



King County

ENVIRONMENTAL CHECKLIST

ISSAQUAH CREEK MITIGATION PROJECT

Purpose of the Checklist:

The State Environmental Policy Act (SEPA), Chapter 43.21 RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write “**do not know**” or “**does not apply**.” Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

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 a significant adverse impact.

Use of Checklist for Nonproject Proposals:

Complete this checklist for nonproject proposals, even though questions may be answered “**does not apply**.” In addition, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (PART D).

For nonproject actions, the references in the checklist to the words “**project**,” “**applicant**,” and “**property or site**” should be read as “**proposal**,” “**proposer**,” and “**affected geographic area**,” respectively.

A. BACKGROUND

1. *Name of the proposed project, if applicable:*

Issaquah Creek Mitigation Project

2. *Name of Applicant:*

King County Department of Natural Resources and Parks (DNRP)
Water and Land Resources Division (WLRD)

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

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Seattle, WA 98104-3855
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4. *Date checklist prepared:*

March 19, 2018

5. *Agency requesting checklist:*

King County Department of Natural Resources and Parks (DNRP)
Water and Land Resources Division (WLRD)

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

The project will be constructed during the summer of 2019. Most planting will occur during late 2019 and early to mid-2020.

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

There are no plans for future additions, or expansions. Further activity is limited to maintenance and corrective actions to ensure project performance and public safety.

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

1) Issaquah Creek Wetland Mitigation Project Wetland Biology Report. August 24, 2017. King County Water and Land Resources Division.

2) Wetland and Stream Delineation Report/Lowe Property, King County. April 4, 2013. Watershed Company.

3) Issaquah Creek Mitigation Project Basis of Design Report, King County Water and Land Resources Division.

4) Cultural Resources Assessment for the Issaquah Creek Mitigation Project, King County, Washington. February 21, 2018. Cardno.

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 permits or other authorizations for other proposals are currently pending.

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

- SEPA
- Nationwide Permit (NWP) 27 Authorization for Aquatic Habitat Restoration, Enhancement, and Establishment Activities (US Army Corps of Engineers), which may include some or all of the following components.
 - *Self-certification of Proposed Habitat Restoration Activity Consistency with the Habitat Restoration Program 4(d) Rule, Limit 8*
 - *Endangered Species Act (ESA) Section 7 Consultation (U.S. Fish and Wildlife Service and National Marine Fisheries Service)*
 - *National Historic Preservation Act Section 106 Review*
 - *Water Quality Certification Compliance with NWP 27 (Wash. State Dept. of Ecology)*
 - *Coastal Zone Management (CZM) Consistency Determination (to be determined; from Washington State Department of Ecology)*
- Construction Stormwater General Permit (Washington State Department of Ecology)
- Hydraulic Project Approval (Washington Department of Fish and Wildlife)
- Clearing and Grading Permit (King County)
- Shoreline Management Substantial Development Permit Exemption (administered by King County for Washington State Department of Ecology)
- King County Flood Hazard Certification (King County)
- Aquatic Use Authorization on Department of Natural Resources (DNR)-managed Aquatic Lands (Washington State Department of Natural Resources)
- Parks Special Use Permit (King County)
- Procedures for Considering Public Safety When Placing Large Wood in King County Rivers, Public Rule LUD 12-1, King County Ordinance 16581

11. *Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site.*

The Issaquah Creek Mitigation Project (ICMP) will remove fill and some native material to enhance and create wetland and backwater habitat. Project elements include the following (Figure 1: Project location; and Figure 2: Project elements (pre-30% design):

- Create ~2.7 acres of aquatic, emergent, scrub shrub and forested wetland;
- Enhance and revegetate approximately 5.4 acres of floodplain and riparian/wetland buffers including at least one acre of conifers;
- Create 5 backwater (aquatic) areas (~600 LF) that outlet at the north bank of Issaquah Creek to provide rearing and refuge habitat for juvenile salmonids, particularly Chinook;

- Accelerate natural processes by creating a ~100 LF side channel which engages existing features (ditch/relic side-channel already containing seasonal flow);
- Install 3 large wood jams along the north margin of Issaquah Creek to encourage floodplain engagement at high flows;
- Install 9 large woody debris in created backwaters and a side-channel along the north margin of Issaquah Creek;
- Install wildlife habitat snags, rootwads and debris piles for nesting and foraging;
- Remove ~40 LF (~900 cu ft) of angular rip rap within the OHWM, 100 LF of ecology blocks outside of the OHWM of Issaquah Creek, and miscellaneous fencing and debris; and
- Decommission an unused well on the east parcel if located in the work area.

Responsibility for completing the Issaquah Creek Mitigation Project has been transferred from multiple impact projects in the Sammamish River Watershed to King County through King County's state and federally authorized in-lieu fee mitigation program. King County WLRD will perform the mitigation through the King County In-Lieu Fee Mitigation Program in exchange for a fee based on the full cost of the work.

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 plan, 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 5.4-acre project area is part of the 41-acre Middle Issaquah Natural area near Issaquah, WA in the SE ¼ of Section 22, Township 23, and Range 6E. The two parcels (222306-9122 and 222306-9015), are located at 23731 SE 156th Street. The project is located east of Cedar Grove Rd, south of SE 156th Street, and along the north bank of Issaquah Creek. The parcels are owned and managed as 'ecological land' by King County Department of Natural Resources and Parks and are used for passive recreation and conservation.

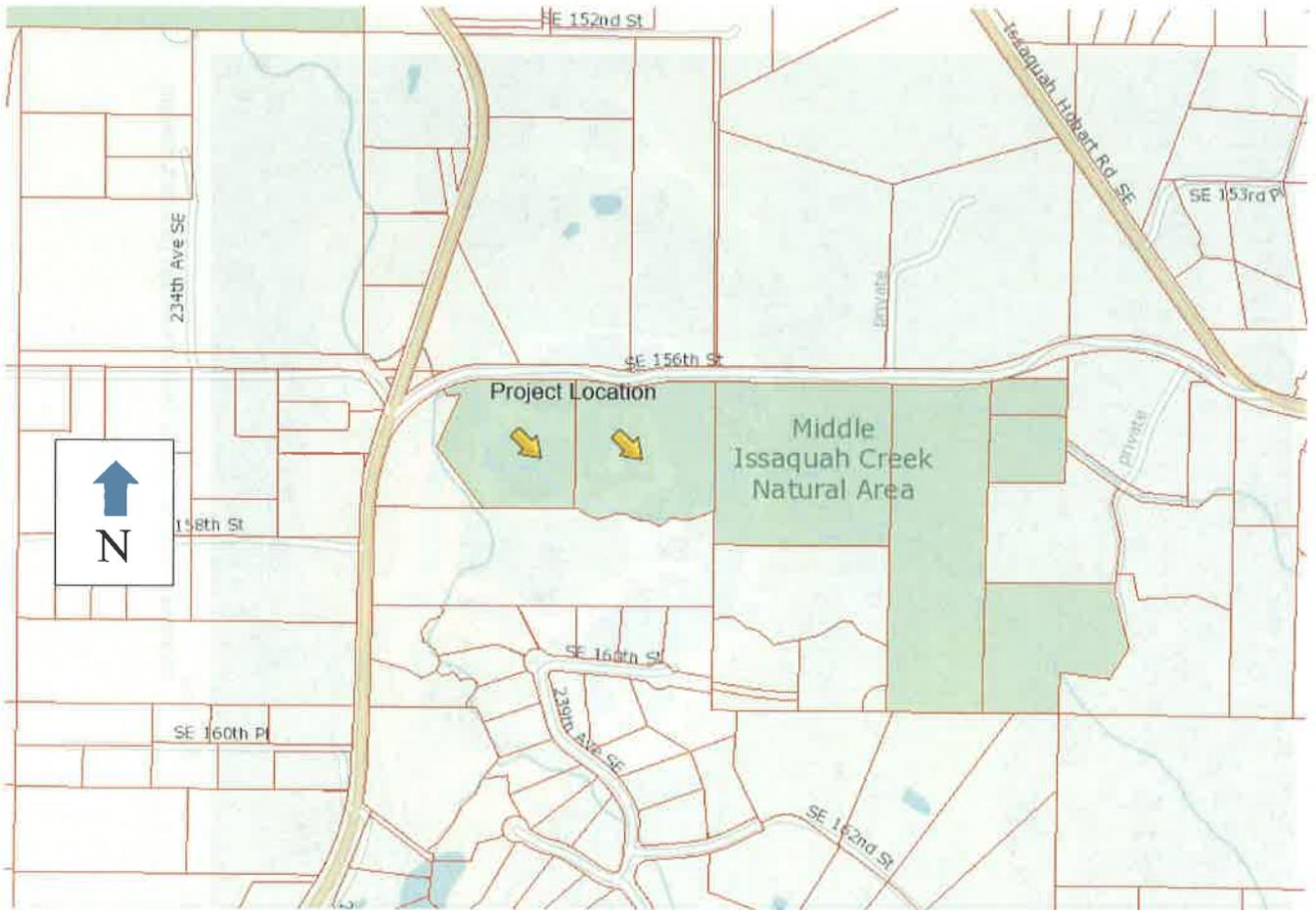


Figure 1: Project Location

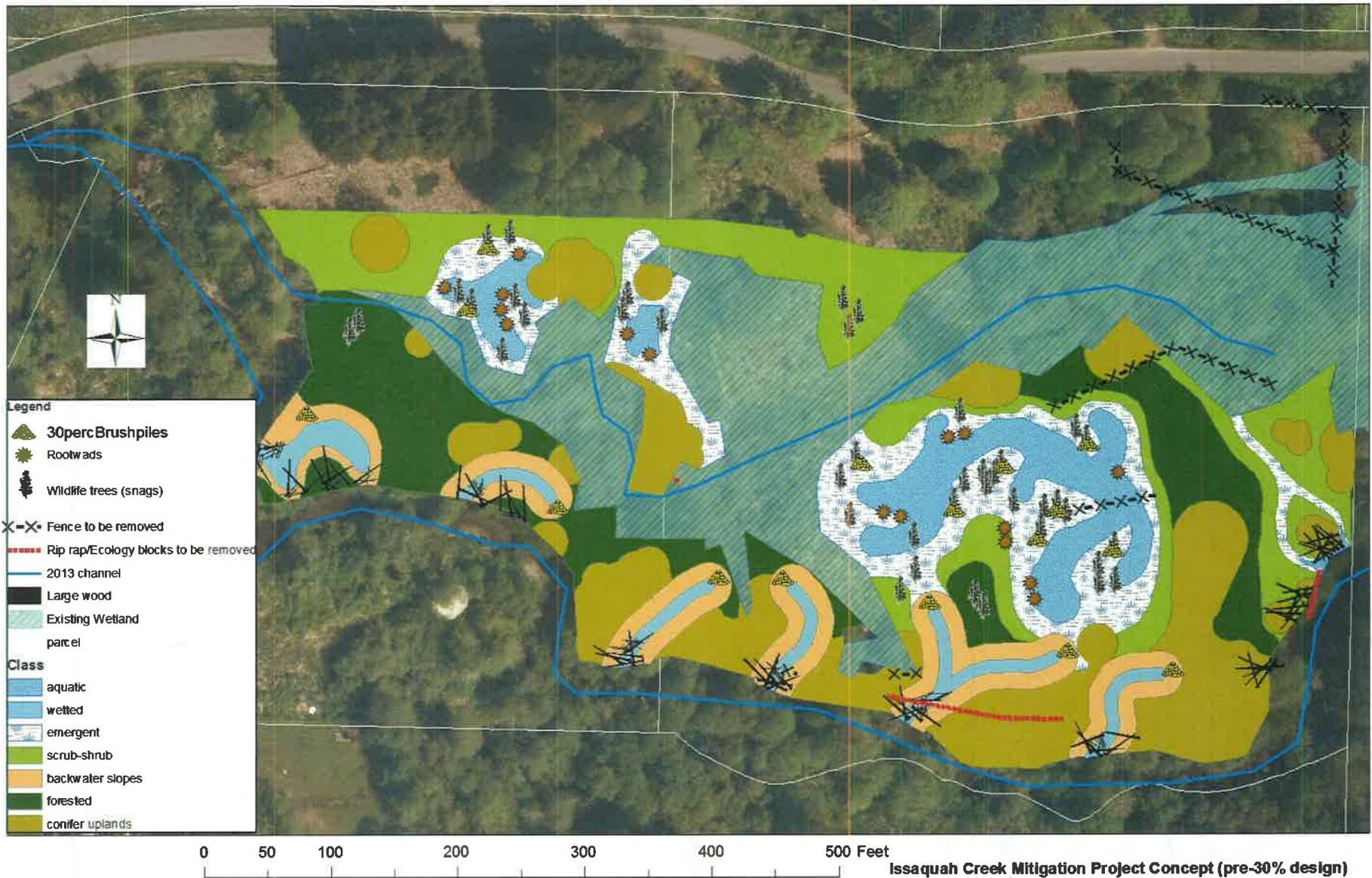


Figure 2: Project Elements (pre-30% design)

B. ENVIRONMENTAL ELEMENTS

1. Earth

- a. *General description of the site (underline one):* The site is flat floodplain.
- b. *What is the steepest slope on the site (approximate percent slope)?* 14% side slopes on the embankment along SE 156th Street, but most of the site it is relatively flat at a 1% slope.
- 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 prime farmland.*

According to the U.S Department of Agriculture's (USDA's) Natural Resources Conservation Service Soil Data Explorer, there are three primary types of soils in the project area. The vast majority of the project area consists of Puyallup fine sandy loam on 0 to 2 percent slopes. However, along the northern central margin of the project area, sediments consist of Sultan silt loam and Kitsap silt loam, (USDA 2017). Overall, the soils are well-draining with sandy loam in the upper layer with some organics and medium to fine sand and some small gravels or cobbles in the lower stratum.

- d. *Are there surface indications or history of unstable soils in the immediate vicinity?*
No indications of unstable soils were observed, though the armored north bank of Issaquah Creek indicates that prior property owners restricted natural bank erosion.
- e. *Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate the source of fill.*

No new fill is proposed. Existing fill and native material will be excavated and transported off site to an approved disposal location. Approximately 11,000 cubic yards (CY) will be excavated to create and re-establish wetlands, backwater areas, a side channel, and to remove bank armoring.

All excavated material will be hauled off-site to an approved disposal location.

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

Erosion could occur in graded areas during and after construction. A detailed erosion control plan will be developed and used during construction to prevent surface runoff of sediment-laden stormwater, per the terms of the Construction Stormwater General Permit.

Erosion could also occur while the rip-rap is being removed from the stream bank. The worksite may be isolated using instream structures like turbidity curtains to protect water quality.

Natural bank erosion is expected after the bank armoring is removed, allowing the channel to migrate naturally through the floodplain. Surface erosion will be restricted by dense plantings.

- g. *About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?*
None.
- h. *Proposed measures to reduce or control erosion, or other impacts to the earth, if any:*

Although minor erosion, channel migration and floodplain sedimentation are intended outcomes, the following practices will be used to assure that water quality is maintained during construction:

- A. Contractors will be required to submit an approved Stormwater Pollution and Prevention Plan and a Water Quality Management Plan to King County for approval before any grading or in-water work occurs. King County will require that all necessary and appropriate Construction Stormwater Best Management Practices (BMPs) will be employed to limit sediment runoff from access roads, work areas, and stockpiles during rain events.
- B. Turbidity in the creek will be monitored during in-water construction work to ensure turbidity levels are within permitted limits.
- C. During construction of side and backwater channels, wood installation, and rip rap removal, in-water work areas will be temporarily isolated from the creek by means such as a temporary dam, leaving a soil plug in place for removal upon completion of excavation, or a turbidity curtain. The contractor will be required to submit a dewatering plan.
- D. Existing native trees will be preserved wherever possible (approximately 80% retention) by limiting clearing to only what is necessary to implement the project. Grading and staging areas will be revegetated after grading is complete.

2. Air

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

Air quality will be impacted by greenhouse gas (GHG) emissions produced by vehicles and equipment during project construction. Internal combustion engines primarily emit carbon dioxide (CO₂), methane, and nitrous oxide. The global warming potential (GWP) of these compounds is measured in "carbon dioxide equivalents," or CO₂e, which converts the GWP of various gasses into their equivalent in CO₂. Carbon dioxide emissions can be approximated from projected fuel consumption, transportation distances, and duration of use, using formulae developed by the Energy Information Administration (EIA) of the U.S. Department of Energy.

The project is expected to discharge 68 tons of CO₂e over 52 days during construction of the project. Emissions will be offset by planting native trees and shrubs that sequester CO₂. Carbon sequestration caused by planting of native trees and shrubs should offset emissions from construction of the project within 17 years of planting. The finished project will emit no GHGs aside from those naturally occurring in the environment; all emissions are related to construction of the proposed project. The Greenhouse Gas (GHG) Emissions Worksheet is attached to the end of this checklist.

- 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 the air, if any:*

Construction will comply with Puget Sound Clean Air Agency regulations. Tree clearing will be minimized. Graded and disturbed areas will be replanted with native vegetation according to plan. Approximately 790 trees will be planted in the first fall/winter after construction.

Engines will not idle unnecessarily and will be kept in proper working order with all filters and other emission control devices functional.

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

Yes, the site contains the following surface waters (Figure 3):

- 1) About 1,300 linear feet of Issaquah Creek (Type S/Class 1, WRIA Tributary 08.0178) borders the project to the south;
- 2) About 850 LF of unnamed Type N seasonal stream (unknown tributary) runs east to west and bisects the project; and
- 3) About 2.2 acres of a Class II riverine wetland that continues east for approximately another four acres.

Issaquah Creek flows into Lake Sammamish. The project reach is located upstream of the confluence of Issaquah Creek and Tributary 08.0215 that drains from Four Lakes. It is located downstream of the left bank confluence of Issaquah Creek and another unknown tributary.

The wetland supports palustrine forested, scrub shrub and emergent plant communities.

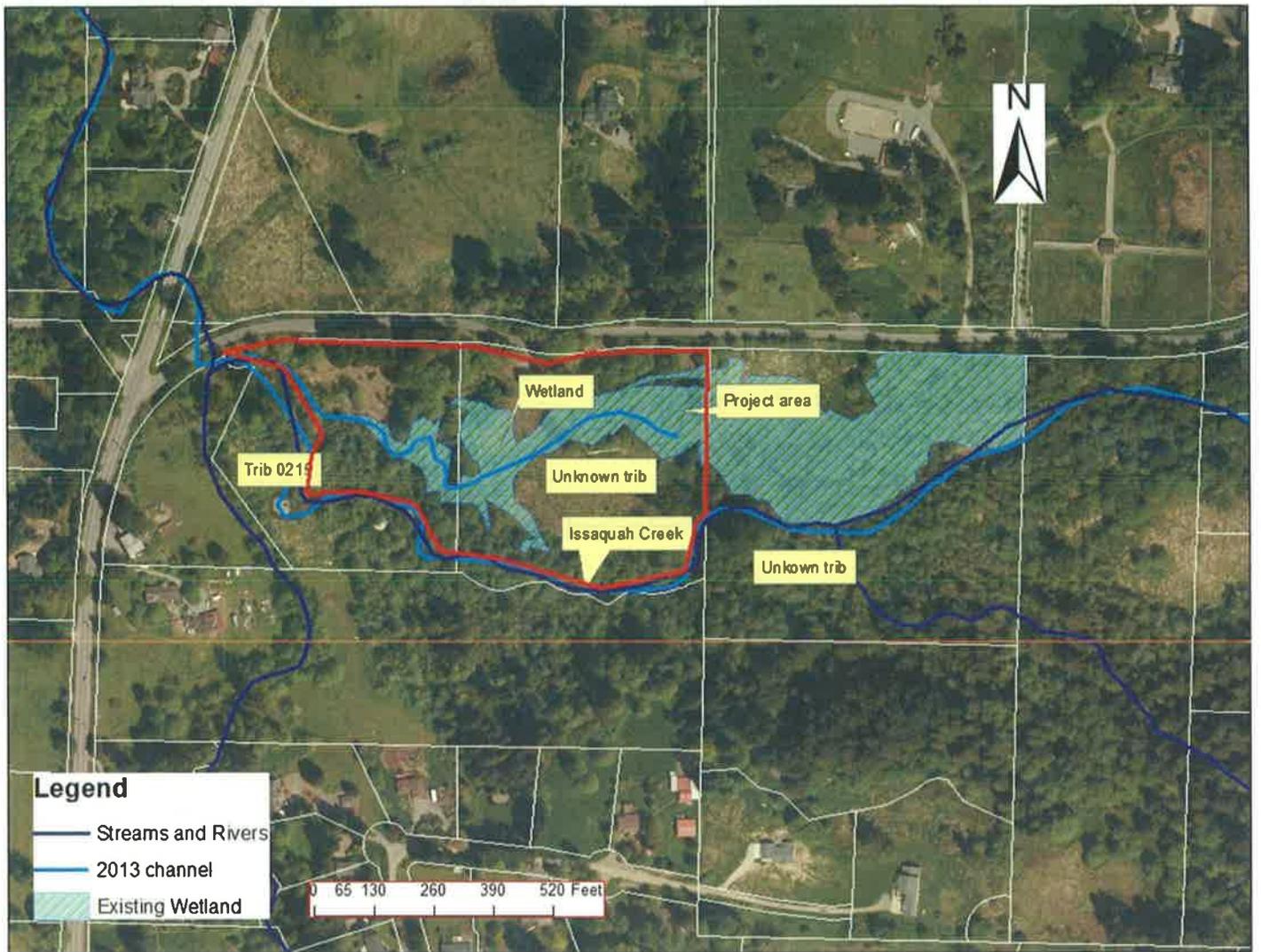


Figure 3: Surface waters on the Issaquah Creek Mitigation site

- 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 project will require work over, in, and adjacent to each of the described waters. The work will occur during summer low flow conditions. No grading will occur inside the existing wetland. Temporary crossings will be established to access southern parts of the site using, for example, a temporary 'flat rack' bridge plate that will not fill or permanently alter the wetland.

The project will remove fill and some native soil material to enhance and create wetland, backwater and side-channel habitat. All activities are within the 100-year floodplain.

Activities over, in, or adjacent to the described waters include:

- Excavate approximately 2.7 acres to create wetlands;
- Excavate to create five approximately 100-foot long backwater (aquatic) areas;
- Excavate to create one approximately 100-foot long side channel to engage with existing relic channel containing seasonal flow;
- Install three log jams along Issaquah Creek to encourage floodplain engagement at high flows;
- Install nine logjams in the backwaters and side-channel;
- Install brush piles, rootwads and snags for wildlife habitat;
- Remove approximately 40 LF (~900 cu ft) of bank armor rock (rip-rap) from below the ordinary high water mark;
- Remove approximately 100 LF of ecology blocks and miscellaneous fencing and debris from above the ordinary high water mark;
- Install native plants across the entire site; and
- Decommission an unused well on the east parcel if located in the work area.

Wetland and aquatic habitats will be constructed using earthmoving equipment such as excavators and bulldozers. Backwater channels and a side channel will connect to Issaquah Creek and will expand the limits of the stream. Excavation spoils will be hauled offsite using dump trucks and disposed of at a permitted facility. Downed trees will remain on site.

The upstream logjams will be laced between existing trees. A pile driver may be used to install piles to secure logs and logjams, but will not require any in-water work. Wood placed along backwater and side channels may be embedded by excavating a trench in the floodplain, placing the wood and backfilling to the existing grade. This work will occur adjacent to Issaquah Creek and wetlands, but will not require any in-water work, or wetland impacts. Placing logjams and large wood will improve the ecological function of the floodplain.

All in-water work will be done during the summer when water levels are lowest. BMP's will be employed to minimize impacts to aquatic resources. Site excavation and the majority of the earthwork will occur during the dry season. All earth work will employ Temporary Erosion and Sediment Control measures and Best Practices and will be inspected by a Certified Erosion and Sediment Control Lead.

Backwaters and the side channel will be isolated from the creek while they are excavated. Possible isolation approaches include:

- Portable dams placed at the confluence of the backwater/side channels and the creek.
- Leaving the existing material at the confluence in place until the backwater channel is excavated. The material at the confluence would then be removed as the final step in the backwater channel excavation.

Water pumped from the dewatering of excavated areas will be cleaned prior to discharge.

Staging areas will be located in uplands, though within the 100-year floodplain. All disturbed areas will be replanted except for aquatic areas.

- 3) *Estimate the amount of fill and dredge material that could 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.*

No fill will be placed in surface water or wetlands.

Approximately 40 LF (~900 cu ft) of angular rock will be removed from below the ordinary high water mark of Issaquah Creek.

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

Surface water withdrawals are not anticipated. Work areas may need to be isolated to remove 40 LF of angular rock from the edge of bank. Some work areas, such as the excavation of backwaters and side channel, and installation of large wood may require portions of the work site to be temporarily de-watered.

Backwaters and side channel will be isolated from the creek while they are excavated. Possible isolation approaches include:

- Portable dams placed at the confluence of the backwater/side channels and the creek.
- Leaving the existing material at the confluence in place until the backwater channel is excavated. The material at the confluence would then be removed as the final step in the backwater channel excavation.

Water pumped from the dewatering of excavated areas will be cleaned prior to discharge.

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

Yes, the entire project is located within the 100-year floodplain of Issaquah Creek.

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

No waste material will be discharged to surface or groundwater.

b. *Ground:*

- 1) *Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities, if known.*

No. This project will not withdraw from or discharge to groundwater.

- 2) *Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: domestic sewage; industrial containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.*

No waste material will be discharged 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.*

No impervious surfaces will be added to the site so no new surface or stormwater runoff will be created by the project; some impervious areas of rock bank will be removed. Stormwater runoff from SE 156th Street enters a ditch on the south side of the road and runs west via a ditch and through the wetland and outside of the work area. Runoff is contained within the wetland, which is outside of our work area. Flows move west in a small ditch before discharging to Issaquah Creek on the west side of the project boundary.

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

Minor quantities of turbidity could enter Issaquah Creek for short periods of time, but these will not exceed State water quality standards.

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

See **Section 3a(4)** above.

Contractors will be required to submit an approved Stormwater Pollution and Prevention Plan and a Water Quality Management Plan to King County for approval before any grading or in-water work occurs. King County will require that all necessary and appropriate Construction Stormwater Best Management Practices (BMPs) will be employed to limit sediment runoff from access roads, work areas, and stockpiles during rain events.

Turbidity in the Issaquah Creek will be monitored to demonstrate compliance with Washington State water quality standards (WAC 173-201A-200) during work within ordinary high water (OHW).

During construction of side and backwater channels, wood installation, and rip-rap removal, in-water work areas will be temporarily isolated from the creek by means such as a temporary dam, leaving a soil plug in place for removal upon completion of excavation, or a turbidity curtain. The contractor will be required to submit a dewatering plan.

Discharges of turbid water will be managed to comply with standards established through the Individual 401 Water Quality Certification. Techniques include but are not limited to the following: isolating the work area from flowing water; slowing or pausing in-water work; impounding turbid water within work areas using BMP's such as silt booms or pumps.

4. Plants

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

- Deciduous trees: red alder, black cottonwood, Oregon ash, big leaf maple, Pacific willow
- Evergreen trees: Sitka spruce
- Shrubs: Red twig dogwood, Sitka willow, salmonberry, vine maple, twinberry, red elderberry
- Grass: Reed canary grass
- Pasture: Pasture grasses
- Crop or grain
- Wet soil plants: soft rush, hardstem bulrush, buttercup
- Water plants:
- Other types of vegetation: knotweed, Himalayan blackberry

Wetland

The forested wetland canopy is dominated by Pacific willow (*Salix lucida*) and black cottonwood (*Populus balsamifera*). The shrub layer is dominated by Sitka willow (*Salix sitchensis*), red-osier dogwood (*Cornus sericea*), and salmonberry (*Rubus spectabilis*). Wetland emergent plants include reed canary grass (*Phalaris arundinacea*) and creeping buttercup (*Ranunculus repens var. repens*)

Upland

The upland canopy is dominated by black cottonwood (*Populus balsamifera*), and red alder (*Alnus rubra*), Shrubs include red elderberry (*Sambucus racemosa*), vine maple (*Acer circinatum*) and salmonberry (*Rubus spectabilis*). Herbaceous plants include pasture grasses and reed canary grass.

Invasive species such as Himalayan blackberry and reed canarygrass are common across the site.

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

Minimal clearing of trees will be required for a temporary access road because it will be established around existing trees, wherever possible. About 80% of trees greater than 8-inches in diameter will be retained (127 of 158). All of the felled trees will be placed at the project site for habitat improvement. Most of the site will have some grading, but much of the cover is pasture grass or reed canarygrass, or non-native blackberry with small patches of trees and shrubs.

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

There are no threatened or endangered plant species known to exist on the site. The Washington Department of Natural Resources' (DNR) Natural Heritage Information System indicated no listed species are found on the subject properties or nearby.

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

Non-native invasive plants will be controlled within the project area. The existing wetland will be surrounded with high visibility fencing and/or silt fence. High visibility fencing or flagging will be installed to mark and protect specific clusters of trees and shrubs as indicated on plan. Disturbed areas will be revegetated with native plants. The existing wetland will be enhanced with native plants. Approximately 5.4 acres of floodplain and riparian/wetland buffers will be revegetated and maintained after construction.

5. Animals

- a. *Check or underline any birds or 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, elk, beaver, coyote, other
 Fish: salmon, trout, other

This reach of Issaquah Creek is used by Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*O. kisutch*), coastal and resident cutthroat trout (*O. clarki clarki*), as well as lamprey and sculpins. Rainbow and winter steelhead trout (*O. mykiss*) and sockeye salmon (*O. nerka*) may also use this reach.

The wetlands and the river margin provide habitat to amphibians, birds, and a variety of terrestrial wildlife such as, coyote, deer, elk, beaver, and small rodents.

A couple of snags (dead trees) and mature trees in the project vicinity provide excellent habitat for raptors such as bald eagles, hawks and cavity-nesting and insect-eating birds. Issaquah is located along the Pacific Flyway.

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

Fall Chinook salmon (*Oncorhynchus tshawytscha*) are known to be on or near the site.

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

Fish migrate through the project area. The site is also located on the Pacific Flyway used by waterfowl and other migratory bird species.

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

The project is expected to increase habitat diversity, quantity, and quality. Flood flows will interact with the placed wood, seasonally occupy the floodplain, and establish new habitat. Native plants, wildlife habitat trees, and downed wood will be installed to provide habitat for insects, birds, small mammals and deer and elk.

6. Energy and Natural Resources

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

The completed project will require no energy.

- 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:*

Not applicable.

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.*

There is a small risk of a hydraulic fluid or other fuel spilling or leaking from heavy equipment.

- 1) *Describe special emergency services that might be required.*

None.

- 2) *Proposed measures to reduce or control environmental health hazards, if any:*

Maintenance and refueling of equipment will be completed in designated areas set up to prevent pollutant spills. Spill response kits will be on site to ensure accidents are promptly addressed.

- b. Noise:

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

None.

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

Heavy equipment operation will cause temporary noise increases between 7 a.m. to 7 p.m. on Monday through Friday and 9 a.m. to 5 p.m. on Saturdays. The completed project will not change existing noise levels.

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

Construction activities will comply with the provisions of the King County Noise Ordinance (Ordinance No. 3139). Equipment operation will be limited to the hours of 7 a.m. to 7 p.m. on Monday through Friday and 9 a.m. to 5 p.m. on Saturdays.

8. Land and Shoreline Use

a. *What is the current use of the site and adjacent properties?*

The two parcels that make up the project site (and five east of it) are owned by King County and managed as a larger 41-acre 'ecological land' (Middle Issaquah Creek Natural Area) by the Natural Resource Lands Program (King County Dept. of Natural Resources and Parks). The management goals for these lands are to conserve and enhance ecological value and to accommodate passive recreational use. Low-impact activities are welcomed, including walking, nature observation, or fishing.

b. *Has the site been used for agriculture? If so, describe.*

Aerial photos from 1936 show that the project area was maintained/mowed. It is unknown if it was for agricultural purposes. Subsequent years show the presence of denser canopy and an existing forested wetland. A fenced paddock is shown in the year 2000 aerial with evidence of animals, but there is no evidence of grazing or other farming.

c. *Describe any structures on the site.*

A residence and outbuildings were demolished and moved from the site by 2012. Aboveground structures and debris to be removed on site include approximately 100 linear feet of ecology blocks, 40 linear feet (~900 cu ft) of angular rip rap on the north bank of Issaquah Creek, and miscellaneous fencing. One unused well exists belowground on the east parcel. No other structures are present on the site.

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

- The project will remove 100 linear feet of ecology blocks, approximately 40 linear feet of angular rip-rap on the north bank of Issaquah Creek, and miscellaneous fencing. An unused well located on the east parcel will be decommissioned if located in the work area.

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

Both parcels are zoned RA5 (rural area, one dwelling unit per five acres).

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

King County Open Space and Natural Lands.

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

'Conservancy Shoreline'.

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

Yes. The entire project is within the 100-year floodplain of Issaquah Creek (Tributary 08.0178). An unnamed seasonal tributary also runs east to west through the site mostly in the form of a ditch. The National Wetlands Inventory notes one palustrine scrub shrub seasonally flooded (PSSC) wetland, its presence also confirmed by The Watershed Company (2013) and King County (2017).

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:*

Does not apply.

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

Issaquah Creek was identified in the 2017 WRIA 8 Chinook Salmon Conservation Plan Update as a Tier 1, Wadeable Chinook stream. The Issaquah Creek Mitigation Project aligns with two goals in the plan: increase area of riparian cover; and increase wood volume to support sustainable and harvestable Chinook salmon populations (<http://www.govlink.org/watersheds/8/reports/pdf/1710-8207m-appendix-d.pdf>). Also, the project goal of invasive plant species control is listed as an overall basin wide project, referred to as Project #IC-3-BB Riparian Restoration and Invasive Species Control (<http://www.govlink.org/watersheds/8/reports/pdf/1711-8207m-appendix-f-pdfs/1711-8207m-appendix-f-3-issaquah-creek-54-66.pdf>). The project is also consistent with the goals of the Critical Areas Ordinance and Shoreline Master program attempts to maintain and restore important ecological areas.

9. Housing

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:*

Does not apply.

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?*

Does not apply. No proposed structures protrude above the existing grade, except for logjams that will be built within existing stands of trees. These will not exceed 20 feet in height.

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

The views from the road will change. The property, once covered with grass or shrubs and invasive Himalayan blackberries and knotweed, will be converted to shrub and forested habitat. Some remains of fencing will also be removed.

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

The project may be considered an aesthetic improvement.

11. Light and Glare

- a. *What type of light or glare will the proposal produce? During 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. *Describe proposed measures to reduce or control light and glare impacts, if any.*

None.

12. Recreation

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

The management goals for Middle Issaquah Creek Natural area are to conserve and enhance ecological value and to accommodate passive recreational use.

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

No. The site is managed as Ecological Lands and will remain available to the public for passive recreation. Signage will note the site as a protected, sensitive area.

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

Not applicable. There will be no known impacts on passive recreation.

13. Historical and Cultural Preservation

- a. *Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.*

King County Historic Preservation Program (KCHPP) conducted an internal review of any historic cultural resources on the site. An archaeological consultant performed a site-specific assessment of the property to determine if historic and/or cultural resources are present and if the project has the potential to adversely affect such resources on adjacent properties. The consultant researched the archaeology, ethnography, and history of the project area and reviewed local, state, and federal sources, and work by previous investigators.

The records search identified one previously recorded archaeological isolated find (a precontact lithic isolate) within 1.0 mile north of the project which was not eligible for listing in the NRHP. No places or objects were on the national, state or local preservation registers.

- b. *Generally describe any landmarks or evidence of historical, archaeological, scientific, or cultural importance known to be on or next to the site.*

Nine historic-period resources were located within 1.0 mile (1.6 km) of the project area that had been previously recorded on Historic Property Inventory Forms. The nearest historic resource is 0.3 miles from the project area. All nine historic resources are unevaluated by the State Historic Preservation Officer for listing in the National Register of Historic Places.

No ethnographic place names or traditional cultural properties have been identified within the project area.

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

The pedestrian and subsurface survey and geotechnical test pit excavations identified no cultural materials within the project area.

The following measures are proposed to reduce or control unforeseen impacts:

- Develop and implement an Unanticipated Discovery Plan (UDP) to minimize potential impacts to any unknown intact archaeological resources. The plan will outline protocols for DNRP personnel and its contractors to follow if cultural resources are observed during construction.
- Discuss the possibility of uncovering materials of archaeological or historic or cultural significance and appropriate response procedures during a pre-construction conference with construction crews prior to construction.
- Enlist experts in historic and cultural resource issues to be on-call during construction to evaluate and direct crews should potential resources be encountered.
- Cease work immediately if cultural or archaeological resources are uncovered or encountered during project construction, and take appropriate steps necessary to protect those resources will be taken prior to resuming construction.

- Notify the Washington State Department of Archaeology and Historic Preservation, the King County Historic Preservation Program, and any affected tribal groups if resources are discovered and conduct an on-site inspection by a state-certified archaeologist and other qualified resource professionals. Prepare a mitigation plan prior to construction resuming at the site.
- Treat any human skeletal remains that are discovered during this project with dignity and respect.

14. Transportation

- a. *Identify public streets and highways serving the site and describe proposed access to the existing street system. Show on-site plans, if any.*

Access to the site is from the south side of SE 156th Street.

- b. *Is the site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?*

No. The nearest transit stop is approximately 3 miles from the project site.

- c. *How many parking spaces would the completed project have? How many would the project eliminate?*

The proposed project will neither create nor eliminate any parking spaces.

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

No.

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

No.

- f. *How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.*

None.

- g. *Proposed measures to reduce or control transportation impacts, if any:*

Transportation impacts will be reduced with signage, flaggers, and similar methods to be developed in a traffic control plan.

15. Public Services

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

No.

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

Does not apply.

16. Utilities

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

- An unused well is located on the east parcel that will be decommissioned during construction if located in the work area.

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 that might be needed.*

None.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature:

Sarah Hartene

Title:

Ecologist

Date Submitted:

3/29/18

Greenhouse Gas (GHG) Emissions Worksheet

Greenhouse Gas (GHG) Emissions Worksheet

Project Name: Issaquah Creek Mitigation Project

Project Manager: Josh Latterell

Assessment Completed by: Laura Hartema

Date of completion: 7-Mar-18

Project Description: The purpose of the Issaquah Creek Mitigation Project (ICMP) is to enhance or create wetland and riparian habitat, and provide backwater/side-channel rearing and refuge habitat for juvenile salmonids, particularly Chinook. The larger goal of the basin is to improve the survival of threatened salmon and trout by allowing natural processes including floodplain connection, log jam and side channel formation, slower/deeper water (scour pools, backwaters).

Construction-related Greenhouse Gas Emissions

	Pounds	Metric tons
Emissions from fuel-burning activities (in CO ₂ e):	149377	68
Emissions from embedded materials (in CO ₂ e):	0	0
Emissions resulting from site impacts (in CO ₂ e):	0	0
Total Emissions (in CO₂e):	149377	68

Project-Related Carbon Sequestration

	Pounds	Metric tons
Total Carbon Sequestration 35 years after planting:	0.14895	328.29474

Years Required for Carbon Sequestration to Equal Total CO₂e Emissions: 17

