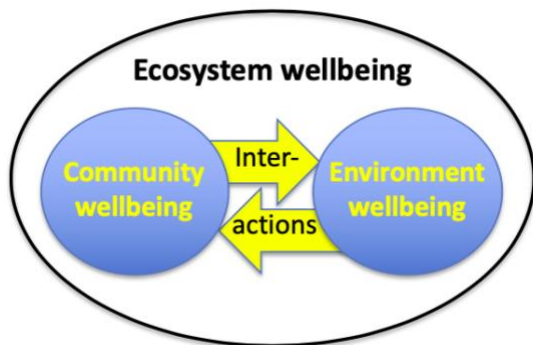


Revitalizing Forests and Rural Communities in Washington

A proposal prepared by the Olympic Natural Resources Center
for the Washington Senate Natural Resources Committee,
Honorable Senator, Kevin Van De Wege, chair



The Olympic Natural Resources Center (ONRC), near Forks, WA was created by the Legislature in 1991 (built in 1995) to integrate ecological and economic concerns, and is administered by the University of Washington. Our center is well suited to addressing rural community and forest revitalization and health by engaging UW campus assets with communities, public agencies, and other stakeholders under a rural ecosystem sustainability model that's proven acceptable to most people:



This proposal seeks an increase in ONRC base funding (\$896/biennium) for 3 new initiatives that will:

1. Provide rapid scientific assessments for Swiss Needlecast and other emerging threats (\$179k);
2. Apply science-based field trials on DNR's Oly. Exp. State Forest (OESF) to better inform key decisions (\$523); and
3. Apply adaptive management and practice-based research to give rural people more of a say in public land decisions (\$193k).

Additionally we're requesting \$133k to DNR for Swiss Needlecast surveys to assist in our assessments.

Revitalizing Forests and Rural Communities in Washington

A proposal prepared by the Olympic Natural Resources Center (ONRC)
for the Washington Senate Natural Resources Committee,
Honorable Senator, Kevin Van De Wege, chair
Submitted: September 21, 2018

Legislator synopsis (cost for the 2019-2020 biennium is about \$896k.)

The Washington legislature created the ONRC in 1991 to bring to bear UW and other scientific expertise to improve natural resource management by better integrating ecological and economic values and implementing innovative management practices in field experiments¹. Base funding from the state was supplemented with federal appropriations of more than \$200k per year until about 10 years ago. An increase in base funding will facilitate a greater impact of ONRC research and application focused on revitalizing forests and rural communities at a critical time in state history—with changing climate, demographics, rural economics, and social-environmental awareness. The time is right to up the investment in ONRC by using a holistic approach that works closely with state and federal land managers, taps into local knowledge, builds community participation and capacity, applies science to key social and natural resource questions, demonstrates innovative approaches in field trials, and supports evidence-based decisions for public lands. Such an approach would allow ONRC to refocus its mission to: developing methods and systems to revitalize both forests and rural communities in Washington, by connecting people with the forests, rivers, and coastlines of the Olympic Peninsula that local and state residents love and depend on.

An enhanced ONRC-led effort would provide a statewide model that:

- Finds new ways for public land managers to benefit rural communities beyond meeting their existing federal and state responsibilities;
- Supports evidence-based decisions through science-based adaptive management, for example, adjusting the sustainable harvest calculations for DNR trustlands and revising the Northwest Forest Plan;
- Helps rural communities define sustainability for themselves and builds their capacity to participate in land-management planning to improve both community and environment wellbeing, and;
- Builds scientific capacity to tackle key emerging natural resource issues affecting public, private, tribal, and industrial land owners, such as growth decline in Douglas-fir affected by Swiss needlecast and sustainable timber supply for advanced wood product manufacturing.

Increases in base funding for ONRC are needed to achieve these goals.

¹ See Appendix 1, originating statute

Background on forest and community health in rural Washington

The health of people and forests in less populated, rural Washington is critically important to all of Washington. Why? Because rural areas provide most of the agricultural and forest products, drinking water, and many tourism opportunities. It's also where the vast majority of incoming solar energy is captured, carbon is sequestered, and foodchains flow to support biodiversity, fish, and wildlife. Linking the fortunes of rural and urban populations is necessary to sustain the ecosystem services on which both depend. It begins with a better understanding of and investing in the connections between rural communities and their environment—you cannot take care of the rural environment without taking care of the nearby communities, and vice versa²—this is the new “sustainability” paradigm that most citizens now recognize and support.

Many rural communities in Washington—especially those with nearby large public forestlands, like the Olympic Peninsula—have struggled in the last 25 years, for a wide array of reasons, some of which relate to state and federal natural resource policy. For example, in 2017 the five census tracts in the OESF showed the median income at 66% of the state average, a poverty rate of 22%, and unemployment at 11%—during a period of rapid growth in more urban regions. Forests in these areas are thought by many people to have also been degraded by over-harvesting in the late 1900s, and by others to have been over-protected in the 2000s. Instead of arguing about this, we need to recognize the new reality—that most forests are now second growth that could benefit from more active management.

The ONRC and its partners have developed a conceptual model of rural ecosystem sustainability that provides a roadmap to improving both community and environment wellbeing into the future (Fig. 1). Benefits are already emerging from this model, including a community-led proposal to explore potential economic engines of forestry, fisheries, recreation/tourism, and restoration to generate incentives for personal and financial investment. Another grant was awarded to ONRC to work with tribes to develop ethnoforestry practices where species of importance to tribes that also have economic potential are worked into normal stand management practices on state and federal lands.

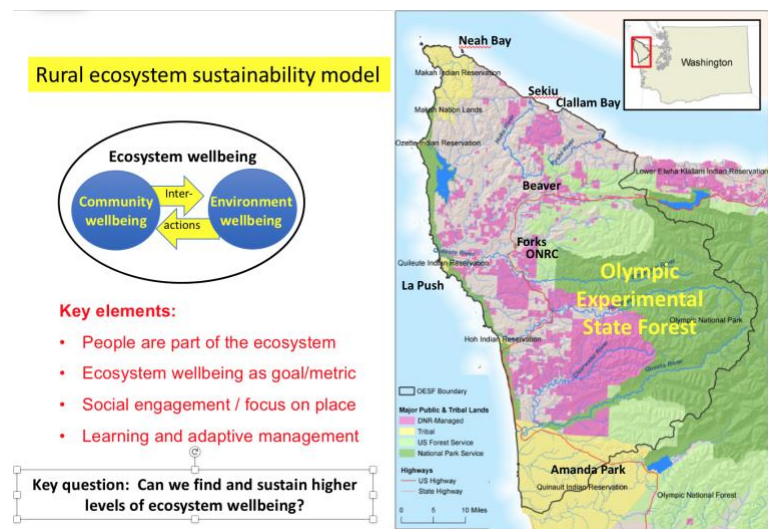


Fig. 1. Rural ecosystem sustainability—maintaining or improving the wellbeing of a peopled ecosystem (the experimental forest), where elements of community and environment wellbeing are considered together with a focus on their interactions.

[\[See Ecosystem Sustainability Model\]](#)

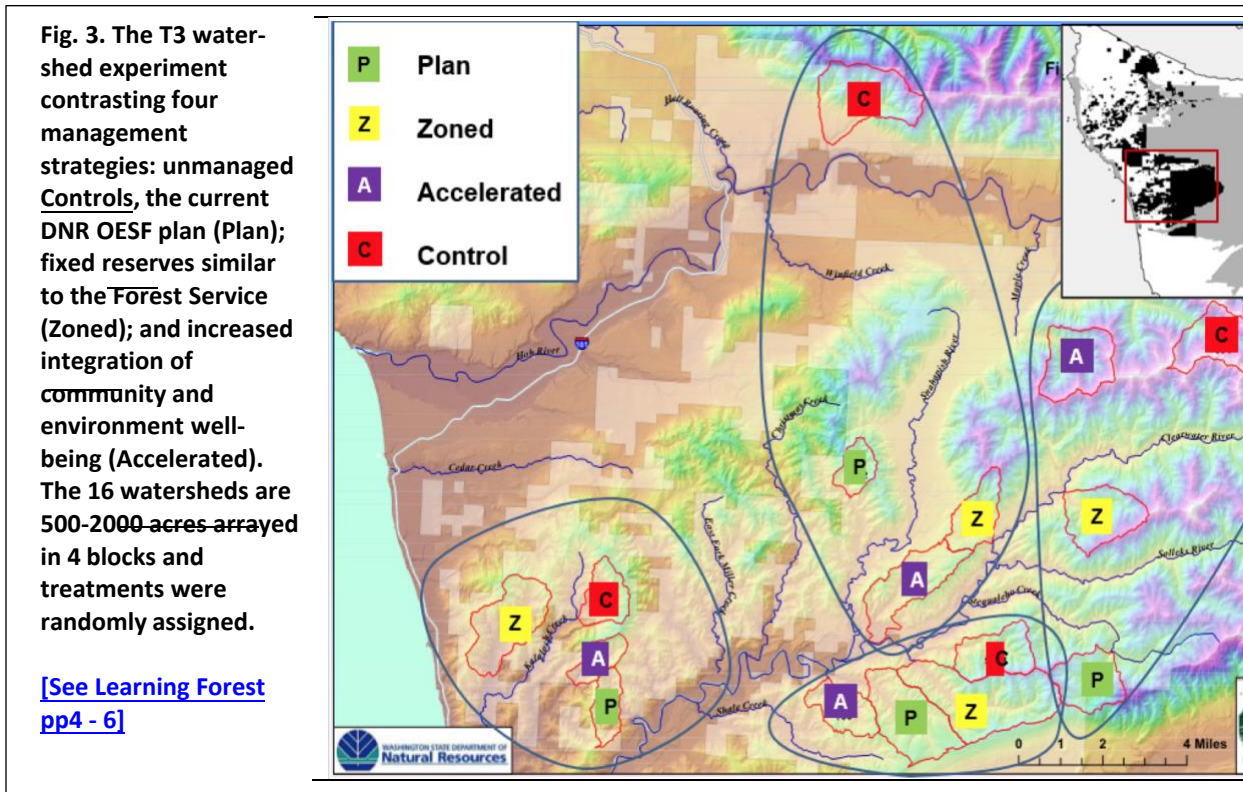
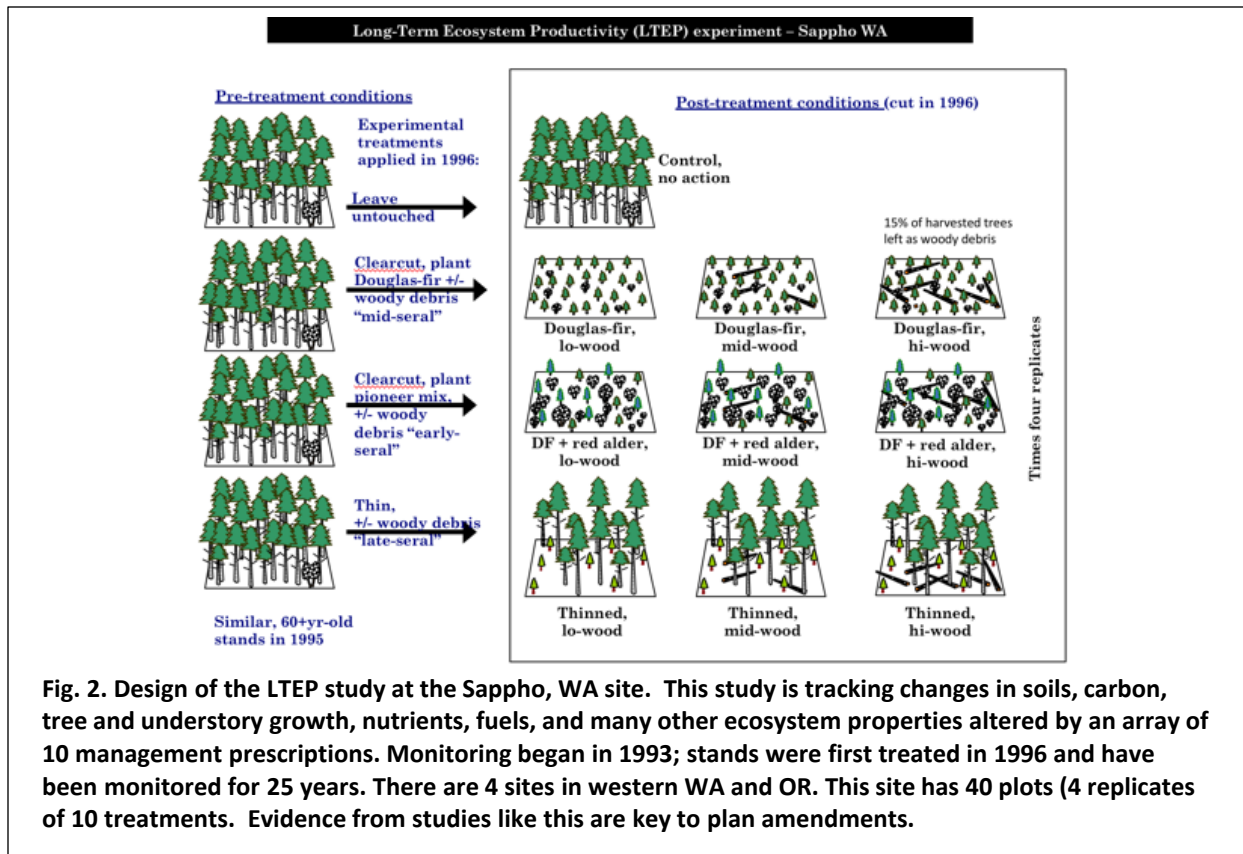
² Paraphrased from comments by Lands Commissioner, Hillary Franz at a public meeting in Port Angeles, WA (date). This perspective is the basis for the DNR's Rural Communities Partnership Initiative.

Legislative Proposal

Increase ONRC base funding by \$896k/biennium (see Appendix 2). This increase is needed to revitalize forests and rural communities by applying social and biophysical sciences to directly address key policy questions, support evidence-based decisionmaking by testing innovative solutions, increase public engagement, and quickly provide knowledge to all landowners and the public. Three major initiatives are proposed:

- A. **Swiss Needlecast and other emerging threats.** Provide rapid scientific assessments for effects on forest and community wellbeing as identified by the Legislature. Provide basic ecological and socio-economic knowledge including alternative management responses to landowners and the public (ONRC has formed a WA working group for Swiss Needlecast).
Funding proposal: \$180k/biennium [\[See Needlecast Report\]](#)
- B. **Field trials.** Compare different public-land forest management strategies on the ground in science-based field trials to support rapid, positive change in management to improve ecosystem wellbeing. The design alone provides near-term planning alternatives, and monitoring results over time will provide much-needed empirical evidence of success. These trials provide: (1) effectiveness monitoring for the DNR OESF land plan; (2) scientific support for future DNR decisions including sustainable harvest calculations; (3) ways for DNR to achieve goals of the Lands Commissioner’s Rural Communities Partnership Initiative; and (4) ideas and evidence to consider in Forest Service plan revisions. Two experiments form a backbone of scientific and operational inquiry that can assess whether current management is in fact sustainable:
- Continue the 25-year-old **long-term ecosystem productivity** experiment at Sappho, WA for research and education on key assumptions of National Forest and DNR policies that can be tested only in long-term trials, such as soil, forest, and economic productivity and C sequestration (Fig. 2); and
 - Fully implement the large-scale, 20,000-acre **T3 watershed experiment** adopted by ONRC and DNR in 2017 that compares the current OESF land plan to a fixed reserve (zoned) strategy and an accelerated integration that explores potential new win-wins beyond current practice or policy. (Fig. 3; see Appendix 1).
- Funding proposal: \$523k/biennium (mainly for monitoring and a research forester)*
- C. **Social science and engagement.** Apply adaptive management and practice-based research in conjunction with stakeholder engagement (entailing communication, learning, and trust-building) to integrate community and environment under the ecosystem wellbeing framework. This includes:
- Better understand and track changes in local perspectives on community wellbeing;
 - Engage with economic strategic planning, socio-economic studies, and community/NGO initiatives on the Olympic Peninsula; and
 - Conceive and develop practices that increase both environment and community wellbeing (ethnoforestry as example). [\[See Social Science Plan\]](#)
- Funding proposal: \$193k/biennium (mostly for social-science graduate students).*

This proposal also asks for \$113k/biennium to DNR for Swiss Needlecast surveys.



Appendix 1. Originating law

76.12.210 Olympic Natural Resources Center (1989), recodified in c 334 § 239.
RCW 43.30.810 (2003)

(1) The Olympic natural resources center is hereby created at the University of Washington in the school of environmental and forest sciences and the school of aquatic and fishery sciences.

(2) The Olympic natural resources center shall maintain facilities and programs in the western portion of the Olympic Peninsula. The purpose of the center is to demonstrate innovative management methods which successfully integrate environmental, energy, marine, and economic interests into pragmatic management of forest and ocean resources. The center shall combine research and educational opportunities with experimental forestry, oceans management, and traditional management knowledge into an overall program which demonstrates that management based on sound economic principles is made superior when combined with new methods of management based on ecological principles. The programs developed by the center shall include the following:

(a) Research and education on a broad range of ocean resources problems and opportunities in the region, such as estuarine processes, ocean and coastal management, renewable energy production, offshore development, fisheries and shellfish enhancement, and coastal business development, tourism, and recreation. In developing this component of the center's program, the center shall collaborate with coastal educational institutions such as Grays Harbor community college and Peninsula community college;

(b) Research and education on forest resources management issues on the landscape, ecosystem, or regional level, including issues that cross legal and administrative boundaries;

(c) Research and education that broadly integrates marine and terrestrial issues, including interactions of marine, aquatic, and terrestrial ecosystems, and that identifies options and opportunities to integrate the production of commodities with the preservation of ecological values. Where appropriate, programs shall address issues and opportunities that cross legal and administrative boundaries;

(d) Research and education on natural resources and their social and economic implications, and on alternative economic and social bases for sustainable, healthy, resource-based communities;

(e) Educational opportunities such as workshops, short courses, and continuing education for resource professionals, policy forums, information exchanges including international exchanges where appropriate, conferences, student research, and public education; and

(f) Creation of a neutral forum where parties with diverse interests are encouraged to address and resolve their conflicts.

[2012 c 243 § 2; 1991 c 316 § 2; 1989 c 424 § 4. Formerly RCW 76.12.210.]

Appendix 2. Revitalization studies budget proposal					
				2019-20	Number of
Overview of the three initiatives (University of WA,-ONRC portion)				Biennium	Biennia
Emerging threats (needlecast as first focus)				\$ 191,925.77	5
Field trials -- T3 watershed study				\$ 347,079.93	5
Field trials -- Long-term ecosystem peroductivity				\$ 115,390.87	5
Engagement based adaptive management and practice research				\$ 241,391.74	5
Total ONRC request				\$ 895,788.31	5
				2019-20	Number of
Associated DNR funding needs				Biennium	Biennia
Swiss Needlecast (DNR portion)					
Alternating-year surveys				\$ 25,000.00	
Install survey ground plots				\$ 88,000.00	
Field trials -- T3 Watershed study				Under study from internal sources	
Field trials -- Long-Term Ecosystem Productivity				Under study from internal sources	
Total DNR request:				\$ 113,000.00	5
Budget details (ONRC portion)					
	Threats	Field Trials	Social Sci. &	Total	
Personnel	(needlecast)	T3 Watersheds	Engagement		
Coordinator (100% FTE/ 2 years)	\$ 84,347.00	\$ -	\$ 16,869.40	\$ 67,477.60	\$ 168,694.00
GIS/LIDAR Analysis (8 months)	\$ 26,518.00	\$ 26,518.46	\$ -	\$ -	\$ 53,036.46
Research forester 100% FTE/2 years	\$ 16,000.00	\$ 128,000.00	\$ 16,000.00	\$ -	\$ 160,000.00
Forestry Grad Student (1 month ea summer)	\$ -	\$ 6,197.50	\$ 6,197.50	\$ -	\$ 12,395.00
2 Social Sciences students (2 yr)	\$ -	\$ -	\$ -	\$ 100,000.00	\$ 100,000.00
COE funding replacement	\$ 25,000.00	\$ 25,000.00	\$ 25,000.00	\$ 25,000.00	\$ 100,000.00
Faculty and Agency Authors	\$ -	\$ -	\$ 28,000.00	\$ -	\$ 28,000.00
Intern Stipends	\$ -	\$ -	\$ 14,400.00	\$ -	\$ 14,400.00
Total Salaries/Labor	\$ 151,865.00	\$ 185,715.96	\$ 106,466.90	\$ 192,477.60	\$ 636,525.46
Travel	Needlecast	T3 Watersheds	LTE Productivity	Engagement	Total
Vehicles for field work	\$ 3,249.00	\$ 4,480.00			\$ 7,729.00
PI/Director Travel	\$ 4,331.00				\$ 4,331.00
Coordinator Travel	\$ 5,397.77			\$ 5,522.40	\$ 10,920.17
Total Travel	\$ 12,977.77	\$ 4,480.00	\$ -	\$ 5,522.40	\$ 22,980.17
Supplies/Materials	Needlecast	T3 Watersheds	LTE Productivity	Engagement	Total
Field supplies	\$ 606.00	\$ 8,200.00	\$ 2,000.00	\$ -	\$ 10,806.00
Total Supplies/Materials	\$ 606.00	\$ 8,200.00	\$ 2,000.00	\$ -	\$ 10,806.00
Other Expenses	Needlecast	T3 Watersheds	LTE Productivity	Engagement	Total
Lidar	\$ 25,000.00	\$ 10,000.00	\$ -	\$ -	\$ 35,000.00
Ground plots for lidar	\$ -	\$ 15,000.00	\$ -	\$ -	\$ 15,000.00
Lidar based models	\$ -	\$ 85,000.00	\$ -	\$ -	\$ 85,000.00
Researcher/Reviewer contracts	\$ -	\$ 20,000.00	\$ -	\$ -	\$ 20,000.00
Tuition (Grad. Students)	\$ -	\$ 4,923.97	\$ 4,923.97	\$ 39,391.74	\$ 49,239.68
ONRC conference rooms	\$ -	\$ 4,400.00	\$ 2,000.00	\$ 4,000.00	\$ 10,400.00
Lodging (Interns / Grad Students)	\$ 1,477.00	\$ 9,360.00	\$ -	\$ -	\$ 10,837.00
Total Other	\$ 26,477.00	\$ 148,683.97	\$ 6,923.97	\$ 43,391.74	\$ 225,476.68
Subtotal Direct Costs	\$ 191,925.77	\$ 347,079.93	\$ 115,390.87	\$ 241,391.74	\$ 895,788.31
TOTAL COST				\$ 895,788.31	