



Director's Message

John Calhoun, *Director*



It is fitting that the first newsletter of the new year reviews accomplishments and articulates goals for the future. A year's worth of activity cannot be reasonably presented here. Features in this issue include an example of our collaborative work with the Washington State Department of Natural Resources (DNR) and a summary of the many activities our conference center engages in.

As part of the University's annual budget planning process, UW ONRC listed its accomplishments and goals. I'd like to share some highlights with *ONRC Update* readers.

2005 Accomplishments

1. Conducted a research program that integrates ecological values with commercial forest practices. This program responded to community-identified priorities, supported regional bio-energy initiatives, and utilized expanded external funding for the program.
2. Delivered educational services and professional development to regional educators and administrators. We collaboratively developed programs with the UW College of Forest Resources, College of Education, and Department of Mathematics, serving 67 teachers from 28 rural school districts.
3. Provided service to watershed planning projects. UW ONRC supported these efforts with technical Geographical Information System applications to aquatic environments and supplied technical assessments, project management, and facilitation services.
4. Provided technical assistance and automated decision support tools to DNR managers, advancing the implementation of the Habitat Conservation Plan on the Olympic Experimental State Forest.
5. Expanded external research and pro-

gram funding. With increases in state and federal funding, UW ONRC increased the proportion of total research and project external funding to 55%.

2006 Goals

1. Complete 10-year Research Program Review and revise our Strategic Research Priorities.
2. Increase service/partnership with DNR and others through development and delivery of decision support tools.
3. Publish research and project results in peer reviewed journals.

The briefly described items do not communicate the detail and depth of programs at UW ONRC. But they provide a framework for our thoughts and help guide us as we strive to deliver relevant research, education, and service to our constituents.

ONRC UPDATE is published bimonthly by the

University of Washington Olympic Natural Resources Center, PO Box 1628, Forks WA 98331
(360) 374-3220 or from Seattle (206) 685-9477 Website: www.onrc.washington.edu
Newsletter Editor: Ellen Matheny – ematheny@u.washington.edu (360) 374-4556

OESF Corner

New Models to Improve Watershed Analysis

Jeff Comnick
Research Scientist



The Washington State Department of Natural Resources (DNR) manages state forests for many objectives. The two primary objectives are revenue generation for Trust beneficiaries and northern spotted owl habitat restoration according to the Habitat Conservation Plan (HCP).

Complicating forest management on the Olympic Experimental State Forest (OESF) is the protection of water resources through Watershed Analysis. This process is identified in the HCP to consider the negative cumulative effects of management within a watershed: landslide hazards; flooding potential during storm events; sediment delivery from roads to streams; and shade and large woody debris production from riparian forests adjacent to streams.

For the past year, DNR has worked with UW ONRC to update the analytical techniques used to complete a watershed analysis. While the original methodologies were developed in 1996 and used aerial photo interpretation, topographic maps, and field visits, goals for the updated methods were to use forest inventory information with existing Geographical Information Systems (GIS) coverages.

The first step in updating the Watershed Analysis methods was delineating watersheds, typically along ridges around the

appropriate models selected. Where none existed, the original

methods were reviewed and new computer models developed, if possible. Finally, existing data sources were incorporated that identify forest structure, soil type, road and stream location, precipitation level and type, and topography for every location within the OESF.

These new models take advantage of computer processing power and could eventually be integrated with the most commonly-used GIS mapping software. Additionally, the models should produce more repeatable and precise results.

For the first time, watershed analyzes can be completed for each watershed within the OESF. With results

currently being summarized, future research must focus on integrating Watershed Analysis with other DNR planning efforts. A more developed Watershed Analysis process could also be uniquely capable of integrating a research and monitoring program with forest management.



Figure 1. Major watershed boundaries within the Olympic Experimental State Forest.

smallest fish bearing streams. Across the OESF, over 500 watersheds were identified. Additionally, larger Watershed Analysis Units were used to analyze resources at multiple scales. Figure 1 displays the major watershed boundaries in the OESF.

Next, a review of existing models for each assessment was completed, with the most appro-

ONRC Conference Center Snapshot

Theresa Santman

Conference Center Coordinator

The UW ONRC Conference Center has wrapped up a busy calendar year 2005, providing conference and support services to a multiplicity of user groups. We are pleased to fulfill the center's goal of providing research and field support to University of Washington undertakings. Over the course of the year, our ability to provide lodging, workspace, network access, and university support services facilitated both long-term lodgers and brief stays by University students and staff involved in research, environmental education, and service learning.

Of particular significance were the UW ONRC-sponsored research and outreach events including:

- the 2005 UW Mathematical Institute for K-12 educators throughout western Washington
- a series of GIS/GPS workshops held for both the public and by special arrangement
- the ONRC Public Forum series on natural resource issues
- the annual Nature Days environmental education field day for area youngsters
- lodging for UW College of Forest Resources students involved in research taking place on the Olympic Peninsula

In addition, the Conference Center staff worked hard to support education and outreach efforts involving the larger UW community, including field trips

by students studying forestry, ecosystem sciences, marine biology, urban planning and aquatic and fisheries sciences.



The UW ONRC Conference Center also provided facilities to a diversity of UW-sponsored events including:

- The Pipeline Project Alternative Spring Break program
- Educational Partnerships and Learning Technologies / Virtual Museum project
- The Institute for Teaching Excellence faculty academy
- Office of Undergraduate Education Rural Spring quarter
- The Gear Up Program Honors Academy field trip

In 2005, our client base continued to extend beyond the University as we hosted field trips from Evergreen Col-

lege, Western Washington University, Everett Community College, and private schools involved in environmental education. We were delighted to provide support to these institutions as they enriched the educational experience of their students.

Non-academic lodgers/users were varied as well: the Olympic Coast National Marine Sanctuary; the Water Resource Inventory Area 20 Planning unit; the National Park Service; and the Olympic Educational Service District represent a sample of the many groups we provided services to.

Many of last year's clients have already made reservations at our facility for 2006. We look forward to working with them and others throughout the coming year. Our staff welcomes the opportunity to provide you with conference support and meeting room space. We encourage you to consider using the UW ONRC Conference Center for your next event.



The University of Washington Olympic Natural Resources Center

An ideal location for your next seminar, workshop, field trip, training or conference!



The Olympic Natural Resources Center was created to foster and support the research and education necessary to provide sound scientific information on which to base sustainable forest and marine industries, and at the same time sustain ecological health.

In support of this objective, the ONRC Conference Center has a well-developed capability to meet the needs of a diversity of users. The ONRC Conference Center offers meeting room space for groups large or small, on-site lodging and catering, high-speed internet access, audio-visual aids and an 18-station computer lab situated in a beautiful 40 acre setting. Our clients relate that they are well satisfied with the variety of catering options, the moderate room rental rates, and the full range of conference support

services the conference center can provide.

The Olympic Natural Resources Conference Center is located on the stunning Olympic Peninsula, a short distance from ocean beaches and the Olympic National Park Hoh Rain Forest. Guests rarely depart ONRC without reserving time to explore area hiking trails, try their hand at geocaching, or relax in the glow of a Pacific beach sunset.



Our facility is available for trainings, conferences, field trips and workshops.

More information about the Conference Center can be found on our web site at:

www.onrc.washington.edu

For help in planning your next event, please contact:



Theresa Santman
Conference Center Coordinator
Olympic Natural Resources Center
Forks, Washington
(360) 374-4550
(206) 685-9477 Ext 223
tsantman@u.washington.edu
