



King County

ENVIRONMENTAL CHECKLIST

REDDINGTON LEVEE SETBACK AND EXTENSION

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:*

Reddington Levee Setback and Extension

2. *Name of Applicant:*

Sarah McCarthy
King County Department of Natural Resources and Parks
Water and Land Resources Division

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

King County Water and Land Resources Division
201 South Jackson Street, Suite 600
Seattle, WA 98104-3855
Phone: 206-263-0492
Fax: 206-205-5134

4. *Date checklist prepared:*

8/13/2012

5. *Agency requesting checklist:*

King County Department of Natural Resources and Parks
Water and Land Resources Division

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

May 1, 2013 – November 30, 2013

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

No.

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

Reddington Levee Setback and Extension Feasibility Report, November 2011 (TetraTech)

Wetland Delineation: Reddington Levee Setback and Extension Project, August 2012
(Herrera Environmental Consultants)

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

No

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

Permit	Issuing/Regulating Agency
Clean Water Act Section 404 Permit	US Army Corps of Engineers (USACE)
Rivers and Harbors Act Section 10 Permit	USACE
Endangered Species Act Section 7 Consultation	NMFS and USFWS
LOMA / LOMR	FEMA
Clean Water Act Section 401 Water Quality Certification	WA Dept of Ecology
Coastal Zone Management Consistency Determination	WA Dept of Ecology
NPDES Permit	WA Dept of Ecology
National Historic Preservation Act Section 106	DAHP, coordinated by USACE
SEPA (State Environmental Policy Act)	King County (lead agency)
Hydraulic Project Approval	WDFW with MIT concurrence
Shoreline Management Act Compliance	City of Auburn
Critical Areas compliance	City of Auburn
Floodplain Development Permit	City of Auburn
Clearing/Grading Permit	City of Auburn
Flood Hazard Certification	City of Auburn
Right of Way Construction Permits	City of Auburn
Demolition Permits	City of Auburn
Asbestos/Demolition Notification	Puget Sound Clean Air Agency

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

The Reddington Levee Setback and Extension project is part of a larger overall flood management strategy for the lower Green River. This project will set back and extend the Reddington Levee along the left (west) bank of the Green River through a portion of the City of Auburn. The project area is 1.3 miles in length and extends from the southern boundary of Port of Seattle's wetland mitigation project at river mile (RM) 28.2 (43rd Street Northeast) to RM 29.5 at Brannan Park (26th Street Northeast). The project consists of removal of existing rock armor and levee fill materials, demolition of existing structures, utility construction and relocation, and construction of a setback levee.

The project will result in increased flood conveyance, a wider riparian corridor with enhanced ecological benefits, improved instream habitat along the channel margin and expanded flood refugia during higher flow events. It will greatly reduce flood risk to residents, businesses and infrastructure within the City of Auburn and the Green River Valley. Once the new setback levee is constructed and the existing levee is removed, the river channel will be free to migrate laterally within a broader riverine corridor, forming new channel patterns and complex salmon habitat. Extensive revegetation of all disturbed areas will jumpstart establishment of a wider riparian buffer for water quality and habitat protection.

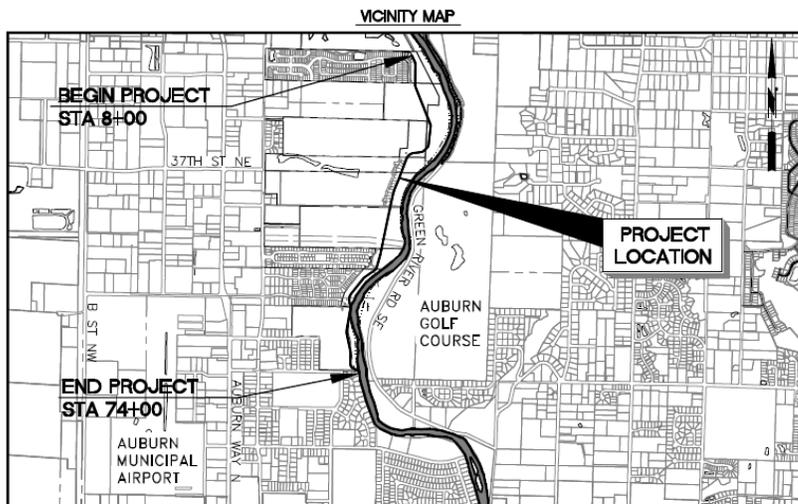
Key project components include:

- Removal of approximately 4,700 linear feet (LF) of existing levee prism and rock revetment (RM 28.6-29.5),
- Construction of approximately 6,600 LF of setback levee (RM 28.2 to 29.5, roughly 43rd Street NE to 26th Street NE) including the 1,900 LF new levee segment.
- Construction of buried rock barbs (landward of the existing river channel) that will deflect erosive flows away from the toe of the setback levee and encourage formation of floodplain alcoves and riparian forest,
- Installation of eight engineered logjams (ELJs) to improve fish rearing and slow water refuge habitat as well as encourage sediment accretion and riparian buffer formation,
- Revegetation of all disturbed surfaces with native trees, shrubs, and grasses,
- Acquisition and demolition of residential structures to maximize the restored river corridor provided by the levee setback, and
- Utility construction and relocation.

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 proposed project is located in the City of Auburn. The project extends from the southern boundary of Port of Seattle's wetland mitigation project at rivermile (RM) 28.2 (43rd Street Northeast) to RM 29.5 at Brannan Park (26th Street Northeast).

Section (N to S): SE31/NW5/NW6/SE6 Township 22N Range 5W
 North End of Project Site: Latitude: 47.34617, Longitude: -122.2085
 South End of Project Site: Latitude: 47.33031, Longitude: -122.2123



B. ENVIRONMENTAL ELEMENTS**1. Earth**

a. *General description of the site (underline one): flat, rolling, hilly, steep slopes (existing levee slopes), mountainous, other.*

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

The steepest slope on the site is the existing levee slope, which has a maximum slope of 50%. The rest of the site is generally flat.

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.*

There are six soil types mapped by NRCS in the project area: Briscot silt loam, mixed alluvial land, Oridia silt loam, Pilchuck fine sandy loam, Puyallup fine sandy loam, and Renton silt loam.

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

Natural soils in this area are prone to deposition and periodic erosion. The majority of the left bank through the project area has been stabilized for over 50 years with coarse gravel and riprap. There is a small segment of levee toe rock loss and toe scour near RM 28.8.

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

Approximately 27 acres will be cleared and grubbed in preparation for construction. Significant trees will be avoided where possible.

The following excavation is proposed:

- Removal of approximately 4,400 cubic yards (CY) of existing levee riprap (all rock will be removed from the riverward face of the existing levee)
- Removal of approximately 160,000 CY of existing levee fill and terrace material (the terrace will be excavated for the installation of rock barbs and down to current floodplain elevation). An additional 26,000 CY of excavated terrace material will be used to backfill and cover over the rock barbs.

Excavated rock, fill, and earthen material will be reused onsite if materials are determined to be suitable. Any material that cannot be reused onsite will be exported to an approved disposal facility (e.g., Pacific Topsoil or a King County soil recycling facility). The following fill is proposed:

- Approximately 40,000 CY of earthen and gravel fill for the setback levee

- Approximately 82,000 CY of angular gravel and riprap for the rock barbs and levee face rock (located adjacent to Wetland E at River Mobile Estates [37th Street NE, see Reddington Wetland Delineation Report on King County's project webpage] and the City of Auburn's Brannan Park Pump Station near 30th Street NE)
- Approximately 224 boulders for engineered log jam (ELJ) ballast

In addition, the ELJs will be constructed with at least 104 pieces of large wood and secured with approximately 64 wood pilings.

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

Yes, erosion could occur as a result of clearing, excavation, hauling of material and general project construction. There is potential for short term turbidity impacts on the Green River adjacent to and downstream of the project area during the removal of riprap from the existing levee. The implementation of temporary erosion and sediment control measures and stabilization techniques (see B.1.h.) will minimize any potential adverse effects.

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

Approximately four percent of the site will be covered with impervious surfaces after project construction because the crest of the setback levee will be paved to allow for trail access. The trail will be 12 feet wide. However, the project will remove more impervious surface than is being replaced; the current impervious area is approximately nine percent (inclusive of existing levee access road/trail and River Mobile Estates).

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

During construction temporary erosion and sediment control measures such as silt fencing, straw bales, construction entrances, street sweeping and catch basin inlet protection will be used to control and minimize erosion and sedimentation. Turbidity curtains will be used during in-water work and turbidity monitoring will be carried out to ensure compliance with state water quality standards. Following construction, disturbed soil areas will be stabilized by using seed, mulch, erosion control blankets and installation of native vegetation. The setback levee will be inspected during and following each flood for signs of erosion, and appropriate measures such as application of geotextile fabrics and packing of any observed rills or gullies will be carried out promptly to address any observed erosion problems.

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.

The project has the potential to generate construction related dust. Dust control will be performed on an as-needed basis by stabilizing construction access surfaces and watering. All loads of soil or other debris leaving the site will be covered.

The completed project will not emit gasses with the potential to negatively affect climate change.

Construction equipment, including track hoes, dump trucks and pick-up trucks, will be used during construction. This equipment will emit gasses including carbon dioxide (CO₂), methane and nitrous oxide, as well as others in much smaller amounts. 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. The amount of CO₂e that may be emitted as a result of constructing the proposed project has been estimated by computing the amount of fuel to be consumed by equipment used to construct the project or by estimating their hourly output of various greenhouse gases. Fuel consumed or hourly output is then converted into CO₂e emitted using formulae developed by the Energy Information Administration (EIA) of the U.S. Department of Energy.

Construction of the proposed project will likely result in the discharge of approximately 712 tons of CO₂e to the atmosphere.

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:

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 existing levee is located on the left bank of the lower Green River. In addition, there are four wetlands within the project area (Wetlands D, E, J, and K). Wetland D is a riverine flow-through wetland extending along the riverbank; it is contiguous for the entire length of the project area and is approximately 2.4

acres in size. Wetland E is a depressional outflow wetland located between the River Mobile Estates (37th Street NE) and the levee; it is approximately 4.7 acres in size. Wetlands J and K are depressional closed wetlands located north of 32nd Place NE, on the west side of the pathway that parallels the levee alongside the Green River; these wetlands are 0.04 and 0.03 acres, respectively.

- 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 levee removal will occur adjacent to the Green River. Removal of the rock toe and face rock from the base of the levee slope will occur, in part, below the Ordinary High Water Mark of the Green River. Setback levee construction will also require work in and adjacent to Wetland E (adjacent to the River Mobile Estates).

- 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.*

Direct wetland impacts in Wetland E include approximately:

- 6,290 cubic yards (CY) of rock fill (26,200 square feet (SF) footprint)
- 7,150 CY (44,460 SF footprint) temporary wetland excavation; this includes 1,185 CY (6,400 SF footprint) for ELJ placement

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

No

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

Yes. Approximately 30 percent of the existing levee, and therefore the proposed levee and riprap removal, is within the current FEMA 100-year floodplain. Less than ten percent of the proposed setback levee is within the 100-year floodplain.

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

No

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

- 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.

N/A

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 primary source of runoff within the existing project site is impervious surfaces (mobile home units and gravel and paved surfaces associated with the units and existing trails) with green space (lawn, brush and wooded area) and poorly draining agricultural field generating the remaining runoff. Existing storm water system conveys offsite drainage through the project site. All drainage flows into the Green River. Once completed, the proposed activity will result in less impervious surfaces to generate runoff.

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

Waste materials will be prevented from entering the ground or surface waters by maintaining a clean site, properly disposing of debris and use of Best Management Practices to filter and trap material within the project site.

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

Temporary erosion and sediment control measures will be used during construction to reduce and control surface water runoff. Reduction of impervious area and dense revegetation with native riparian plants with the project will be used to protect surface water quality following construction. No groundwater impacts are expected during or following construction.

4. Plants

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

- Deciduous trees: alder, maple, cottonwood, ash, cherry, oak, other ornamental
- Evergreen trees: fir, cedar, pine, spruce
- Shrubs (including willow species)
- Grass
- Pasture
- Crop or grain
- Wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other
- Water plants: water lily, eelgrass, milfoil, other
- Other types of vegetation: blackberry, knotweed

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

Approximately 300 trees will be removed, primarily from upland areas and existing levee slopes. Large trees will be avoided where possible. Levee vegetation consists primarily of bigleaf maple (40%), black cottonwood (24%), and red alder (23%), with Douglas fir, Oregon ask, and willow species making up the rest of the vegetation. Upland vegetation consists primarily of black cottonwood (54%), red alder (17%), and Douglas fir (13%), with bigleaf maple, western red cedar, and ornamental species making up the rest.

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

No threatened or endangered plant species have been seen on or near the project site.

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

Significant trees will be avoided during construction when feasible. Levee removal will be limited to the upper six feet of the levee adjacent to Wetland E near the River Mobile Estates (though all of the riprap from the riverward slope will be removed) in order to preserve several significant trees on the landward levee slope in this portion of the project.

All disturbed areas will be planted with native trees, shrubs, and grasses following 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: kingfisher, merganser, dipper
 Mammals: deer, bear, elk, beaver, other: otter, vole, mouse
 Fish: bass, salmon, trout, herring, shellfish, other: whitefish, sculpin

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

Puget Sound Chinook salmon
 Coastal/Puget Sound steelhead trout
 Coastal/Puget Sound bull trout

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

Juvenile and adult anadromous and resident fish migrate through the project area during certain times of the year. Most of the large river valleys in King County – including the Green River – comprise a portion of the Pacific Flyway used by waterfowl and other migratory bird species.

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

This project has been designed to avoid and minimize direct construction impacts on fish in the Green River. Most ground-disturbing actions will occur more than one hundred feet landward and above the Ordinary High Water Mark (OHWM) of the channel. The only construction-related action proposed to occur below the OHWM of the Green River is removal of existing levee face and toe rock, which is essential for the restoration of riverine process and function within the project area. Turbidity curtains will be used as needed to minimize water quality impacts within the project area. In accordance with permit conditions, in-water work will be timed to impact the fewest fish species and life stages possible.

The engineered log jams proposed for construction in Wetland E adjacent to the River Mobile Estates will create hydraulic complexity and roughness along the bank (approximately RM 28.6 to 28.85). They will also deflect erosive flows away from the bank and slow water velocities near the channel margin thereby providing substantial hydraulic refugia as well as escape cover for juvenile and adult fish.

The existing levee and river bank is dominated by Himalayan blackberry, which outcompetes native vegetation and provides minimal habitat for fish, birds, and small mammals. The proposed project will remove blackberries and other invasive plant species, and revegetate all disturbed areas with native trees, shrubs and grasses.

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.*

Petroleum fuels will be used to operate all construction and watering equipment during construction. Once the project is completed, petroleum fuels will be used to power watering trucks (to water installed vegetation) or portable pumps, if their temporary use is permitted by the Department of Ecology, during hot weather in the summer for up to three years following construction. Once the project is completed and the vegetation is established, no further source of energy will be needed.

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:*

Energy conservation features are not included in this proposal.

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.*

The potential for spills of toxic or hazardous materials, and related risks of fire or explosion are limited to the petroleum fuels used for project construction, maintenance and irrigation. A spill prevention plan will be implemented to minimize the risk of spills, response kits will be maintained on site at all times during construction, and excess fuel will not be kept on site.

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

The need for special emergency services is not anticipated. 911 will be called in the event of an emergency.

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

Best management practices such as fuel containment and a spill response plan will be used during construction 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)?*

Urban traffic, air traffic from the Auburn airport, and park/residential maintenance (e.g., lawn mowing) are the main sources of existing noise in the project area. None of these noises will affect the 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.*

On a short-term basis, noise will be generated from construction equipment (e.g., truck traffic hauling materials to and from the site, excavator activity, etc.). Short-term noise impacts will be minimized by limiting the hours of construction in accordance with applicable regulations. Short-term noise impacts will cease upon project completion; no long-term noise impacts would be created by or associated with the proposed project.

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

Standard mufflers will be used on all construction equipment during regular daytime working hours.

8. Land and Shoreline Use

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

The current land use of the site and adjacent properties includes park, residential properties. There is also a large fallow field that is slated for residential development, but occasionally farmed.

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

Yes, most of the project site has been converted from agriculture in prior decades, and a currently fallow field has been used for agriculture in the recent past.

- c. *Describe any structures on the site.*

Structures on the site include a levee access road/trail, a stormwater pump station, single family mobile homes, and a residential street.

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

The levee access road/trail will be demolished and reconstructed on the crest of the proposed setback levee. The stormwater swale associated with an existing pump station will be demolished and reconstructed. Sixteen mobile homes will be demolished. The residential street will be improved.

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

The current zoning is RMHC (Residential Mobile Home Community), P1 (Public Use District), PUD (Planned Unit Development), and R7 (Residential 7 Dwelling Units/Acre).

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

High Density Residential, Moderate Density Residential, Single Family Residential, Public/Quasi-Public, Open Space

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

Urban Conservancy

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

Yes. The site includes Geologic Hazard Areas (Landslide, Erosion, Seismic), Wetlands, Streams (and rivers), Groundwater Protection Areas, Wildlife Habitat Areas and Special Floodplain Hazard Areas (Floodplain, Floodway, Riparian Habitat Zone, Channel Migration Zone).

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

None.

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

Sixteen families.

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

The residents will receive fair market value for their homes, as well as relocation assistance from King County.

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

The proposed project, when completed, will remain compatible with the existing land uses in the area. Moreover, the completed project will enhance aquatic and terrestrial habitat conditions along the river bank and the new trail will serve as a recreational amenity for pedestrians and cyclists.

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.*

Sixteen low to moderate income residential units will be eliminated.

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

King County designed the project to eliminate the minimum number of residential units while maximizing the environmental and flood hazard reduction impacts of the project. The residents of the housing units impacted by this project will receive fair market value for their homes, as well as relocation assistance from King County.

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?*

The tallest height of any proposed structure is the levee, the crest of which will be a maximum of eight feet above the ground surface.

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

There will be slight alteration in views due to the landward relocation of the setback levee. The levee will be higher in places, and therefore may impact views of the river or riverbank.

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

The levee will not be constructed any higher than is required for flood risk reduction purposes (500-year flood protection plus 3.5 feet of freeboard). Any disturbed areas will be replanted to restore native riparian vegetation within the river corridor. Over time, the aesthetics of the project site will be improved by converting areas currently overgrown with invasive plants to more beneficial native plant communities.

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.*

There is no need for measures to mitigate light and glare impacts.

12. Recreation

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

Brannan Park provides both designated (ball fields, picnic benches) and informal (open grassy areas) recreational opportunities. The existing levee maintenance road is used as a walking trail and as informal access to the river by fishermen. In-river use may include boating, floating and wading.

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

The proposed project will eliminate some currently mowed grassy areas used for informal recreational opportunities, but will improve recreational opportunities for pedestrians, cyclists and river recreationists who use the new paved trail on the levee crest, or access the river via the setback levee's generally flatter slope angles.

The proposed project includes setting the levee back up to 300 feet from its current location. The proposal also includes installation of engineered log jams along a portion of the project length in and near Wetland E (adjacent to the River Mobile Estates, 37th Street NE). These project-related alterations could modify flow patterns and add hydraulic complexity that may change conditions previously observed or experienced by shoreline and in-river users while boating, floating, wading or fishing. While these

users will experience altered conditions from the project, these recreational uses are not expected to be displaced.

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

The project will include a public trail and increased access to the river and its riparian zone informal shoreline and upland recreational uses including bird watching, native plant identification and passive enjoyment of a natural area.

Shoreline and in-river recreational safety will be addressed in a number of ways.

1. King County adopted a public rule entitled Procedures for Considering Public Safety When Placing Large Wood in King County Rivers in 2010. The purpose of the public rule is:
 - a. To consider public safety issues in the design of projects involving the placement of large wood in King County rivers and streams.
 - b. To evaluate strategies for design of wood placements that will maximize project benefits and minimize risks to public safety.
 - c. To make available to the public the opportunity to provide input on proposed projects utilizing large wood.
2. King County's procedures for considering public safety when placing large wood in King County rivers requires that the Department of Natural Resources and Parks develop and maintain a list of projects where large wood will be or is likely to be installed in a King County river or stream. This project list will be updated every year and made available by request and via the county website or e-mail notifications. The website is:
<http://www.kingcounty.gov/environment/watersheds/general-information/large-wood/project-list.aspx>.
3. King County conducts a recreational safety campaign annually and maintains a River Safety website (www.kingcounty.gov/riversafety) that provides information for river users, including the following safety tips:
 - Wear a PFD (personal flotation device).
 - Do not use alcohol or drugs when recreating on the river.
 - Watch children closely when they are on or near any type of water; stay close enough to reach them immediately.
 - Choose safer swimming options with lifeguards present, such as a beach, lake or pool.When planning a boating or floating trip:
 - Always tell someone your route and when and where you expect to put in and take out.
 - Have a back-up plan for emergency contact in case your trip is cut short by an unforeseen obstacle or emergency.
 - Never float the river alone and, if possible, make sure there is at least one oared craft in your group in case a rescue is needed.
 - Bring a dry bag with food, water, and warm clothes.

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.*

There are no known places or objects listed on, or proposed for, inclusion on national, state or local preservation registers on or adjacent to the site. In 2010, King County hired a professional archaeologist to conduct a preliminary cultural resources review of the project area and to monitor geotechnical borings. No cultural materials were observed in the geotechnical borings. Based upon evidence for Native American and historic-period use of the project area and surroundings, the consultant recommended that additional cultural resources work be carried out as the project progressed. In 2012, King County again hired a consultant to conduct additional background research and review (including a literature review for the project area encompassing one mile in every direction from the project footprint), perform a surface and subsurface survey of the project site, and examine deep sonic core borings. The consultant encountered no precontact or ethnographic archaeological remains. The Reddington Levee was documented on a State of Washington Historic Property Inventory Form, and evaluated for inclusion on the National Register of Historic Places (NRHP). The property did not meet any of the criteria for eligibility for inclusion on the NRHP. The HPI form will be submitted to the Washington State Department of Archaeology and Historic Preservation for concurrence on this evaluation.

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

There is one known ethnographic place within the project site and two adjacent to it. However, no evidence of precontact or ethnographic archaeological remains was found during the 2010 and 2012 cultural resources investigations.

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

During construction, King County will have an archaeologist on site to monitor construction ground disturbance within 50 feet of known ethnographic places. In addition, an Archaeological Resources Monitoring Plan will be prepared to outline specific monitoring requirements and define activity thresholds for modifying the level of monitoring effort to be implemented during construction. The plan will also include procedures to be followed if cultural resources are encountered during construction. The monitoring plan will be reviewed and approved by the US Army Corps of Engineers to ensure compliance with Section 106 of the National Historic Preservation Act during permit review.

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.*

This project runs north to south, parallel to I Street and Auburn Way. Cross streets include 37th Street NE, 30th Street NE, and 28th Street NE. Access from these streets to the site will not change.

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

King County Metro bus route 180 goes down Auburn Way, approximately 0.5 miles away from the project site.

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

The project will not add or eliminate parking spaces. It will reduce local parking demand by the removal of sixteen existing residential units.

- 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).*

The proposed project includes improvements to Lilac Street (within the River Mobile Estates).

- 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:*

Once the construction is completed, there will be no impact on transportation. King County will coordinate with the City of Auburn to address transportation impacts anticipated during construction.

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:*

There will be no impact on public services.

16. Utilities

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

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.*

Proposed utility work (sewer, water and storm drainage) is limited to removing existing utilities in the way of the setback levee and rerouting utilities to maintain the existing level of service following the project. A new storm pipe at the north end of the project is proposed to replace the existing overland flow path that would otherwise be cut off by the project levee.

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 McCarthy

Title:

Senior Ecologist

Date Submitted:

August 13, 2012

Greenhouse Gas (GHG) Emissions Worksheet

Reddington Levee Setback and Extension Project

Note: The finished project will emit no GHGs aside from those occurring in the environment by natural processes. All emissions are therefore related to construction of the proposed project.

Distance of project site from Renton Shops. Actual trip origins and distances will depend upon the construction contractor chosen: 35 miles

Estimated days of construction activity:

<u>Vehicle</u>	<u>Miles/hours</u>	<u>Rate</u>	<u>fuel used</u>	<u>Em. Coef.</u>	<u>Emissions</u>	<u>Tons CO₂e</u>
Pickup	5425	20.7	262	19.564	5127	2.56
Pickup	5425	20.7	262	19.564	5127	2.56
Pickup	5425	20.7	262	19.564	5127	2.56
dumptruck	205000	6.15	33333	22.384	746133	373.07
PC 120 Trackhoe	4680	6.3	29484	22.384	659970	329.98
Heavy Equip Transport	210	1.9	111	22.384	2474	1.24
TOTAL:					1423959	711.98