

MEMORANDUM FOR: RECORD

August 2, 2018

SUBJECT: TIER 1 DETERMINATION REGARDING THE SUITABILITY OF PROPOSED EXCAVATED AND DREDGED MATERIAL FROM THE DISCOVERY CLEAN WATER ALLIANCE SALMON CREEK TREATMENT PLANT OUTFALL PROJECT, WITH INWATER DISPOSAL AND UPLAND DISPOSAL OPTIONS

1. Introduction. This memorandum documents the Tier 1 (existing information) evaluation by the Dredged Material Management Program (DMMP) agencies (U.S. Army Corps of Engineers, Washington Departments of Ecology and Natural Resources, and the Environmental Protection Agency) of the Discovery Clean Water Alliance (DCWA) Salmon Creek Treatment Plant Outfall (SCTP) project. This analysis determined that existing information is sufficient for determining the suitability of proposed disposal options, and that no further testing is necessary for DMMP purposes.

2. Project. The DCWA proposes to construct a new outfall and pipeline for discharge of treated effluent to the Columbia River near River Mile (RM) 96 (Figure 1). The proposed pipeline involves excavation and backfill in three different waterbodies: Salmon Creek, Lake River, and the Columbia River main stem (Figures 2 and 3). Round Lake and Curtis Lake—also in the pipeline path—are dry during the summer when work is expected to take place. Excess sediment from the Salmon Creek and Lake River trenches will be disposed upland. The construction for the outfall diffuser Columbia River will involve excavation by open trench proceeding from the shore into the river. The existing outfall diffuser and riprap cover will be removed and the riverbed backfilled with native sediment. Excess material from the Columbia River terminus will be placed in-water in the vicinity of the diffuser (Table 1).

3. Tier 1 Evaluation. The DMMP evaluates the suitability of sediment for in-water disposal based on applicable federal and state law, including the Clean Water Act (CWA). A Tier 1 evaluation is a comprehensive analysis of all readily available existing information, including site history and previously collected physical, chemical and biological data, to determine if additional information is required to make a determination. In this case the evaluation is of backfill material in all three in-water excavation locations, and for in-water placement for excess material in the Columbia River.

Section 404 of the CWA includes provisions for exclusion from testing based on Tier 1 evaluations. Potential exclusion situations occur most commonly "if the dredged material is composed primarily of sand, gravel and/or inert materials; the sediments are from locations far removed from sources of contaminants, or if the sediments are from depths deposited in preindustrial times and have not been exposed to modern sources of pollution." Testing may also not be necessary "where the discharge site is adjacent to the excavation site and subject to the same sources of contaminants, and materials at the two sites are substantially similar "(40 CFR 230.60(c)).

Existing evidence evaluations for each location are summarized below:

a. Salmon Creek

- No sediment or water quality data exist in the Ecology's Environmental Information Management (EIM) database from Salmon Creek within the project footprint (Ecology, 2018).
- Nearest cleanup site is a Superfund site more than five miles from the project site, with cleanup completed in the 1990s.

- There are no known sources adjacent to the project footprint.
- Excavated sediments will either be used as backfill onsite or trucked to upland location. Sediments that remain onsite satisfy CWA testing exclusion for “substantially similar” materials.

b. Lake River

- Sediment samples collected in 2007 near the proposed effluent pipeline crossing in Lake River yielded no detections of PCBs or pesticides freshwater sediment screening levels (Ecology, 2007).
- There are no known sources adjacent to the project footprint.
- Excavated sediments will either be used as backfill onsite or trucked to upland location. Sediments that remain onsite satisfy CWA testing exclusion for “substantially similar” materials.

c. Columbia River

- Sediment data from a 2016 study conducted by DCWA for lease purposes indicated that COCs in sediments from the vicinity of the current outfall diffuser are less than Ecology’s freshwater sediment quality values. Sampled sediments from 4 locations were predominantly fine sands with a total organic carbon content of less than 0.5 percent. None of the samples had detectable levels of total sulfides, pesticides, or PCBs.
- Treated wastewater from the Salmon Creek Treatment Plant is managed under NPDES permit # WA0023639. Since 2012, the only violations under this permit were two exceedances of 85% design criteria warnings for total suspended solids (in February and April 2017). These violations were addressed and did not trigger any permit action.
- For projects up to a moderate rank, the DMMP User Manual (DMMP 2016) recommends <1,000 CY as a “no test” volume. With approximately 385 cy of excess sediment expected for this segment, the in-water disposal volume can be considered a no-test project under small project guidelines.
- The location proposed for the new outfall diffuser is deeper than the current location, approximately 200 feet upstream and 150 ft further offshore than the existing outfall. Due to the dynamic environment of this area of the lower Columbia River, there is no reason-to-believe that sediment quality in the proposed location would be worse than that documented in the 2016 study at the existing diffuser site. The DMMP concludes that the existing data from the current outfall location is sufficient to characterize the new location. No additional testing is required to characterize sediments that will be excavated by trenching in the vicinity of the new diffuser, and all material is suitable for in-water placement, as backfill or at another permitted in-water location.

4. Tier 1 Determination. Based on the information provided above, the DMMP agencies have determined that sufficient information exists to require no further testing for the proposed project.

This determination does *not* constitute final agency approval of the project. During the public comment period that follows a public notice, resource agencies will provide input on the overall project. A final decision will be made after full consideration of agency input, and after an alternatives analysis is done under section 404(b)(1) of the Clean Water Act.

Table 1. Proposed work at waterbody crossings. Adapted from CH2M 2018.

Pipeline Segment Water Body Crossing	Estimated Excavation and Fill	Proposed Disposal for Excavated Material
Salmon Creek Crossing	The contractor will excavate approximately 2,053 cy of stream bottom from a trench averaging 12 feet deep for pipe installation. About 1,455 cy of the trench backfill will be imported: pipe, pipe bedding (379 cy), pipe zone material (379 cy), and angular stone (428 cy) to stabilize and protect the effluent pipe. The remainder of the backfill will be native sediment.	Some of the sediment excavated from trenches in Lake River and Salmon Creek will be reused in the trench backfill to restore pre-construction grades within the channels. The excess material that can't be reused in the river trench for Lake River or Salmon Creek would be trucked and disposed of in a dedicated disposal area for the project. Any excess sediment excavated from Lake River and Salmon Creek is expected to be disposed at an off-site "approved upland disposal site" even if it is suitable for open water disposal. Exact disposal location will be determined based on sediment evaluation.
Lake River Crossing	The contractor will excavate approximately 2,397 cy of stream bottom from a trench averaging 14 feet deep for pipe installation. About 1,456 cy of the trench backfill will be imported: pipe, pipe bedding (380 cy), pipe zone material (380 cy), and angular stone (428 cy) to stabilize and protect the effluent pipe. The remainder of the backfill will be native sediment.	
Outfall Diffuser Terminus in Columbia River	The contractor will excavate approximately 588 cy of Columbia River stream bottom from a 13-foot-deep, on average, trench for pipe installation. About 385 cy of the trench backfill will be imported: pipe/diffuser, granular bedding (101 cy), pipe zone material (101 cy), and angular stone (Class 50 riprap; 113 cy) for pipe stability and protection. The remainder of the backfill will be native sediment. Additionally, the existing outfall diffuser will be removed and the riverbed backfilled with native sediment.	Approximately 385 cy of excess trench sediment (fine to medium sands) will be placed downstream (north) of the trench. There may be a need to place the some excess material offshore and downstream of the diffuser site--likely in the scour hole off the end of the Willow Pile Dike. This could be necessary to avoid material from covering the functioning existing diffuser.

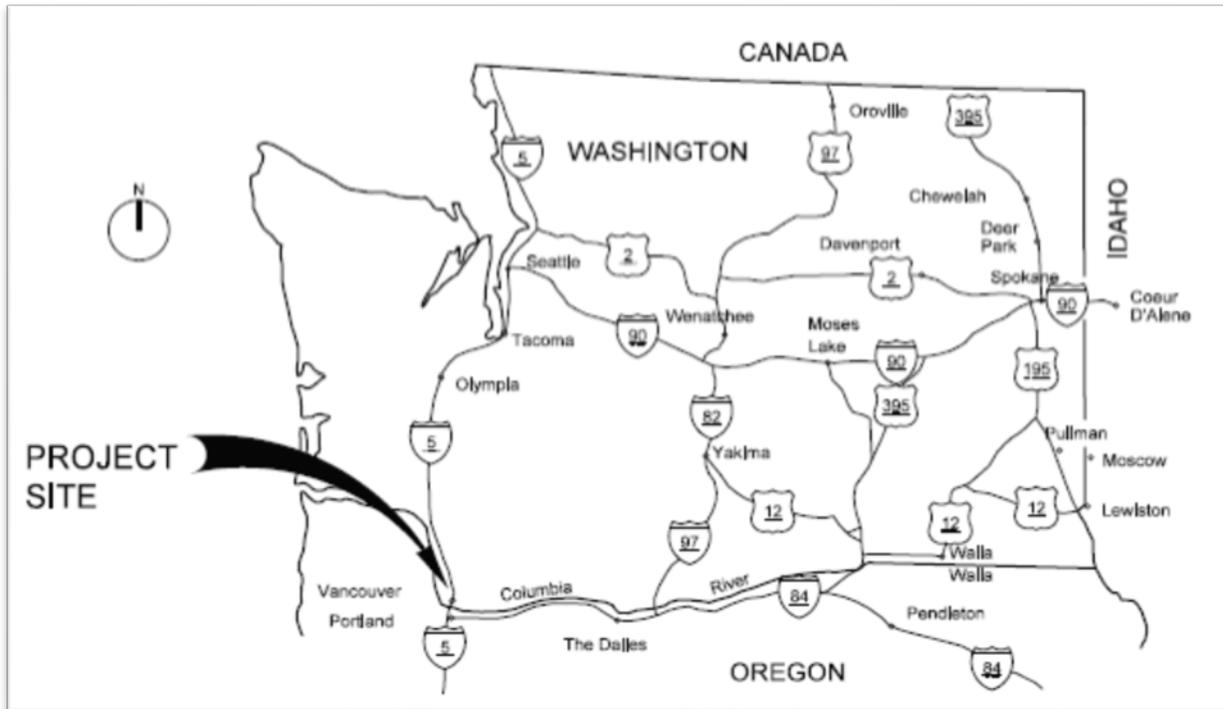


Figure 1. Project Location

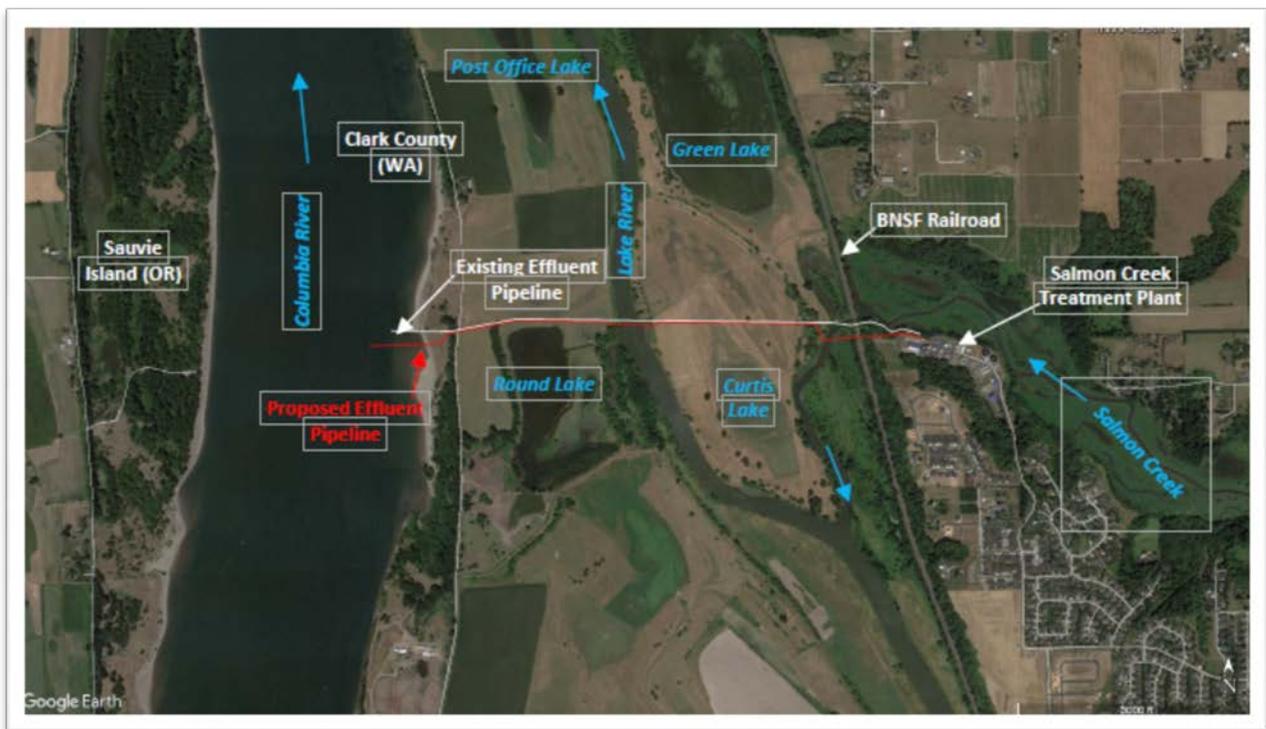


Figure 2. Overview of Salmon Creek Treatment Plant, Effluent Pipeline, and Outfall Location on the Columbia River at River Mile 96. Source: CH2M modified from Google Earth, 2016

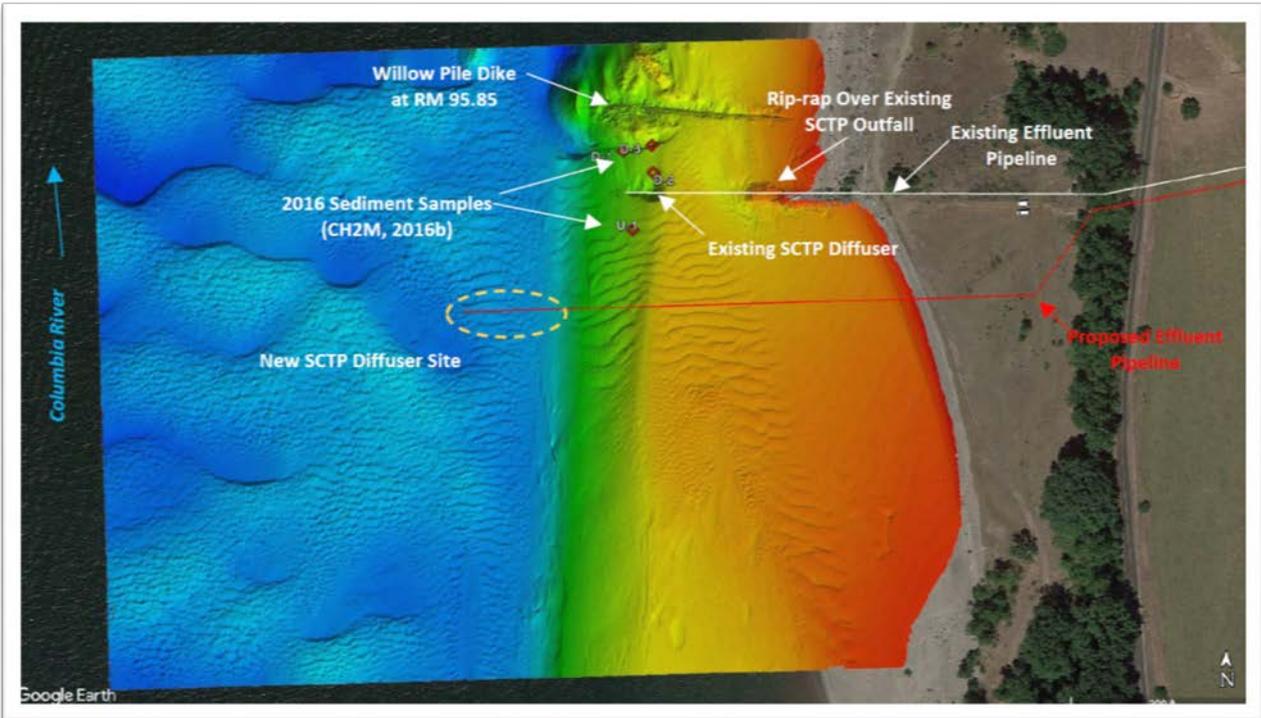


Figure 3. Columbia River Outfall with Bathymetry and 2016 Sediment Samples (CH2M 2018).

5. References.

- CH2M 2018. *Columbia River Outfall and Effluent Pipeline Project Sediment Characterization: Tier 1 Evaluation and Site History--Draft Technical Memorandum*. Prepared for: Seattle District Dredge Material Management Office, by Erin Thatcher and Carrie Andrews (CH2M). July 5, 2018
- DMMP 2016. *Dredged Material Evaluation and Disposal Procedures (User Manual)*. Dredged Material Management Program, updated August 2016.
- Municipal NPDES Individual Permit No. WA0023639 for the Salmon Creek Wastewater Treatment Plan, issued 12/22/1980.
- Washington Department of Ecology (Ecology). 2018. "EIM – environmental monitoring data." In: *Environmental Information Management* online database. Accessed July 2018.
<https://ecology.wa.gov/Research-Data/Data-resources/Environmental-Information-Management-database>.

6. Agency Signatures.

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Copies Furnished:

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DMMP agencies
USACE Regulatory
DMMO File