

NATURAL DISTURBANCES ON
THE WESTERN OLYMPIC PENINSULA:
AN ANNOTATED AND INDEXED BIBLIOGRAPHY

Introduction

This bibliography indexes and describes existing sources of information specific to natural disturbances on the western Olympic Peninsula in Washington State. Its intended use is for characterizing the historic range of variability¹ of riparian and upland ecosystems in the Olympic Experimental State Forest (OESF), managed by the Washington State Department of Natural Resources (DNR).

One of DNR's conservation objectives for the OESF is "to look at natural disturbance regimes for the keys to understanding how to achieve restoration and maintenance of natural systems" (DNR 1997, p. IV.81). More specifically, the OESF riparian conservation strategy targets "habitat complexity afforded by natural disturbance regimes on the western Olympic Peninsula" (DNR 1997, p. IV.107). However, there is a limited understanding as to what naturally variable landscapes look like, and even less understanding about how to incorporate the concept of spatial and temporal natural variability into management standards and operational guidelines. This knowledge gap has been identified as critical to implementation of the OESF riparian conservation strategy (DNR 2009) and, most recently, during the forest land planning process for the OESF (DNR 2010). The development of this bibliography establishes a reference pool for future projects describing natural disturbance regimes and the resulting ecological conditions.

Methods for developing the bibliography

This bibliography was developed as a collaborative project between Olympia Forestry Sciences Laboratory, U.S. Forest Service Pacific Northwest Research Station (FS

¹ Range of specific conditions that have been experienced by biota prior to significant modern human activity

PNW) and DNR. The initial compilation of the information sources was conducted between April, 2010 and May, 2011.

The authors used the catalog of current and past research and monitoring conducted on state trust lands in the OESF (Teply and Phifer 2008) as a starting point. The process of identifying additional information sources started with identifying the organizations that have worked on natural disturbance topics on the Olympic Peninsula. Academic institutions, tribal governments, county and local governments, federal agencies, state agencies, non-profit groups, and local land managers were contacted with request for information. In addition, literature searches and reviews produced lists of individuals and organizations that were contacted and interviewed to ascertain the existence of related information. As with most searches of this kind, an interview almost always would lead to another unknown information source or contact upon which follow up was needed. The list of contributing organizations follows in Acknowledgements.

All information sources were reviewed for topical and geographic relevance. With the exception of some theoretical publications and several models, all information sources refer to the western Olympic Peninsula from the Quinault River basin to the Strait of Juan de Fuca. The topical relevance was based on major disturbance types such as wind, fire, and flooding.

The information sources include peer-reviewed publications, published and unpublished white papers, as well as current and historical resource information such as maps, photos, inventories, survey reports, digital maps and databases, diaries and other assessments. The information sources describing past and current biophysical conditions were identified for their relevance to the temporal and spatial effects of natural disturbances.

As the bibliography is used, we expect to add more information sources and to refine the indexing of the records. Your interest and involvement in the bibliography is encouraged. If you have any comments, corrections, additions, or questions, please contact the OESF Research and Monitoring Manager Teodora Minkova at

Teodora.Minkova@dnr.wa.gov

Format and organization of the database

The bibliography is maintained as an Excel spreadsheet.

Information sources are indexed by the by the following categories:

- Data Type
- Disturbance Type
- Secondary Disturbance Effect
- Lead Author
- Keywords
- Description
- Spatial Extent
- Spatial Resolution
- Time Period
- Location of the Info Source
- Metadata
- Internet Link
- Contact
- Access

The records are searchable by index categories and subcategories. Description the index categories and subcategories is available in the Data Dictionary which accompanies the bibliography as a separate worksheet in the same Excel workbook.

A URL is provided for sources available on the Internet. Sources that are not available online, but are available as electronic copies, are hyperlinked from the database. The electronic copies are located in a separate folder, which should always accompany the database. The electronic copies of the records are stored in Adobe Acrobat, XML, or Power Point format in a folder accompanying the database. For the electronic spatial data (GIS layers) the hyperlink points to a copy of the metadata.

As of June 17, 2011, the bibliography contains 282 indexed and annotated records.

Bibliography location and availability

The database and the accompanied electronic copies of the records are stewarded by the Forest Resources and Conservation Division, DNR. For access and more information, please contact the OESF Research and Monitoring Manager Teodora Minkova at Teodora.Minkova@dnr.wa.gov.

Acknowledgements

Many governments and organizations actively participated in the initial compilation of the bibliography. They are listed below in alphabetical order. Their involvement is appreciated and the authors look forward to continued collaboration.

10,000 Year Institute
Clallam County, Washington
Earth Systems Institute
Green Diamond Resource Company
Hoh Indian Tribe
Jefferson County, Washington
Makah Indian Tribe
National Park Service, Olympic National Park
NOAA Fisheries, Northwest Fisheries Science Center
NOAA, National Weather Service
Northwest Indian Fisheries Commission
Oregon State University
Peninsula College
Quileute Indian Tribe
Quinalt Indian Tribe
Rayonier Inc.
The Evergreen State College
The Nature Conservancy
University of British Columbia
University of Washington
US Department of Interior, Bureau of Land Management
US Fish and Wildlife Service, Pacific Region
US Forest Service, Olympic National Forest
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 University
Western Washington University
Wild Fish Conservancy Northwest

The following individuals provided substantive input to the development and review of the database:

Peter Bisson and Steven Wondzel, FS PNW

Christina Heimburg, Weikko Jaross, Eric Aubert, and Jeffrey Rickleffs, DNR

References

- Teply, M. and C. Phifer. 2008. Olympic Experimental State Forest Catalog of Research and Monitoring, Washington State Department of Natural Resources, Land Management Division, Olympia, Washington. (online) URL: http://www.dnr.wa.gov/ResearchScience/topics/forestresearch/pages/lm_oesf_research.aspx
- Washington State Department of Natural Resources. 1997. Final Habitat Conservation Plan. Washington State Department of Natural Resources, Olympia, Washington.
- Washington State Department of Natural Resources. 2009. Draft Research and Monitoring Strategy for Olympic Experimental State Forest. Washington State Department of Natural Resources, Olympia, Washington.
- Washington State Department of Natural Resources. 2010. Draft Environmental Impact Statement on Olympic Experimental State Forest (OESF) HCP Planning Unit Forest Plan. Washington State Department of Natural Resources, Olympia, Washington.

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