King County

ENVIRONMENTAL CHECKLIST

TAYLOR 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:

Taylor Creek Mitigation Project

2. Name of Applicant:

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

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

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Fax: 206-296-0192
Dan.eastman@kingcounty.gov

4. Date checklist prepared:

July 2018

5. Agency requesting checklist:

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

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

The major earthwork associated with this project will occur during the summer of 2019. The majority of the planting will occur during the fall/winter of 2019/2020; additional wetland vegetation will be planted by June 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 at this time. Further activity is limited to monitoring, maintenance and corrective actions to ensure project performance. Post-project effects on water surface elevation caused by beaver dams will be monitored regularly and a plan for managing potential impacts to private property is under development.

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

1) Taylor Creek Wetland Mitigation Project Wetland Biology Report (August 20, 2017). King County Water and Land Resources Division.

2.) Cultural Resources Assessment for the Taylor Creek Mitigation Project, King County, Washington. May 16, 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.*

- Clean Water Act Section 404 Permit (U.S. Army Corps of Engineers)
- Endangered Species Act (ESA) Section 7 Consultation (National Oceanic and Atmospheric Administration Fisheries and United States. Fish and Wildlife Service)
- National Historic Preservation Act Section 106 Review
- National Pollutant Discharge Elimination System (NPDES) Permit for Construction (Washington State Department of Ecology)
- Coastal Zone Management Consistency
- Section 401 Water Quality Certification (Washington State Department of Ecology)
- Washington Department of Fish and Wildlife Hydraulic Project Approval
- King County Clearing and Grading Permit
- Shoreline Management Substantial Development Permit Exemption (Washington State Department of Ecology)
- King County Flood Hazard Certification
- Approval Memo for Altering King County Park Division Properties. King County Department of Natural Resources and Parks

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

The Taylor Creek Mitigation Project will restore the floodplain topography, connectivity, wetland plant communities and wood density that likely existed in this reach of Taylor Creek prior to residential and agricultural development. The purpose of the project is to re-establish and enhance wetland and aquatic habitat and restore floodplain functions within the lower reaches of Taylor Creek. This reach of Taylor Creek has been channelized for flood control, resulting in lost connectivity with adjacent floodplain wetlands – many of which have been filled to promote agriculture and residential development (Figures 1, 2 and 3). The total project area is approximately 13 acres, with ~4 acres of aquatic habitat restoration and 8 acres of upland enhancement.

Project actions include the following:

- Create ~ 4 acres of aquatic, emergent, scrub shrub and forested wetland by excavating material from the floodplain;
- Enhance ~0.5 acre of existing wetlands and over 8 acres of upland forest;
- Create off-channel aquatic areas adjacent to Taylor Creek to provide rearing and refuge habitat for juvenile salmon;
- Install large wood throughout restored wetland areas;
- Install wildlife habitat snags and slash piles for nesting and foraging;
- Remove non-native plants and install native plants throughout the 13 acres of restored stream, wetland and upland areas;
- Remove one existing bridge and replace another bridge with a pedestrian bridge that conforms to current state and local hydraulic code;

- Remove existing utility lines and two concrete bulkheads from the stream; and
- Install a shallow berm adjacent to Taylor Creek to contain flooding from beavers along Maxwell Road.

The project is sponsored by King County's Federally certified In-Lieu Fee Mitigation Program and will include riparian/floodplain type mitigation consisting of wetland, stream and buffer components to mitigate for impacts to aquatic habitat elsewhere in the Cedar River/Lake Washington Service Area, including King County Solid Waste Division's Factoria Recycling and Transfer Station Replacement Project (Corps permit # NWS-2012-952), a portion of impacts associated with the Washington State Department of Transportation's State Route (SR) 520, Portage Bay Bridge Phase Project (Corps permit # NWS-2008-1246) and Sound Transit's Operations and Maintenance Facility: East Bellevue, Washington Project (Corps Permit # NWS-2016-097).

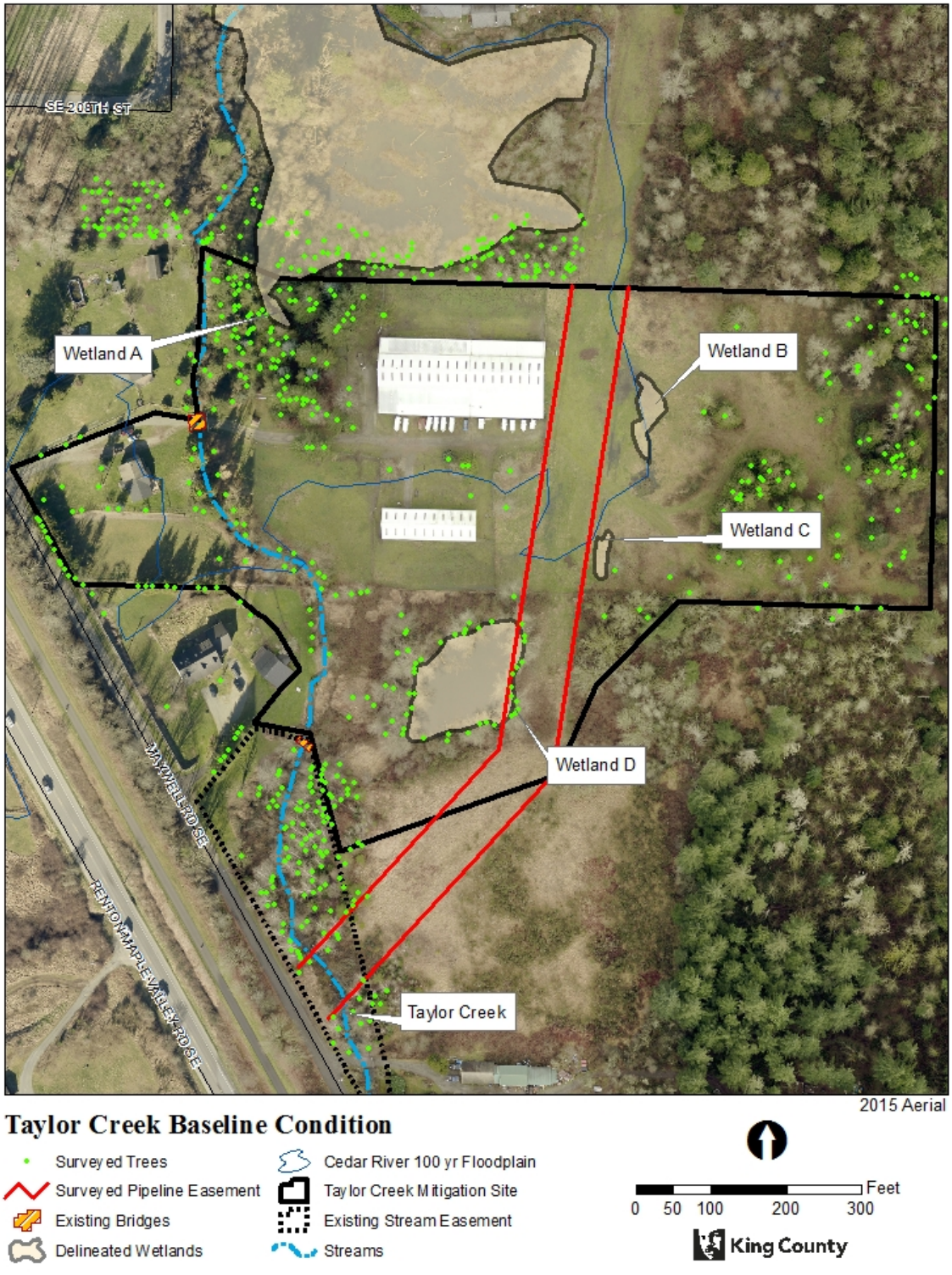

Figure 1. Taylor Creek Mitigation Project Site –Existing conditions shown via 2017 aerial photo. Note that the two barns and house on the northern portion of the project area were demolished in September 2017.

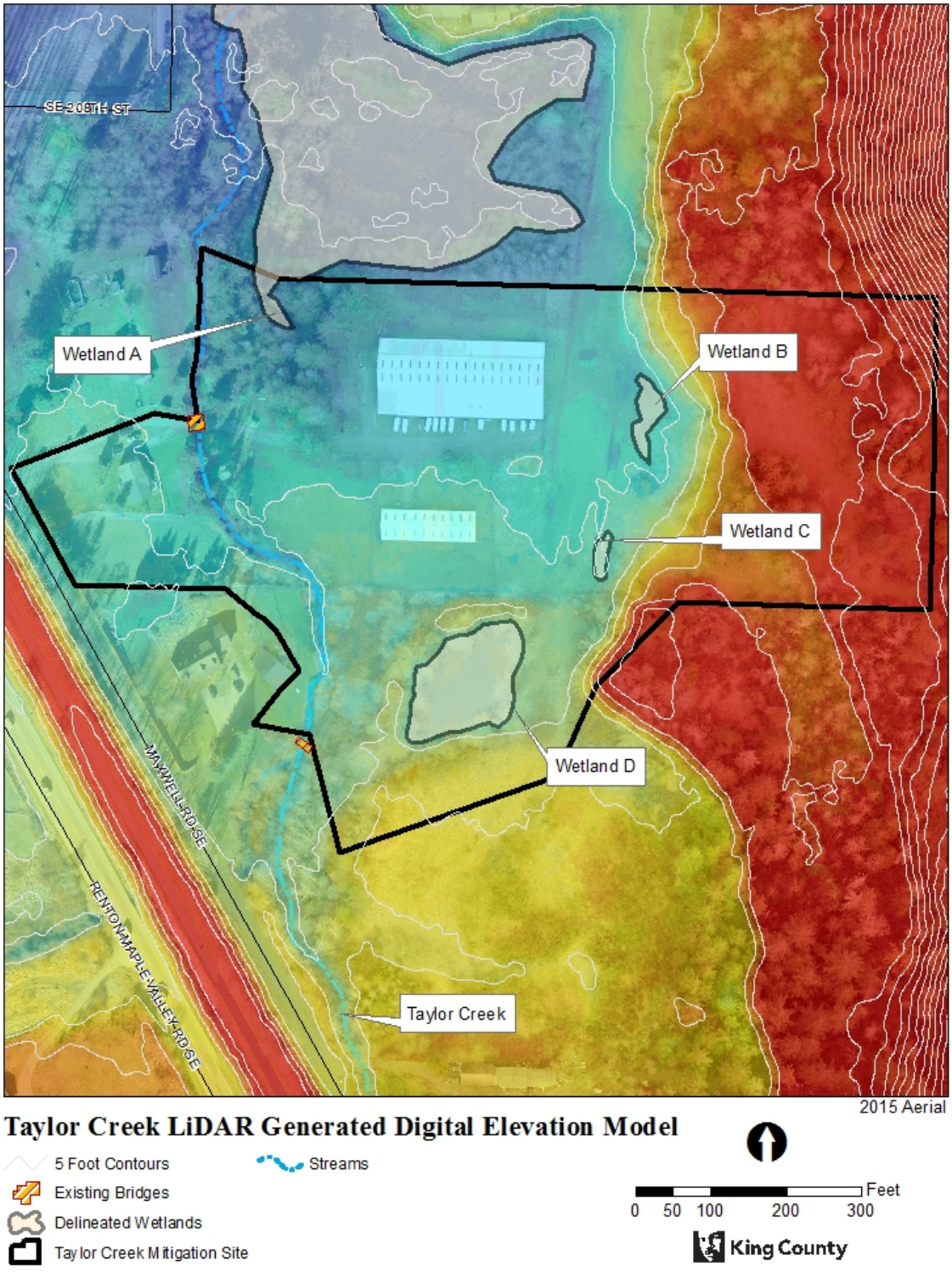

Figure 2. Taylor Creek Mitigation Project Site – Existing condition shown via 2015 LiDAR generated digital elevation model - higher elevations are shown in red and lower elevations in blue.

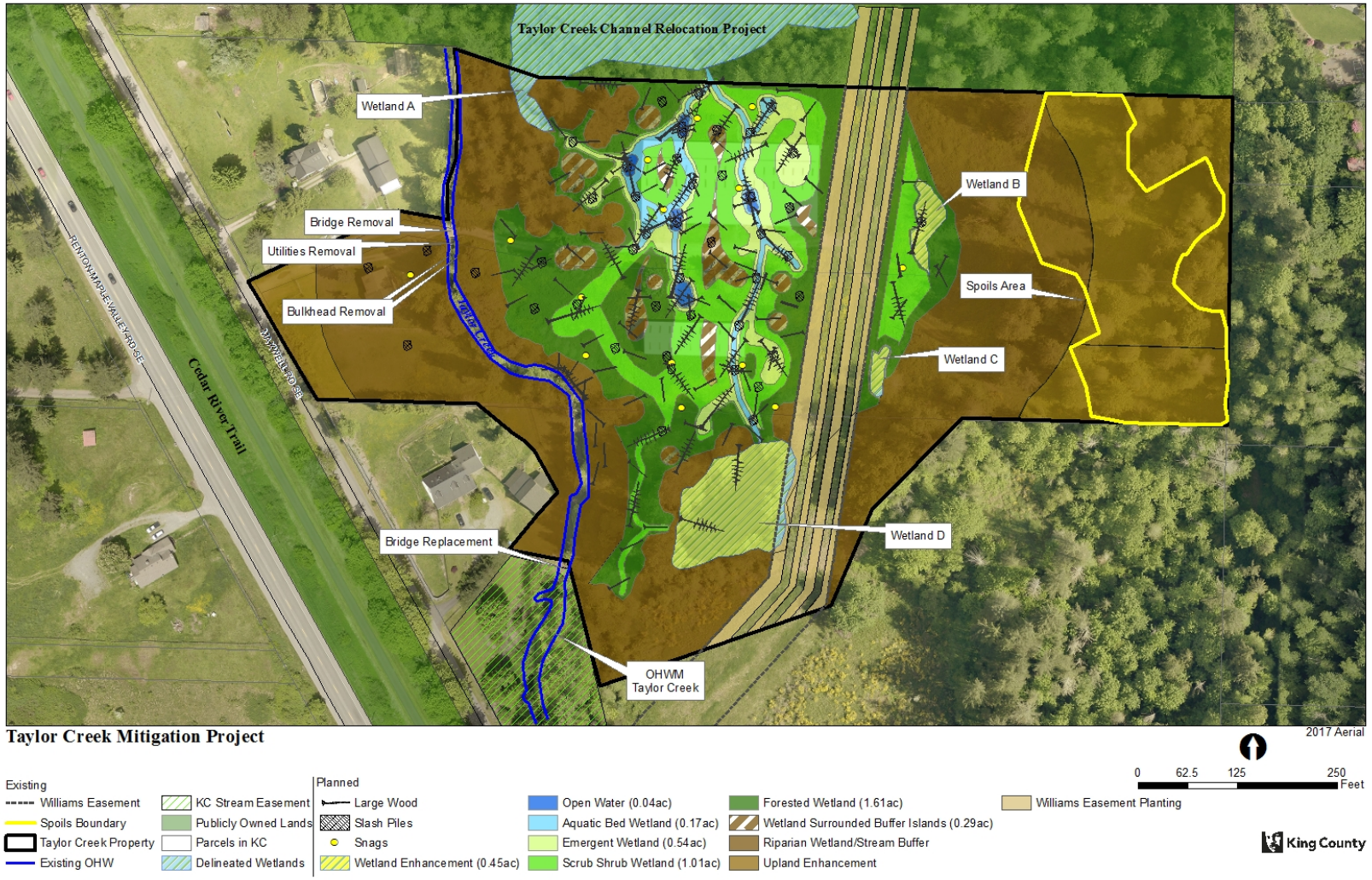

Figure 3: Conceptual design drawing for the Taylor Creek Mitigation Project.

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 Taylor Creek Mitigation Project is located within the Lower Cedar River sub-basin of WRIA 8, north of the City of Maple Valley, in unincorporated King County. The site is located downstream of SR 18 and north of Maxwell Road SE. The project is located on King County owned parcels 0922069031, 0922069035, 0922069036, and 5112400047 and a portion of privately owned parcel 0922069032 at 20920 and 21010 Maxwell Road SE, Maple Valley, WA 98038 in the NE ¼ of Section 9, Township 22N, and Range 6E. The project has right bank and left bank locations in the lower reach of Taylor Creek. The project vicinity map is shown in Figure 4.

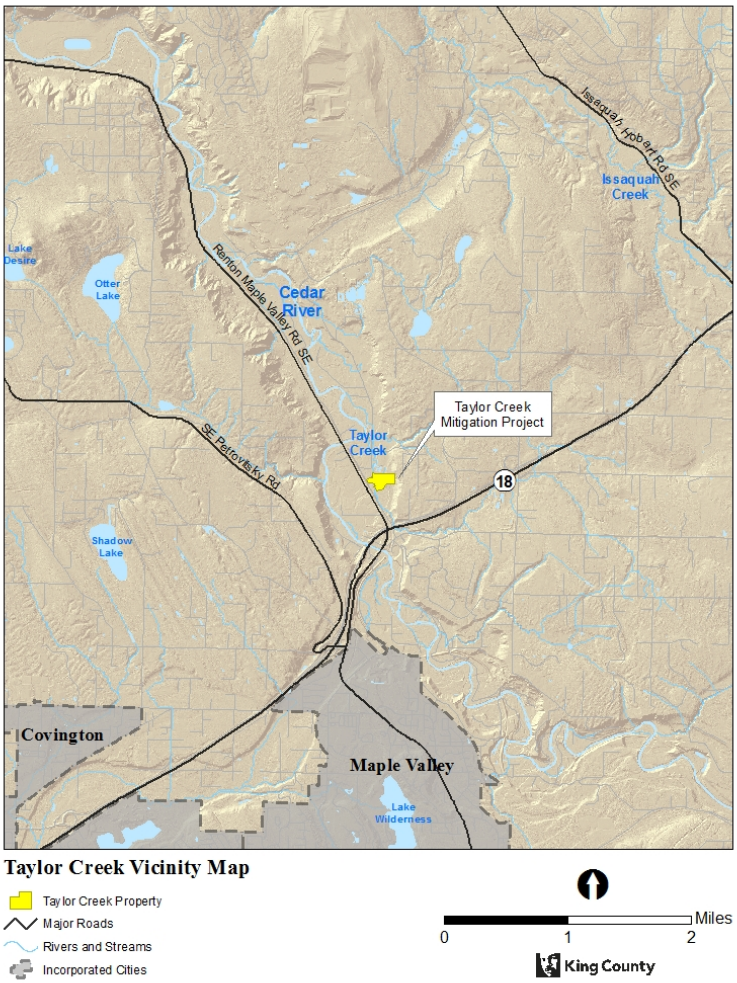

Figure 4: Project Vicinity Map.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (underline one):

Two of the parcels have been a single family residence and farm since the early 1900's (Figure 1). Two large barns and several outbuildings were built in the 1980's and have been used to board and train horses. There is evidence of considerable fill material from the barns within test pits dug for wetland delineation and groundwater well installation. All structures on the Taylor Creek Mitigation Site were demolished in the summer of 2017. Demolished structures included a 1,800 square foot single-family home, a 35-stall equestrian barn and a 7-stall stud barn, along with various sheds and outbuildings.

The project site has mostly been cleared of native trees and shrubs (Figure 1). The site primarily consists of a mix of pasture and open space with an intact upland forest in the eastern 1/4 of the site and small patches of forested upland in the northwest corner and along the east side of the creek. The site is dominated by pasture grasses. Invasive species onsite include non-native blackberries (*rubus armeniacus and r. laciniatus*), Scotch broom (*cytisus scoparius*), tansy ragwort (*senecio jacobaea*), and reed canary grass (*phalaris arundinacea*).

In 1946, Williams Pipeline Inc. obtained an easement through the Property (Williams Easement). Subsequent easements were recorded in 1971 and 2003. Ground elevation increases rapidly just east of the Williams Easement and the eastern 1/3 of the Taylor Creek Mitigation Site are far above the floodplain elevation with no Critical Areas present (Figure 2). About half of this higher area is cleared of native trees and shrubs.

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

The area east of the Williams Easement has 50% slopes, but the remainder of the site 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.

Soils within the Project were identified using the Natural Resource Conservation Service (NRCS) Web Soil Survey (websoilsurvey.sc.egov.usda.gov accessed May 2017). These data depict the study area including mixed alluvial land, Puget silty clay loam, Pilchuck loamy fine sand, Everett very gravelly sandy loam 0 to 8 percent slopes and Alderwood and Kitsap soils, very steep. Of these, the Puget silty clay loam and Pilchuck loamy fine sand are included in the NRCS Hydric Soils List.

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

No surface indications of unstable soils are observed.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate the source of fill.

The proposed wetland design on the right bank floodplain of Taylor Creek involves deep excavation (4-8 feet) creating several focused channels to restore aquatic and emergent wetland areas for fish and amphibians, with shallower grading (~1-3 feet) adjacent to and between channels to provide a

balance of drier scrub shrub and forested wetland habitat. The grading concept restores complex river and stream floodplain topography in this filled and flattened landscape. The grading plan will generate 15,000 to 20,000 cubic yards (CY) of topsoil and gravel to redistribute within the site. About 5,000 CY of topsoil will be removed from all areas to be graded significantly and stockpiled until the site is close to final grade. Topsoil will then be placed over graded surfaces to bring the site to final grade with an average of 6" of topsoil throughout most of the site. The remaining 10,000 to 15,000 CY of fill and courser gravel will be hauled to the upland area on the east portion of the Taylor Creek Mitigation Site and stabilized there. About 300 cubic yards of fill is proposed to create a berm along Maxwell Road to reduce flooding from beaver dams.

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

Yes, erosion could occur due to site modification. Minor erosion of banks within the newly created wetlands is expected during the first year as the site stabilizes. Water quality will be protected by using BMPs and an erosion control plan during and after construction. As vegetation becomes established within the first year we expect minimal erosion at the site. Any sediment generated within the project is expected to settle within the constructed wetlands onsite.

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 during and after construction is expected, the following practices will be used to assure that water quality is maintained during construction:

- All necessary and appropriate erosion control Best Management Practices (BMPs) will be used during construction to limit sediment runoff from access roads, work areas, and stockpiles during rain events.
- Turbidity in the creek will be monitored during in-water construction work to ensure levels are within permitted limits.
- Work areas during construction of stream and off-channel elements, will be temporarily isolated from the creek by means such as a coffer dam, temporary sheet piles, or a turbidity curtain and will be included in a detailed dewatering plan.
- Existing native trees will be preserved 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 (CO_2), methane, and nitrous oxide. The global warming potential (GWP) of these compounds is measured in "carbon dioxide equivalents," or CO_2e, which converts the GWP of various gasses into their equivalent in CO_2.

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 8 tons of CO_2e over 48 days during construction of the project. Emissions will be offset by planting native trees and shrubs that sequester CO_2. 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 where possible. Graded and disturbed areas will be replanted with native vegetation according to plan. Approximately 5,000 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 Waters of the U.S (Figures 1-2):

About 1,100 linear feet of Taylor Creek (Type F/WRIA # 08.0320), runs through the project area. It continues north and drains into the Cedar River (Figures 1 -2). There are four existing wetlands within the Project (Table 1). Wetland A, encompassing an on-site area of approximately 2,030 square feet, continues off-site onto adjacent King County-owned properties to the north. This high quality Category II wetland, based on Washington State Department of Ecology wetland rating system, is the result of restoration actions in 2005 and 2006 and subsequent evolution via beavers, sediment aggradation and periodic disturbance from flooding. It has a total area of approximately six acres and is riverine flow-through wetland with forested, scrub-shrub and aquatic habitats. Wetlands B and C are small, closed depressions to the east of the Williams Easement where water is impounded between the pipeline easement and the toe of the slope to the east. Wetlands B and C are Category IV depressional wetlands with emergent habitat. Wetland B is 2,620 square feet and Wetland C is 975 square feet. Wetland D is a man-made farm pond that forms a 19,602 square foot, Category IV, depressional wetland with forested, scrub shrub and aquatic habitats.

Table 1. Wetland Designations, Classifications, Sizes and Regulatory Buffers

Wetland	Wetland Classification				Wetland Size (acres)	Buffer Width (feet)
	Cowardin	HGM	Ecology	King County		
A	PFO/SS/PEM	Riverine	II	II	0.05	150
B	PEM	Depressional	IV	IV	0.06	25
C	PEM	Depressional	IV	IV	0.02	25
D	PFO/SS/AB	Depressional	IV	IV	0.45	25

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 adjacent to and within each of the described waters during summer, low flow conditions. Almost all work will be completed outside of the existing stream and wetlands except for connections to existing wetlands upstream and downstream of the site, enhancement of three small existing wetlands and bridge replacement and removal within Taylor Creek. The project will also include extensive work within the 100 year floodplain of the Cedar River and Taylor Creek and the buffers of existing streams and wetlands.

The Taylor Creek Mitigation Project will remove fill and native material to enhance and create wetland, and stream habitat. Wetland and aquatic habitats will be constructed using earthmoving equipment such as excavators, bulldozers loaders and backhoes to restore lower, wetter elevations throughout the floodplain. Excavation spoils will be hauled using dump trucks to upland areas in the eastern portion of the site. Topsoil will be preserved and reused to amend soils upon the completion of grading. Water level in work area will be managed with trash pumps, above ground settling basins and filtration through vegetated areas prior to discharge back to the downstream wetland. Felled trees will remain on site and be utilized as large wood in aquatic areas along with imported logs and brush. An excavator will be used to install large wood, brush and wildlife snags. Equipment and materials staging areas will be located in uplands. All disturbed areas will be replanted and maintained using hand labor and hand-held augers.

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.*

Wetland Excavation: Only about 10 cubic yards of material will be excavated from existing wetlands at the upstream and downstream connection points for the new wetland channels with existing wetlands. A total of about 15,000 to 20,000 cubic yards (CY) of topsoil and gravel will be removed from the upland areas of the project site to create new wetland habitat.

Stream excavation: Up to 10 cubic yards of existing concrete footings and associated fill material will be removed from the two bridge footings and two additional bulkheads within Taylor Creek.

Coffer dam fill: Up to 5 cubic yards of sandbags will be placed temporarily to divert water from work areas in Taylor Creek associated with bridge footing work and bulkhead removal. This material will come from the wetland excavation area.

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

Yes, surface water and shallow subsurface water will be diverted and/or pumped from in-water work areas to maintain water quality in the stream and wetlands and to allow grading at lower elevations in the wetland creation area:

- During the bridge removal, bridge replacement and bulkhead removal the in-water work areas will be isolated from the creek using coffer dams, turbidity curtains and other measures to divert flowing water as needed to maintain State Water Quality Standards.
- To establish design grades in the deeper areas of the proposed wetland, shallow subsurface water will be pumped down using one or two 4-inch diameter trash pumps

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

Yes, the majority of the project located west of the Williams pipeline is within the 100-year floodplain of the Cedar River and Taylor Creek, though the southern portion of the project site is outside of the regulated floodplain of the Cedar River (Figure 1).

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.*

As noted above, shallow groundwater may be pumped out of the active construction area to protect water quality. This will be limited to small areas and for short durations that are not expected to affect deeper groundwater conditions or drinking water wells of adjacent properties. There will be no discharge to groundwater. See shallow subsurface water description above.

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.*

The project does not create any new impervious surface and therefore is not expected to generate stormwater runoff. Precipitation that falls within the project area is expected to

infiltrate on the site due to the porous nature of the onsite soils. During periods of heavy rain, however, rainwater that does not infiltrate is expected to enter the wetland areas created onsite and then flow into Taylor Creek.

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

No.

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

During dewatering in wetland areas, the following measures will be taken to minimize the potential for any significant drawdown of the local water table:

a. Pumping will be limited to the deeper area shown in blue on the conceptual design graphic (Figure 3);
b. Work in this deeper excavation area will be divided into small work zones to reduce the duration and volume of pumping necessary to bring water to workable levels in the immediate work zone.

Turbid water from the dewatering of deep excavation areas will be pumped to an above-ground, contained settling basin and then filtered through vegetated upland areas prior to discharge to the existing wetland downstream. Multiple, large settling basins will allow for overnight settling of sediment prior to final treatment through the vegetated filter and discharge to the wetland.

Excavation in wetland areas will be isolated from existing wetlands using the following measures:

a. Coffer dams placed at the confluence of the new and existing aquatic features;
b. Leaving existing native material at the confluence in place until the new wetlands are excavated;
c. The coffer dams or native material at the confluence will be removed as the final step in the wetland excavation.

Post-project effects on water surface elevation caused by beaver dams will be monitored regularly and a plan for managing potential impacts to private property and public infrastructure is under development.

Discharges of turbid water will be managed using the methods above and other Best Management Practices to comply with State Water Quality Standards.

4. Plants

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

- ☒ Deciduous trees: red alder, black cottonwood, big leaf maple
- ☒ Evergreen trees: Douglas fir, Western Red Cedar, pine sp.
- ☒ Shrubs: Red twig dogwood, Sitka willow, Hookers willow, salmonberry, rose sp.
- ☒ Grass: Reed canarygrass
- ☒ Pasture: Pasture grasses
- ☐ Crop or grain
- ☒ Wet soil plants: slough sedge, soft rush, hardstem bulrush, buttercup
- ☒ Water plants: Yellow pond lily
- ☒ Other types of vegetation: blackberry, tansy ragwort, Scotch Broom

Wetland
The forested wetland canopy is dominated by red alder (*A. rubra*), 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 Slough sedge (Carex obnupta), reed canary grass (*Phalaris arundinacea*) and creeping buttercup (*Ranunculus repens var. repens)*

Upland
The upland canopy is dominated by Douglas fir (pseudotsuga menzesii) and red alder (*A. rubra*). Shrubs include salmonberry (*Rubus spectabilis*). Herbaceous plants include pasture grasses.

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

Invasive species will be removed or controlled and native vegetation will be reestablished throughout the project area. Much of the site will be graded, but the cover in most graded areas is pasture grass, reed canarygrass, or non-native blackberry.

Approximately 24 deciduous trees (maple, alder, cottonwood and alder) and 12 conifers (cedar, fir and hemlock) will be removed to maximize the area of restored wetland, to generate wood to place in the wetland and to make room for placement of excavated material in upland area to the east.

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:

All disturbed areas will be replanted with native herbaceous plants, shrubs, and trees appropriate to the soils and hydrology on the site. Wetland/riparian shrubs and tree species will be planted extensively throughout the newly created wetland and side channel habitats. High visibility flagging or fencing will be installed to protect existing native trees and shrubs.

Most trees proposed for clearing fall outside of Critical Areas and their buffers. All of the cleared trees will be felled whole with rootballs intact and will be placed at the project site for habitat improvement.

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 small mammals
☒ Fish: salmon, trout, other

Although fish and wildlife habitat on the site is degraded, the site does provide habitat to a variety of fish and wildlife species native to Puget Sound lowland forests, streams and wetlands. Chinook salmon and bull trout are found in the Cedar River basin. Chinook have been documented to spawn in

Taylor Creek, including portions of the project area. Coho and sockeye salmon, as well as cutthroat and steelhead trout, are also found in Taylor Creek.

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

Chinook salmon (*Oncorhynchus tshawytscha*), bull trout (*Salvelinus confluentus*); and bald eagle (*Haliaeetus leucocephalus*) are all listed as threatened species under the Endangered Species Act.

Chinook salmon and bald eagles are both found in the vicinity of the project. Chinook are found within the Cedar River and in the lower reaches of Taylor Creek. Taylor Creek is also proposed as Critical Habitat for Chinook salmon. Bald eagles are known to use the Cedar River valley and adjacent wooded slopes as wintering and foraging habitat. There are no nests or known communal roost trees on or near the project site.

Bull trout have been found in the upper Cedar River Watershed and foraging at the mouth of the Cedar River in Lake Washington. It is likely that the relatively disturbed condition of Taylor Creek and high summer water temperatures preclude use of Taylor Creek by bull trout during the summer months in particular. Bull trout have never been observed in Taylor Creek. WDFW does not consider bull trout in its determination of work windows on the Cedar River because it is acknowledged that bull trout sightings in the lower Cedar River and tributaries are extremely rare, despite extensive fish monitoring conducted by King County, WDFW, City of Seattle and the Muckleshoot Tribe in the lower Cedar River.

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

Yes. The project site lies within the Pacific Flyway which is a major migratory route for birds. Taylor Creek is also used by anadromous salmonid species at various life stages, including both upstream and downstream migration.

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

The Taylor Creek Mitigation Project will provide fish and wildlife habitat by establishing new and enhancing existing wetland areas with a persistent, diverse mix of the four wetland plant communities (forested, scrub shrub, emergent and aquatic) and habitat wood (snags, logs, debris piles). It will improve wildlife habitat by expanding upon and improving connectivity with the existing patchwork of adjacent forest. It will improve riparian upland wildlife habitat by converting disturbed uplands within the wetland and stream buffers to a native forested or shrub communities.

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.

None. 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.

Construction equipment could leak diesel gas, oil, or hydraulic fluid onto the site.

1) Describe special emergency services that might be required.

An emergency spill kit will be kept on the site at all times to respond to the potential loss of diesel gas, oil, or hydraulic fluid from construction machinery.

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

All construction equipment will be refueled at a designated fueling area outside of critical areas. All equipment will be inspected on a daily basis to determine if there are leaking seals or gaskets that require replacement. BMPs such as fuel containment and a spill response plan will be used during construction of this project to reduce and control environmental health hazards.

b. Noise:

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

Although the project is located in a rural residential area, the project site is located near two state highways, SR-18 and SR-169, and a local access road. Some minor traffic noise is expected, but this should have no effect either on construction or the completed project.

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. and 7 p.m. on weekdays and between 9 a.m. and 5 p.m. on Saturdays. No noise is anticipated to be produced on Sundays. 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?

Current use of the site is medium to low density residential. There is a large wetland project to the north. Adjacent properties to the south, east and west are also medium to low density residential. Commercial properties are located to the south, near the intersection of SR-18 and SR-169.

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

Many areas along Taylor Creek have historically been and continue to be used for pasture. The property to the north was grazed by cattle until King County DNRP purchased the property and implemented a habitat project in 2005. The current Taylor Lee MRP project property was used to graze horses in the past.

c. Describe any structures on the site.

There are two bridges onsite as well as some utility pipes and a concrete bulkhead.

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

The residential structures on the Taylor Creek Mitigation Site were demolished in the summer of 2017. Demolished structures included a 1,800 square foot single-family home, a 35-stall equestrian barn and a 7-stall stud barn, along with various sheds and outbuildings. Two bridges over Taylor Creek will be removed; one will be replaced with a footbridge. Two concrete bulkheads that support the bridge that will not be replaced will be removed from the channel of Taylor Creek.

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

The parcels are zoned RA5 (rural agricultural, 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 proposed project is a stream and wetland habitat restoration project that will be completed on and adjacent to Taylor Creek (WRIA # 08.0320), a tributary to the Cedar River. Taylor Creek is considered a Type F stream that is known to support Chinook salmon, coho salmon, sockeye salmon, and cutthroat trout. There are also 4 existing wetlands within the project area that will be enhanced. These include a category II riverine wetland and three category IV depressional wetlands.

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

None.

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

One property had two dwellings used by people. Those residents voluntarily relocated when the property was sold to King County through a voluntary transaction.

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

King County negotiated the purchase of this property. The two people living onsite were relocated.

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

The completed project will be compatible with existing and projected land uses and known plans. Taylor Creek and existing wetlands already have substantial buffers on them that affect future land use. Although boundaries and buffers associated with new wetlands may change within the project area, the combined buffers on surrounding private properties are not expected to expand as a result of the project, under the current King County Critical Areas Ordinance.

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 habitat logs and snags 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 predominantly covered with grass and invasive species, will be converted to wetland, 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 the Taylor Creek project area are to conserve and enhance ecological value and to accommodate passive recreational use. Once the project is constructed, low-impact activities are welcomed, including walking and nature observation.

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

No recreational opportunities will be adversely impacted.

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

The proposed project will improve fish and wildlife habitat and thereby may have a positive effect on recreational opportunities.

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 to evaluate the project's potential impact on cultural resources or historic structures. 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 to provide information on known or probable cultural resources in the project area. The consultant reviewed local, state, and federal sources, and work by previous investigators. No cultural resources were identified during the onsite survey or monitoring efforts

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

The proximity of several known archaeological sites and the presence of an ethnographically recorded village at Maple Valley show that the project vicinity was important for Native Americans. The General Land Office surveyed the area in 1881 and noted a historic trail paralleling the river about one mile east of the project. An Indian trail was also recorded about one mile west and northwest of the project area. A search at the Office of Archaeology and Historic Preservation shows that five archeological sites have been recorded within one mile of 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, if any:

- Develop and implement a Monitoring and Inadvertent Discovery Plan (MIDP) 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.

- Enlist a cultural resources expert to be on site to observe excavations into native soils in any areas previously identified as potentially sensitive.

- 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.

The project is immediately adjacent to Maxwell Road SE and 206th Avenue SE.

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

No.

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

Does not apply.

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.

None.

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: _____

Title: ENVIRONMENTAL SCIENTIST

Date Submitted: 7/12/18

Greenhouse Gas (GHG) Emissions Worksheet

Project Name: Taylor Creek Mitigation Project

Project Manager: Dan Eastman
Assessment Completed by: Cody Toal
Date of completion: 20-Jun-18

Project Description: The purpose of the Taylor Creek Mitigation project is to re-establish and enhance wetland and aquatic habitat and restore floodplain functions within the lower reaches of Taylor Creek. The project is sponsored by King County's In-Lieu Fee Program and will include riparian/floodplain type mitigation consisting of wetland, stream and buffer components to mitigate for impacts to aquatic habitat elsewhere in the Cedar River/Lake Washington Service Area. This reach of Taylor Creek has been channelized for flood control, resulting in lost connectivity with adjacent floodplain wetlands – many of which have been filled to promote agriculture and residential development. The total project area is approximately thirteen acres, with about four acres of proposed wetland and aquatic habitat restoration and eight acres of upland enhancement.

Construction-related Greenhouse Gas Emissions

	Pounds	Metric tons
Emissions from fuel-burning activities (in CO2e):	15272	7
Emissions from embedded materials (in CO2e):	2800	1.27041742
Emissions resulting from site impacts (in CO2e):	0	0
Total Emissions (in CO2e):	**18072**	**8**

Project-Related Carbon Sequestration

	Pounds	Metric tons
Total Carbon Sequestration 35 years after planting:	**1.01308**	**2232.82341**
Years Required for Carbon Sequestration to Equal Total CO2e Emissions:		**17**