

# Director's Message

John Calhoun, Director



## ONRC UPDATE

I often take advantage of this space to highlight the excellence of our staff and programs. After all, we want to make sure folks are aware of the good things we are doing at UW ONRC. You will find features in this issue that do just that. In this column, however, I want to discuss an opportunity for improvement in one of our core program areas: forestry research.

We have funded a project titled, "Improving the Focus and Direction of the UW Olympic Natural Resources Center Research Program." This project will take a comprehensive review of research performance and content over the past 10 years, make critical

judgments regarding quality and effectiveness, and make recommendations for changes. We will enlist the aid of outside experts through a programmatic peer review process and engage stakeholders in discussions regarding our priorities and policies.

The first step in this process is well underway. We are developing a complete record of research projects funded by UW ONRC and characterizing them in terms of their effectiveness, quality, and consistency with our mission. We will assess the extent to which these projects resulted in a journal publication or report, what sort of multiplier effect they pro-

duced (other funds attracted), effects on policy and management, etc.

Next, we will assemble an external panel of peer reviewers to assess the program. We will then bring recommendations to our Policy Advisory Board and other stakeholders.

This process may result in the ONRC Policy Advisory Board revising our research program strategic priorities. We anticipate recommendations will be ready for Board consideration in early winter. This will allow time for implementing the changes prior to the next research funding cycle. I look forward to enhancing our research program, updating its focus and direction.



Wildlife at  
UW ONRC



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# OESF Corner

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On June 9 and 10, 2004, the Washington State Department of Natural Resources (DNR) management held an "OESF Retreat" to develop recommendations for the coming budget cycle. The Olympic Experimental State Forest (OESF) idea was an outcome of the Old Growth Commission Report, circa 1988. However, with the encumbrance of the Northern Spotted Owl

and Marbled Murrelet under the US Fish & Wildlife (USF&W) Service Endangered Species Act, the OESF has not been fully implemented. In 1997, the DNR reached an agreement with the USF&W on forest management strategies and endangered species, resulting in the current DNR Habitat Conservation Plan (HCP). The OESF became a special planning and conservation unit of

the HCP. The 1997 adoption of the HCP and a "ten year implementation plan" by the Board of Natural Resources signaled the DNR to move ahead with OESF implementation. The OESF retreat results included here outline the organization and first priorities for OESF management. Table 1 shows budgetary estimates to support future OESF activities.

TABLE 1: OESF Retreat Budget Planning Worksheet DRAFT: June 9-10, 2004

Month / Year	Position	FTEs	Resources	COSTS Salary & Benefits Travel / G&S	Comments / Other Information
<b>2005</b>					
July 1	OESF Manager – WMS- 2	1.0	Computer, DNR software & workstation	\$90,000	OESF management and Regional lead for landscape planning, research & monitoring, coordination with UW ONRC and public outreach. (Division employee based in the region-OESF)
July 1	OESF Scientist	1.0	Computer, DNR software & workstation, vehicle & radio	\$90,000	OESF Scientist delivers R&M plans / procedures. Coordinates work with Division Scientist and other Researchers. Also provides assessment on UW ONRC proposals. (Division employee based in the region-OESF)
<b>2006</b>					
July 1	Planner - NREP3	1.0	Computer, DNR software & workstation	\$80,000	Implementation of Landscape planning across Region with emphasis in the OESF
July 1	Geologist 3	1.0	Computer, DNR software & workstation, vehicle & radio	\$80,000	Product sales and landscape planning. R&M for unstable slope and riparian volume harvests.
July 1	Administrative Assistant 2	0.5	Computer, DNR software & workstation	\$28,000	Support for OESF manager, LSPlanning, Granting, Files and newsletters.

# OESF Corner: OESF Budget Package

## OESF Background

The following points summarize the OESF objectives, under the management of the DNR, in the HCP (p. I.15) which was signed in 1997:

1. **The OESF is DNR's focal point for experimentation.** Information gained from experimentation will be applied to other DNR-managed lands where and when appropriate. **DNR will share the information gained with other interested parties** in order to insure that the maximum benefit is achieved through DNR's investment in the Experimental Forest.

2. In the OESF, DNR will seek to answer questions **about integrating conservation and production.** DNR will explore the links between management activities and ecological processes and functions at both the landscape and stand levels.

3. DNR will acquire knowledge to enhance trust land management through **active monitoring**, a targeted research effort, and the promotion of cooperative research projects.

4. Through time, DNR will demonstrate a process by which trust land management activities in the Experimental Forest can respond to new information (i.e., adaptive management).

## DNR's OESF Retreat Recommendations

Executive, division and region collaboration at an OESF Retreat on June 9-10 produced key recommendations to make the OESF a full DNR program. The vision and priorities are outlined below.

## OESF Vision

The OESF is DNR's lab to create the next generation of HCP management and implement the Sustainable Forest Transition:

- Using science-based sustainable natural resource management
- Increasing the economic and ecological efficiencies of natural resource management
- Telling the story of working landscapes so that people connect with it.

## First-Priority Projects, to Move the OESF Toward Full Implementation

### Priority 1: Telling the Story

This set of tasks enables DNR to claim success for past and current experimentation and prepare for future partnerships in sustainable resource management.

- Task 1: Document past and current research and monitoring activities and earlier field trial experiments, using the P&T database,
- Task 2: Record and schedule all future research and monitoring activities in the P&T database,
- Task 3: Develop communication tools to successfully tell the story such as websites, newsletters, tour and workshop seminars. Seek external funding to support some of these activities (e.g., tours and workshops),
- Task 4: Interpret P&T data, and package and disseminate information to target audiences to inform, educate, solicit partnerships, and leverage funding.

### Priority 2: Riparian Management

Implementing research in riparian management zones is a critical step, considering riparian zones make up one in every three acres

designated for harvest in the sustainable forest calculation.

- Task 1: Develop a retrospective riparian-zone-management study to gather insights about stand responses to past management activities; use results to help guide development of future approaches to experimental or operational restoration,
- Task 2: Design and implement a prospective study, testing silvicultural pathways to restore physical and ecological function in young-forest riparian zones,
- Task 3: Design and implement a prospective study, testing partial harvest of mature timber from the riparian zone that also maintains physical and ecological functions.

### Priority 3: Old Forests

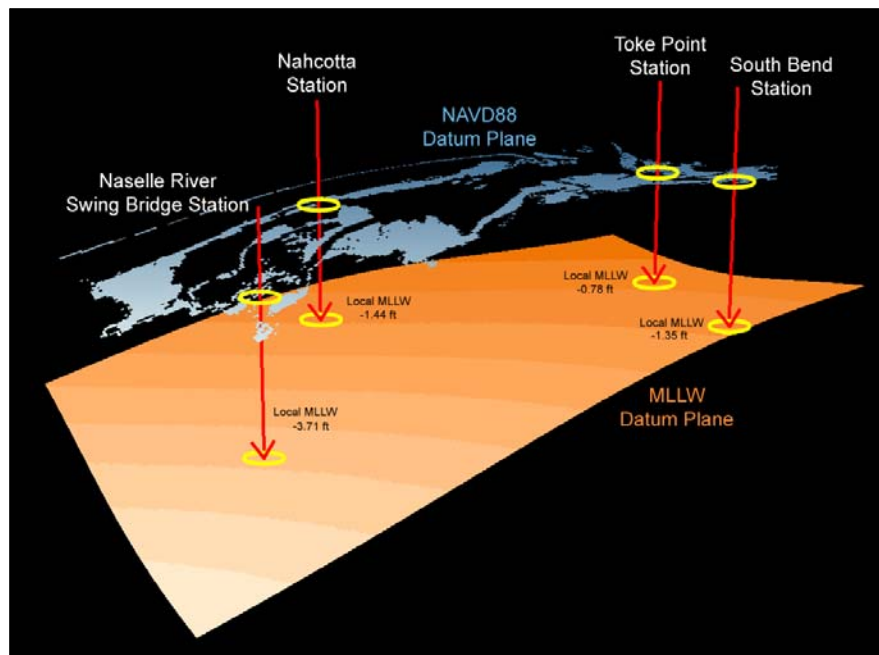
The third priority is to research how to manage commercial forests to maintain some and more quickly restore other natural functions associated with older forests; old forest ecosystem structures are important to natural and social values and as economic values for the trust beneficiaries.

- Task 1: Design and implement a prospective study, testing silvicultural pathways to create old forest functions from second growth stands,
- Task 2: Design and implement a prospective study, testing silvicultural pathways to extract value from older stands that maintains old forest functions.

# UW ONRC Presents at the International Society of Wetland Scientists 25<sup>th</sup> Annual Meeting in Seattle

Teresa Zena Alcock, GIS Specialist  
UW Olympic Natural Resources Center

Keven Bennett and I presented our work on tidal exposure mapping in Willapa Bay to the International Society of Wetland Scientists 25<sup>th</sup> Annual Meeting in Seattle in July. Our presentation followed immediately after Kyle Murphy, Department of Agriculture Statewide Spartina Coordinator, presented an overview of the efforts this season to combat the weed. Kyle had very supportive comments about our work during our presentation, saying that after a GPS survey was incorporated for model validation, our maps appeared to match closely with what was observed in the field. Below is the abstract as submitted for the Conference Proceedings. You can visit the Spartina website to view the actual presentation. Just go to the UW ONRC website, and click on "Invasive Spartina in Willapa Bay."



Establishing the Vertical Reference Framework for Modeling Tide Predictions

## ABSTRACT

### Mapping Predicted Tidal Exposure Durations using a LIDAR Based MLLW-Referenced Terrain Model for Invasive *Spartina alterniflora* Treatment and Control in Willapa Bay

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Olympic Natural Resources Center GIS is producing maps showing predicted tidal exposure durations for resource managers and stakeholders to plan herbicide applications to control *Spartina alterniflora* in Willapa Bay. The efficacy of the two primary herbicides used drops dramatically when treatment area drying time durations drop below a certain level. We have been using a LIDAR based Mean Lower Lowest Water (MLLW) referenced elevation model and NOAA National Ocean Service (NOS) tide predictions to provide these spatially explicit tidal exposure duration maps.

Validation and accuracy assessment is underway. One challenge we overcame is that the MLLW datum itself, which is used by all tide stations for which predictions are published by the NOS, varies from point to point in the bay. Another is the fact that features within the bay exert their own dynamic hydrologic effects on all aspects of tide mechanics, which makes correlation with NOS tide predictions, which are typically open-water data, very difficult. Our approach to these challenges has been to obtain GPS points along the water line to detect the intersection between the water surface and the underlying terrain to detect quantifiable errors. Using this error data, we are in the process of refining the MLLW-referenced elevation model that is the basis of our mapping methodology. When properly validated, these tidal exposure duration maps can be far superior to the use of tide tables alone. They provide a useful and elegant decision support tool to economically and effectively incorporate chemical applications into Integrated Pest Management strategies.