

Lewis River Aquatic Fund Projects (SA 7.5.3.2)

Project Closeout Report

Project Title:	Lewis River Hydroelectric Project 2013 Bull Trout Habitat Restoration Project ID Assessment
Project Approved By:	Aquatic Coordination Committee March 26, 2013
Original Project Sponsor:	Adam Haspiel (US Forest Service) Abigail Groskopf (Mount St. Helens Institute)
Project Funding	<ul style="list-style-type: none">• \$59,226.00
Project Description (work completed):	<ul style="list-style-type: none">• Collected and synthesized existing bull trout data. (2013)• Deployed temperature data loggers in cold water streams. (2013 & 2014)• Conducted habitat survey data in Pine Creek• Conducted spawning surveys (2013 & 2014)• Develop study design for data collection (2014)• Conduct habitat parameter surveys (2014 known use & 2015 scoping).• Completed data summarization (2016) and Reporting• Developed conceptual project scoping designs (2017)
Workforce:	<ul style="list-style-type: none">• US Forest Service• US Fish and Wildlife Service• WA Department of Fish and Wildlife• PacifiCorp• Cowlitz Indian Tribe• Lower Columbia Fish Recovery Board• Mount St. Helens Institute
Schedule Summary:	Planned Completion Date: Spring 2015 Actual Completion Date: Fall 2017
Problems Encountered:	<ul style="list-style-type: none">• In October 2013 the US government shutdown delayed 2013 spawning surveys because of a lack of transportation for the field crew. As a result, all project activities were delayed one year.• Additionally, the project saw significant personnel changes between 2013 and 2017 resulting in minor delays and new personnel became acquainted with the project.

Things that went well:

- Diverse partners provided collaborative approach throughout the project.
- Habitat surveys identified unique habitat characteristics specific to Lewis River Bull Trout.
- Project allowed for additional partnership to conduct eDNA sampling throughout the basin.
- Completed detailed habitat surveys in previously under-surveyed reaches.
- Model of key habitat characteristics in the basin.

Work Not Completed:

- All work identified in the project proposal has been completed.

Lessons Learned:

- In addition to cold water, bull trout spawning occurs with increased channel complexity and at stream margins with appropriate depths (15-20 cm).
- While there is no quick fix to improve habitat conditions for bull trout there are restoration options to improve connectivity to cold-water habitats.

*** Attachments (Photo Documentation):**

- 2015 BT MSHI 6. CL 24. Clear Creek HabID 24
- 2015 BT MSHI 20. CW. 96. Clearwater HabID 96
- 2015 BT MSHI 28. D 26. Drift Creek HabID 26
- 2015 BT MSHI 37. SM 1. Smith Creek HabID 1

*(Per National Marine Fisheries Service's Biological Opinion for Relicensing of the Lewis River Hydroelectric Projects):

Identify process or methodology the project will include and provide photo documentation of habitat conditions at the project site **before, during, and after** project completion.

- a. Include general views and close-ups showing details of the project and project area, including pre- and post-construction.
- b. Label each photo with date, time, project name, photographer's name, and documentation of the subject activity.



Photo 1. Clear Creek HabID 24



Photo 2. Clearwater HabID 96



Photo 3. Drift Creek HabID 26



Photo 4. Smith Creek HabID 1