The riparian vegetation associated with the stream adjacent to NMPS consists of native and invasive species. Several large coniferous and deciduous trees are present in the riparian corridor, including red alder (*Alnus rubra*), western red cedar (*Thuja plicata*), and Douglas fir (*Pseudotsuga menziesii*). The understory is dominated by Himalayan blackberry (*Rubus armeniacus*), English ivy (*Hedera helix*), and Japanese knotweed (*Polygonum cuspidatum*). Proposed restoration will include clearing the streambanks will be cleared of invasive vegetation and replanted with native vegetation.

The vegetation along the Mercer Island Interceptor is primarily associated with the I-90 Trail. The tree species along the I-90 Trail were identified and characterized in the Arborist Report (Tree Solutions 2019a), and primarily include western red cedar, incense cedar (*Calocedrus decurrans*), Douglas fir, katsura tree (*Cercidiphyllum japonicum*), and Norway maple (*Acer platanoides*). There are also areas within residential and urban centers that also have native trees.

Bellevue: The shoreline of Lake Washington between Enatai Beach Park and the mouth of Mercer Slough contains single-family residences with armored shorelines and very little overhanging vegetation. Vegetation in the area is primarily lawn, ornamental shrubs and trees, and invasive Himalayan blackberry and English ivy. Some large trees are present along the shoreline, including Douglas fir and western red cedar. To the east of this residential area, approaching Mercer Slough, the shoreline is within the I-90 ROW. In this area, I-90 is elevated, and the shoreline has herbaceous and woody (mostly willow [*Salix* spp.] species) vegetation growing underneath. Large patches of Himalayan blackberry are present between I-90 and the I-90 Trail.

The Mercer Slough East shoreline along the pipeline alignment is mostly wetland and a significant portion of the shoreline is located within the Mercer Slough Wetland Complex. At the mouth of Mercer Slough in Lake Washington, residential impacts give way to a more natural area before the slough riparian corridor is bisected by I-90. The natural area riparian vegetation is dominated by invasive shrubs and grasses, primarily Himalayan blackberry and reed canarygrass (*Phalaris arundinacea*). Further backshore, there are several clumps of large trees, including western red cedar, Douglas fir, red alder, and big-leaf maple (*Acer macrophyllum*).

Directly upstream of the I-90 East Channel Bridge, the riparian vegetation is similar to the mouth of Mercer Slough, with reed canarygrass and Himalayan blackberry adjacent to the slough, and red alder and western red cedar further upland. Further upstream, and adjacent to the Mercer Slough wetlands, the riparian habitat is dominated by red-osier dogwood (*Cornus sericea*) and salmonberry (*Rubus spectabilis*).

The Project is developing arborist reports for the City of Mercer Island (Tree Solutions 2019a) and the City of Bellevue (Tree Solutions 2019b). Trees that will be protected and removed will be documented in the arborist reports for review by the respective jurisdictions.

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

No threatened or endangered plant species are known to be on or near the site.

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

King County is working with Bellevue, Mercer Island, and WSDOT on tree replacements and other habitat enhancements at NMPS and along the pipeline alignment. All temporarily disturbed vegetation areas will be graded to pre-Project contours and replanted with native vegetation suitable for site conditions. Permanent impacts will be mitigated per the applicable local codes and WSDOT requirements.

There are several locations proposed for habitat enhancements that go beyond standard site restoration following construction activities. The enhancements will use native plants to off-set potential Project impacts and preserve, restore or enhance existing vegetation of the site (Figure 2). Overall, there will be more than a 1:1 ratio of site restoration activities within the limits of construction that include planting native vegetation, including trees, and removing non-native or invasive plant species intended to improve ecological conditions.

Construction activities will follow vegetation protection BMPs including:

- Minimizing clearing to the extent necessary to complete the project.
- Clearly marking the extent of clearing before construction begins.
- Installing and maintaining tree protection fencing to protect the critical root zone of all trees to be retained.
- Replanting vegetated areas as soon as practicable after construction activities are complete.

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

Himalayan blackberry, English ivy, Japanese knotweed, reed canarygrass, Eurasian watermilfoil, hydrilla, and Brazilian elodea.

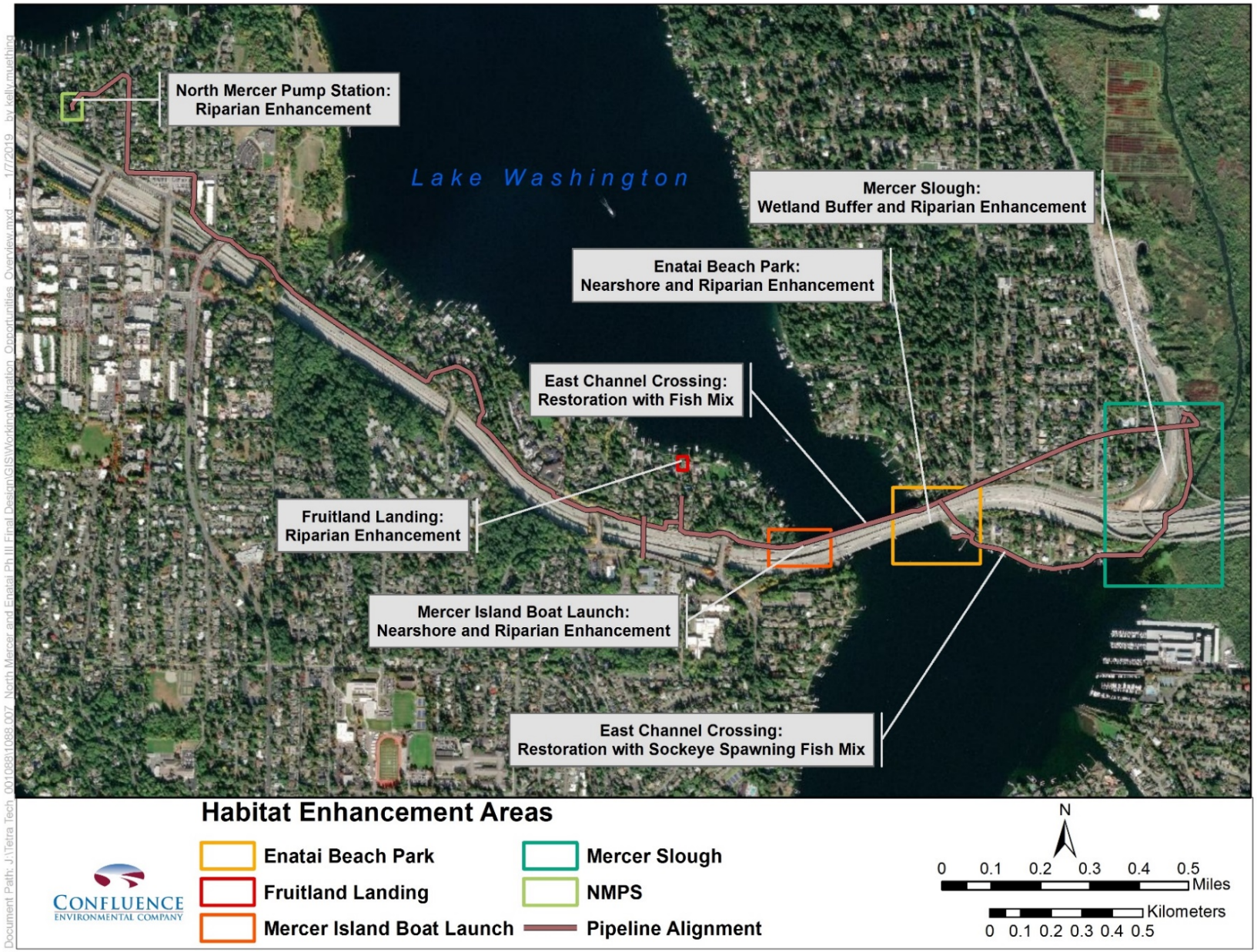

Figure 2. Habitat Enhancement Areas

5. Animals

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

Examples include (applicable species along the pipeline alignment are **bolded and underlined** below):

birds: **hawk, heron, eagle, songbirds, other: waterfowl**
mammals: **deer**, bear, elk, **beaver, other: coyote, squirrel, racoon**, etc.
fish: **bass, salmon, trout**, herring, shellfish, other _____

Documented animals along the pipeline alignment include:

- **Birds:** Great blue heron, bald eagle, peregrine falcons, pileated woodpecker, Vaux's swift, purple martin, osprey, green heron, red-tailed hawk, and various other songbirds and waterfowl.
- **Mammals:** Long-legged myotis, long-eared myotis, western big-eared bat, coyote, eastern gray squirrel, racoon, striped skunk, black rat.
- **Fish:** Puget Sound Chinook salmon, Puget Sound steelhead, bull trout/ dolly varden, coho salmon, rainbow trout, resident coastal cutthroat trout, and sockeye salmon.
- **Amphibians:** Western toad and the common bullfrog.
- **Invertebrates** (near the pipeline alignment): crayfish.

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

Puget Sound Chinook salmon (*Oncorhynchus tshawytscha*; threatened), Puget Sound steelhead (*O. mykiss*; threatened), and bull trout (*Salvelinus confluentus*; threatened).

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

This site is used for migration by salmonids. The documented presence of salmonids in the Lake Washington and Mercer Slough means that both adults and juveniles periodically use the nearshore for migration. Migratory birds, such as waterfowl and songbirds, also migrate through the area.

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

The BMPs identified above in Sections B.1.b, B.2.c, B.3.d, and B.4.d will also be proposed measures to preserve or enhance wildlife. In addition, the following BMPs will be implemented during construction to avoid and minimize construction related impacts to fish, wildlife, and their habitats:

- Turbidity curtains will be used for all in-water work to confine the impact to the local area and exclude fish from the work area as outlined below. Turbidity curtain removal will only occur after water quality sampling shows that water quality has returned to allowable limits according to the WAC 173-201A-200 (1)(e) Table 200.
- Turbidity monitoring will occur during dredging and filling of the pipeline alignment zone to ensure that water quality standards are met.

- Seasonal restrictions (i.e., in-water construction periods) will be applied to the project to avoid or minimize potential impacts on fish species, following approval from the regulatory agencies.
- Riprap and other bank stabilizing materials will be installed from the banks or outside the wetted perimeter as much as possible.
- Disturbance to riparian vegetation will be minimized by straddling the vegetation with heavy equipment (or by pruning it without damaging the roots) to allow for the operation of heavy equipment.
- Riparian vegetation outside of the approved work area will not be disturbed.

Habitat enhancement measures that will also enhance wildlife habitat include the areas identified for restoration under B.4.d and Figure 2.

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

There are no invasive fish or other aquatic vertebrates known to occur along the pipeline alignment. Invasive crayfish of the northern, red swamp, and rusty varieties may also be found at or near the site in freshwater.

One invasive invertebrate species, the New Zealand mudsnail, is known to occur in Lake Washington and its tributaries, although it has not been documented in the specific areas of Lake Washington that will be disturbed by the Project. The nearest observation of New Zealand mudsnail is in Mercer Slough, greater than 800 feet from the proposed pipeline alignment. On-site surveys conducted in 2017 for inspections of existing structures to support Project design did not find evidence of New Zealand mudsnails in Mercer Slough along or near the pipeline alignment. The Project will adhere to the permit conditions that are anticipated related to the control and containment of New Zealand mudsnails or other invasive species during in-water construction.

6. Energy and Natural Resources

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

The completed Project will continue to rely primarily on electricity to meet its energy needs, which are predominantly for continuous operation of pump station facilities.

In the event of a power failure, Project pump stations (e.g., NMPS and Sweyolocken PS) will be powered by a diesel standby generator. Periodic visits by operations and maintenance staff will require vehicles powered primarily by gasoline or diesel.

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

No. The Project will entail the repair, replacement, and rehabilitation of an existing sewer line that is located below ground. The height and location of the above ground improvements at the NMPS facility will not affect potential use of solar energy by 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:

Specific elements that were added to NMPS for energy conservation include photo cells to control exterior lights and unit heaters to limit how much and how often heaters are running. In addition, older equipment will be replaced with newer, more energy efficient equipment.

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.

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

Materials will be excavated throughout the proposed conveyance pipeline alignment. No evidence of known or possible contamination along the upland pipeline alignment was discovered. For in-water portions of the alignment, based on a review of Ecology's Lake Washington water and sediment surveys, the likelihood of occurrence of contaminated materials during Project excavation is expected to be very low (Ecology 2018). The chemical analytical results of the East Channel sediment sampling concluded that none of the samples analyzed exceeded any of the DMMP Marine Guideline screening levels and are considered safe for unconfined open water disposal in Elliott Bay in accordance with applicable regulations (Shannon & Wilson 2018b). If encountered, contaminated materials will be handled using BMPs, as described in Section B.5.d.; however, contaminated materials are not expected to occur along the pipeline alignment.

Based on a review of the Environmental Data Resources reports for the NMPS site, there were two reported incidences of diesel spills on the site. For planning purposes, it has been assumed that diesel-contaminated soils will be encountered in all excavations along the existing driveway, parking area, and along the force main excavation beneath the NMPS stream. It has also been assumed that the soils encountered in the upper 10 feet of the temporary pump station excavation will be diesel-contaminated. Diesel-contaminated soils are not expected in excavations for the generator building and retaining walls to the west of the driveway and parking area. Excavated soils that are contaminated will require special handling and disposal in a Resource Conservation and Recovery Act Subtitle D facility.

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.

No known contamination exists along the project alignment beyond those described above. The properties impacted by the Project are generally in the same land use type as they have been for several decades (e.g., residential, parks, transportation infrastructure, utilities).

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-related materials such as fuel and hydraulic fluid will be stored and used on site during construction. BMPs will be implemented during construction to minimize the potential for spills or mechanical failures to occur, and to minimize the potential for adverse effects from hazardous chemicals to workers or nearby residents.

The completed project will convey untreated wastewater. Exposure to untreated wastewater can be hazardous, but the risk of exposure to members of the public will be negligible.

4) Describe special emergency services that might be required.

No special emergency services will be required beyond those currently available in the area: City of Mercer Island Fire Department, City of Bellevue Fire Department, and Department of Ecology (spill of oil or hazardous material: 1-800-645-7911).

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

During construction, BMPs will be implemented to minimize the potential for spills or mechanical failures to occur, and to minimize the potential for adverse effects from fuels, fluids, and lubricants to workers, nearby residents, or the environment. During construction, the contractor will be responsible for complying with all applicable regulations.

Applicable Project BMPs identified above will also reduce or control environmental health hazards. Additionally, the Project will comply with following regulations by the cities of Bellevue and Mercer Island: fire code, wastewater treatment codes, and construction spill protocols.

b. Noise

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

Vehicle traffic noise from I-90, Lake Washington boat traffic, and typical urban noises (e.g., lawn mowers) are audible from the Project site, but will have no impact on 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.

Short-term Noise Impacts: Construction noise transmission is not expected to exceed ambient terrestrial and underwater noise levels. Common construction impacts, including in-water noise, have been avoided and/or minimized to the extent practicable.

All construction activities that produce noise above local ordinance nighttime thresholds will be limited to the weekday times of 7AM and 10PM (Mercer Island) and 7 AM to 6 PM (Bellevue) to reduce construction noise levels during sensitive nighttime hours, unless a noise variance is approved by the local jurisdiction.

Specific construction methods (e.g., impact driving of sheet piling) are being avoided to reduce noise impacts. Trenching equipment (e.g., vacuum excavator, concrete saws, dump trucks, backhoes) will produce the loudest noise levels of all the Project equipment on land.

The loudest three pieces of terrestrial equipment used for construction will be the concrete saw at a noise level of 90 A-weighted decibels (dBA) at a distance of 50 feet, the vacuum excavator at 85 dBA at 50 feet, and a backhoe at 78 dBA at 50 feet. The HDD drilling and pull-back process includes equipment such as a drill rig, pumps, excavator, cranes, soil separation plant, dump trucks, generators, Baker tanks, and derrick with barge. Similar noise levels will be generated for the UV-CIPP lining technique used during the Enatai Interceptor rehabilitation and for the pull-back process during the HDD work. These noise levels will range from approximately 65 dBA (pumps) to approximately 85 dBA (vacuum/sewer cleaning) at a distance of 50 feet. These noise levels are all below general construction noise generation levels.

Two proposed in-water activities in the action area will have the potential to increase underwater noise levels: trenching equipment and vessel operations. The loudest components of the trenching equipment will be stationed above the waterline on construction barges; thus, in-water noise from this equipment is expected to be negligible.

The operation of tugboats or self-propelled work barges will produce in-water noise disturbance. However, vessel operation is likely to result in noise levels that are less than the injury effects threshold for fish (i.e., 206 dBPEAK [maximum decibel value reached by the sound pressure]) and composed of a substantially different sound signature (e.g., distribution of sound energy levels across variable frequencies) compared to impact pile driving for which the 206 dBPEAK sound level threshold was established. In addition, the ambient underwater noise level is assumed to be at least 120 dBRMS (decibel root mean square) based on the presence of commercial and recreational vessels in Lake Washington.

Lake Washington is located in an urban setting with high vessel traffic and associated underwater noise. Overall, the disturbances generated by Project-related vessels and construction equipment are expected to be within the range of baseline conditions.

Long-term Noise: There are no long-term noise sources associated with operation of the Project that are above existing baseline conditions or above conditions allowed within the local code. The new equipment at NMPS is designed to be limited to 60 dB at the property line (background conditions). There are odor control fans along the conveyance, although these will have acoustic attenuation devices to limit the noise and not exceed conditions under the local jurisdiction code for noise levels.

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

Noise Control Measures: BMPs that will be used to reduce noise generated from equipment used during construction activities:

- The contractor will equip construction equipment engines with adequate mufflers, intake silencers, and engine enclosures to reduce their noise by 5 to 10 dBA.
- The contractor will turn off construction equipment during prolonged periods of non-use to eliminate extraneous noise.
- The contractor will maintain all equipment and train equipment operators in good practices to reduce noise levels.
- Temporary diesel generators and temporary pumping equipment to be operated at night will be required to be fitted with sound attenuation equipment.
- Sound enclosures for the fan in the odor control vaults and silencers on the exhaust stacks if the acoustical analysis identifies a need.
- NMPS will be equipped with sound traps at building penetrations to limit noise transmission outside of the buildings.
- NMPS walls and ceilings are designed to absorb or limit noise transmission.

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.

Mercer Island: The Project sites within the City of Mercer Island are zoned and used as residential, WSDOT ROW, parks, or aquatic (i.e., Lake Washington). Mercer Island is surrounded by Lake Washington, and the shoreline is nearly completely developed with residential properties. The Mercer Island Boat Launch is a waterfront park featuring lawn, parking area, and a boat ramp to Lake Washington. Lift Station 11 at Fruitland Landing has a small picnic area. Common activities within the Mercer Island portion of the Project area include residential activities, boating, waterfront city park activities, and biking and walking along the I-90 Trail.

Bellevue: The Project sites within the City of Bellevue are zoned as single family residential, open/park space, or aquatic. Enatai Beach Park is a waterfront park featuring multiple picnic areas, a lawn, a swimming beach, a boat house, a snack shack, restrooms, a parking lot, and a small playground. Mercer Slough Nature Park includes a canoe trail, blueberry farm, an environmental education center, picnic area, and waterfront access. Common activities within the Bellevue portion of the Project area include residential activities, waterfront city park activities, boating (both motorized and non-motorized), and biking and walking along the I-90 Trail.

The Project will not affect land use on nearby or adjacent properties, and is intended to maintain sewer service to the area.

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 project site has not been used as working farmlands or forest lands in recent decades. The Project area is currently developed and no agricultural or forest land will be converted or impacted as a result of the Project.

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 project will not affect or be affected by surrounding working farms or forest land normal business operations.

c. Describe any structures on the site.

The main building structures on the site are located in two locations: (1) NMPS, and (2) Sweyolocken PS. The structures associated with these areas are described below.

- **NMPS:** NMPS consists of the existing building, which houses pump and generator machinery, a paved driveway, and parking area. NMPS receives gravity flow from the West Trunk and discharges to the North Mercer Force Main. NMPS is operational, but requires upgrades to support current and future flows.

- **Sweyolocken PS:** Sweyolocken PS, located next to Bellevue Way and the Mercer Slough Nature Park, sends wastewater from Bellevue and Mercer Island to a major wastewater pipeline called the Eastside Interceptor which terminates in Renton. The site includes the pump station and associated structures, gravel driveway and parking areas, and a hand boat launch.

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

No structures, as described above, will be demolished as part of the Project. There is a private dock located to the north of the Enatai Beach Park that is not permitted and is located partly on WSDOT property. This dock will be removed and demolished.

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

The project intersects the following land use zones in the City of Mercer Island:

- Single-family Residential (R-8.4, R-9.6, R-12, R-15)
- Business (B)
- Commercial Office Zone (C-O)
- Multi-Family (MF-2L, MF-3)
- Public Institution (PI)

The Project intersects the following land use zones in the City of Bellevue:

- Single-Family Residential (R-1, R-2.5, R-3.5, R-4, R-5)
- Multi-Family Residential (R15, R20)
- Park

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

See zoning classifications above, which are reflective of city comprehensive plans (City of Bellevue 2018, City of Mercer Island 2018).

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

City of Mercer Island:

- Urban Park Environment (Lift Station 11)
- Urban Residential Environment (Mercer Island Boat Launch)

City of Bellevue:

- Shoreline Residential (North of I-90 & Between Enatai Beach Park and Mercer Slough)
- Urban Conservancy (I-90 and Enatai Beach Park)
- Urban Conservancy—Open Space (Mercer Slough)

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

Mercer Island: Critical areas are defined in the Mercer Island City Code (MICC) under 19.07. Critical areas within the Mercer Island portion of the Project area include streams and stream buffers, shorelines and shoreline buffers, geologic hazard areas, and fish and wildlife conservation areas. The stream adjacent to NMPS has a standard buffer width of 75 feet. Lake Washington's shoreline has a buffer width of 50 feet. There are no wetland or wetland buffer impacts on Mercer Island within the Project area.

Bellevue: Critical areas are defined in the City of Bellevue Land Use Code (LUC) under 20.25H. Critical areas within the City of Bellevue portion of the Project area include streams and stream buffers, wetlands and wetland buffers, geologically hazardous areas, and habitat for species of local importance. Mercer Slough East stream has a standard buffer width of 100 feet. Mercer Slough Wetland Complex has a standard buffer width of 110 feet. There are no areas of special flood hazard impacts on Bellevue within the Project area.

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

Both NMPS and Sweyolocken are automatically controlled and remotely monitored by County operations and maintenance staff; therefore, no County employees are dedicated to either site and are only on-site to perform regular maintenance activities and troubleshoot and operational issues as they arise. It is not anticipated that this project will substantially change the number of trips County staff make to each facility on an annual basis.

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

None.

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

None.

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

The Project is undergoing coordination and review with local, state, and federal jurisdictions to obtain all necessary approvals and permits to ensure compatibility with existing and projected land uses and plans. This includes coordination with WSDOT and Sound Transit to address compatibility with their nearby projects and facilities.

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

No measures are proposed since no agricultural and forest lands exist along the project alignment.

9. Housing

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

None, as there is no housing associated with the project.

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

None

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

Not Applicable

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 only location where buildings are being proposed is at the NMPS. Current and proposed structures on the site are one story or less. Building material includes wood, concrete, and metal. There are also minor structures associated with the odor control vaults (e.g., odor control stack), which will be at least 6 feet in height. The exact locations are not fully determined, but will be prioritized in locations that naturally screen the structures (e.g., in areas with trees).

When trees are not around, stacks are typically disguised to look like trees or other natural structures. The final design will be determined during the final design phases.

As described in Section B.2.c above, odor control stacks are anticipated at the following locations:

- NMPS (on Mercer Island)
- East Channel Inlet (near SE 35th Place on Mercer Island)
- Force Main Discharge (near 90th Place SE on Mercer Island)
- Enatai Beach Park (Bellevue)

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

The Project will result in the removal of trees which will alter views at the NMPS and some locations along the conveyance pipeline, including along the Aubrey-Davis section of the I-90 Trail in Mercer Island. King County is working with residents, WSDOT, and the cities of Mercer Island and Bellevue to provide replacement trees in accordance with applicable regulations. The proposed building modifications at NMPS and the odor control structures will not appreciably alter or obstruct existing views.

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

At the NMPS site, the design of the new generator building carefully considered the proximity of adjacent property to the west, and a priority was placed on maintaining an adequate landscaped area between the new building and the property line to provide visual screening from the neighboring properties. The new above-ground structures were also sited further south on the property in order to minimize the visual impact from the SE 22nd Street and help maintain the residential character of the neighborhood. Design elements have also been incorporated around the courtyard area to screen the view of equipment from the street. The proposed NMPS improvements will undergo design review by the City of Mercer Island to ensure compatibility with the local setting and reduce and control any aesthetic impacts. Odor control vaults are considered minor structures that do not require additional measures to control aesthetic impacts.

The remaining aesthetic impacts will be controlled through replanting trees and native vegetation along the pipeline alignment.

11. Light and Glare

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

Project construction will take place largely during daylight hours. Temporary site lighting may be used at the beginning and end of work days during construction when daylight hours are short.

Lighting will be interior to the odor control sites in both Mercer Island and Bellevue. There will be new exterior lighting associated with the NMPS improvements, although it will remain similar to existing conditions at the site. The City of Mercer Island requires zero light leaving the property, and the new lighting for the facility has been designed to meet those requirements.

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

No.

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

No existing off-site sources of light or glare will affect the proposed project.

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

During construction, all exterior lights will be focused or shielded as necessary to cast light only in areas that require it and to minimize light spilling onto neighboring properties. Downcast light will be used in the NMPS design to control for light and glare impacts to adjacent properties. No other new lighting is proposed.

12. Recreation

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

Recreational opportunities in the immediate vicinity of the Project include:

- The I-90 Trail that runs parallel to I-90 along most of the proposed pipeline alignment.
- Fruitland Landing, a City of Mercer Island street-end park located at the north end of 97th Avenue SE that provides public access to Lake Washington.
- Lake Washington, particularly the East Channel and then areas to the east to Mercer Slough.
- Mercer Island Boat Launch, Enatai Beach Park, and the Mercer Slough Nature Park, which are all waterfront parks that offer access to Lake Washington or Mercer Slough. There is also a small boat launch site near the Sweyolocken Pump Station.

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

During Project construction, public access will be temporarily displaced for various segments of the I-90 Trail for bicycling and walking/running. Access to swimming, boating and other shoreline recreational uses of Lake Washington will be temporarily affected at several public parks along the pipeline alignment. These include portions of the Mercer Slough Nature Park and at the Sweyolocken hand held boat launch, Enatai Beach Park, the Mercer Island Boat Launch, and Fruitland Landing. Private access to swimming and boating will also be temporarily affected during construction, primarily along Lake Washington between Enatai Beach Park and Mercer Slough for rehabilitation of the Enatai Interceptor.

Although the construction schedule for the various Project components is subject to change by the contractor, the estimated timing and duration of intermittent disruptions to existing recreational uses due to Project construction are as follows:

- The I-90 Trail (Mercer Island): approximately 17 months from summer 2021 through late 2022.
- Fruitland Landing: approximately 14 months from spring 2021 to late spring 2022.
- Mercer Island Boat Launch: Partial use of parking area for staging will begin in summer 2021 and may extend for approximately 18 months through late 2022. The access road will be more directly affected by pipeline construction (e.g., lane closure) for approximately 3 months during late summer to fall of 2021.
- Lake Washington: approximately 5 months from July through November 2022 within East Channel, and approximately 2 months during fall 2023 for the Enatai shoreline.
- Enatai Beach Park: Construction may begin by summer 2021 although it will generally occur on the north side away from recreational uses through 2022. Construction activities will extend more directly into active park use areas for approximately 3 months during late summer and fall of 2022. Construction will occur within the swim beach area for approximately 3 months during late summer and early fall 2023.
- Mercer Slough Trail (Bellevue): approximately 5 months from summer 2023 through late 2023, and approximately 1 month during spring 2024.
- Mercer Slough Nature Park (from the mouth of Mercer Slough to Sweyolocken PS) and the Sweyolocken boat launch: primary construction activity for approximately 8 months from summer 2021 through early 2022 will take the boat launch out of service. Other Project work during the latter half of 2023 and spring 2024 is not expected to prevent boat launch access.

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

The Project construction will avoid high use times for Lake Washington (e.g., SeaFair) to the extent practical, and only block portions of public access locations when necessary. During work along the I-90 Trail or surface streets, traffic will be rerouted via detour routes that will be finalized prior to construction based on information in the Transportation Study (Jacobs 2018a). Boat docks on private property will only temporarily be affected, and equipment will be removed as soon as practical.

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.

Various buildings and structures are located near the Project site that are over 45 years old. Based on a cultural resources study for the Project completed by Jacobs (2018b) no buildings or structures either listed in or eligible for the listing in the National Register of Historic Places were observed within the Area of Potential Effect (APE) for the Project. Therefore, a finding of "no effect to historic properties" was recommended for the Project.

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.

Based on the cultural resources study for the Project completed by Jacobs (2018b), no landmarks, archaeological features or deposts were identified in the APE, and there is limited potential for the APE to contain intact archaeological deposits. No other notable evidence of Indian or historic use or occupation has been identified or documented in the Project area.

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 archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

Jacobs (2018b) conducted background research (including ethnographic records, archeological and historical records, environmental data, and LiDAR imagery from WADNR), archaeological monitoring of geotechnical borings, and a field survey to determine if the APE is at risk of impacting any existing cultural resources. Research and fieldwork were conducted by archaeologists that meet the Secretary of Interior's Professional Qualifications for archaeology (Jacobs 2018b).

The Project was screened by the King County Historic Preservation Program for the presence of cultural and historic resources within the project area and the probability of an inadvertent discovery of cultural resources during project construction. This screening included a review of historic registers, databases including the DAHP records database ("WISAARD"), historic maps and reports, and predictive GIS modeling.

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 Project will comply with the requirements of the National Historic Preservation Act, particularly the requirements for consultation under Section 106 of the Act. The Section 106 consultation process will include the preparation and approval of an archaeological monitoring and inadvertent discovery plan that will be implemented during project construction to ensure that the Project complies with all applicable regulations pertaining to cultural and historic resources. No other specific measures are proposed to reduce impacts to cultural or historic resources given that no cultural or historic resources have been identified within the APE.

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 area generally parallels I-90 from the City of Mercer Island to the City of Bellevue. At the west end, NMPS can be accessed from SE 22nd St. 76th Ave SE. Proceeding east, the conveyance pipeline on Mercer Island follows 78th Ave. SE, SE 24th St., 81st Ave. SE., N.

Mercer Way, Shorewood Drive, SE 89th Place SE, 90th Place SE, and via E. Mercer Way and Frontage Road to the Mercer Island Boat Launch area. In Bellevue, access from I-90 is primarily via Bellevue Way SE, with other connections to the Project via 108th Ave SE, SE Lake Road, 113th Ave. SE, and SE 34th St. as well as others (See Figure 1).

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?

Mercer Island Park and Ride is located southwest of the proposed pipeline alignment. There are two bus stops adjacent to the park and ride: N Mercer Way and 80th Ave SE- Bay 1 and Bay 2. Bay 1 currently serves routes 201, 204, 216, 550, 554, 630, and 989. Bay 2 currently serves routes 892 and 981 in addition to the routes served by Bay 1. Additionally, route 894 extends across City of Mercer Island, and there is a stop located at SE 26th St & 82nd Pl SE and multiple stops adjacent to the alignment along N Mercer Way. Within Mercer Island, minimal impacts to public transit are anticipated. The project area within the City of Bellevue is currently served by public transit. Impacts to traffic and public transit in Bellevue area are expected to be minimal as Project work will not be occurring directly in through streets (Jacobs 2018a).

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

Street parking throughout the proposed pipeline alignment will be temporarily impacted by construction activities at various times. These impacts will generally be limited to the time it takes the contractor to complete work in specific segments of the Project. However, some shoulder parking on North Mercer Way (between SE 26th Street and SE 35th St) will be impacted for a longer duration as it will serve as a bike/detour route while work is being done along portions of the I-90 Trail. Approximately half of the parking at the Mercer Island Boat Launch, and all of the parking at the Enatai Beach Park and the Sweyolocken Boat Launch, will be temporarily impacted by construction activities at various times (Jacobs 2018a). The construction of a new access road to allow for maintenance of the new structures at Enatai Beach Park could result in the loss of two existing parking spaces at the park, although that will not be confirmed until the completion of the final design.

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).

No improvements to existing roads and streets are proposed for the Project other than what is required by WSDOT and the Cities of Bellevue and Mercer Island to restore portions of streets where excavation is necessary.

Sections of the I-90 Trail that are excavated during Project construction will be restored in accordance with applicable WSDOT requirements and site constraints. At a minimum, the trail will be restored to its existing width. To the extent feasible, however, the trail will generally be restored to meet the WSDOT trail width standard of 12 feet with 2 feet of gravel on both sides. For pedestrians and bicycling facilities, the Aubrey Davis Park Master Plan, which is currently in progress, will be developing a comprehensive plan for programmatic improvements along the I-90 Trail (a portion of the Mountains-to-Sound Greenway) along the pipeline alignment.

Coordination meetings with the project team have taken place with both the Cities of Mercer Island and Bellevue and WSDOT, and other potential trail improvements and/or restoration will continue to be discussed as details of the Master Plan are developed and made available.

A new access road will be constructed in Enatai Beach Park (beneath the overhead spans of I-90) to provide maintenance access to the new odor control vault. King County has been coordinating the road design with the Bellevue Parks Department to address Enatai Beach Park Master Plan considerations.

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

Project construction will occur near public water access facilities at Mercer Island Boat Launch, Enatai Beach Park, and the Sweyolocken hand held boat launch. See the response to B.12.b for more details. In-water construction will occur within navigable areas of Lake Washington.

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?

Vehicular tips generated by the Project following completion are anticipated to remain similar to the current number of occasional trips associated with operation and maintenance of the facilities as noted in response to B.8.i.

Truck traffic generated by the Project during construction will vary based on the different Project components. The construction of the Mercer Island conveyance pipeline is anticipated to require the most truck traffic for a sustained period of time; however, this will occur in localized work segments involving an estimated 13 to 21 truck trips per day. The average daily truck trips for work on other Project components are generally anticipated to be lower.

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.

No, the Project will not 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:

Pipeline construction will be transient in nature with the contractor generally completing construction within a local area as they advance along the alignment (i.e., rolling work zones). This will lead to construction activities being concentrated in a specific area for a relatively short portion of the total construction duration and then moving on to an adjacent segment of street or series of streets. While work is being completed within a particular area, vehicular, pedestrian, or bicycle traffic may need to be controlled through the work zone using traffic control devices, flaggers, and/or using a detour. Construction will generally occur during the normal work hours allowed by the local permitting agencies (WSDOT, City of Mercer Island, or City of Bellevue). Traffic will be flagged through work zones during construction. Flagging,

signage, and lane closures during construction hours will be used to detour vehicle traffic and pedestrians (Jacobs 2018a).

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.

No, the Project will not increase a need for public services.

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

Not Applicable

16. Utilities

a. Circle utilities currently available at the site:
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other

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.

The purpose of the Project is to upgrade existing sanitary sewer service on north Mercer Island and Bellevue through modifications to existing sewer infrastructure in order to meet regional wastewater system requirements projected through the year 2060. Other utilities now serving the existing Project components will continue to be used. There will be electrical service upgrades, additional electrical connections at various locations along the new pipeline, and additional temporary electrical service during construction. Puget Sound Energy is the electricity service provider. Impacts to other non-Project utilities during construction will be avoided to the extent possible; however, appropriate measures will be taken in consultation with relevant service providers to protect, temporarily relocate, and restore their affected utilities, as needed, in order to avoid or minimize service interruptions.

King County is also coordinating with the City of Mercer Island to include their installation of a fiber optic cable along a segment of the new pipeline alignment under the I-90 Trail 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: Katherine Fischer

Katherine Fischer, Environmental Programs Managing Supervisor
King County WTD

Date Submitted: 5/13/19

D. REFERENCES

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Appendix A. King County Greenhouse Gas Emissions Worksheet

Section I: Buildings

Type (Residential) or Principal Activity (Commercial)	# Units	Square Feet (in thousands of square feet)	Emissions Per Unit or Per Thousand Square Feet (MTCO2e)			Lifespan Emissions (MTCO2e)
			Embodied	Energy	Transportation	
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

Section II: Pavement

Pavement		14.54				727

Total Project Emissions: 727

Note: King County calculated CO2 emissions for this project based on the following general project parameters (for the Building Type "Other"): "Buildings that are industrial or agricultural with some retail space; buildings having several different commercial activities that, together, comprise 50 percent or more of the floorspace, but whose largest single activity is agricultural, industrial / manufacturing, or residential; and all other miscellaneous buildings that do not fit into any other category."
You can find more details on how CO2 emissions were calculated at
http://www.kingcounty.gov/depts/permitting-environmental-review/info/SiteSpecific/ClimateChange.aspx