



Project Title: Restoring Habitat-Forming Processes on the Upper Quinault River to Protect Diversity and Resilience

Headline Title (2-5 words): Improving Salmon Habitat on the Upper Quinault

Brief Summary (Abstract): Working with state, federal and local partners to protect salmon and other fish and wildlife, the Quinault Indian Nation is restoring habitat-forming processes on the Upper Quinault River to create ecosystem diversity and resilience and facilitate adaptation to climate change.

Project Location: Olympic Peninsula, Washington

Partners: Quinault Indian Nation, WA Dept. Natural Resources, WA Salmon Recovery Funding Board, The Nature Conservancy, Pacific Coast Salmon Recovery Fund, Wild Salmon Center, US Fish & Wildlife Service, US Geological Service, US Forest Service, National Park Service, University of Washington, Grays Harbor and Jefferson counties, private landowners.

Background: The glacier-fed Quinault River on Washington's Olympic Peninsula once supported hundreds of thousands of salmon that spawned and thrived in cool, gravel-bottomed streams flowing through deep forests and open glades. A century of clearcut logging and mismanagement of the river corridor have resulted in a significant loss of salmon habitat and what remains is a shallow, braided river channel. The glacier from which the Quinault River originates has melted and almost disappeared. Salmon populations have declined precipitously. Impacts associated with climate change could be the final stressor for the salmon.

The lower Quinault River flows across the Quinault Indian Reservation and into the Pacific Ocean. The Quinault Indian Nation (QIN) has responded to declining salmon populations with determination to re-create habitat diversity and resilience that will allow ecosystems to support strong runs of salmon and adapt to changing climate regimes. Since 2007 the QIN has installed 23 engineered log jams on the upper Quinault River to protect remnant spawning habitat, stabilize streams and reduce erosion and siltation. Streambanks and log jams are being planted with native tree species to anchor soils, shade deep pools and eventually add woody complexity to flowing waters. Early evidence indicates the QIN project is successfully repairing habitat-forming processes in the upper Quinault River. The biological processes – including the return of strong salmon runs – will follow.

Project Goals: Project goals are to: 1) increase ecosystem diversity and resilience to facilitate adaptation under a range of possible climate conditions; and 2) increase populations of salmon and other fish and wildlife within the Quinault River corridor.

Strategy Goals Implemented:

- Goal 1 (*Conserve habitat to support healthy fish, wildlife and plant populations and ecosystem functions in a changing climate*), Strategy 1, Actions 1.1.1, 1.2.1, 1.3.1, 1.3.2, 1.3.3



NATIONAL *fish, wildlife & plants*
CLIMATE ADAPTATION STRATEGY

- Goal 2 (*Manage species...to protect ecosystem functions and provide sustainable cultural, subsistence, recreational and commercial use in a changing climate*), Strategy 2, Actions 2.1.8 and 2.2.3

Climate Impacts Addressed: Impacts on species and habitats

Status of Project Implementation (Timeline, Milestones, Next Steps): Up to 27 engineered logjams are scheduled to be built in the Upper Quinault River in 2014-15. This is a long-term restoration project that will continue in adaptive phases, as funding allows, through the next decade.

Project Outcomes: Project outcomes will be improved ecosystem diversity, function and resilience to support salmon and other fish and wildlife under a range of climatic conditions.

Funding Sources: Quinault Indian Nation, WA Dept. of Natural Resources, WA Salmon Recovery Funding Board, The Nature Conservancy, Pacific Coast Salmon Recovery Fund, Wild Salmon Center.

Photos/Attachments:

Photo/Figure Credits (do we have permission to print): Photo by Larry Workman, Quinault Indian Nation (You have permission to print.)

Suggested Photo Caption: Carefully engineered log jams built from locally sourced materials are placed in the Quinault River to re-establish natural processes that create good habitat for salmon and other fish and wildlife.