

INSTREAM PROJECT DESIGN CHECKLIST

For Design and Construction of Flood and Erosion Protection Facilities and Habitat Restoration Projects that May Include Large Wood Placement or Natural Wood Recruitment

Project Name: Judd Creek Estuary Enhancement

Project Manager Laird O'Rollins

River/River Mile/Bank 0.2, both banks. Date May 30, 2018

Check one or both:

Project includes placement of large wood elements

Project may influence the recruitment, mobility and accumulation of natural large wood.

Note: If the project is comprised of emergency work, then fill out and file this form within 30 days of completion of emergency work.

I. Project Background and Preliminary Design (30-40 Percent) Information

(Provide general information at a conceptual level)

1. Describe the overall river management context, strategy and objectives for the river reach. Refer to pertinent plans, policies or documents pertaining to flood hazards, salmon recovery, etc.

Judd Creek is a small tributary to Quartermaster Harbor on Vashon Island. The creek is not used for recreational purposes, but is used for both spawning and rearing by coho salmon and for rearing by Chinook salmon, among many other species. Enhancement of estuaries and stream mouths along Vashon shorelines is recommended in the WRIA 9 Salmon Recovery Plan (NC-17).

2. Describe the goals and objectives of the project and its relative importance to the success of DNRP program goals and mandates. Identify funding source(s) and describe any applicable requirements or constraints.

The project goals and objectives are to enhance fish habitat in the lower reach of Judd Creek. Enhancement of stream mouths along the Vashon shoreline is recommended in the WRIA 9 Salmon Recovery Plan (NC-17).

3. Describe the existing (and historic, if relevant) site and reach conditions, including structural features, channel form, and the presence of naturally-deposited large wood. Describe known utilization by salmonids and any important or unique biological or ecological attributes.

The reach flows through a property that was, until recently, residential and highly landscaped, including an artificial pond adjacent to the stream channel. Judd Creek is used by coho salmon for spawning and rearing and by Chinook salmon for rearing. This reach is at the upper end of the tidally-influenced portion of Judd Creek.

4. Describe what is known about adjacent land uses and the type, frequency, and seasonality of recreational uses in the project area. Are there nearby trail corridors, schools or parks? What is the source(s) of your information?

Most adjacent land uses are low-density residential. The parcel to the south is owned by Vashon Parks District, though most of the parcel is forested including the portion adjacent to the project property. The creek too small for recreational floating and the site is relatively isolated and not frequently visited.

5. If the project includes wood placement, describe the conceptual design of large wood elements of the project, including, if known at this stage in the design, the amount, size, location, orientation, elevation, anchoring techniques, and type of interaction with the river and stream at a range of flows.

Project plans call for placement of 24 logs within the channel of Judd Creek. The logs will be placed in groups of 3 and anchored to each other to prevent downstream mobility. Logs will be placed to have maximum contact with the stream bed and channel.

6. If the project includes wood placement, what is the intended structural, ecological or hydraulic function of the placed wood? What role does the placed wood have in meeting the project's goals and objectives? Is the project intended to recruit or trap additional large wood that may be floating in the river?

Placed wood is intended to increase complexity of instream habitat and to provide cover. Placed wood should influence sediment sorting and transport and result in a channel bed that is less regular and more varied and complex. It is unlikely that significant quantities of additional woody debris will be trapped by the placed logs as there are no likely sources of natural wood between the upstream end of the project reach and the driveway bridge which would likely block logs coming from upstream.

7. Is the project likely to affect the recruitment, mobility or accumulation of natural large wood, e.g., by encouraging wood deposition on or near the site or promoting bank erosion that may cause tree toppling? Describe expected site evolution and its potential effects on natural wood dynamics.

It is unlikely that significant quantities of additional woody debris will be trapped or recruited by the placed logs as there are no likely sources of natural wood between the upstream end of the project reach and the driveway bridge which would likely block logs coming from upstream.

8. Describe how public safety considerations have been incorporated into the preliminary project design. For placed wood, address each of the considerations:

- a. Type, frequency, and seasonality of recreational use;

The project reach is too small for floating and the property is isolated and seldom visited. Recreational use of the area is minimal.

- b. Wood location, positioning, and anchoring techniques;

Wood will be positioned in the channel to have maximum hydraulic effect. Logs will be placed in groups of three logs that are anchored to one another to prevent mobilization.

- c. Maximizing achievement of project goals and objectives while minimizing potential public safety risks;

Wood will be positioned in the channel to have maximum hydraulic effect. Logs will be placed in groups of three logs that are anchored to one another to prevent mobilization. It is highly unlikely that recreationists will encounter these logs in any context.

- d. Use of established and recognized engineering, geological, and ecological expertise.

The project has been designed and approved by a Licensed Professional Engineer and a professional ecologist.

9. Has the project been reviewed and approved by a Licensed Professional Civil Engineer? Please list other licensed technical staff who have reviewed and provided input on the design (e.g., Licensed Geologist and Licensed Engineering Geologist). Specify the Engineer of Record for the design and any other Licensed Professionals who have sealed their portion of the design plans. Were all reviews and approvals completed?

The project has been designed and reviewed by a Licensed Professional Engineer. The Engineer of Record will be Will Mansfield.

10. Has the project been reviewed and approved by a King County Professional Ecologist (e.g., person with an advanced degree in aquatic and/or biological sciences from an accredited university or equivalent level of experience) if ecological benefits are an intended project objective, to evaluate the consistency of the design with project goals, existing environmental policies and regulations, and expected or known permit conditions? Specify the Reviewing Ecologist for the project. Was this review and approval completed? What is the anticipated schedule for completing project milestones (30-40% design, final design, major construction/earthmoving) and for soliciting public input)?

Yes. The project has been managed, partially designed and reviewed by a professional ecologist. The project design will be completed during June, 2018 and constructed during July/August, 2018.

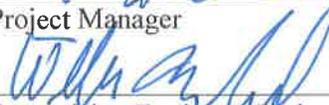
Project Manager



Date

5/31/18

Supervising Engineer, Project Supervisor or Unit Manager



Date

5/31/18