SEATTLE PUBLIC UTILITIES
SEPA ENVIRONMENTAL CHECKLIST

This State Environmental Policy Act (SEPA) environmental review of Seattle Public Utilities' (SPU) Cedar River Sockeye Hatchery Broodstock Collection Facility (BCF) Replacement Project has been conducted in accordance with Washington SEPA regulations (Revised Code of Washington [RCW] 43.21C), SEPA regulations (Washington Administrative Code [WAC] Chapter 197-11), and the City of Renton (City) SEPA ordinance (Renton Municipal Code [RMC] Section 4-9-070).

A. BACKGROUND

1. Name of proposed project:

Cedar River Sockeye Hatchery Broodstock Collection Facility Replacement Project

2. Name of applicant:

Seattle Public Utilities

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

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4. Date checklist prepared:

September 29, 2020

5. Agency requesting checklist:

Seattle Public Utilities

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

The proposed project would be constructed in two phases, with Phase 1 in 2022 and Phase 2 in 2023. Phase 1 consists of all work on the south side of the Cedar River and includes all upland work and construction of approximately half of the concrete sill extending from the south bank of the river to just past mid-channel. Phase 2 includes in-water construction of the north half of the concrete sill, facilitated from Cedar River Park on the north bank.

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 planned additions, expansions, or activities associated with the proposal.

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

- Seattle Public Utilities. 2003 (March). *Final EIS, Cedar River Sockeye Hatchery Project*.
- McMillen Jacobs Associates. 2019 (November 18). Engineering '*No Rise' Certification Technical Memorandum*.
- Seattle Public Utilities. 2019 (June). *Draft Geotechnical Report, Cedar River Hatchery BCF Replacement Project*.

Materials Not Available for Public Review

- Cascadia Archaeology. 2008 (May). *Cultural Resources Assessment, Cedar River Sockeye Broodstock Site*. (This document is exempt from disclosure under the State of Washington's Public Records Act [RCW 42.56.300]).

Permitting Materials (these may be updated during design)

- Confluence Environmental Company. 2020 (August). *Biological Assessment, Cedar River Broodstock Collection Facility Replacement*.
- Confluence Environmental Company. 2020 (August). *Critical Areas Report, Cedar River Broodstock Collection Facility Replacement*.
- McMillen Jacobs Associates. 2020 (January). *Draft Drainage Report SPU Broodstock Collection Facility Retrofit (Revision No. # 1, 60% Draft)*.

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.

The proposal would affect City-owned parcel 1723059014, acquired in 1993 with grant funding provided by the Washington State Recreation and Conservation Office (RCO). That funding history requires this property to be maintained in perpetuity for public recreation use. In 2008, through coordination led by the City, RCO confirmed construction of a boat ramp and access road to support temporary and seasonal BCF activities would support recreational use of the site overall and would not constitute a taking. Recreational use of this property would not change as a result of the proposal. SPU will coordinate with the City and RCO to update an existing Memorandum of Agreement to reflect proposed site changes.

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

All or some of the following permits or approvals would be required before project construction can commence:

<u>U.S. Army Corps of Engineers (USACE)</u>

- Clean Water Act Section 404 – Nationwide Permit 4, Fish and Wildlife Harvesting, Enhancement and Attraction Devices and Activities

<u>U.S. Fish and Wildlife Service and/or National Marine Fisheries Service (NMFS)</u>

- Endangered Species Act (ESA) Section 7 – Consultation and Biological Opinion

<u>Washington State Department of Archaeological and Historic Preservation</u>

- National Historic Preservation Act Section 106 – Concurrence

<u>Washington State Department of Ecology (Ecology)</u>

- Clean Water Act Section 401 Water Quality Certification (WQC) – certification provided under Nationwide Permit 4, unless Ecology determines an individual WQC is required

Washington Department of Fish and Wildlife (WDFW)

- Hydraulic Project Approval

Washington Department of Natural Resources (DNR)

- Aquatic Use Authorization for DNR-Managed Aquatic Lands

Washington State Department of Transportation (WSDOT)

- Right-of-entry or other property right to access WSDOT right-of-way for Interstate 405 (I-405)

City of Renton

- Shoreline/Land Use Permit
- Grading Permit

11. Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

SPU constructed and operates the Cedar River Sockeye Hatchery in Landsburg, Washington, as a mitigation commitment identified in the multi-agency Landsburg Mitigation Agreement (2000). The Hatchery mitigates for SPU's decision to prevent passage of sockeye salmon (*Oncorhynchus nerka*; a fish species not native to the Lake Washington/Cedar River system) into Seattle's Cedar River Municipal Watershed above the City of Seattle's Landsburg Diversion Dam at River Mile 21.4. Through an agreement with SPU, WDFW operates the SPU owned sockeye salmon Hatchery and associated BCF on the Cedar River. The BCF is a sockeye salmon collection structure consisting of a weir and fish trap that captures adult sockeye salmon. The existing BCF consists of an access road and 1.5 CY of gravel sandbags and an associated wire cable on the bed of the Cedar River. Picket panels and a trap box are attached to the cable each year when the BCF is in operation. WDFW collects salmon from this trap and transports them to the Hatchery for artificial breeding. At the Hatchery, WDFW incubates sockeye salmon eggs and releases marked unfed sockeye fry into the Cedar River so they can volitionally out-migrate and rear naturally in Lake Washington.

SPU has identified a project that would replace the existing BCF and construct ancillary improvements at the project site at River Mile 1.7 on the Cedar River in Renton, Washington. The existing BCF is not meeting performance goals and must be replaced to do so. The project has two primary components: (1) work in the Cedar River required to construct the replacement BCF, and (2) adjustments to existing shoreline facilities to facilitate BCF operation. The replacement BCF would improve fish collection capabilities, worker safety, and installation/removal method conditions that are problematic or inefficient with the existing facility.

Benefits of the Replacement BCF

The replacement BCF would improve conditions compared to the existing facility:

- *Improved fish collection capabilities.* The replacement BCF has been designed to operate in higher velocity river flows. This would allow the BCF to function later into the year, providing a longer duration for fish collection and increased fish genetic diversity.

- *Improved worker safety.* The replacement picket panels can be remotely lowered/raised for cleaning from an upland area along the south bank, rather than forcing workers to enter the Cedar River to remove debris.
- *Improved installation/removal methods.* The replacement BCF includes a permanent concrete sill designed for easily attaching and detaching the picket panels.

In-Water and Over-Water BCF Components

The replacement BCF would provide an improved weir system that includes a permanent concrete sill with an embedded electric actuator lift system that lowers and raises a series of picket panels (the picket weir) that direct migrating salmon to a trap box. Similar picket weir systems are shown in photographs in Attachment C. The replacement BCF would be constructed approximately 20 feet upstream of the existing weir alignment. The shift in weir location is needed to accommodate the two construction seasons. Also, building the weir upstream allows the existing BCF to be operated during construction of the replacement BCF.

Improved Weir System and Concrete Sill

The proposal includes a channel-spanning concrete sill installed in the bed of the Cedar River. The sill would be approximately 21 feet wide to accommodate the approximately 20-foot-long picket weir. Boulders would be placed to a depth of 4 feet and would extend approximately 8 feet upstream and downstream of this concrete sill to armor the sill and prevent scour.

Summary of In-Water Project Components		
Concrete sill	Constructed in riverbed	Approximately 84 feet long by 21 feet wide by 4 to 8 feet deep
Boulders	Placed upstream and downstream of concrete sill, and along retaining wall	8 to 16 inches in diameter; approximately 150 cubic yards (CY) total
Picket weir	Seasonally attached to concrete sill	Approximately 20 feet long by 3 feet wide and comprised of a series of individual picket panels

New Trap Box/Access and Debris Deflector

The replacement BCF includes a larger aluminum trap box to collect and temporarily hold fish in the river flow until they can be removed for transport. The trap box includes a floor that can be raised and lowered with a hand winch to facilitate fish collection without workers entering the river or the trap. As the floor is lifted, fish in the trap would centralize within a neoprene trough for collection. The trap box would also contain a hand-operated lifting trap bypass gate that can be raised to allow non-targeted fish, such as Chinook salmon (*O. tshawytscha*), to bypass the trap box and continue swimming upstream.

Additionally, a debris deflector panel would be installed upstream of the trap box to protect fish and the trap box from downstream drifting debris. The debris deflector panel would be anchored by T-bars in a triangle shape pointing upstream. Debris encountering the panel would be redirected away from the trap box toward the weir.

Summary of Over-Water Project Components		
Trap box	Seasonally installed upstream of concrete sill, above water	Approximately 15 feet long, 6 feet wide (10 feet wide with walkway), and 7.5 feet tall
Gangway	Seasonally installed between trap box and shoreline, above water	Approximately 30 feet long by 2 feet wide
Debris deflector	Seasonally installed upstream of trap box, at water surface	Two approximately 7.5-foot-long by 6-foot-tall panels

In-Water Components That Support Shoreline Facilities

The shoreline at the project site is subject to natural erosion by the Cedar River; a flood event in early 2020 reshaped a portion of the south bank just upstream of the existing and proposed BCF. Project design addresses these erosive forces. A concrete retaining wall would be constructed in the riverbed along the base of the reconfigured boat ramp to protect the boat ramp from scour. This wall would begin approximately 3 to 4 feet below riverbed (varies in depth) and would transition in height to be flush with the boat ramp elevation as it extends approximately 9 feet upstream. This would provide additional scour protection for the boat ramp and would offer support for a Grasscrete-style pad located immediately upland.

Summary of In-Water Components Supporting Shoreline Facilities		
Concrete retaining wall	Constructed at waterward edge of boat ramp, in-water	Approximately 30 total linear feet long (includes about 21 linear feet below riverbed when along the boat ramp/concrete sill and about 9 linear feet when extending upstream, flush with elevation of the boat ramp)

Upland Boat Ramp and Access Road Improvements

Upland components of the project would facilitate installation and removal of the picket panel system and trap box each year and operation of the BCF when the picket weir and trap box are in the river. This includes reconfiguration of the boat ramp, moving it approximately 20 feet east of its current location so that it is in-line with the new concrete sill. That former boat ramp area would then be restored with native vegetation.

The access road leading to the boat ramp would be widened or replaced to support the larger crane class needed for BCF installation and removal. A Grasscrete-style turnaround would be established at the top of the boat ramp to support movement of equipment. A Grasscrete-style pad would be established adjacent to the east side of the boat ramp to support crane outriggers.

Other upland improvements include a new light pole directly east of the boat ramp. The light would be used only during emergencies or to improve safety during operations at dark. A control panel for the electric actuators/lift system would be affixed to the new light pole.

Annual Installation, Operation, and Maintenance

All operable components of the replacement BCF (including the picket weir system, gangway, trap box, and debris deflector) would be installed/removed annually; installation would occur in early September and removal would occur in December, except for the picket weir, which would be left in a lowered position against the concrete sill for removal before early July.

At a minimum, accumulated sediment and debris would need to be removed twice yearly before picket weir removal and prior to picket weir installation. Accumulated sediment and debris would be removed manually with a shovel or similar tool, with a portable airburst-type system, and/or with a combination of raising and lowering the pickets. In addition, maintenance may include up-to-weekly raising of the picket panels a few inches off the lowered position to dislodge accumulated sediment and debris. This up-to-weekly maintenance practice would substantially reduce the amount of accumulated sediment and debris usually removed during the twice-yearly maintenance.

In September, after the sill has been cleared, the picket panel system would be mounted to the concrete sill. The trap box and debris deflector panel would be installed by crane. A temporary detachable gangway would be installed to provide access to the trap box. Annual installation/removal of these components, including equipment staging, would be conducted from the boat ramp on the south bank.

During operation, the electric actuator lift system would lift or lower the picket weir from the upland control area on the south bank. The weir may also be lowered to allow Chinook salmon passage or for cleaning. While the weir is raised, sockeye salmon would be collected in the trap box until the capacity for the measured water depth is reached, or when maximum holding times are reached, and fish must be removed. The Biological Assessment prepared for the project includes additional detail on holding times and NMFS-provided criteria. Fish handling, including removal or release from the trap box and transport to the Hatchery, would continue to meet NMFS criteria and would not change from existing operations.

Construction Description

Project construction is planned in two phases: Phase 1 in 2022 and Phase 2 in 2023. The existing BCF would be operated as usual between phases. In-water work is proposed from June 1 through August 31 each year, which would require a one-month extension to the usual agency-approved in-water work window (July 1 to August 31). Upland work is not confined to the work window, but is generally expected to coincide with in-water activities or be phased just before and after. A summary of construction impacts is provided below.

The primary staging/laydown area for construction would be established in the existing Cedar River Trailhead parking lot. During Phase 1, the existing access road would be widened by 3 feet or replaced, and the existing boat ramp would be reconfigured to align with the new concrete sill; a portion of the existing boat ramp would be removed. Grasscrete-style pavers would be installed at the side of and at the top of the boat ramp. Other ancillary improvements include installation of one light pole and trenching for placement of electrical conduit. Vegetation surrounding the areas of upland (riparian) improvement on the south bank would be cleared; clearing would be limited to the minimum necessary to support construction.

Phase 1 also includes construction of the south half of the concrete sill, extending from the south bank of the river to just past mid-channel. Phase 2 includes in-water construction of the north half of the concrete sill, facilitated from the Cedar River Park.

Construction below the ordinary high water mark (OHWM) of the River would occur during both phases within a cofferdam system. In addition to placement of the concrete sill, this in-water work would include placement of scour-protection boulders and construction of a retaining wall on the south bank, waterward of the reconfigured boat ramp.

Summary of Construction Impacts

PROJECT ELEMENT	RIPARIAN IMPACT (ABOVE OHWM) [1]		IMPACT BELOW OHWM[2]	
	TEMP.	PERMANENT	TEMP.	PERMANENT
Vegetation clearing, including removal of 2 mature cottonwood trees (area restored after construction)	3,733 SF	1,628 SF total	n/a	n/a
Access road widening (new impervious surface)	0	419 SF	n/a	n/a
Boat ramp reconfiguration (1,148 SF of new impervious surface)	0	957 SF	n/a	35 CY in 191 SF
Restoration of old boat ramp configuration (654 SF of existing impervious surface removed)	n/a	-115 SF	n/a	-539 SF
Concrete retaining wall and Grasscrete-style pavers (414 SF)	n/a	369	0	12 CY concrete, backfill over 45 SF
Cofferdam installation and removal; 465 linear feet (LF) (6,228 SF Phase 1; 3,495 SF Phase 2)	n/a	n/a	Up to 930 CY of supersacks or similar	0
Excavation to construct sill, retaining wall, and reconfigured boat ramp	n/a	n/a	610 CY; 3,200 SF	0
Sill (1,764 SF footprint) and boulder/backfill placement (1,486 SF)	n/a	n/a	n/a	1,764 SF requiring 100 CY concrete. 1,486 SF requiring 471 CY aggregate, backfill, boulders

[1] In square feet (SF). [2]In square feet (SF) and cubic yards (CY).

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 site is at River Mile 1.7 of the Cedar River in Renton, Washington, immediately upstream of WSDOT's I-405 bridge over the Cedar River. Development would occur in the Cedar River and along its south bank on City-owned parcel 1723059014. There is no site address associated with this parcel. The project is in the SW quarter of Section 17, Township 23N, Range 5E. A vicinity map is provided in Attachment A. Project layout is depicted in Attachment B.

Work would also occur on WSDOT-owned parcel 1723059179 where development would widen an approximately 120-foot-long segment of an existing access road by approximately 3 feet. The existing parking lot on the parcel would be used temporarily for construction staging. SPU would coordinate with WSDOT to obtain approval and required access agreements. Construction access/staging would also occur on the north side of the river on City-owned parcel 1723059013 (Cedar River Park) and in WSDOT right-of-way for I-405.

B. ENVIRONMENTAL ELEMENTS

The 2003 *Final Environmental Impact Statement for the Cedar River Sockeye Hatchery Project* (EIS) included evaluation of potential impacts from construction and operation of a BCF at the project site. While the BCF was a relatively minor component of the EIS, construction of the replacement BCF would be consistent with the type and extent of temporary impacts described in the EIS. Operation of the replacement BCF would be consistent with the description provided in the EIS, including the weir design that includes a channel-spanning concrete sill. No new environmental impacts are anticipated from the replacement BCF beyond those identified in the EIS. Additional information on the following environmental elements is found in the EIS; that analysis, the findings, and details are not recapitulated here.

1. Earth

a. General description of the site:

☒ Flat ☐ Rolling ☐ Hilly ☒ Steep Slopes ☐ Mountainous
☐ Other:

The south shoreline of the Cedar River is naturally terraced and contains City-designated steep slopes, which slope down to a flat area along the river where most of the proposed development would occur. The portion of the project site on the north shoreline is flat and consists of developed park land.

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

The steepest slope on the project site is approximately 76 percent. This slope is located directly south of the existing boat ramp and is a vegetated slope that would not be impacted by construction.

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.

According to the U.S. Department of Agriculture Web Soil Survey (https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm), the project site contains riverwash and urban land (fill material). Fill material in this area was likely placed during realignment of the river channel in the early 1900s, construction of the I-405 bridge in 1962, and alteration of the bridge in 1994. Neither of these soil types is suitable for agricultural purposes. Geology and soils at the site have not measurably changed since the 2003 EIS and would not be significantly impacted by construction or operation of the replacement BCF.

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

The project site is in a high seismic area but not within an erosion hazard area. The City's online GIS map also maps portions of the upland parcel south of the Cedar River with sensitive (25 to 40 percent) and protected (40 to 90 percent) slopes. Slope stability would not be significantly impacted by construction or operation of the replacement BCF.

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

Construction would clear approximately 5,500 SF and excavate approximately 150 CY of earth from riparian (upland) areas, of which approximately 1,628 SF would be permanently replaced with proposed civil site improvements. The remaining 3,733 SF

of temporarily disturbed ground would be restored in-kind (to natural riparian conditions) upon completion of construction.

Construction would excavate approximately 610 CY from a 3,200 SF area below the OHWM of the Cedar River of which approximately 1,461 SF would be permanently replaced with proposed civil site improvements (concrete sill and ancillary in-water project elements). The remaining 1,739 SF of temporarily disturbed riverbed would be backfilled with excavated spoils and boulders and cobbles.

Permanent placement of an estimated 1,000 CY of fill would be required for project construction (approximately 190 CY of upland fill and 775 CY of fill placed below the OHWM). Fill material would consist of gravel aggregate, 8- to 16-inch-diameter boulders, and concrete (including Grasscrete-style pavers), all of which would be sourced from local commercial providers.

Collectively (above and below the OHWM), project construction would affect approximately 8,700 SF, excavate 760 CY of earth, permanently place about 1,000 CY of fill, and permanently alter 3,089 SF of riparian and aquatic habitat.

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

Construction would temporarily disturb soils and remove vegetation adjacent to and in the Cedar River. These activities could result in minor erosion. To minimize potential for erosion, the project would implement erosion and sediment control best management practices (BMPs) contained within a project-specific Temporary Erosion and Sediment Control (TESC) Plan and a Stormwater Pollution Prevention Plan (SWPPP). Once project construction is complete, disturbed areas would be restored to preconstruction conditions or better. The completed project would not increase the potential for erosion compared to the existing conditions at the site.

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

Approximately 3,910 SF of impervious surfaces exist at the project site. Project construction would increase impervious surfaces by approximately 1,628 SF. New impervious surfaces would consist of concrete (including Grasscrete-style pavers) required for the access road widening or replacement and boat ramp reconfiguration. These shoreline features constitute 13 percent of the approximately 1-acre shoreline parcel; however, the site extends across the Cedar River channel. Concrete elements below the OHWM were excluded from these impervious surface totals.

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

To reduce and control earth impacts and erosion during construction, the project would implement these BMPs:

- Disturbed areas would be permanently restored as soon as possible following completion of construction.
- Construction impacts would be confined to the minimum area necessary to complete the project.
- Clearing limits would be clearly flagged to prevent disturbance outside these limits.
- Vegetation would be grubbed only from areas undergoing permanent alteration. No grubbing would occur in areas slated for temporary impacts.

- Additional BMPs as identified in a project-specific TESC Plan and SWPPP would be implemented. BMPs in these plans would be used to control sediments from all vegetation removal or ground-disturbing activities. Examples of applicable BMPs include silt fences, wattle, compost socks, ditch check dams, seeding and mulching, and stabilized construction entrances.

Project design also includes measures to avoid and minimize long-term erosion, including scour protection upstream and downstream of the concrete sill and along and upstream of the boat ramp.

2. Air

a. What types of emissions to the air would result from the proposal (*e.g.*, dust, automobile, odors, industrial wood smoke, greenhouse gases [GHG]) during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Mobile and stationary equipment would be used for project construction and would generate emissions due to the combustion of gasoline and diesel fuels (such as oxides of nitrogen, carbon monoxide, particulate matter and smoke, uncombusted hydrocarbons, hydrogen sulfide, carbon dioxide, and water vapor). Emissions during construction could also include dust from grading activities and exhaust (carbon monoxide, sulfur, and particulates) from construction equipment; these emissions are expected to be localized and temporary.

Construction of the proposal would produce greenhouse gases (GHGs) in two ways: embodied in the proposed gravel aggregate and concrete work, and through construction activity (as described above). Total GHG emissions for construction of the proposal are estimated to be approximately 468.3 metric tons of carbon dioxide emission ($MTCO_2e$). The GHG emission calculations are shown in Attachment D and described in the table below.

The completed project would also generate GHG emissions (primarily through combustion of gasoline and diesel fuels) during annual operation and maintenance of the replacement BCF. Operation and maintenance projections assume the replacement BCF is operated and maintained for 50 years. The estimated total GHG emissions generated from operations and maintenance over the 50-year design life of the facility are 2,439.38 $MTCO_2e$.

Summary of Greenhouse Gas Emissions

Activity/Emission Type	GHG Emissions (pounds of CO_2e)[1]	GHS Emissions ($MTCO_2e$)[1]
Aggregate and concrete	387,061.6	175.57
Construction activities (Diesel)	576,454	261.48
Construction activities (Gasoline)	68,891	31.25
Long-term operations and maintenance activities (Diesel)	4,269,240	1,936.49
Long-term operations and maintenance activities (Gasoline)	1,108,688	502.89
Total GHG Emissions	6,410,304.6	2,907.68

[1] Note: 1 metric ton = 2,204.6 pounds of CO_2e. 1,000 pounds = 0.45359237 metric tons of CO_2e

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

There are no known off-site sources of emissions or odors that could negatively affect the proposal.

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

During construction, impacts to air quality would be reduced and controlled through implementation of standard federal, state, and local emission control criteria and City construction practices. These include use of best available control technologies, proper vehicle maintenance, minimizing vehicle and equipment idling, and use of hydraulic or electric models of impact tools such as jackhammers. In addition, the project would implement dust control measures during earthwork, including but not limited to water application to exposed soil surfaces and covering soil stockpiles to minimize fugitive dust.

3. Water

a. Surface:

(1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If so, describe type and provide names. If appropriate, state what stream or river it flows into.

The project site encompasses a portion of the Cedar River at River Mile 1.7 and adjacent upland parcels. The Cedar River is a major tributary to Lake Washington.

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

The entire project, as described in Section A.11 above, is in the Cedar River and within 200 feet of the OHWM.

(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.

In-water excavation is required for the water-dependent project components below the OHWM. This includes the permanent concrete sill in the bed of the Cedar River, the concrete retaining wall along the base and upstream of the boat ramp, and most of the Grasscrete-style pad. Once in-water excavation is complete, concrete, aggregate, and boulders would be placed in the Cedar River for constructing and backfilling the concrete sill, retaining wall, scour protection, and Grasscrete-style pad.

Construction would excavate approximately 610 CY from a 3,200 SF area below the OHWM of the Cedar River of which approximately 1,461 SF would be permanently replaced with proposed civil site improvements (concrete sill and ancillary in-water project elements). An estimated 775 CY of fill would be permanently placed below the OHWM. Fill material would consist of gravel aggregate, 8- to 16-inch-diameter boulders, and concrete (including Grasscrete-style pavers), all of which would be sourced from local commercial providers.

Up to 930 CY of aggregate-filled supersacks could be deployed temporarily as part of a cofferdam system during construction. That cofferdam system would be deployed along a total of 465 LF over 6,228 SF in Phase 1 and over 3,495 SF in Phase 2. The cofferdam could be established as long as three months during the agency-approved in-water construction window in each construction phase.

Once the replacement BCF project is complete, accumulated sediment and debris would need to be removed twice yearly from the picket weir and concrete sill, before weir removal and prior to weir installation. In addition, ongoing routine maintenance may include raising the weir a few inches off the lowered position on an up-to-weekly frequency to dislodge accumulated sediment and debris. This maintenance practice would substantially reduce the amount of accumulated sediment and debris to be moved off the BCF during the twice-yearly maintenance. During maintenance, sediment would not be removed from the river but pushed downstream with a shovel or other tool, with an air-burst type system, or by raising and lowering the weir. Typical deposition may range from 3 to 6 inches, but large flood events could deposit substantially more sediment and debris. For every foot of sediment and debris accumulation on the concrete sill, 65 CY of material would be moved downstream. This sediment management activity would comply with local, state, and federal regulations.

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

In-water work would be conducted within a temporary cofferdam system. The temporary cofferdam is expected to be a PortaDam, AquaBarrier, Bulk-Bag (supersack), ecoblock/sandbag, or sheetpile system installed with a vibratory hammer, or other similar cofferdam system. A cofferdam system would be installed (and removed) during each phase of the proposed work, with Phase 1 occurring on the south bank of the Cedar River during the 2022 in-water work window and Phase 2 occurring on the north bank during the 2023 in-water work window. The cofferdam would extend to just beyond the middle of the river, allowing for continued river flow.

Once the cofferdam system is in place, the work area within the cofferdam would be dewatered. This includes dewatering after the cofferdam is installed and continuous dewatering while in-water work is conducted. Initial dewatering water would be discharged directly to the Cedar River.

During construction, water collected within the cofferdam system would be settled, filtered, and then discharged to the Cedar River. Any water that has come into contact with cementitious material would be considered process water and would be either treated before discharge or disposed of off-site. Otherwise, if collected water is not suitable for discharge it would be contained and then discharged to upland areas or disposed of off-site. All discharge would be monitored to ensure that it meets State of Washington water quality criteria.

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

According to the Federal Emergency Management Agency (FIRM panel 53033C0977F) and the City's online GIS map, the project site is in the 100-year floodplain.

(6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

The proposal would not discharge waste materials into the Cedar River; the proposal's effects on stormwater runoff are addressed below.

b. Ground:

(1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

The proposal would not withdraw groundwater for drinking water or other purposes and would not discharge water or other materials to groundwater. The project area lies atop the Cedar Valley Aquifer, which is the primary source of the City of Renton's municipal water supply. The City's four Downtown wells are in Liberty and Cedar River parks within one quarter-mile of the project area. This Aquifer was designated a sole source aquifer by the Environmental Protection Agency in 1988 to reflect that the aquifer supplies at least 50 percent of the drinking water for its service area and there are no reasonably available alternative drinking water sources should the aquifer become contaminated. This Aquifer is susceptible to contamination because there is no confining layer between the land surface and the aquifer.

(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.

The proposal would not require discharge of any waste material to groundwater.

c. Water Runoff (including storm water):

(1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

During construction, potential sources of stormwater could include runoff entering the project site during ground-disturbing activities. This could result in discharges of sediment-laden stormwater to the Cedar River. However, the potential for this would be low because the project would implement BMPs from an SPU-approved TESC Plan and SWPPP.

Long-term stormwater management would be consistent with existing site conditions. According to the City, drainage facilities are not required for projects resulting in less than 5,000 SF of new-plus-replaced pollution-generating impervious surfaces and less than ¾ acres of new pollution-generating pervious surfaces. The proposal falls below the drainage facility requirement threshold because

approximately 1,628 SF of new impervious surface is proposed. Therefore, no new drainage facilities are proposed.

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

Waste materials are not expected to enter the Cedar River during construction. The project would implement BMPs identified in a project-specific TESC Plan, Spill Prevention, Control, and Countermeasure (SPCC) Plan, and SWPPP to contain stormwater, minimize potential erosion from disturbed areas, and avoid sediment-laden water from reaching the Cedar River.

Once construction is complete, potential for waste materials to enter the Cedar River would be low. Areas disturbed by construction would be either improved with new surfaces or restored with native vegetation to preconstruction conditions; this would minimize potential for waste materials or sediment-laden runoff to enter surface waters.

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

The proposal would have no measurable impact to existing upland drainage patterns. Approximately 1,628 SF of new impervious surfaces would be constructed. This is a minor increase in impervious surfaces, amounting to approximately 3.7 percent of the parcel, which is otherwise vegetated and allows for stormwater infiltration.

Within the river, the concrete sill would not have an adverse impact on hyporheic flow. The hyporheic zone extends down and around the sill and water could continue to flow downstream—under, around, and over the concrete sill.

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

The following BMPs would be implemented during construction to avoid and minimize potential impacts to surface water:

- To minimize the release of sediment laden water from upland construction, a SWPPP would be prepared and implemented.
- Work below the OHWM would be confined within a cofferdam.
- To minimize disruption to river flows, a cofferdam would be installed in each in-water construction phase. The SPU-approved cofferdam plan would allow for river flow around the cofferdam during each phase.
- To minimize handling of fish, fish would be herded out of and excluded from re-entering the cofferdam area before its completion.
- A dewatering plan would be prepared and implemented to avoid the commingling of river water and uncured concrete.
- Before, during, and immediately after isolation and dewatering of the in-water work area, fish from the isolated area would be captured and released using methods minimizing risk of fish injury, in accordance with approved protocols for such activities.
- A visual monitoring program would be implemented to monitor turbidity during construction.

- Water within the cofferdam would be settled and then discharged to the Cedar River. If it is not suitable for discharge, it would be contained and then discharged to upland areas or otherwise disposed of off-site.
- Construction equipment operated waterward of the OHWM would use biodegradable oil.
- Cedar River flows would be monitored throughout construction using USGS gage 12119000 (Cedar River at Renton), upstream of the project site. During flow events approaching the 5 percent exceedance flow for June (1,319 cubic feet per second), equipment and materials would be moved off the access pads until waters subside.
- All construction activities would comply with water quality standards set forth in the State of Washington Surface Water Quality Standards (WAC 173-201A). Process water would be treated to meet applicable water quality standards before discharge or will be disposed of off-site.
- All construction activities would comply with conditions of the applicable USACE permit, Ecology Water Quality Certification, and WDFW Hydraulic Project Approval.
- Concrete washout areas would comply with WSDOT specifications, which requires washout areas to be located a minimum of 50 feet from surface waters.
- Only clean and imported material would be used in-water, as needed, to prevent scour at the concrete sill and improved boat ramp.
- All work below the OHWM would be completed during the agency-approved in-water work window and will fully comply with all environmental permits and other authorizations.
- The contractor would prepare a SPCC Plan prior to beginning construction. The SPCC Plan would identify appropriate spill containment materials to be available at the project site, as well as specify what to do and who to contact when spills occur. The SPU-approved SPCC Plan would provide site- and project-specific details identifying potential sources of pollutants, exposure pathways, spill response protocols, protocols for routine inspection fueling and maintenance of equipment, preventive and protective equipment and materials, reporting protocols, and other information according to contract specifications.
- The contractor would prepare a Water Quality Monitoring and Protection Plan (WQMPP) to ensure state water quality standards are maintained through construction and that discharges to surface waters do not exceed numerical criteria for the Cedar River.
- As part of the WQMPP, all equipment to be used for construction activities would be cleaned and inspected prior to arriving at the project site to ensure no potentially hazardous materials are exposed, no leaks are present, no invasive species are being transported, and the equipment is functioning properly. Should a leak be detected on heavy equipment used for the project, the equipment would be immediately removed from areas within or immediately adjacent to the OHWM mark of waterbodies.
- A concrete truck chute cleanout area or equally effective BMP would be established to properly contain wet concrete.

- Uncured concrete and/or concrete byproducts would be prevented from coming in contact with streams or water conveyed directly to streams during construction
- Excavated material would be removed to an upland location that would prevent its re-entry into waters of the state.
- A compensatory mitigation plan would be prepared to compensate for unavoidable adverse impacts to the aquatic and riparian environment, consistent with all applicable environmental regulations. The mitigation plan would be implemented following review and approval by regulatory agencies as part of the USACE Section 404 permitting process. See Section B.5.d for more information.

4. Plants

a. Types of vegetation found on the site:

☒ Deciduous trees:	☒ Alder	☒ Maple	☐ Aspen	☒ Other: Sitka willow, black cottonwood
☐ Evergreen trees:	☐ Fir	☐ Cedar	☐ Pine	☐ Other:
☒ Shrubs				
☒ Grass				
☐ Pasture				
☐ Crop or grain				
☐ Orchards, vineyards, or other permanent crops				
☐ Wet soil plants:	☐ Cattail	☐ Buttercup	☐ Bulrush	☐ Skunk cabbage
☐ Other:				
☐ Water plants:	☐ water lily	☐ eelgrass	☐ milfoil	☐ Other:
☒ Other types of vegetation: Japanese knotweed, English ivy, and Himalayan blackberry				

The south bank includes a narrow vegetated riparian zone, paved access to the river for the existing BCF, a regional bike trail, and open fields. It is generally characterized by a high terrace sloping steeply down to a narrow flood terrace along the Cedar River in the vicinity of the BCF. Vegetation in the riparian zone below the high terrace consists of a mix of native and non-native species. Native vegetation includes, but is not limited to, an overstory of bigleaf maple (*Acer macrophyllum*), black cottonwood (*Populus balsamifera*), and red alder (*Alnus rubra*) with an understory of red osier dogwood (*Cornus sericea*), snowberry (*Symphoricarpos albus*), beaked hazelnut (*Corylus cornuta*), Indian plum (*Oemleria cerasiformis*), and western redcedar (*Thuja plicata*). Invasive species include Japanese knotweed (*Polygonum cuspidatum*), English ivy (*Hedera helix*), and Himalayan blackberry (*Rubus armeniacus*).

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

Vegetation removal would be the minimum necessary for the proposed improvements to the access driveway and boat ramp. By constructing the permanent civil site improvements including the boat ramp, crane outrigger Grasscrete-style pad, the turning area Grasscrete-style pad, and the access road widening or replacement, the project would permanently impact 1,628 SF in the riparian buffer. To construct these permanent civil site improvements, the project would temporarily clear 2,300 square feet. The temporary cleared area is mostly unvegetated or sparsely vegetated with invasive Himalayan blackberry, but would include removal of up to two mature black cottonwoods.

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

There are no known federally listed endangered or threatened plant species or state-listed sensitive plant species on or near the project site.

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

The project site is entirely in critical area buffers. The proposal would restore temporarily disturbed areas in the riparian buffer using native plant species. The proposal would also restore 654 SF of area where the existing boat ramp would be removed. Compensatory mitigation would offset permanent impacts to the riparian buffer to ensure no net loss of ecological function.

A mitigation plan has been prepared to compensate for project impacts to the aquatic and riparian environment. SPU proposes a combination of on- and off-site mitigation to address 1,461 SF of unavoidable permanent impacts to aquatic habitat. A combined on- and off-site mitigation approach is required to satisfy both local and federal requirements. Onsite mitigation would consist of a combination of aquatic and riparian elements. A large woody material complex is proposed along ordinary high water on the gravel bar approximately 150 feet upstream of the proposed BCF to provide aquatic habitat complexity along the shallow channel margin.

Additionally, approximately 6,680 SF of proposed riparian habitat enhancement would remove invasive species and install native trees and shrubs to offset 1,628 SF of unavoidable permanent impact to riparian habitat. Areas subject to temporary disturbance during construction, including removal of a portion of the existing boat ramp, would also be restored with native vegetation to preconstruction conditions once construction is complete (3,733 SF).

To further compensate for impacts to the aquatic environment, SPU proposes to purchase compensatory mitigation credits from King County's In-Lieu Fee (ILF) Mitigation Program (which operates under King County's Mitigation Reserves Program). Consistent with guidance from USACE, purchasing credits from the ILF Program was determined to be the preferred approach to off-site compensatory mitigation.

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

Invasive vegetation known to occur on the project site includes Japanese knotweed, English ivy, and Himalayan blackberry.

5. Animals

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

Birds:	☒ Hawk	☒ Heron	☒ Eagle	☒ Songbirds
☐ Other:				
Mammals:	☒ Deer	☐ Bear	☐ Elk	☒ Beaver
☐ Other:				
Fish:	☐ Bass	☒ Salmon	☒ Trout	☐ Herring
☐ Shellfish	☒ Other: steelhead trout, lamprey			

Animals in the project area are those common to transitional environments between urban development and forest. In addition to the threatened or endangered fish species listed below, a variety of resident fish are present in the lower Cedar River, including several species of sculpin, mountain whitefish, northern squawfish, and western brook lamprey.

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

The Cedar River and Lake Washington provide habitat for several fish species protected under state and federal regulations. The table below lists the current state and federal status of species potentially found in the lower Cedar River and Lake Washington.

Species Name	2020 Federal Status	2020 State Status
Chinook salmon (*Oncorhynchus tshawytscha*)	Threatened	State Candidate
Coho salmon (*O. kisutch*)	Species of Concern	Species of Recreational, Commercial, and/or Tribal Importance
Sockeye salmon (*O. nerka*)	None	State Candidate
Bull trout (*Salvelinus confluentus*)	Threatened	State Candidate
Steelhead (*O.mykiss*)	Threatened	State Candidate
Pygmy whitefish (*Prosopium coulteri*)	None	State Sensitive
Other Species of Concern		
Coastal cutthroat trout (*O. clarki*)	None	Species of Recreational, Commercial, and/or Tribal Importance
Kokanee (*O. nerka*)	None	Species of Recreational, Commercial, and/or Tribal Importance
River lamprey (*Lampetra ayresi*)	None	State Candidate
Pacific lamprey (*L. tridentata*)	Species of Concern	None

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

The Cedar River is a migratory corridor for steelhead trout, sockeye salmon, kokanee, coho salmon, and Chinook salmon. Resident coastal cutthroat and bull trout are also documented in the Cedar River. The project purpose is to collect migrating sockeye salmon, and so the BCF is sited in this migratory corridor for fish. The project site is also within the Pacific Flyway—a flight corridor for migrating waterfowl, migratory songbirds, and other birds. The Pacific Flyway extends from Alaska to Mexico and South America.

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

In-water work is proposed from June 1 through August 31 each year, which would require a one-month extension to the usual agency-approved in-water work window (July 1 to August 31). Most in-water work would occur during July and August to avoid and minimize impacts to migrating juvenile salmonids. In addition, in-water work would

be isolated using a cofferdam system. A cofferdam system that does not require impact pile driving would be selected to avoid noise-related impacts to aquatic and terrestrial species.

The proposal includes measures to limit and mitigate construction and post-construction impacts to the aquatic and shoreline environments. To offset unavoidable permanent impacts on aquatic resource functions resulting from the disturbance of aquatic and riparian areas during construction, SPU will restore these areas to near preconstruction conditions using native plants and would remove and restore approximately 654 SF of existing boat ramp using native plants. The project's proposed compensatory mitigation is described in Part B.4.d, above.

The replacement BCF has been designed to minimize potential delay to fish migration that occurs from operation of the existing (or any) BCF. Protocols to minimize migration delay on the ESA-listed Chinook salmon have been established and are reviewed yearly; however, individual fish may exhibit a behavioral holding response upon encountering the weir or they may become delayed in the trap. To minimize this potential, open weir protocols and Chinook salmon release measures will be employed to allow free passage of Chinook salmon or release entrapped Chinook salmon from the box as quickly as possible. Potential effects to ESA-listed species are described in more detail in the project's Biological Assessment.

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

King County lists the European starling, house sparrow, Eastern gray squirrel, and fox squirrel as terrestrial invasive species that could occur in the general area. (http://www.kingcounty.gov/services/environment/animals-and-plants/biodiversity/threats/Invasives.aspx)

6. Energy and Natural Resources

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

The completed project would require minimal amounts of electricity to operate the picket weir; the lights on the south bank of the Cedar River would be used only for BCF operation during low-light conditions and in emergencies.

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

There are no structures immediately adjacent to the project site; the nearest structures are those in the Cedar River Park, on the north side of the Cedar River. Vertical elements associated with the proposal would be limited to one new light pole; this light pole would have no measurable effect on potential nearby solar energy use.

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:

The proposal would not result in adverse energy or natural resource impacts. No measures to reduce or control energy impacts are needed.

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:

Construction would require storage and use of small amounts of gasoline, diesel fuel, hydraulic fluids, etc. However, these materials are commonly used at construction sites and would not present a significant hazard. The completed project would not introduce environmental health hazards to the project site.

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

There are no known sources of contamination at the project site.

(2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

There are no known hazardous chemicals or conditions on the project site.

(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 would require use and storage of relatively small amounts of materials such as gasoline and diesel fuels, hydraulic fluids, oils, lubricants, and other chemical products. No toxic or hazardous chemicals would be stored, used, or produced at any time during the operating life of the project.

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

Fire and medical response services may be required in the event of an emergency during construction or during operation and maintenance of the completed project. However, the completed project would not result in higher levels of special emergency services than already exist in the project area.

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

The proposal would not encounter or result in temporary or permanent environmental health hazards; therefore, no environmental health hazard mitigation or control measures are required or proposed.

b. Noise

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

There are no existing sources of noise that would affect the proposal.

(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.

Construction would result in a short-term, temporary increase of noise levels in the project area. Construction-related noise is not expected to have a significant impact given the existing background noise from I-405. While construction noise may be

noticeable to recreational users, noise-related impacts to recreation are not anticipated. The City adopted Washington's noise regulations, which exempt noise produced at temporary construction sites during the normal working hours between 7:00 a.m. and 10:00 p.m. (WAC 173-60-050(3)(a)).

Noise associated with operation of the completed project would occur only seasonally, during installation and removal of the picket weir, trap box, gangway, and debris deflector. The completed project would not produce noise discernable over the existing background noise from I-405.

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

Impact pile drivers would not be used during project construction. This construction equipment emits high noise levels and would be disruptive to adjacent recreational uses. Construction equipment would be muffled in accordance with applicable laws, and construction hours would comply with limits prescribed by the City.

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.

Primary land use on the project site is the existing BCF. The BCF was constructed in 2008 as part of the Cedar River Sockeye Hatchery Program. Each year, the existing picket weir and appurtenances are installed shortly after Labor Day and removed when flows exceed approximately 550 cubic feet per second, around early November.

The project site also includes a concrete access road and boat ramp for non-motorized watercraft, located on City property on the south bank. The boat ramp provides public access to the shoreline, in accordance with an agreement between the City and the RCO. This boat ramp is also currently used by SPU and WDFW for seasonal access to the Cedar River during installation/removal and operation of the existing BCF.

Cedar River Park is located north of the project area. No development activities are proposed in the park, but it would be used for construction staging.

Temporary construction-related land use impacts could occur, including limiting the publicly accessible portion of the Cedar River to approximately half its width while cofferdams are deployed, precluding public access to the boat ramp on the south bank during Phase 1 work, and limiting publicly accessible areas of the Cedar River Park on the north bank during Phase 2. These impacts would be temporary and limited to approximately 10 total months over the 2-year duration of construction.

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?

There are no working farms or forest lands on or near the project site.

(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 proposal would not affect or be affected by normal business operations of working farms or forest lands because there are no designated agricultural or forest lands in the City.

c. Describe any structures on the site.

An access driveway and boat ramp were constructed along the shoreline of the project area in 2008 to support construction and seasonal installation and removal of the existing BCF. Three light poles were also installed in the vicinity of the boat ramp. The only permanent components of the existing BCF in the Cedar River are limited to 1.5 CY of gravel in sandbags and an associated wire cable on the bed of the Cedar River. On the north side of the river, a rock retaining wall forms a hardened shoreline between the Cedar River and the adjacent Cedar River Park.

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

Approximately 654 SF of the existing boat ramp would be demolished and restored to native vegetation after the boat ramp has been reconfigured.

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

The project site is in the City's Commercial Office Residential zone, which has a corresponding Urban Design District C overlay. The Cedar River does not contain a zoning designation or overlay district.

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

The comprehensive plan designation for the project site is Commercial Office Residential.

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

The proposal would occur in the Cedar River and in the 200-foot shoreline jurisdiction of the Cedar River, which is a Shoreline of the State subject to regulation by the City's Shoreline Master Program (SMP). According to the City's SMP, the shoreline environment designations for the project site include the Shoreline High Intensity shoreline environment on the north bank and the Urban Conservancy shoreline environment on the south bank. Portions of the project waterward of the OHWM of the Cedar River are in the Aquatic shoreline environment.

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

According to the City's GIS mapping tool, the project site contains these critical areas:

- Flood Hazard Areas: Portions of the parcel to the south and parcel to the north of the Cedar River are in the 100-year floodplain. The regulatory floodway of the Cedar River also overlaps with portions of parcels 1723059014 (south bank) and 1723059013 (north bank).
- Steep Slopes: The parcel south of the Cedar River is mapped with protected slopes (greater than 40 percent) and sensitive slopes (greater than 25 percent but less than 40 percent). The parcel to the north is mapped with sensitive slopes.
- Seismic Hazard Areas: The entire project site is mapped as being a high seismic hazard.

- Wellhead Protection Areas: The entire project site is in a wellhead protection zone, zone 1.

RMC 4-3-050(B)(1)(d) states Type S waterbodies inventoried as a Shoreline of the State are not regulated by the City's critical areas ordinance but by the SMP regulations in RMC 4-3-090. RMC 4-3-090(D)(2)(c)(iii) considers Shorelines of the State in the Urban Conservancy shoreline environment as a Class 1 fish habitat conservation area.

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

The completed project would not result in new residences or employment opportunities.

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

No people would be displaced by the completed project.

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

The proposal would not result in displacement impacts; therefore, no avoidance or reduction measures are proposed.

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

The proposal would not establish a new land use; rather, infrastructure would be improved to support the existing land use. In addition, the scale of the physical and operational characteristics of the replacement BCF would remain substantially the same as the existing BCF, which ensures that the proposal would not generate new compatibility issues. In 2008, the City confirmed that operating a BCF at this location is compatible with existing land uses by issuing a shoreline authorization.

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

The project would have no effect on agriculture or forest lands; therefore, no impact reduction or control measures are proposed.

9. Housing

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

The proposal does not include construction of permanent housing. However, during operation of the existing BCF, temporary housing in the form of a travel trailer on the south bank is provided to workers staffing the BCF. This practice would continue during seasonal operation of the replacement BCF.

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

The proposal would not eliminate existing housing units.

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

No housing impacts would occur; therefore, the proposal does not include housing impact reduction or control measures.

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?

When the replacement BCF is installed in the Cedar River, the all-aluminum trap box would be the tallest structure at 7.5 feet above the riverbed and approximately 3 to 5 feet above the water surface. Along the shoreline, one light pole would be installed. It would be made of square steel and be approximately 14 feet tall.

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

Since 2008, the existing BCF has become a seasonal feature of the visual landscape and is visited by community members to observe salmonid migration and fish-handling. The replacement BCF would continue to add interest to the visual landscape, and the above-water components of the project are consistent with the existing facility.

Construction would result in temporary aesthetic impacts while construction equipment is present and site work is being completed over 2 years.

Long-term, the completed project would not result in significant visual impacts on or off site when compared to existing conditions and operations. Permanent vertical project elements are limited to the installation of one light pole and the removal of up to 2 trees. The project would also result in an increase of approximately 1,628 SF of new impervious surfaces. The concrete sill installed in the river would not likely be visible at high flows, and at low flows, would largely be covered with accumulated sediment. Aesthetically, these improvements would be consistent with the existing site conditions/character of the area. Annual installation and removal of the seasonal BCF components would continue, similar to operation of the existing BCF. Therefore, the replacement BCF would not constitute a new aesthetic impact.

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

The project design was adjusted to avoid new structures in the visual landscape by minimizing the number of light standards and using Grasscrete-style paving where possible. Interpretive panels in Cedar River Park and the kiosk adjacent to the Cedar River Trail were installed in the viewshed of the BCF as a regulatory requirement in the approval of the existing BCF. These signs are expected to be updated as a regulatory requirement in the approval of the proposed BCF replacement.

11. Light and Glare

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

Construction would generally occur during daylight hours, but may occur at night. However, given the summer construction season significant supplemental construction lighting is not anticipated. If construction lighting is needed, lights would be downcast and focused on the construction zone to minimize spillover to the Cedar River and adjacent Cedar River Park.

Long-term light and glare impacts are not anticipated. There are three existing light poles on site. While one new light pole is proposed, the light would be used only during emergencies or if needed to improve safety during low-light conditions. The proposal would not produce adverse light or glare impacts.

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

The proposal would not produce light or glare on a scale that would constitute a safety hazard or interfere with views.

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

No significant sources of light or glare exist in proximity to the project site. Existing off-site sources of light or glare do not negatively impact the existing BCF and would not affect the replacement BCF.

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

To minimize artificial light on the shoreline, lights would be used only during emergencies or to improve safety during low-light conditions.

12. Recreation

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

Designated and informal recreational opportunities exist within the project area. The access driveway and boat ramp constructed in 2008 to support BCF operations also provide public access to the shoreline, in accordance with an agreement between the City and the RCO. SPU will coordinate with the City and RCO to ensure that public access is maintained in the project area when the BCF is not being operated.

The Cedar River provides recreational activities such as swimming, fishing, and kayaking, with peak use after Memorial Day and through Labor Day weekend. The Cedar River Trail located directly south of the project area provides visual and physical access to the river and walking, jogging, and biking. The Renton Community Center/Cedar River Park is located to the north and provides a picnic area, restrooms, ball fields, direct access to the Cedar River, fitness facilities, aquatic center, and a theatre.

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

Construction of the replacement BCF would temporarily interrupt recreational activities on the Cedar River. Construction-related disruptions to the public's normal use of the shoreline would be limited to a maximum of 10 total months over 2 years. During the construction period, signage would be posted to notify recreational users of project construction, directing them to exit the river and walk around the work area, consistent with the direction provided when the BCF is installed each year. Approximately half the width of the river channel in the project site would be open during construction, although recreation in this area is not advised due to public safety concerns.

Construction would also temporarily interrupt a segment of the Cedar River Trail where construction traffic would cross, and at the boat ramp along the south bank of the river. The project would provide signage and a passable detour for the public using the Cedar River Trail. The detour will be pedestrian-friendly and extend around the south side of the construction staging/work area. A portion of the Cedar River Park would also be inaccessible to the public during construction of Phase 2. However, only the minimum amount of space necessary would be occupied by construction equipment; staging would otherwise occur outside the Cedar River Park.

The Cedar River Trail parking lot would be temporarily closed during both phases of construction; while the trail would remain operational, vehicles would not be able to park at the trailhead during active construction. Access to the Cedar River Park via Houser Way/Cedar River Park Drive would be closed during Phase 2 of construction since construction staging would be established beneath I-405. This would avoid public transit in an active construction zone. Access to the Cedar River Park would not be impacted overall; park users would enter the park via the Maple Valley Highway entrance. A City-approved Traffic Control Plan (TCP) would be implemented to avoid/minimize transportation-related impacts associated with Phase 2 construction.

During operation of the BCF, potential recreational impacts would be consistent with existing conditions. The BCF is installed after Labor Day each year, following peak use of the Cedar River from recreational users. If recreational users are in the project site when the BCF is in use, they would be alerted by signage upstream, which directs them to exit the river and walk around the BCF. Additional signage would be installed at the boat ramp to communicate that boat launching cannot occur when the weir and trap are in operation. This would result in a slight interruption to watercraft travel in this area during non-peak recreation seasons. Impacts to watercraft traffic would be minimized through annual removal of overwater components of the replacement BCF at the end of the season each year, in December. At that time, the weir would be laid onto the concrete sill and removed before early July, when peak season use of the river begins. At the Cedar River Trail, pedestrians/bicyclists would experience brief and temporary delays while trucks hauling broodstock cross to and from the project area.

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

Measures to avoid and minimize potential project-related impacts to recreation within the project area are described above.

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.

There are no buildings, structures, or sites in the project area.

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.

An archaeological survey was conducted in the project area prior to construction of the existing BCF, boat ramp, and access driveway. The associated Cultural Resources Assessment describes that the project area contains historic fill, and the upland slopes have been altered through active river deposition and erosion of the floodplain. Therefore, it is unlikely that ground-disturbing work would encounter intact deposits of significant prehistoric or cultural material. The Cultural Resources Assessment is referenced in Section A.8 and is on file with SPU.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the Department of Archaeology and Historic Preservation, archaeological surveys, historic maps, GIS data, *etc.*

An archaeological survey was conducted by Cascadia Archaeology in 2008. No cultural or historic resources were identified at that time. SPU will engage the Tribes regarding ground disturbance during construction.

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.

Consistent with the 2008 construction of the existing facilities, an Inadvertent Discovery Plan will be prepared prior to construction and approved by SPU's cultural resources specialist. A copy will be maintained on site throughout the duration of work.

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.

Access to the project site is provided by the driveway serving the Cedar River Trail trailhead, located south of the project site. Access to the driveway is from South 3rd Street.

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?

Public transit does not directly serve the project site. The nearest King County Metro transit stop is approximately 800 feet west of the project site.

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

The proposal would not add or remove parking spaces.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

The existing access road down to the boat ramp would be widened by 3 feet or replaced to accommodate a larger class of crane required for annual BCF installation/removal. No other transportation improvements are proposed.

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

The proposal would not occur in the vicinity of commercial water or air transportation. The project site is approximately 300 feet upstream of a BNSF Railway branch line that services Boeing at the south end of Lake Washington. Construction access for Phase 2 would use Cedar River Park Drive that passes under this branch line with a 10-foot clearance limit. Also, I-405 is located approximately 100 feet south of the project area. SPU has engaged WSDOT to coordinate project construction activities with the proposed I-405 expansion.

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?

It is anticipated that project construction would result in approximately 1,302 round trips distributed over the 2 years of construction.

It is anticipated that approximately 521 round trips could be generated per year of completed project operation and maintenance; this projection includes the trips that would be generated by the existing facility if it operated for an additional 50 years and the additional trips generated by maintenance unique to the replacement BCF. The proposed BCF will require more round trip travel as compared to the existing BCF because the new facility will require regular displacement of sediment and debris from the sill, as described in sections A.11 and B.3.a.3.

The BCF does not generate vehicle trips when not in operation.

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.

Neither the proposal nor its construction would interfere with, affect, or be affected by the movement of agricultural and forest products on roads or streets.

h. Proposed measures to reduce or control transportation impacts, if any:

Construction would temporarily impact vehicle access to the Cedar River Trail parking lot and would require temporary closure of one ingress/egress point to the Cedar River Park. During both phases of construction, the access road to the Cedar River Trail trailhead parking lot would be closed to vehicles. While closure of this road would preclude vehicles from parking at the trailhead, the trail itself would remain open. In addition, a small segment of the Cedar River Trail at the head of the access road to the boat ramp would be temporarily rerouted around the upland staging area in the trailhead parking area. During phase 2 of project construction, access to the Cedar River Park via Houser Way/Cedar River Park Drive would be restricted to construction-related vehicles only. This would avoid public transit within an active construction zone. Access to the Cedar River Park would remain available via the Maple Valley Highway entrance.

These transportation-related impacts would be minimized/controlled through implementation of a City-approved TCP. Transportation control measures within the TCP would include but are not limited to placement of “Road Closed” barriers when vehicle access is restricted, installation of pedestrian-friendly detour signs that demarcate the temporary pathway of the rerouted Cedar River Trail, and coordination with the City to ensure that construction access and traffic will not present significant impacts to Cedar River Park. Construction workers and truck drivers would also be briefed regarding safe driving and the use of roads by pedestrians, bicyclists, and school children.

Following construction, the small amount of traffic generated by BCF operation is not expected to noticeably affect existing traffic volumes on the surrounding road network. Given that adverse transportation impacts are not anticipated, transportation-related reduction and control measures are not proposed.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

The proposal would not create an increased need for public services.

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

No reduction or control measures are proposed because no adverse impacts on public services would result from the proposal.

16. Utilities

a. Check utilities available at the site, if any:

☐ None
☒ Electricity ☐ Natural gas ☒ Water ☐ Refuse service
☐ Telephone ☐ Sanitary sewer ☐ Septic system
☐ Other:

Electricity is currently available at the project site and is used for BCF operation during low-light conditions and in emergencies. The City of Renton provides a domestic water service to the SPU trailer where WDFW staff stay during operation of the BCF. No other utilities are currently available or needed.

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 proposal would require installation of electrical conduit, extending from existing power sources on the site to the proposed concrete sill. Minor trenching work would be required to extend this utility; existing underground utility locations will be confirmed prior to excavation. Puget Sound Energy is the electrical service purveyor.

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: Fernando Platin Digitally signed by Fernando Platin Date: 2020.09.29 11:54:04 -07'00'

Fernando Platin, PE, Project Manager

LIST OF ATTACHMENTS

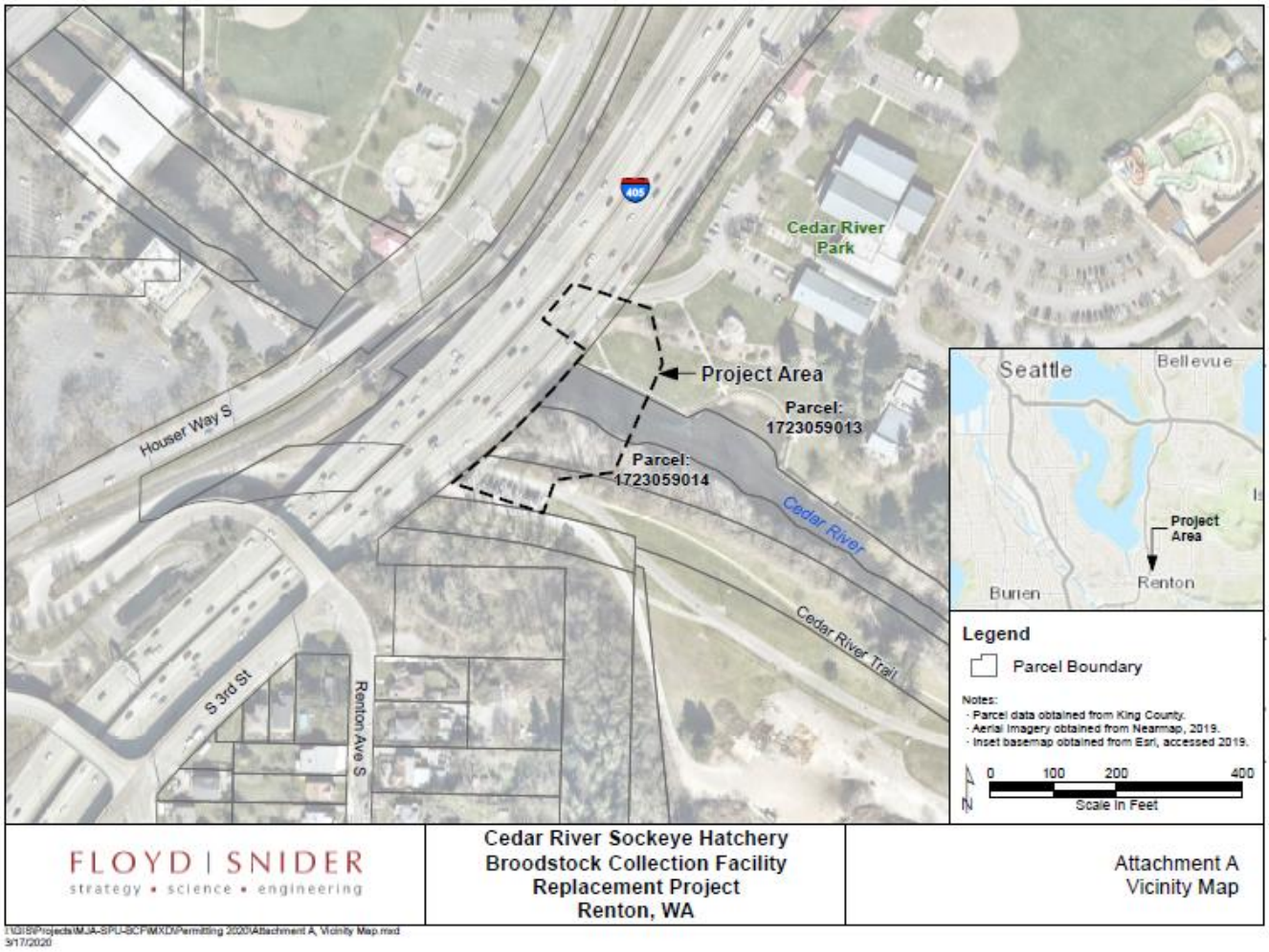
Attachment A: Vicinity Map

Attachment B: Project Layout

Attachment C: Photographs of Similar Picket Weirs

Attachment D: Greenhouse Gas Emissions Worksheet

Attachment A: Vicinity Map



Attachment B: Project Layout

Attachment C: Photographs of Similar Picket Weirs

Photograph 1. Picket weir at this fish collection facility is raised to impede fish passage. Location is undetermined.

Photograph 2. Picket weir at this fish collection facility on Lostine Creek (Lostine, Oregon) is raised to impede fish passage. Photograph from Bonneville Power Administration. 2013. Lolo Creek Permanent Weir and Fish Trapping Facility Preliminary Environmental Assessment. January. https://eplanning.blm.gov/public_projects/nepa/32708/42286/44944/Lolo_Draft_EA_508.pdf

Attachment D: 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 ($MTCO_2e$) Embodied	Energy	Transportation	Lifespan Emissions ($MTCO_2e$)
Single-Family Home	0		98	672	792	**0**
Multi-Family Unit in Large Building	0		33	357	766	**0**
Multi-Family Unit in Small Building	0		54	681	766	**0**
Mobile Home	0		41	475	709	**0**
Education		0.0	39	646	361	**0**
Food Sales		0.0	39	1,541	282	**0**
Food Service		0.0	39	1,994	561	**0**
Health Care Inpatient		0.0	39	1,938	582	**0**
Health Care Outpatient		0.0	39	737	571	**0**
Lodging		0.0	39	777	117	**0**
Retail (Other than Mall)		0.0	39	577	247	**0**
Office		0.0	39	723	588	**0**
Public Assembly		0.0	39	733	150	**0**
Public Order and Safety		0.0	39	899	374	**0**
Religious Worship		0.0	39	339	129	**0**
Service		0.0	39	599	266	**0**
Warehouse and Storage		0.0	39	352	181	**0**
Other		0.0	39	1,278	257	**0**
Vacant		0.0	39	162	47	**0**
					TOTAL Section I Buildings	**0**

Section II: Pavement

						Emissions ($MTCO_2e$)
Pavement (street, sidewalk, asphalt patch) or **concrete pad**, in thousands of square feet (0.05 $MTCO_2e$ per square foot of concrete)		3.5				175
Gravel aggregate, in cubic yards (import volume of material is converted to tons and multiplied by an emissions conversion factor of 0.0034 $MTCO_2e$ per metric ton of material; see note 1)		120				**0.57**
					TOTAL Section II Pavement	**175.57**

Section III: Construction

	Emissions ($MTCO_2e$)
(See detailed calculations below)	
TOTAL Section III Construction	**292.73**

Section IV: Operations and Maintenance

	Emissions ($MTCO_2e$)
(See detailed calculations below)	
TOTAL Section IV Operations and Maintenance	**2,439.38**

TOTAL GREENHOUSE GAS (GHG) EMISSIONS FOR PROJECT ($MTCO_2e$)	**2,907.68**

Attachment D: Greenhouse Gas Emissions Worksheet (continued)

Section III Construction Details		
Construction: Diesel		
Equipment	**Diesel (gallons)**	**Assumptions**
Mobilization/Demobilization: Lowboy/heavy equipment/tractor/trailer	810	27 round trips X 3 hours round trip X 10 gallons per hour
Site delivery: flatbed truck	420	42 round trips X 100 miles round trip / 10 miles per gallon
Generator	7,735	91 days of use X 10-hour days X 8.5 gallons per hour
Excavator	4,548	65 days of use X 7.5-hour days X 9.33 gallons per hour
Loader	4,022	65 days of use X 7.5-hour days X 8.25 gallons per hour
Dump truck	806	84 round trips X 3 hours round trip X 3.2 gallons per hour
Forklift	1,611	93 days of use X 3.30-hour days X 5.25 gallons per hour
Concrete mixer truck	360	15 round trips X 3 hours round trip X 8 gallons per hour
100-ton crane	1,400	28 days of use X 5-hour days X 10 gallons per hour
Subtotal Diesel Gallons	21,712	
GHG Emissions in lbs CO_2e	576,454	26.55 lbs CO_2e per gallon of diesel
GHG Emissions in metric tons CO_2e	261.48	1,000 lbs = 0.45359237 metric tons

Construction: Gasoline		
Equipment	**Gasoline (gallons)**	**Assumptions**
Personal commuter vehicles	2,835	1,134 round trips X 50 miles round trip / 20 miles per gallon
Subtotal Gasoline Gallons	2,835	
GHG Emissions in lbs CO_2e	68,891	24.3 lbs CO_2e per gallon of gasoline
GHG Emissions in metric tons CO_2e	31.25	1,000 lbs = 0.45359237 metric tons

Construction Summary		
Activity	**CO_2e in pounds**	**CO_2e in metric tons**
Diesel	576,454	261.48
Gasoline	68,891	31.25
Total for Construction	645,345	**292.73**

Section IV Long-Term Operations and Maintenance Details		
Operations and Maintenance: Diesel		
Equipment	**Diesel (gallons)**	**Assumptions**
Flatbed truck – BCF operation	800	4 round trips X 40 miles round trip / 10 mpg X 50-year design life of facility = 800 gallons over 50 years.
Fish haul truck – BCF operation	150,000	150 round trips X 4 hours round trip X 5 gallons per hour X 50-year design life of facility = 150,000 gallons over 50 years.
100-ton crane – BCF installation/removal	10,000	2 days of use per year X 10 hours use per day X 10 gallons per hour X 50-year design life of facility = 10,000 gallons over 50 years.
Subtotal Diesel Gallons	160,800	
GHG Emissions in lbs CO_2e	4,269,240	26.55 lbs CO_2e per gallon of diesel
GHG Emissions in metric tons CO_2e	1,936.49	1,000 lbs = 0.45359237 metric tons

Attachment D: Greenhouse Gas Emissions Worksheet, continued

Operations and Maintenance: Gasoline		
Equipment	**Gasoline (gallons)**	**Assumptions**
Personal commuter vehicle	45,625	365 round trips X 50 miles round trip / 20 miles per gallon = 913 gallons per year X 50-year design life of facility = 45,625 gallons over 50 years. This operational projection includes the trips that would be generated by the existing facility if it were capable for operating for an additional 50 years and the additional trips that would be generated by O&M unique to the replacement BCF.
Subtotal Gasoline Gallons	45,625	
GHG Emissions in lbs CO_2e	1,108,688	24.3 lbs CO_2e per gallon of gasoline
GHG Emissions in metric tons CO_2e	502.89	1,000 lbs = 0.45359237 metric tons

Operations and Maintenance Summary		
Activity	**CO_2e in pounds**	**CO_2e in metric tons**
Diesel	4,269,240	1,936.49
Gasoline	1,108,688	502.89
Total Operations and Maintenance	5,377,928	**2,439.38**

1. For purposes of estimating greenhouse gas emissions, the volume of gravel aggregate was converted to tonnage with a conversion factor of 1.4 metric tons (MT) per cubic yard. The tonnage was multiplied by the USEPA's estimated emissions rate, 0.0034 MTCO2e per MT of gravel/sand/clay production, as presented in the EPA's Spreadsheets for Environmental Footprint Analysis. Emissions associated with construction equipment used to construct the access road are presented in Section III.