

Washington State Department of Natural Resources

Olympic Experimental State Forest

**CATALOG OF RESEARCH AND MONITORING**

INTRODUCTION, METHODS, AND ORGANIZATION

June 2008

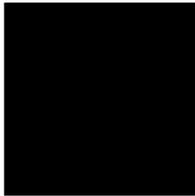


WASHINGTON STATE DEPARTMENT OF  
**Natural Resources**

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# Olympic Experimental State Forest Catalog of Research and Monitoring

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## Introduction

The Catalog of Research and Monitoring is part of DNR's Research and Monitoring Program strategy to share and incorporate new research into the management of the Olympic Experimental State Forest (OESF). The Catalog meets several needs. It is the product of extensive review of established research and monitoring activities and a search for new research work that relates to the OESF. Through this discovery process, we are developing a product that collects the government reports, cooperative research, academic theses, non-profit findings, private research and journal articles in one place. Through this effort, DNR is establishing a common reference and knowledge pool to assist in planning and management on the Experimental Forest.

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## Methods

The Catalog was developed through a deliberate process beginning with consultation with stakeholder and research partners. Academic institutions, tribal governments, city and local governments, state and federal agencies, and private landowners, and non-government organizations were interviewed to understand their research interests and past and on-going research and monitoring relevant to the HCP. Organizations' bibliographies and websites were reviewed and relevant literature databases searched. The list of organizations researched so far follows via the Acknowledgements.

Through these consultations, a comprehensive list of studies was then compiled. These studies were screened to identify those geographically and topically relevant to the conservation objectives on the OESF. Only those research and monitoring projects completed within the three Water Resource Inventory Assessment areas draining the OESF (WRIA's 19, 20, and 21) were considered. Of these, only projects directly relating to the HCP conservation strategies on the OESF were cataloged. A bibliographic database was then compiled and indexed. Indexing captures the conservation strategy (riparian, spotted owl, marbled murrelet, or multi-species) and the general line of study (management approach, species habitat, and/or species populations). This coarse indexing provides the basis for thematic reporting found on the DNR's website.

To date, the Catalog records about 1,000 citations, but is by no means complete. As the Catalog is used, we expect to discover more investigations that would be relevant to our

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conservation objectives on the OESF. As the Catalog is used, we expect to refine the indexing of these studies, both topically and geographically so that they become of more utility to researchers and managers. As the catalog is used, we expect to deliver links to the citations listed and, where possible, electronic versions of selected references. Over time, we expect the Catalog to play a central role in coordination of research on the OESF and its integration into management.

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## Organization

The OESF Catalog of Research and Monitoring is available on-line through the DNR's website. About 1,000 citations are compiled to-date and can be reviewed through the following themed reports, introduced briefly as follows:

### Investigations of Species Populations

The HCP seeks to benefit three key populations on the Olympic Peninsula – anadromous fish, northern spotted owl, marbled murrelet – as well as several other special status species. Research and monitoring cataloged to date provides fundamental information on the abundance, structure, distribution, and movement of these populations.

### Investigations of Species Habitat

Through habitat restoration, the DNR seeks to improve the chances for survival and recovery of these key populations. Numerous studies are cataloged characterizing species-specific habitat conditions and trends on the Olympic Peninsula. Most studies address habitat for riparian-dependent species. Several upland habitat studies are cataloged, too, focused on small mammals, the prey-base for the northern spotted owl.

### Species-Habitat Relationships

Understanding the habitat conditions found where these populations of interest are successful helps us characterize habitat conditions likely to be of benefit. Other studies cataloged to date rate habitat quality based on our best current understanding of these species-habitat relationships. Several watershed assessments are cataloged, used for prioritizing habitat restoration activities.

### Management to Benefit Species

Several conservation plans – federal, state, and private – are cataloged that provide guidance for land management activities and the recovery of our key populations of interest. Restoration plans are also listed, developed by local watershed groups to guide site-specific remedies. Periodic reports on activities pursuant to these strategies, providing an implementation record.

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### Effects of Management on Species Habitat

Over the past 30 years, there has been much focused study by many organizations concerning the effects of forest management on the habitat of the species we seek to benefit. Effectiveness of conservation measures has been of keen interest as has investigation of the effects of management occurring prior to conservation planning. Several DNR-sponsored projects are highlighted.

### Effects of Management on Species Populations

The response of species populations to forest management has been a focus of investigation, too. Most studies address effects on salmonid populations in the Olympic Peninsula, many of which utilize streams crossing DNR-managed lands. Upland studies are also cataloged, mostly limited to reporting on the habitat use of various upland species in managed landscapes.

### General Investigations of OESF Ecosystems

Many studies are cataloged where the line of investigation is not specific to any particular species. Most of these characterize ecosystem dynamics and focus on communities – e.g., old-growth, lowland wetlands – or processes – e.g., wind disturbance, climate-landscape interactions. Several silvicultural trials are cataloged here as well, reporting on general stand response to management.

### Socioeconomics Effects of Habitat Conservation

The effects of conservation measures on social and economic systems is a unique line of study not prioritized in the HCP. Studies cataloged here relate in some manner to the communities dependent on natural resources found on the Olympic Peninsula.

Within each themed report, citations are grouped by species of interest and organizations leading the research or monitoring effort. Related studies are grouped and generally categorized. All citations are formatted to be consistent with the American Fisheries Society publication standards. Listing of research and monitoring in the OESF Catalog of Research and Monitoring is not an endorsement of the research and monitoring work.

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## **For More Information**

Maintenance of the Catalog will be an on-going process. The DNR seeks to keep this catalog current through periodic review of organizations' research activities. Your interest and involvement in the Catalog is encouraged. If you have any comments, corrections, additions, or questions, please contact Teodora Minkova, DNR's OESF HCP Research and Monitoring Coordinator at 360.902.1175 or [teodora.minkova@dnr.wa.gov](mailto:teodora.minkova@dnr.wa.gov).

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## Acknowledgements

To date, the following organizations are represented in the OESF Catalog of Research and Monitoring. Many of them actively participated in and contributed to the development of this version of the Catalog. Their involvement is appreciated and DNR looks forward to continued collaboration in building this resource.

10,000 Year Institute  
ABR, Inc.  
Clallam County, Washington  
Earth Systems Institute  
Governor's Salmon Monitoring Oversight Committee  
Green Crow  
Hardwood Silvicultural Cooperative  
Hoh Indian Tribe  
Jefferson County, Washington  
Lower Elwha Klallam Indian Tribe  
Merrill and Ring  
National Council for Air and Stream Improvement  
National Park Service, Olympic National Park  
NOAA Fisheries, Northwest Fisheries Science Center  
NOAA Fisheries, Technical Recovery Team  
North Olympic Salmon Coalition  
Northwest Indian Fisheries Commission  
Oregon State University  
Pacific Fishery Management Council  
Pacific Salmon Commission  
Peninsula College  
Pennsylvania State University  
Quileute Indian Tribe  
Rayonier  
Rice University  
Salmon Recovery Funding Board  
The Evergreen State College  
University of Chicago  
University of Washington  
US Bureau of Reclamation  
US Fish and Wildlife Service, Pacific Region  
US Forest Service, Pacific Northwest Experiment Station  
US Forest Service, Regional Ecosystem Office  
US Geological Survey, Forest and Range Ecosystem Science Center  
US Geological Survey, Water Science Center  
Washington State Conservation Commission  
Washington State Department of Ecology  
Washington State Department of Fish and Wildlife  
Washington State Department of Natural Resources, Asset Mgt. and Protection Division  
Washington State Department of Natural Resources, Forest Practices Division

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Washington State Department of Natural Resources, Land Management Division  
Washington State Department of Natural Resources, Olympic Region  
Washington State University  
Western Washington University  
Wild Salmon Center