

SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals:

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the [SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS \(part D\)](#). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. Background [\[HELP\]](#)

1. Name of proposed project, if applicable:

AI Helenberg Memorial Boat Launch Safety Improvements

2. Name of applicant:

City of Castle Rock

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

Dave Vorse, Public Works Director

360-274-7478
360 A Street
Castle Rock, WA 98611

4. Date checklist prepared:
July 28, 2020

5. Agency requesting checklist:
City of Castle Rock, Building and Planning

6. Proposed timing or schedule (including phasing, if applicable):
The project is proposed to be constructed in 2021 between July and September. Construction activities will be limited to daylight hours and from 7:00 a.m. to 6:00 p.m., Monday through Friday.

Upland work away from the shoreline will take approximately 1 month to complete and includes earthwork, grading, installing constructing the access roads, and installation and removal of temporary erosion control measures.

In-water work will occur within the current Cowlitz River work window between August 1 through August 15 per the Corps and WDFW. This work will include installation of temporary cofferdam, pile driving, concrete panel installation and installing riprap. The total in water work is expected to take approximately 10 days (2 work weeks).

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

A 10-year maintenance permit is included with this project to ensure that the new permit is obtained prior to expiration of the current permit. The City of Castle Rock maintains the boat launch area to ensure proper water depths for boat launching, which involves regular dredging of the sediments from within the Cowlitz River within the project area.

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

Ecological Land Services, Inc. (ELS). 2020. *Critical Areas Report and Habitat Management Plan for the Al Helenberg Memorial Boat Launch Safety Improvements, Castle Rock, Washington.*

Ecological Land Services, Inc. (ELS). 2020. *Bank Use Plan for the Al Helenberg Memorial Boat Launch Safety Improvements, Castle Rock, Washington*

Ecological Land Services, Inc. (ELS). 2020. *Alternatives Analysis for the Al Helenberg Memorial Boat Launch Safety Improvements, Castle Rock, Washington.*

Ecological Land Services, Inc. (ELS). 2020. *Biological Evaluation for the Al Helenberg Memorial Boat Launch Safety Improvements, Castle Rock, Washington.*

Ecological Land Services, Inc. (ELS). 2020. *JARPA for Al Helenberg Memorial Boat Launch Safety Improvements, Castle Rock, Washington.*

Ecological Land Services, Inc. (ELS). 2020. *Shoreline Substantial Development Permit Assessment for Al Helenberg Memorial Boat Launch Safety Improvements, Castle Rock, Washington.*

URS Corporation. (URS). 2007. *Cultural Resources Survey of the City of Castle Rock's Proposed Cowlitz River Boat Launch, Cowlitz County, Washington*. Prepared for City of Castle Rock. July 2008.

WEST Consultants, Inc. 2016. *Al Helenberg Boat Launch Velocity Reduction Structure Alternatives Analysis*. Prepared for Gibbs & Olson. November 1.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

No.

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

Critical Areas Permit– City of Castle Rock

Shoreline Substantial Development Permit – City of Castle Rock/Ecology

Section 10 Work in Navigable Waters - Corps

Hydraulic Project Approval - WDFW

Aquatic Land Use Authorization – DNR

Section 404 Water Quality Certification – Ecology

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The approximately 6-acre project area consists of the eastern portions of Cowlitz County Parcel Numbers 308770100 and 308800100 along the Cowlitz River adjacent to the Al Helenberg Memorial Boat Launch. This project proposes to construct a structure consisting of two reinforced 30-foot long cast-in-place concrete panels supported by a combination of vertical, diagonal, and battered-in H-piles. The panels are designed to improve safety at the boat launch by slowing the velocity of the water upstream while also maintaining adequate water velocity to minimize material deposition. The walls are proposed approximately 300 feet upstream of the launch, which will necessitate 1) construction of an access road to the work area (north maintenance access road) ; 2) installation of a steel sheet-pile cofferdam upstream of the work area; and 3) replacement of riprap on the riverbank in the project area.

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 approximately 6-acre project area consists of the eastern portions of Cowlitz County Parcel Numbers 308770100 and 308800100 along the Cowlitz River adjacent to the Al Helenberg Memorial Boat Launch. The boat launch is accessed by a driveway located at 5040 Westside Highway in Castle Rock, Washington, within in a portion of Section 10, Township 9 North, and Range 2 West, of the Willamette Meridian (Sheet 1).

B. Environmental Elements [\[HELP\]](#)

1. **Earth** [\[help\]](#)

a. General description of the site:

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

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

Approximately 35%

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.

Sand, ash, dredge spoils, riprap.

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

No.

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

Maintenance and Construction Access

Construction equipment will access the project area via the proposed north road, consisting of a gravel access road that is 275 feet long and 12 feet wide. The road will be constructed along the top of the riverbank, north of the boat launch. To install this maintenance access, 22 cottonwood trees will need to be removed. The approximately 3,600 square feet of riverbank immediately waterward of the north road will be prepared for construction access by the removal of the existing riprap and its replacement with new heavy loose riprap (see below). This area will function as access to the work area, a solid base for the excavators to track down the riverbank, and erosion control post project completion. Materials will also be lowered to the construction site using a crane. Silt fencing will be installed at the waterward edge of tree removal and the north access road (Sheet 3). Additional BMPs will be utilized to prevent construction impacts to the Cowlitz River (see Avoidance and Minimization Section). This road will remain following construction and used for maintenance access by the City. As part of this project, a second maintenance access road will be constructed south of the boat launch to provide direct access to the floating docks. The access road will be a 12-foot wide gravel road that extends approximately 215-feet from the existing parking area to the top of the riverbank. To install this maintenance access, 2 cottonwood trees will need to be removed. Stormwater generated on the south side road will be conveyed into the stormwater pond that currently provides storage function for the park. Silt fencing will be placed waterward of the work area to protect the river from impacts (Sheet 3). Approximately 110 cubic yards of gravel are expected to be required.

Temporary Cofferdam Installation and Removal

To allow for the installation of the concrete walls, a temporary cofferdam will be installed around the work area (Sheet 3). This cofferdam will be constructed of approximately 275 linear feet of steel sheet piles, which will be installed using excavator-mounted vibratory equipment. The selected contractor will develop a more specific cofferdam plan so other cofferdam systems may be utilized to isolate the work area, depending on actual field conditions at the time of construction. Vertical interlocking sheet piles (1-foot thick by 2 feet wide) will be vibratory driven to refusal at the assumed gravel layer approximately 30 feet below the mudline and then hammer

driven an additional 4 feet minimum as needed to reach the appropriate depth. A driving shoe¹ will be used at end of the piles for ease of driving the pile into the substrate and a confined bubble curtain will be used for installation of the cofferdam during hammer driving.

Once the cofferdam is fully installed, the work area will be dewatered to allow for wall construction in a dry environment. Fish exclusion will precede dewatering and will be conducted using block nets that are set upstream and downstream of the work area. The block nets will remain in place at least through cofferdam installation but may remain for the duration of the proposed work. River water removed from the cofferdam area will be pumped to a tank or temporary pond outside of all critical areas that will facilitate settling before it is release back into the river downstream of the project area.

After construction is complete, the temporary cofferdam will be removed utilizing the same equipment as was used for the installation. The steel sheets, equipment and remaining materials will be lifted from the riverbank utilizing a crane and the excavation equipment will track back up the riprapped bank.

The work area within the cofferdam will be dewatered using a pump that will force water through pipe up the riverbank and into a tank or pond. The water will be allowed to settle for at least 1 day before it is pumped from the tank or pond and piped for discharge into the river downstream of the work area.

Wall Construction

The two 30-foot long by 5-foot-thick concrete panels will be supported by 34 - W12x53 (12-inch x 53 lbs./foot) steel H-piles placed vertical, battered, and in-plane diagonal directions (Sheet 5). Installation of the vertical piles will be done using vibratory equipment and impact driving as necessary to a depth of approximately 34-feet below the existing mudline. Batter and in-line diagonal piles will be driven using vibratory equipment to refusal at the gravel layer. The gravel layer is assumed to be approximately 30 feet below mudline. If shallower gravel layer prevents the pile from being vibratory driven to the required depth, the engineer will be contacted to determine if the first refusal gravel layer will be sufficient or if hammer driving will be needed to reach the required depth. The 5 feet by 30 feet, 8-inch thick concrete panels will be cast in place.

Maintenance Dredging

The City maintains the boat launch area to ensure proper water depths for boat launching, which involves dredging the sediments from within the Cowlitz River. Sediment accumulates within the launch basin and alcove at a rate that necessitates regular maintenance dredging as described in the 2007 biological evaluation (URS 2007). The river was dredged in 2008 for construction of the current boat launch to create an alcove and launch basin for boat accessibility to the concrete launch lanes. Mitigation for dredging activities was completed at this time offsite at Whittle Creek. The City has been conducting dredging on a regular basis, which according to documentation from the City, has been conducted nine times over the past three years. The document also indicates that even though dredging has been conducted multiple times per year, the removed material does not exceed the originally specified 200 cubic yard annual maximum. Dredging is conducted using an excavator staged on the boat launch, which reaches into the basin to remove the accumulated sediment. It is loaded onto a dump truck and moved to an onsite upland location outside of the riparian zone in proximity to the river. Maintenance dredging is ongoing under the current permit

¹ A driving shoe is a cast or fabricated steel drive shoe which may be pointed and is fixed to the pile shaft at the tip for easier driving, improved penetration, protection against damage in dense material or boulders and improved bearing at the tip. Also called Driving Point, Drive Shoe, Pile Shoe or Conical Point.

which expires in March of 2022 and is expected to be necessary in the long term for which a new 10-year permit is requested.

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

The streambank is currently diked and lined with riprap. A cofferdam will be installed to dewater the work area to allow for construction in a dry environment. Erosion is not likely as the project will prepare the portion of streambank used for access by removing the existing riprap and replacing it with new heavy loose riprap to help minimize post construction shoreline erosion.

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

A total of 0.12 acres of new gravel will be installed to create construction and maintenance access to the site. When added to the area of the existing impervious surfaces within the project area it approximates to almost 30% of the site.

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

A cofferdam will be installed to dewater the work area to allow for construction in a dry environment. During construction disturbed soils will be stabilized by grading and compaction, and installation of temporary silt fence to avoid impacts to the river from erosion. Permanent erosion control of the site will include riprap stabilization of the riverbank and hydroseeding of the disturbed upland areas.

2. Air [\[help\]](#)

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

Only standard air emissions from construction vehicles and equipment is likely during the proposed project.

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

No.

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

All construction vehicles and equipment will be kept in proper working order and checked each day prior to work for leaks and other possible emission issues.

3. Water [\[help\]](#)

a. Surface Water: [\[help\]](#)

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

Yes. The Cowlitz River, a Type S (shoreline) and shoreline of statewide significance flows from north to south along the southeastern portion of the project area. The Toutle River is one of the largest tributaries to the Cowlitz River, with the confluence approximately 2.4 miles upstream of the site and the confluence of the Cowlitz River and Columbia River is approximately 17 miles downstream.

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

Yes. The proposed aquatic and riparian impacts to the Cowlitz River are unavoidable. The construction of the two 30-foot by 1.5-foot wall sections will permanently impact approximately 0.002 acres (90 sq. ft.) of stream channel below the ordinary high water mark (OHWM). In order to construct the wall sections, 24 mature black cottonwood trees with a combined canopy of 0.45 acres (19,578 sq. ft.) will be removed from the shoreline, as well as 0.07 acres (3,188 sq. ft.) and 0.05 acres (2,271 sq. ft.) of gravel will be compacted north and south of the boat ramp (respectively) to create maintenance and construction access to the project site. Additionally, 0.028 acres (1,200 sq. ft.) of riprap will be placed below the OHWM and 0.055 acres (2,400 sq. ft.) of riprap will be placed landward of the OHWM following wall construction to stabilize and armor the shoreline. This project will directly impact 0.002 acres (90 sq. ft.) of aquatic habitat and 0.57 acres (25,037 sq. ft.) of riparian habitat.

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.

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hammer driven an additional 4 feet minimum as needed to reach the appropriate depth. A driving shoe² will be used at end of the piles for ease of driving the pile into the substrate and a confined bubble curtain will be used for installation of the cofferdam during hammer driving.

Once the cofferdam is fully installed, the work area will be dewatered to allow for wall construction in a dry environment. Fish exclusion will precede dewatering and will be conducted using block nets that are set upstream and downstream of the work area. The block nets will remain in place at least through cofferdam installation but may remain for the duration of the proposed work. River water removed from the cofferdam area will be pumped to a tank or temporary pond outside of all critical areas that will facilitate settling before it is release back into the river downstream of the project area.

After construction is complete, the temporary cofferdam will be removed utilizing the same equipment as was used for the installation. The steel sheets, equipment and remaining materials will be lifted from the riverbank utilizing a crane and the excavation equipment will track back up the riprapped bank.

The work area within the cofferdam will be dewatered using a pump that will force water through pipe up the riverbank and into a tank or pond. The water will be allowed to settle for at least 1 day before it is pumped from the tank or pond and piped for discharge into the river downstream of the work area.

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² A driving shoe is a cast or fabricated steel drive shoe which may be pointed and is fixed to the pile shaft at the tip for easier driving, improved penetration, protection against damage in dense material or boulders and improved bearing at the tip. Also called Driving Point, Drive Shoe, Pile Shoe or Conical Point.

The document also indicates that even though dredging has been conducted multiple times per year, the removed material does not exceed the originally specified 200 cubic yard annual maximum. Dredging is conducted using an excavator staged on the boat launch, which reaches into the basin to remove the accumulated sediment. It is loaded onto a dump truck and moved to an onsite upland location outside of the riparian zone in proximity to the river. Maintenance dredging is ongoing under the current permit which expires in March of 2022 and is expected to be necessary in the long term for which a new 10-year permit is requested.

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

None other than the temporary cofferdam described above in question a3.

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

No. The Cowlitz River is considered a Regulatory Floodway zone by FEMA. The upland portion of the site lies within the 0.2% annual chance flood area.

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

No.

b. Ground Water: [help](#)

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.

No.

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.

None.

c. Water runoff (including stormwater):

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

Stormwater runoff from the construction area (which is expected to be nominal) will infiltrate onsite.

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

No.

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

No. The proposed flow control structure will however, slow the velocity of the current at the boat launch area while preventing scour (WEST 2016).

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

Stormwater runoff from the construction area (which is expected to be nominal) will infiltrate onsite.

4. Plants [\[help\]](#)

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

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

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

The vegetation onsite consists of mowed and maintained yard grass with a thin stand of cottonwood trees and invasive Himalayan and trailing blackberry (*Rubus armeniacus* & *R. ursinus*) shrubs along the shoreline. Construction of the proposed facility improvements will necessitate the removal of 24 black cottonwood (*Populus balsamifera*) trees to facilitate construction of the north access road and direct access to the in-river work area.

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

Golden paintbrush (*Castilleja levisecta*), and Kincaid’s lupine (*Lupinus sulphureus* ssp. *kincaidii*). There is not critical or suitable habitat onsite.

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

None proposed.

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

Himalayan blackberry.

5. Animals [\[help\]](#)

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

Examples include:

- birds: hawk, heron, eagle, songbirds, other:
- mammals: deer, bear, elk, beaver, other:
- fish: bas, salmon, trout, herring, shellfish, other _____

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

Species, ESU ¹ or DPS ²	State Status ³	Federal Status ³	Critical Habitat ⁴ in Project Vicinity
<i>Fish</i>			
Lower Columbia River ESU Chinook Salmon (<i>Onchorhynchus tshawytscha</i>)	Candidate	Threatened	Yes
Columbia River ESU Chum Salmon (<i>Onchoryhynchus keta</i>)	Candidate	Threatened	Yes
Lower Columbia River ESU Coho Salmon (<i>Onchorhynchus kisutch</i>)	Candidate	Threatened	Yes
Lower Columbia River DPS Steelhead (<i>Onchorhynchus mykiss</i>)	Candidate	Threatened	Yes
Columbia River DPS Bull Trout (<i>Salvelinus confluentus</i>)	Threatened	Threatened	No
Southern DPS (Columbia River Smelt) Eulachon (<i>Thaleichthys pacificus</i>)	Threatened	Threatened	Yes
<i>Birds</i>			
Marbled Murrelet (<i>Brachyramphus marmoratus</i>)	Endangered	Threatened	No
Streaked Horned Lark (<i>Eremophila alpestris strigata</i>)	Endangered	Threatened	No
Yellow-billed Cuckoo (<i>Coccyzus americanus</i>)	Threatened	Threatened	No

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

The Cowlitz River is a migration route for salmonids and Eulachon. Additionally, this project area lies within the Pacific Flyway.

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

Avoidance and minimization measures to preserve wildlife will include:

- **Avoid detrimental impacts to fish during construction by constructing the temporary cofferdam.**
- **Use of an impact hammer to install the cofferdam piling may require use of a confined bubble curtain.**
- **A soft-start technique will be used for vibratory and impact-hammer pile driving outside of the cofferdam to allow aquatic species to leave the work area before full energy is used to drive the pile.**
- **The concrete panels will be constructed within the work area while the cofferdam is in place so that it can be constructed in the dry. Following construction, the area of construction will be cleaned of all remnants of concrete materials.**
- **Anti-perch devices will be placed atop the walls to prevent perching and impacts from bird activity.**

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

None known.

6. Energy and Natural Resources [\[help\]](#)

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.

Petroleum products used for the operation of equipment and machinery is the only form of energy proposed for utilization on this project.

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

No.

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:

No energy impacts or energy conservation measures are proposed.

7. Environmental Health [\[help\]](#)

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

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

None.

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.

None.

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.

Petroleum products used for the operation of equipment and machinery is the only form of hazardous chemicals that will be used for this project.

4) Describe special emergency services that might be required.

None.

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

Contractors will have a spill containment and pollution control plan, and their employees will be trained in its implementation. No equipment refueling will take place within 150 feet of the river.

b. *Noise*

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

Nearby noise will not affect this project.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Construction activities will be limited to daylight hours and from 7:00 a.m. to 6:00 p.m., Monday through Friday. In-water work will occur within the current Cowlitz River work window between August 1 through August 15 per the Corps and WDFW. This work will include installation of temporary cofferdam, pile driving, concrete panel installation and installing riprap. The total in water work is expected to take approximately 10 days (2 work weeks). A slight increase in traffic and boat noise may be associated with the completed project.

In air noise

Impact hammer pile drivers have a noise level of 110 A-weighted decibels (dBA) and vibratory pile drivers are slightly lower at 101 dBA. The noise levels of additional equipment, which include excavators (81 dBA), dump trucks (76 dBA), generators (81 dBA), and pneumatic tools (85 dBA), were combined with both pile driving noise levels. The result is a construction noise level of 112 dBA.

In-water noise

- Four to five days to drive 138, in-water, 24-inch sheet piles using vibratory methods. Each of the sheet pile sections will be about 50 feet long and will take 0.5 to 1.0 hours to vibrate into place.
- Seven to eight days to drive the 34 12x53 H-piles - 5 minutes per pile (vibratory only)

Pile Type	Impact-Hammer Pile Driving, No Attenuation ^{1, 6}	Vibratory Pile Driving
138 50-foot by 24-inch sheet piles	205 dB _{peak} 190 dB _{RMS} 180 dB _{SEL}	177 dB _{peak5} 162 dB _{RMS5} 163 dB _{SEL} ⁵

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

- Limiting work times to 7:00 a.m. to 6:00 p.m., Monday through Friday.
- Using vibratory installation methods for piling installation to the maximum extent possible to minimize the use of the impact driving.
- A soft-start technique will be used for vibratory and impact-hammer pile driving outside of the cofferdam to allow aquatic species to leave the work area before full energy is used to drive the pile.
- Use of an impact hammer to install the cofferdam piling may require use of a confined bubble curtain.

8. Land and Shoreline Use [\[help\]](#)

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The site currently consists of a parking lot, boat launch, floating docks, various outbuildings, and walking trails utilized by the public for recreational purposes. The land westerly adjacent to the project area had been used as a location for dredge spoils from the emergency clean-up efforts after the eruption of Mount St. Helens in 1980. This land is currently owned and utilized by the Castel Rock High School. The proposal will not affect current land uses on nearby properties.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

No.

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:

No.

c. Describe any structures on the site.

The site currently consists of a parking lot, boat launch, floating docks, various outbuildings, and walking trails.

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

No.

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

Parks, Recreation, and Open Space

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

Parks, Recreation, and Open Space

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

Aquatic and Recreational

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

The Cowlitz River is a Classification 1 fish and wildlife conservation area according to Castle Rock Municipal Code (CRMC) Chapter 18.10.130 Table 7 which are defined as: "areas with which state/federal-designated endangered, threatened, candidate, or sensitive species have a primary association". The CRMC follows the Washington State Department of Natural Resources (DNR) stream typing methodology, which indicates that the Cowlitz River is also considered a Type 1 stream. According to the CRMC Chapter 18.10.130 Table 8, the designated riparian buffer width for a Type 1 stream is 250 feet.

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

None.

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

None.

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

None.

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

The site currently consists of a parking lot, boat launch, floating docks, various outbuildings, and walking trails. This project is compatible with the current use as it proposed to create safer access to the Cowlitz River by boaters.

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

None.

9. Housing [\[help\]](#)

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

None.

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

None.

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

None.

10. Aesthetics [\[help\]](#)

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The two 30-foot long by 5-foot-thick concrete panels will be supported by 34 - W12x53 (12-inch x 53 lbs./foot) steel H-piles placed vertical, battered, and in-plane diagonal directions (Sheet 4). Installation of the vertical piles will be done using vibratory equipment and impact driving as necessary to a depth of approximately 34-feet below the existing mudline. Once installed, the wall sections will extend above OHWM by approximately 6 feet.

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

The new wall sections will be visible from the shoreline within the vicinity of the project but will not obstruct views.

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

Two alternatives analyses were prepared to address alternative designs and describe why the current design is optimal (ELS 2020, WEST 2016).

11. Light and Glare [\[help\]](#)

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

None.

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

No.

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

None.

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

None.

12. Recreation [\[help\]](#)

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

Boating, swimming, fishing, walking, beach-going, etc.

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

No.

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

None. This project will enhance shoreline recreational opportunities by improving both safety and access for boaters to the Cowlitz River by the public.

13. Historic and cultural preservation [\[help\]](#)

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.

None.

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.

No. A cultural resource assessment was completed in 2007 for the permitting of the boat launch. There were no significant findings.

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

A formal cultural resource assessment was completed in 2007 by URS Corporation.

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.

None, as there were no significant findings from the cultural resource assessment.

14. Transportation [\[help\]](#)

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

The site can be accessed from 5040 Westside Highway in Castle Rock, Washington,

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?

No. The nearest public transit stop is located approximately 10 miles south in Kelso.

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

None.

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

No.

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

The Cowlitz River is a navigable water used by small motorized and non-motorized boats.

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 nonpassenger vehicles). What data or transportation models were used to make these estimates?

Usage of the boat launch has steadily declined over the last few years as evidenced by the boat launch permit totals in Table 1 below. It is estimated that there will be an increase in daily and annual boat launch permits purchased once the project is complete which correlates to an increase in boat launch users. The summer season is the peak season for the boat launch. Vehicles visiting the boat launch area are likely to consist of passenger vehicles and pickups. It is estimated that the increase in daily usage could equal or exceed the total permits purchased in 2015. In 2019, 2,291 day use permits were purchase which approximates to 6 permits per day each requiring one vehicular trip in and out. In 2015, 3,572 day use permits were purchased which approximates 10 permits and vehicular trips per day. The site is already set up to facilitate the increase in public usage.

Table 1. Boat Launch Permit Totals.

Year	Day Use Permit Totals	Annual Use Permit Totals	Total Permits
2015	3,572	97	3,669
2016	3,131	86	3,217
2017	2,684	69	2,753
2018	2,168	58	2,226
2019	2,291	40	2,331
Grand Totals	13,846	350	14,196

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No.

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

No.

15. Public Services [\[help\]](#)

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

No.

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

None.

16. Utilities [\[help\]](#)

a. Circle utilities currently available at the site:

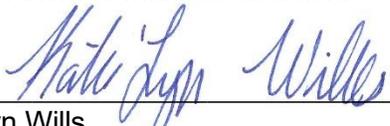
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other _____

c. 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.

None.

C. Signature [\[HELP\]](#)

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: 

Name of signee Kate Lyn Wills

Position and Agency/Organization Biologist/Ecological Land Services, Inc.

Date Submitted: July 28, 2020