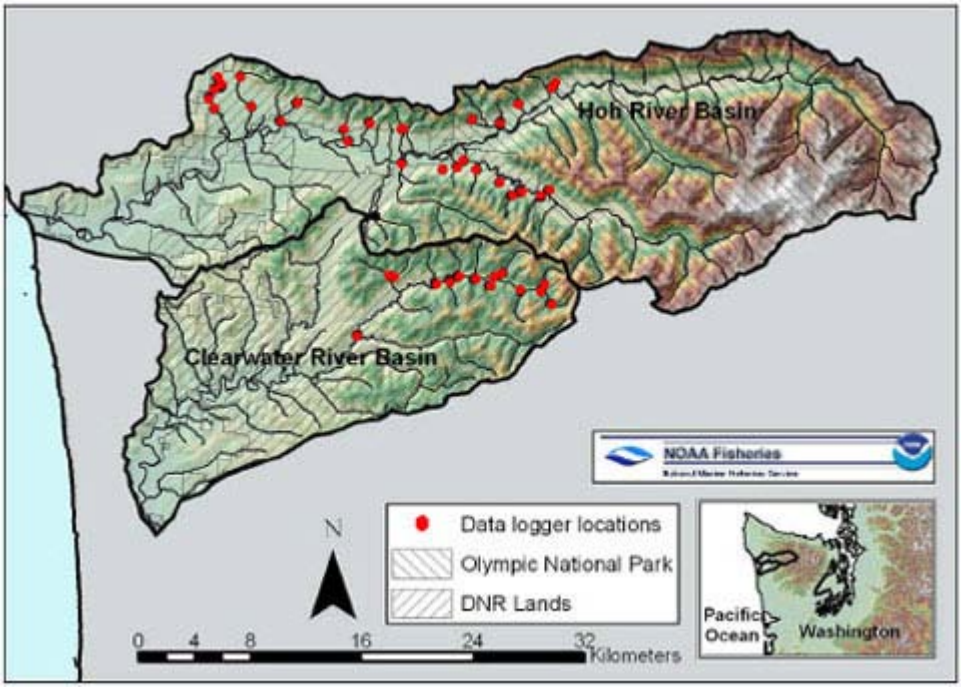
WASHINGTON STATE DEPARTMENT OF
Natural Resources
Peter Goldmark - Commissioner of Public Lands

State Trust Lands Habitat Conservation Plan

EFFECTIVENESS MONITORING OF INSTREAM HABITAT CONDITIONS AND TRENDS

Monitoring our Riparian Forest Restoration Strategy's influence on instream fisheries habitat is a long-term and cooperative effort. Together with scientists from the NOAA Fisheries Northwest Fisheries Science Center Watershed Program, DNR is investigating the assumptions on which the Riparian Forest Restoration Strategy was built. One predicted outcome of our riparian strategy is that instream habitat will improve as riparian forests become older. The primary way that older forests will improve instream habitat is through providing additional shade and organic material (particularly large woody debris) to the stream. The shade should maintain moderate stream temperatures, while the large woody debris should create more pool habitat.



Map showing temperature monitoring locations in the Hoh and Clearwater basins of western Washington.

The purpose of this monitoring is to study the rate and mechanisms of water temperature recovery in relation to watershed recovery. Our study assesses the long-term changes in stream temperature regimes within the Olympic Experimental State Forest (OESF) as we conduct riparian restoration projects. Temperature regimes in the OESF streams are compared with streams in natural (unharvested) basins. The goal is to provide insight into the recovery trajectory for watersheds and fish habitat as a result of Habitat Conservation Plan implementation. Research into factors that influence habitat recovery at both the stream reach and basin scale can be used to support better land use decisions via the adaptive management process.

This cooperative instream monitoring project is also assessing ways to better predict large woody debris contributions to streams over time to provide a more comprehensive picture of watershed recovery. We are testing the hypothesis that renewed instream large woody debris cycling is tied to stream temperature recovery.

Relation to HCP: Effectiveness monitoring links all components of the riparian conservation strategy to the conservation objective of maintaining and restoring high quality aquatic habitat. Riparian restoration efforts aid in federally-listed salmon recovery efforts, and contribute to the conservation of other aquatic and riparian obligate species.

Project Status: Initiated in 1999. Ongoing.

More Information:

Pollock, M, P, S. Baker, R. Bigley, W. Scarlett. 2004. Summer Stream Temperatures in the Olympic Experimental State Forest, Washington. Department of Natural Resources Habitat Conservation Plan Stream and Riparian Monitoring Program. 2004. Unpublished report