

# Enhancing Stewardship of Natural Resources and the Environment

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## V(A). Planned Program (Summary)

### 1. Name of the Planned Program

Enhancing Stewardship of Natural Resources and the Environment

## V(B). Program Knowledge Area(s)

### 1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
112	Watershed Protection and Management	30%			
121	Management of Range Resources	10%			
123	Management and Sustainability of Forest Resources	30%			
124	Urban Forestry	5%			
125	Agroforestry	5%			
131	Alternative Uses of Land	5%			
135	Aquatic and Terrestrial Wildlife	10%			
605	Natural Resource and Environmental Economics	5%			
<b>Total</b>		100%			

## V(C). Planned Program (Inputs)

### 1. Actual amount of professional FTE/SYs expended this Program

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	25.0	0.0	0.0	0.0
<b>Actual</b>	21.0	0.0	0.0	0.0

### 2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c 748498	1890 Extension	Hatch	Evans-Allen
	0	0	0
1862 Matching 748498	1890 Matching	1862 Matching	1890 Matching
	0	0	0
1862 All Other 3420939	1890 All Other	1862 All Other	1890 All Other
	0	0	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

WSU Extension works with the people of Washington State to address agricultural, natural resource, and environmental issues by providing information, education, technical assistance, and local development programs. Our programs are available to all without discrimination.

WSU Extension addressed this goal directly through educational programs, demonstration activities, and facilitation processes. Training programs for faculty, staff, volunteers and appropriate partner organizations as well as for specific clientele groups, the general public and underserved populations was conducted. Educational programs addressed the following issues/needs:

- Developing more profitable income-generating natural resource-based enterprises.
- Sustaining and enhancing water availability, both in quality and quantity.
- Managing for the recovery and sustainability of anadromous fish.
- Improving stewardship of forest and rangeland health, water quality, wildlife habitat, and reducing soil erosion.
- Controlling non-native, invasive species.
- Decreasing rates of land conversion, ecosystem fragmentation, and land ownership fragmentation.
- Effectively engaging interest groups and stakeholders to address forest, rangeland, and environmental issues.
- Enhancing the quality of life through urban and community horticulture/forestry.

Other outreach techniques included field demonstrations, mass media (such as web pages, video streams, newspapers and newsletters), workshops and meetings. Trained volunteers supported programming efforts.

**2. Brief description of the target audience**

Forest, rangeland, shoreline, and related renewable natural resource owners and managers; decision makers; interest groups; home owners; general public; and youth.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	15000	30000	3000	0
2007	131673	846848	14272	8817

**2. Number of Patent Applications Submitted (Standard Research Output)**

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2007:	0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	16	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

Number of educational events (resulting in direct and indirect contacts) conducted to increase awareness among citizens and landowners.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	300	417

**Output #2**

**Output Measure**

Number of contacts with diverse, underserved and limited resource stakeholders within the state resulting in increased knowledge about natural resources practices.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	5000	14583

**V(G). State Defined Outcomes**

O No.	Outcome Name
1	Number of acres (public or private) on which forest or rangeland management was improved as a result of Extension programming or due to partnerships between Extension and other agencies and organizations.
2	Estimated dollars saved or earned by forest, range, fish and wildlife-based income generating enterprises resulting from Extension programming and/or partnerships between Extension and other organizations and agencies.
3	Percentage of program participants that report learning new techniques that may lead to improvement in terrestrial and aquatic habitats, enhanced forest and rangeland stewardship, more effective public policy, control of invasive species, reduced ecosystem fragmentation, and/or increased economic opportunities for natural resource-based industries.
4	Percentage of program participants that apply at least one new technique that may lead to improvement in terrestrial and aquatic habitats, enhanced forest and rangeland stewardship, more effective public policy, control of invasive species, reduced ecosystem fragmentation, and/or increased economic opportunities for natural resource-based industries.

**Outcome #1**

**1. Outcome Measures**

*Not reporting on this Outcome for this Annual Report*

**2. Associated Institution Types**

**3a. Outcome Type:**

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
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**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
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**V(H). Planned Program (External Factors)**

**External factors which affected outcomes**

Natural Disasters (drought, weather extremes, etc.)

Economy

Appropriations changes

Public Policy changes

Government Regulations

Competing Public priorities

Competing Programmatic Challenges

Populations changes (immigration, new cultural groupings, etc.)

**Brief Explanation**

No major challenges were encountered in 2007.

**V(I). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

After Only (post program)

Retrospective (post program)

Before-After (before and after program)

During (during program)

**Evaluation Results**

Enhancing Stewardship of Natural Resources and the Environment  
Knowledge Gained or Intent to Change Behavior (Learning)

- 40% indicated that they planned to thin their forests •
- 70% indicated that they would assess insect damage •
- 70% have developed land management plans •

A net benefit study by the University of Washington indicates that fuel reductions on lands under land management plans developed with the assistance of WSU Extension will result in future net savings of \$5.3 million derived from the reduced wildfire risk on these critical lands. •

70% of adults utilizing Master Gardener volunteer delivered services indicated that their knowledge of environmentally sustainable gardening practices was increased. •

Among participants in Water-wise Gardening and Landscaping workshops, 60% increased knowledge about plant groupings; 52% increased knowledge about water-wise plants; and 50% increased knowledge about how to reduce turf size in yards and gardens. •

100% of private landowners attending forest stewardship workshops indicated that they had learned sound forest management practices. •

100% of private landowners indicated that they gained increased knowledge about where to find critical resources supporting future land management decisions. •

Over 92% of classroom teachers indicated that their students had a positive learning experience as an outcome of Master Gardener led "Plants Grow Children" programs. •

75% of Sustainable Small Farming and Ranching course participants indicated that they had increased their awareness of current issues and concerns related to land management. •

77% of participants in the Living on the Land program indicated significant changes in their knowledge levels.  
Behavior Change (Action)

• 53% of new Beach Watcher volunteers provide service on a monthly basis and 10% volunteer weekly. •

Beach Watcher volunteers conducted surveys in the Puget Sound that will lead to future removal of new Spartina (invasive aquatic plant) and removal of 200 tons of creosoted materials by the Washington Department of Natural Resources. •

The City of Tacoma is marketing Targo mulch and potting mix - derived from biosolid waste materials. These products were developed in partnership with WSU Extension faculty. •

Statewide, 40% of participants in the Coached Planning program developed plans to thin forestlands. •

Statewide, 85% of FireWise program participants produced and began implementing a plan to fire proof their properties. •

In Spokane County, 33% of horticulture education program participants have reduced water use, 44% have reduced pesticide use, 38% have used proper plant placement, and 23% have initiated low maintenance landscaping. •

Volunteers mapped 9.4 nautical miles of shoreline along the Juan de Fuca Strait for eelgrass. •

In King County, 65% of past class participants reported implementing recommended forest practices on their land. •

Three counties and four municipalities have adopted the Low Impact Development Technical Guidance Manual developed by a WSU Extension faculty member. •

98% of King County participants in the Acting Food Policy Council's "Eat Local for Thanksgiving" campaign indicated that they included locally-grown foods on their holiday menu. •

80% of attendees at the Pend Oreille County "Sense of Place Program" have taken steps to protect homes from wildfire, conserve water, and enhance wildlife habitat. •

The percentage of landowners practicing the 10 "Puget Sound-friendly" practices 60-100 percent of the time in Jefferson, Kitsap and Mason counties increased by 21%. •

Demand for toadflax bioagents has increased by 110% in 2007 statewide. •

As a result of the educational programs, the Mason County Health Department reports that over 50% of participants had their sewage systems pumped and inspected. •

The Washington Department of Natural Resources removed 40 tons of creosote-treated wood from Jackson Beach as a result of information provided by Beach Watchers volunteers.

Condition Change

• Spread of Dalmatian toadflax across over 1 million acres has been checked by biological control agents released in a cooperative venture led by WSU Extension faculty. •

Herbicide application on rangeland has been reduced saving \$35 per acre on 138,000 acres in NE Washington resulting in savings to agencies of approximately \$4.8 million. •

Rapid response resulting from rangeland monitoring has allowed for early control of invasive species on 8156 acres and protecting an additional 10,000 adjacent acres. •

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## Key Items of Evaluation

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