

# Aquatic Species Restoration Plan

## Project Implementation Cover Sheet

### Project Contact Information:

Sponsor Name: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Email: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

### Project Information:

Project Address (main access): \_\_\_\_\_

Project Parcels: \_\_\_\_\_

Project GPS Coordinates (main access location): \_\_\_\_\_

Have participating landowners signed a landowner acknowledgement form? Yes  No

Priority Geospatial Unit: \_\_\_\_\_

Other ASRP Geospatial Unit: \_\_\_\_\_

# Initial Site Assessment Template

## Project Overview

Which priority GSU is this project in? \_\_\_\_\_

Which limiting factors are present in this GSU (select top three)?

What restoration and protection actions are emphasized for this GSU? \_\_\_\_\_

What opportunities have you identified to address the limiting factors? *(The area you are working in should be selected for its suitability to address the limiting factors in this GSU by providing the emphasized restoration and protection actions.)*

Is (are) the landowner(s) interested and willing to participate? Yes  No

## Background Information

*Using available GIS and published data (example data source links provided for each subsection), provide brief information to address each of the following major ecosystem topics. This information is important to help project reviewers and participants understand the key watershed issues and how feasible your project is to address the identified limiting factors and achieve ASRP goals.*

### Subbasin Overview

Ecoregion: \_\_\_\_\_

Dominant land uses (Possible data sources: OCB webmaps, aerial, landcover, parcels, zoning):

Known aquatic species presence (Possible data sources: ASRP document, Salmonscape, ESA map)

ASRP species focus?

### *Hydrology*

Is GSU or subbasin gaged or ungaged? Gaged  Ungaged

Nearest USGS or other gage (city, county): \_\_\_\_\_

Summary of gage data if available: (Possible data source: <https://waterdata.usgs.gov/wa/nwis/rt>)

### *Geology and Soils (would any special conditions affect opportunities?)*

What is the underlying geology in the GSU that may contribute to special conditions or denote specific sediment or geomorphologic conditions? ([Washington Geologic Information Portal](http://www.wa.gov/geology))

What are the primary soils on your project site and would they affect project actions?

(<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx> )

### *Floodplains*

What floodplain data is available for your project site? (<https://msc.fema.gov/portal/home>; Chehalis Basin Strategy floodplain mapping on web):

Is your project site within a 100-year or more frequently flooded floodplain? – *Attach floodplain map or screenshot for your project site.* Yes  No

Are there houses, structures, or infrastructure on or adjacent to your project site that are also within the 100-year or more frequently flooded floodplain? (brief description)

### *Water Quality*

Is your project site in an area listed for impaired water quality? Yes  No

(<https://apps.ecology.wa.gov/waterqualityatlas/wqa/proposedassessment> ) -

*Attach screenshot of water quality conditions at your site.*

Are water quality conditions likely to adversely affect aquatic species at your project site? Yes   
No

Would actions taken at your project site ameliorate water quality concerns at your project site (local scale) and/or contribute to ameliorating water quality conditions at a larger scale (e.g., at the GSU scale)?

## Site Conditions from Initial Site Assessment

### *Geomorphology*

Identify any erosion areas, past or recent avulsions, bank armor, levees, evidence of sediment scour/incision or aggradation, large wood conditions at your project site and how widespread these conditions are within the reach. Does (do) the landowner(s) have particular concerns about erosion, flooding, debris, etc.?

What kind of actions could restore natural geomorphic processes in the reach and what constraints might affect the type of actions that could be implemented? (e.g., existing levees or bank armoring that is protecting structures or infrastructure; ongoing land uses) – *Attach photos*

### *Habitat Conditions*

#### **Aquatic**

What are the general stream habitat characteristics of your project reach? (e.g., pools, riffles, glides, side-channels, oxbows)

#### **Riparian**

What are the riparian conditions of your project reach? (e.g., generally forested with deciduous trees such as alder and big-leaf maple ranging from 12 to 24 inches diameter)

#### **Barriers**

Are there fish passage barriers within your project reach? If so, explain. Yes  No

### *What Human Elements or Constraints are Present?*

What are the land uses in the project reach? Are there structures or infrastructure present that could affect proposed restoration actions?

Is (Are) the landowner(s) interested in an easement or acquisition? Yes  No

### **Opportunities/Concept Plan**

List of proposed restoration actions and narrative on which actions are most important and why.

*Attach an aerial map with parcels and project area outlined with concept features (can be circles with callouts indicating project features).*

## How Does this Project Meet the ASRP's Goals?

Protect and restore natural habitat-forming processes within the Chehalis Basin watershed context.

- Protect and restore natural riverine processes including channel migration, sediment and wood transport, and floodplain connectivity.
- Protect and restore riparian processes and functions including cover; shade; inputs of large wood, leaf litter, and insect inputs to the aquatic food web; sediment and erosion functions; nutrient and pollutant trapping and filtering; and floodplain processes.

Increase the quality and quantity of habitats for aquatic species in priority areas within the Chehalis Basin.

- Significantly increase quality of and access to instream habitat for aquatic species (including habitat needs for migration, reproduction, rearing and feeding, and overwintering habitats).
- Protect and enhance existing functioning core habitats for species across their life history trajectories.
- Increase habitat complexity and diversity.
- Protect and restore native riparian, floodplain, off-channel, and wetland habitats.
- Minimize suitability for invasive species within instream and riparian habitats.

Protect and restore aquatic species viability within and across the Chehalis Basin considering viable species population parameters.

Increase watershed resiliency to climate change by protecting and improving natural water quantity and timing characteristics and water quality characteristics.



## Initial Cost Estimate

Please select unit costs applicable to project size and intensity of actions.

ASRP Reach-Scale Project Concept Level Cost Estimate					
Construction	Unit	Unit Cost	Type	Number	Subtotal
Engineered Log Jams	Each	\$			\$
Beaver Dam Analogs	Each	\$			\$
Large Wood (Single Pieces)	Each	\$			\$
Riparian Restoration	Acre	\$			\$
Floodplain Reconnection	Linear Feet	\$			\$
Oxbow or Side-Channel Reconnection	Linear Feet	\$			\$
Wetland Restoration	Acre	\$			\$
Invasive Species Management	Acre	\$			\$
Other (please explain)		\$			\$
<b>Removals or Relocations</b>	Each	\$			\$
<b>Acquisition</b>	Acre	\$			\$
<b>Subtotal Construction</b>					<b>\$</b>
<b>Design<sup>1</sup></b>	Lump Sum	N/A	--	N/A	\$
<b>Permitting<sup>2</sup></b>	Lump Sum	N/A	--	N/A	\$
<b>Management<sup>3</sup></b>	Lump Sum	N/A	--	N/A	\$
<b>Other (please explain)</b>		\$			\$
<b>Contingency<sup>4</sup></b>	Lump Sum	N/A		N/A	\$
<b>Tax</b>	Percent			%	\$
<b>Total</b>					<b>\$</b>

Notes:

- 1 - Design is typically 10% to 15% of construction costs; less for primarily planting or invasives treatment projects
- 2 - Permitting is typically 5% to 10% of construction costs; less for primarily planting or invasives treatment projects
- 3 - Management includes sponsor management and construction management, typically 10 to 15% of construction costs
- 4 - Contingency at early project stage is typically 25% to 30%