



# Program Accomplishments



**Botany**  
**Invasive Plants**  
**Native Plants**

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**Forest Service**

Pacific Northwest  
Region



# Botany

## Program Accomplishments



The Siskiyou Mountains of southern Oregon are one of the most floristically diverse places in North America. Dozens of rare plant species flourish on national forest lands in this area, including Bolander's lily (*Lilium bolanderi*).

**Fiscal Year  
2012**

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# US Forest Service Pacific Northwest Region

## 2012 Botany Program Accomplishments

### Accomplishment Summary

The Botany Program manages our national forest native plant heritage, including federally listed and sensitive plant species and unique plant habitats including those identified as special interest areas. Botanists support recreation, range, engineering, wildlife, aquatics, minerals, invasives, vegetation, forest products, and fuels management projects with a wide range of activities. These include rare plant species surveys, biological assessments, biological evaluations, environmental impact statements, categorical exclusions, IDT participation, invasive plant risk assessment and integrated pest management, revegetation plans and materials, NRIS TES database management, forest plan revision, and environmental education.

The overall goal of this work is to better understand and manage our botanical heritage on national forest lands while supporting other essential forest programs. Our current knowledge is far from perfect. Inventories find new populations of rare species or new examples of special habitats, and as our understanding of these resources changes our management priorities can change, too. Species once thought to be rare or declining can be shown to be secure, while other species that really are rare or narrowly distributed can be managed as the treasures they are. As we learn more, planning at the forest and project level becomes more integrated and multiple use management becomes reality. The Botany Program informs sound decision making and is crucial to balanced resource management in the National Forest System.

### Specific accomplishments in fiscal year 2012 include:

- National leadership role in preparation of agency fire retardant EIS.
- Essential participation in development of new forest plans for five Forests.
- Prepared hundreds of BAs, BEs, and CEs to support Forest projects.
- Completed 118,866 acres of sensitive plant and federally listed plant inventory.
- Found over 250 new sensitive plant sites including species new to many forests.
- Discovered 4 species new to science, and one that may be new.
- Monitored health of over 100 species and 400 populations of federally listed or sensitive species.
- Restored or enhanced 6,246 acres of sensitive plant habitat.
- Completed or updated 5 conservation strategies and one conservation agreement ([www.fs.fed.us/r6/sfpnw/issssp](http://www.fs.fed.us/r6/sfpnw/issssp)).
- NRIS TESP legacy data now mostly corrected, and entry of new data occurring annually.
- Established new or experimental populations of federally listed plants to support multi-agency recovery efforts.
- Continued development and maintenance of national Celebrating Wildflower website reaching 152 countries worldwide ([www.fs.fed.us/wildflowers](http://www.fs.fed.us/wildflowers)).



Figure 1. *Kalmiopsis fragrans*. The Umpqua *Kalmiopsis* is a very narrow endemic plant that occurs in the Limpy Rock Research Natural Area on the North Fork Umpqua River, Umpqua NF. R6 is home to hundreds of endemic plants, fungi, lichens, and bryophytes, many of which occur only on NF lands. Our Botany program documents the distribution and abundance of these plants and seeks to understand ecological connections and management requirements so that we can sustain this remarkable biota into the future.

### Partnerships

Leveraged funding, skills, and expertise through the development of hundreds of partnership projects, increasing regional capacity by over \$165,000.

### Key Projects in Progress

- Implement the Terrestrial Restoration and Conservation Strategy.
- Improve integration with other disciplines on the Forests and Districts.

**Regional Contact:** Mark Skinner, 503-808-2150



**USDA Forest Service  
Pacific Northwest Region**

P.O. Box 3623

Portland, Oregon 97208-3623

# Columbia Gorge National Scenic Area

## 2012 Botany Program Accomplishments

The Botany program is fully integrated with wildlife, fisheries, and soil and water. All projects are jointly funded and supported by our natural resource team.

The botany side of this collaboration worked on a total of 20 projects this year, with a wide range of needs, including sensitive species surveys, botanical assessments, invasive plant management, EIS's, EA's and categorical exclusions. Support spanned many programs such as recreation, roads, aquatics, wildlife, and lands.

These include:

- Continued monitoring *Artemesia campestris* var. *wormskioldii*, a Federal candidate species, at Miller Island. Examined possibility of re-introduction sites on Miller as is being done at 2 other locations within the Gorge (Mosier and The Dalles). Working with USFWS, OR and WA States to increase populations and de-list this species.
- Completed over 1000 acres of habitat enhancement: Sandy River Delta (1000 ac), Bonneville Wetland (5 ac), Collins Slide (150 ac) and Catherine Creek (200 ac) oak/pine habitat enhancement/restoration.
- Reviewed over 20 development reviews for the NSA, both federal and private.
- Co-led 10-day ecology field trip for Clark College students to SE Oregon high desert to introduce general ecological principles and to learn about public land management.
- At Collins Slide the removal of Douglas-fir from oak/pine woodlands saw a dramatic explosion of native flora such as *Cynoglossum grande*, *Viola* spp., and bunch grasses.



Barbara Robinson, a local botanist, examines vegetation plots for plant diversity in a study on effects to the flora as a result of prescribed fire.



Students identifying plants in the high desert of SE Oregon at Lava Bed National Monument.

### 2012 Accomplishments

<u>Acres</u>	<u>Funding</u>	<u>Activity</u>
200 ac	NFWF/NFVW/SP S4/NFHF	TES habitat enhancement/restoration
5 ac	NFVW	Wetland enhancement
150 ac	NFWF/NFVW	Vegetation improved
ac	WFWF/NFVW	TES plant inventory
3 ac	NFIM	TES plant monitoring
1000	NFXF	Habitat enhancement

**1388 TOTAL**

### Partners/Cooperators

BPA, COE, Ashcreek Forest Management, Ducks Unlimited, WDFW, Gorge Ecology Institute, LCEP, WDFW, and six counties in Gorge.

**Contact:** Robin Dobson 541-308-1717



**Columbia River Gorge National Scenic Area National Forest**  
902 Wasco Ave., Suite 200  
Hood River, OR 97031

# Colville National Forest

## 2012 Botany Program Accomplishments

In 2012 the Botany Program supported 9 large projects: 4 vegetation management, 1 dam relicensing, 2 range allotment reissuances, 1 motorized recreation, and 1 Forest Plan Revision.

### Highlights and Activities:

- Hosted 17<sup>th</sup> Annual Univ. of WA Herbarium Foray, 5 days in the Pend Oreille Valley (Figure 1).
- Documented 8 new sensitive plant locations of 5 species.
- Monitored 45 sensitive plant populations for 13 species.
- Completed 3 BE's with 3 more underway.
- Signed off on 40 Categorical Exclusions.
- Completed ISSSSP funded project, "Fungi Surveys in Four Hot Spots on the Colville National Forest."
- Accomplished 1<sup>st</sup> year of a ISSSSP funded 2-year project, "Voucher and Verify *Botrychium* Locations on the Colville NF" (Figure 2).
- Managed 4 CCS projects to survey and identify nonvascular plants.
- RareCare volunteers revisited 6 sensitive plant locations: *Botrychium herperium*, *B. paradoxum*, *Cicuta bulbifera*, *Dryopteris cristata*, *Geum rivale*, and *Lycopodium dendroideum*.
- Continued cleaning up legacy sensitive plant data in NRIS and entered 2012 field data.
- Participated in the R6 Fungi Working Group.
- Conducted 6 conservation education activities reaching 355 kids and adults.
- Led Forest chartered Conservation Education Team.

**Contacts:** Kathy Ahlenslager, 509-684-7178,  
Amy Cabral, 509-684-7178.



Figure 1. University of Washington Herbarium Foray group.

Acres	Funding	Activity
3052	NFTM	TES plant inventory
2000	NFVW	TES plant inventory
197	NFIM	TES plant monitoring
<b>5249</b>	<b>Total</b>	

### Partners/Cooperators

RareCare, University of WA Herbarium, Dr. Jim Groth, Andrew Parker, Dr. Judy Harpel, Erica Heinlen and 12 schools.



Figure 2. *Botrychium minganense*, Nancy Creek.



**Colville National Forest**  
765 S. Main  
Colville, WA 99114

# Deschutes National Forest

## 2012 Botany Program Accomplishments

### Threatened, Endangered and Sensitive Plants:

- Found 69 new element occurrences of rare plants (18 TES; 71 Survey & Manage) of 27 different species, adding 9 new species to the District list and 3 new species to the Forest list (Figure 1). (*Crescent*).
- Revisited pumice moonwort sites to assess habitat threats and population changes, and mapped/flagged for protection green-tinged paintbrush populations within vegetation management planning areas (*Bend/Ft. Rock*).
- Monitored effects of fall logging & short-season grazing on Peck's penstemon (*Sisters*).
- Completed 24 Biological Evaluations.

### Survey & Manage Plant Species:

- Completed FY12 fall/spring fungi surveys in old growth habitats for projects on all 3 Districts. With 2 visits/season, 10,220 acres were surveyed!

### Conservation Education – too many to list, highlights include:

- Engaged elementary students in a unique combination of outdoor field classes (about forest and aquatic ecology; Figure 2), stewardship project in partnership with Wolfree; also provided outdoor education for LaPine/Gilchrist Schools (100's of children) through Outdoor Adventure Days, wetland discovery tours, etc. (*Crescent*).
- Assisted with Ryan Ranch Meadow Field School Activities (*Bend/Ft. Rock*).
- Rick Dewey (SO) provided expertise to complete fen interpretive signs for Cascade Lakes Hwy.
- Worked with partners to develop The Quilt for Two Rivers (part of Tale of Two Rivers Conservation Campaign) in development of a 40 ft. long fabric art quilt of Whychus Creek ecosystem (Figure 3). After a premiere to > 15,000 people at the Sisters Outdoor Quilt Show in July, the art quilt is scheduled for 10 galleries/shows, even in Japan. (*Sisters*; Many additional educational programs related to this conservation effort!)

### Unique Plants and Habitats:

- ISSSSP Regional funding for bryophyte/fen expert, Rick Dewey: monitor fens on Fremont/Winema and Umatilla NFs, produce fen reports, continue providing expertise to the Fungi Working Group.
- Crescent collected post-treatment soil samples & field data at 420 plots for an on-going matsutake study.

### Habitat Restoration:

- YCC crews installed fencing to protect rare fen species in areas used by OHVs (*Crescent*).
- Terrestrial & riparian habitats restored with planting > 2,900+ native plants & 100's lbs. of native grass/forb seed.



Figure 1. Searching for tiny, rare mosses in the subalpine zone below picturesque Diamond Peak.



Figure 2. Bend/Ft. Rock Botanists participated in field studies for local Bend Students, Ryan Ranch Field Classroom, Deschutes NF.



Figure 3. Art Quilt for Two Rivers teaches about ecology of Wild & Scenic River, Whychus Creek.

### 2012 Accomplishments

Total NFWF Funding = \$50,600

Acres	Funding	Activity
11,195	WFHF, NFTM NFIM	TES & S&M Inventory

**Partners:** Bend, Sisters, LaPine, and Gilchrist Schools, National Forest Foundation, The Nature Conservancy, Whychus Friends of the Forest, Wolfree, Western Stewardship Science Institute, Deschutes Basin Land Trust, Boy Scouts of America, Sisters Quilters.

**Contacts:** Katie Grenier (541-383-5564); Maret Pajutee (541-549-7727); Charmane Powers (541-383-4730); Christina Veverka (541-433-3234); Rick Dewey (541-383-5725), Marlo Fisher (541-383-4743).



**Deschutes National Forest**  
63095 Deschutes Market Rd.  
Bend, Oregon 97701

# Fremont-Winema National Forests

## 2012 Botany Program Accomplishments

### Accomplishment highlights include:

- Continued established monitoring for *Astragalus lemmonii* (a species believed to be extirpated from Oregon until 2009).
- Continued monitoring in established plots of pumice grapefern (*Botrychium pumicola*) and collected data to evaluate response to lodgepole pine treatment at 14 sites. Agreement was signed for work to begin in the fall of 2012 by the Klamath County Corrections Crew.
- Continued establishing monitoring transects in high-value fen habitats on Chemult District. Monitored *Carex capitata* sites in 2 fens.
- Through the ISSSSP program funding (1,127.2 acres) and other appropriated funding (2,500.3 acres), contractor surveys revealed:
  - *Carex cordillerana*: 146 plants within 2 sites over 0.8 acres.
  - *Eriogonum umbellatum* var. *glaberrimum*: 443 plants within 12 sites over 18.7 acres.
  - *Eriogonum prociduum*: 11 plants within 1 site over 7.1 acres.
  - *Pinus albicalis*: 11 trees within 4 sites over 0.4 acres.
- Assisted Smithsonian Institute and UC scientists with collection of *Fluminicola* snails in the Klamath Basin for DNA work.
- Led 4 wildflower walks, hosted “fun with fungi” event, and taught the botany section of RAP camp. Preparation for the Bull Swamp trip resulted in location of 2 new sensitive species sites.
- Completed 9 biological evaluations in support of Forest projects. Completed 1 BAER report for the Barry Point Fire. Adjusted workload to meet requirements for survey and manage in several project areas.



Figure 1. Photo of *Eriogonum umbellatum* var. *glaberrimum*

### 2012 Accomplishments

Acres	Fund Code	Activity
20	NFIM	Assisted with Smithsonian Institution's <i>Fluminicola</i> surveys
7	NFWF	Pumice grapefern Monitoring/restoration
2.5	NFWF	Monitoring & baseline data for 3 Chemult fens
1,127.2	NFIM	<i>Eriogonum umbellatum</i> var. <i>glaberrimum</i> and <i>Eriogonum prociduum</i> surveys
2,500.3	NFRG/ NFWF/ WFHF/ CFTM	Survey prior to allotment renewals, aspen treatment, vegetation restoration project, and timber sales.

### Partners/Cooperators

ODA rare plant program, Klamath Basin Chapter of the Native Plant Society, Klamath County Corrections Crew, Smithsonian Institute

### Contacts:

Amy Markus, Acting Forest Botanist 541-947-6256  
Missy Anderson, Westside Botanist 541-783-4085  
Jeannette Wilson, Eastside Botanist 541-576-7593



**Fremont-Winema National Forest**  
1301 S. G Street  
Lakeview, OR 97630

# Gifford Pinchot National Forest

## 2012 Botany Program Accomplishments

In 2012, the Gifford Pinchot National Forest Botany Program supported 2 large vegetation management projects—and various recreation, restoration and engineering projects—by conducting field reconnaissance, surveys, and providing technical assistance.

- Completed 6 Biological Evaluations, one for a 5000 acre timber sale, and administered a 3,413 acre botanical survey contract (CVRD).

We supported regional efforts for rare plant management by implementing a multi-unit Conservation Strategy and Agreement for pale blue-eyed grass (*Sisyrinchium sarmentosum*), and completed approximately 100 acres of intensive survey of high-likelihood habitat for *Sisyrinchium sarmentosum*

- Participated in habitat modeling and validation effort for *Sisyrinchium sarmentosum*
- Implemented Year 1 of Conservation Strategy and Agreement for *Sisyrinchium sarmentosum*

- Awarded 2-yr \$84,000 Competitive Challenge Cost Share grant for Regional Collaboration for Conservation of Pale Blue-eyed Grass, Mardon Skipper Butterfly, and their Meadow Habitat

We began planning habitat restoration for hairy-stemmed checkermallow (*Sidalcea hirtipes*; Figures 1-2).

- Conducted fieldwork for Interagency Special Status Sensitive Species Program project: *Sidalcea hirtipes* (bristly-stemmed checkermallow) Habitat Restoration and Re-establishment Plan: funding \$8,000
- Worked with Mt. Adams Collaborative Group on environmental analysis for rare plant habitat protection and restoration

### Environmental Education

- Conducted 5 environmental education activities, reaching 600+ people (Figure 3)
- Presentation made at University of Washington 2012 Plant Biodiversity Conference

### Rare Plants

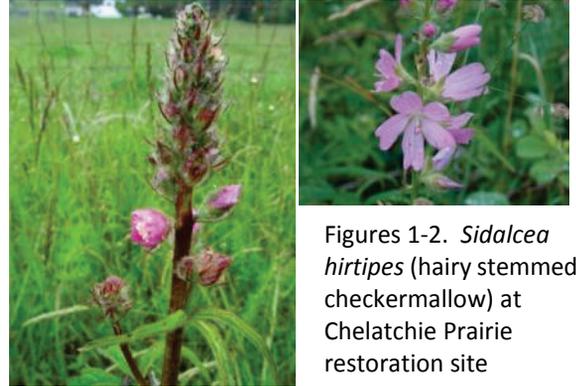
- Monitored 8 rare plant populations and made 2 rare plant seed collections (Rare Care)
- 1 Rare Care Monitoring Report
- Documented 3 new sensitive plant locations
- Continued clean-up of NRIS Rare Plants database populations

### RNAs

- Monitored 5 RNAs - Monte Cristo, T.T. Munger, Steamboat Mountain, Sister Rocks, and Cedar Flats Research Natural Areas, and Weigle Hill proposed Research Natural Area

### BAER Team

- Botany personnel assisted in developing the Burned Area Emergency Response Plan for the Cascade Creek Fire, a 20,000 acres fire on the Mt. Adams District.



Figures 1-2. *Sidalcea hirtipes* (hairy stemmed checkermallow) at Chelatchie Prairie restoration site



Figure 3. Learning about invasive plants at Fish Education Day, Mt. Adams Ranger District.

### 2012 Accomplishments

Funding – NFWF – \$88,000  
Special projects – \$67,900

Acres	Funding	Activity
5.0	NFWF	TES habitat restoration planning
200	Title II	TES plant reconnaissance
151	NFWF	TES plant monitoring and inventory
3,413	NFTM	Plant surveys for Nisqually Thin
<b>3768</b>		<b>Total acres</b>

### Partners/Cooperators

Rare Care (University of Washington); Mt. Adams Collaborative Group; Washington Natural Heritage Program; Cowlitz Tribe; Xerxes Society; U.S. Fish and Wildlife Service

**Contacts:** Carol Chandler 360-891-5106 (HQ)  
Andrea Ruchty 509-395-3414, John Scott 509-365-3413 (SZ)  
Linda Swartz 360-497-1164 (NZ)



**Gifford Pinchot National Forest**  
10600 N.E. 51<sup>st</sup> Circle  
Vancouver, WA 98682

# Malheur National Forest

## 2012 Botany Program Accomplishments

The Botany Program supported programs such as range management, timber, recreation, wildlife, aquatics, engineering, and hazardous fuels for over 15 projects in FY 2012. In general, support to these programs covered a wide range of needs, including sensitive species surveys, habitat assessments, species identification, wetland delineation and inventory, and plant monitoring protocol.

- Prepared **14** biological evaluations / specialist reports.
- Surveyed over **12,000** acres for sensitive plants.
- Discovered **12** new *sensitive* plant sites (6 species).
- Discovered **3** new *strategic* plant sites (2 species).

• Surveyed over 10,000 acres to remap and inventory sensitive populations of the globally rare species *Luina serpentina* and *Thelypodium eucosmum* (Figure 1), and the regionally rare species *Carex scirpoidea* ssp. *stenochlaena* and *Cymopterus nivalis*. In total 1,137 acres of sensitive plant occurrences were inventoried.

• Designed and initiated a monitoring program for *Astragalus tegetarioides*, a globally rare sensitive species that may benefit from restoration activities associated the Collaborative Forest Landscape Restoration Project (CFLRP) of the Southern Blues Restoration Coalition.

• Re-established the historical Phenology Monitoring Station near Seneca, OR (in collaboration with the RO and area genetics program). This plant phenology data will be used in concert with, and compared to, data from the 1930's and will be shared via national phenology databases and climate change networks.



Figure 1. *Thelypodium eucosmum*, a globally rare sensitive species on the Malheur NF

### Botany Program Expenditures:

\$ 55,000	Total
\$ 24,000	NWFF
\$ 21,000	NFIM
\$ 10,000	WFHF

**Partners/Contractors:** Oregon Native Plant Society, Carex Working Group, Stone Ecosurveys, Oregon Biodiversity Information Center, UNLV.

**Contact:** Joseph Rausch, 541-575-3141



### Malheur National Forest

431 Patterson Bridge Road  
P.O. Box 909  
John Day, OR 97845

# Mt. Baker-Snoqualmie National Forest

## 2012 Botany Program Accomplishments

**NRIS Database Updates.** Hooray, as a result of painstaking efforts, we finally have our extensive sighting and survey records properly migrated into NRIS! Quality control was completed on 867 TES surveys. In addition, data quality checks were checked/amended/corrected for approximately 350 records that were extracted from the MBS-OLY Area Ecology Program's data, a great addition to our knowledge of rare plants on the Mt. Baker-Snoqualmie National Forest.

**Monitoring and Rare Plant Conservation.** MBS continued our partnership with Univ. of Washington's RareCare program. Last fall RareCare made a successful seed collection of few-flowered sedge (*Carex pauciflora*) from Mt. Pilchuck, on the Darrington District. This is an R6 Sensitive species on the southern edge of its range. Because of a warming climate, it is especially important to monitor edge species for changes in health, abundance and distribution. RareCare will preserve the seeds in a temperature and humidity controlled seed vault for possible re-introduction in the future. In 2012 RareCare also monitored 2 sites on the Mt. Baker District – glaucous gentian (*Gentiana glauca*) along Skyline Divide, and pygmy saxifrage (*Saxifraga hypoborea*) near Mt. Herman.

**Conservation Biology Partnerships.** The Forest Botanist participated in an effort spearheaded by DNR's Washington Natural Heritage Program to populate the new Floristic Quality Assessment (FQA) database. Professional botanists from all over Washington gathered to rank 4,292 vascular plants by their association and/or likelihood to occur within an intact ecosystem. Species most likely to occur in a pristine habitat got a high score, while introduced, invasive plants received a low score. The FQA database will be used to evaluate habitats for a variety of purposes.

**Project Support.** In 2012 the MBS Botany Program supported large vegetation management projects, ERFO flood repair projects, geothermal consent to lease projects, hydroelectric relicensing projects, ski area management projects, riparian restoration projects, recreation and trails projects, and lands & minerals projects



Figure 1. Boreal jewelweed (*Impatiens noli-tangere*)

**New Finds.** The new North Zone Botanist found a population of round-leaved orchid (*Platanthera orbiculata*, a Survey & Manage species) in the Suiattle River drainage, a population of goblin's gold moss (*Schistostega pennata*, a Survey & Manage species) in the East Fork Sauk River drainage, and 3 new sites of boreal jewel weed (*Impatiens noli-tangere*, a WA Strategic Species) in the Nooksack River drainage. This plant had not been previously documented on the Forest and only one site was previously known to exist in Washington State.

### 2012 Accomplishments

**TES Plant Inventory:** approximately 2,417 acres for a variety of projects funded variously by NFTM, CMRD, CMTL, NFWW, NFWF, NFLM, RAC job codes, and Special Use Permit Agreements.

**Check out the MBS Botany Program on our website!**  
[www.fs.fed.us/r6/mbs/about/botany-program.shtml](http://www.fs.fed.us/r6/mbs/about/botany-program.shtml)

**Contacts:**

Laura Potash (Botany Prg Manager & S Zone Botanist)  
Shauna Hee (North Zone Botanist)  
Sarah Callaghan (Invasive Plant Specialist)



**Mt. Baker-Snoqualmie National Forest**  
2930 Wetmore Ave, Suite 3a  
Everett, WA 98201

# Mt. Hood National Forest

## 2012 Botany Program Accomplishments

The botany program supported numerous projects in 2012 with special-status species surveys, botanical biological evaluations, EAs, CEs, and invasive plant management/coordination. Botanical support spanned all FS programs: ISSSSP, native plant materials, timber, recreation, wildlife, aquatics, lands, and roads (including Title II and legacy road projects).

- Visited 30 validation plots on the Mt. Hood and Willamette National Forests identified by a USFS-developed species habitat model for pale blue-eyed grass (*Sisyrinchium sarmentosum*), a Region 6 sensitive species.
- Found 2 new populations of pale blue-eyed grass on the nearby Willamette National Forest with the aid of a species habitat model.
- Monitored 10 pale blue-eyed grass EO sites, including inventorying numbers of individuals present and assessing population threats.
- Collected native shrub and forb seed (big huckleberry, dwarf Oregon grape, mountain ash, American bird's-foot trefoil) for native plant materials program.
- Collected native forb seed (Cascade aster, pearly everlasting, Canada goldenrod) for revegetation work at Timberline Lodge and Mt. Hood Meadows Ski Area.
- Surveyed roughly 2,500 acres for rare botanical species for projects on the Zigzag, Hood River, and Barlow Ranger Districts.
- Completed spring surveys for Survey & Manage fungi for 17 miles of proposed downhill mountain bike trails near Timberline Lodge on Mt. Hood as well as fall and spring fungi surveys for 200 acres in projects on the Hood River Ranger District (Figure 1).
- Completed 10 biological evaluations for habitat-disturbing projects on the Forest.
- Entered backlog of over 275 known sites for R6 sensitive and Survey & Manage species in NRIS TESP database.
- Managed invasive plant data using FACTS, NRIS, & GIS with reporting to National Marine Fisheries Service (NMFS).
- Coordinated invasive plant treatments conducted by the Oregon Department of Agriculture, Portland Gas & Electric, Hood River County, and Wasco County.
- Planted 1 acre at Barlow Ranger District office with native trees, shrubs, and forbs (Figure 2).



Figure 1. Snowbank mycoflora (*Cortinarius* sp.) on Mt. Hood.



Figure 2. Planting of native trees, shrubs, and forbs at Barlow Ranger District office in Dufur.

### 2012 Accomplishments

Acres	Funding	Activity
5 ac	NFWF	Native plant collection
100 ac	NFWF	TES plant monitoring
2,500 ac	NFTM	TES plant inventory
<b>TOTAL</b>	<b>2,505 ac</b>	

### Partners/Cooperators

Berry Botanic Garden, Oregon Department of Agriculture, The Nature Conservancy, Sandy River and Clackamas River Basin Watershed Councils, Hood River and Wasco Counties, ODOT, Federal Highways, Portland Gas & Electric

**Contact:** David Lebo, Westside Zone Botanist,  
dlebo@fs.fed.us, (503) 668-1671



**Mt. Hood National Forest**  
16400 Champion Way  
Sandy, OR 97055

# Ochoco National Forest

## 2012 Botany Program Accomplishments

### Threatened, Endangered and Sensitive Plants:

- Completed 5 Biological Evaluations, provided project support, participated on Interdisciplinary Teams, conducted field surveys, completed botanical analysis, and entered data into NRIS TESP database.
- Established 6 permanent monitoring sites and collected data for selected Peck's mariposa lily populations, implementing the newly signed Conservation Strategy.
- Surveyed over 100 acres of Henderson's needlegrass habitat to select core populations to monitor. Established 10 permanent plots and recorded baseline data to monitor both populations and habitat conditions (Figure 1).
- Also surveyed 30 acres for sensitive plants for proposed projects.
- Visited several moonwort (*Botrychium* spp.) sites (~ 28 acres) to assess habitat conditions and grazing impacts on populations on Paulina District.
- Collaborated with WWETAC (Western Wildland Environmental Threat Assessment Center) by presenting data on the decline of rare needlegrass species at an Intermountain West Invasive Plant Meeting.



Figure 1. The Interagency Sensitive Species Special Status Program provided funding to Paulina District Botanist, Krista Lopez, to design and implement monitoring of rare Henderson's needlegrass.

### Conservation Education:

- Worked with 20 high school students, providing instruction on native plant genetics, soil ecology, rare plant monitoring and invasive plants (Figure 2)
- Developed a learning session on lichens and mosses for the annual fin, fire feather event that reached 800 students from Crook County.
- Partnered with WolfTree and Crook County Middle School Stream Team to teach 7<sup>th</sup> graders about the role of riparian vegetation.
- Additional botany presentations presented in partnership with Trout Unlimited and the Natural Resources program at OSU-Cascades.
- Co-led a public hike on Round Mt. to teach the public about native plants and their habitats.
- Worked with Crook County Middle School's Outdoor School program to update Natural Resource curricula and provide training to teachers.



Figure 2. Redmond Proficiency Academy students learn how to monitor rare needlegrass populations.

### Unique Plants and Habitats:

- Provided botanical expertise for monitoring of Groundwater Dependent Ecosystems as part of an integrated resource team.
- Monitored Haystack Butte Research Natural Area and completed a suitability assessment for expansion of the RNA (Figure 3).

### Habitat Restoration:

- Terrestrial & riparian habitats restored by planting 100's of native plants.



Figure 3. Lookout Mt. Botanist, Mark Lesko, participated in habitat monitoring and assessing Haystack Butte Research Natural Area for potential expansion. The RNA is a premier example of intact bunchgrass community.

### 2012 Accomplishments

**Total NFWF Funding = \$29,127**

<u>Unit</u>	<u>Funding Activity</u>
6 sites	NFIM Monitoring
158 ac.	NFIM, NFTM TES survey

**Partners:** WolfTree, Crooked River Watershed Council, Prineville Schools, Malheur NF.

**Contacts:** Mark Lesko (541-416-6416) Krista Lopez (541-416-6635); Katie Grenier (541-383-5564)



**Ochoco National Forest**  
3160 NE 3<sup>rd</sup> Street  
Prineville, Oregon 97754

# Okanogan-Wenatchee National Forest

## 2012 Botany Program Accomplishments

The Botany Program manages our native plant heritage including federally listed and sensitive plant species, unique plant habitats identified as special interest areas, invasive plant species, and native plant propagation and restoration. Botanists support recreation, range, engineering, wildlife, aquatics, minerals, invasives, vegetation, and fuels management projects with a wide range of activities. These include rare plant species surveys, biological assessments (BA), biological evaluations (BE), environmental impact statements, categorical exclusions (CEs), Interdisciplinary Team participation, invasive plant risk assessment and integrated pest management, revegetation plans and materials, NRIS TESP database management, and environmental education.

### TES Projects

- Completed 17,091 acres of TES and Survey and Manage plant inventory.
- Documented 26 new sensitive plant sites representing 8 taxa.
- Completed 28 BEs supporting 2 EAs and 26 CEs.
- Completed 5 Fungi Conservation Strategies.
- Restored 453 acres of TES plant habitat and protected 3 sites.

### Site and Species Monitoring

- 2 Endangered plant species monitored: *Hackelia venusta* and *Sidalcea oregana* var. *calva*.
- Monitored 39 sensitive plant populations including: *Iliamna longisepala*, *Trifolium thompsonii*, *Carex dioica* var. *gynocrates*, *Pellaea brachyptera*, *Delphinium viridescens*, *Spiranthes porrifolia*, *Silene seelyi*, *Platanthera obtusata*, and *Penstemon eriantherus* var. *whitedii*.

### Highlights in Environmental Education

- Cle Elum RD Environmental Ed (including Leavenworth Bird Festival, Celebrating Wildflowers, Washington Mycological Society, Cle Elum 4<sup>th</sup> Grade (Figure 1) - 26 presentations).
- Chelan RD Environmental Ed (150 children and adults).
- Kids in the Creek, riparian ecology (100 high school students).
- Methow Valley RD Environmental Ed (120 children).
- Tonasket RD Environmental Ed (16 presentations and 224 children).
- Partnered with Washington state schools in Chelan, Manson, Cle Elum, Wenatchee, Leavenworth, Brewster, Okanogan, Oroville, Omak, Tonasket, and Winthrop as well as Holden Village.
- Developed 1 Celebrating Wildflowers site description for National Celebrating Wildflower website as public outreach.

### NRIS TESP Data Management

- Data management of legacy and current sensitive plant data with data entry of 643 sites.



Figure 1. Environmental education activities on the Cle Elum Ranger District, OKW NF.

### 2012 Accomplishments

**Expenditures:** \$19K NFIM; \$26K NFTM; \$32K NFWW; \$23K WFHF; \$87K NFWF; \$5K CWFS; \$9K ERFO; \$3K NFRG; \$3K S2SR; \$6K NFXN, \$2K NFRW, \$1K NFMG, \$2K CMLG

<u>Units</u>	<u>Funding</u>	<u>Activity</u>
17,091 ac	NFTM, WFHF, NFWW, NFWF, NFXN, NFRW, NFMG, ERFO, CWFS, NFTL	TES plant inventory
39 sites	NFWF, NFWW, NFIM	TES plant monitoring with partners
643 sites	NFIM	NRIS TESP data entry and mgmt

Partners: Rare Care, Wash. Natural Heritage Program, Wash. Native Plant Society, WCC, Federal Highways, Mid-Columbia Fisheries, Fungi Work Group, Eco-Trust Grant, TetraTech, Gear Up Program

**Contact:** Rod Clausnitzer, 509-826-3278



**Okanogan-Wenatchee National Forest**  
215 Melody Lane  
Wenatchee, WA, 98801

# Olympic National Forest

## 2012 Botany Program Accomplishments

In FY 2012, the Botany program supported a total of 30 projects with a wide-range of activities including sensitive species surveys, botanical assessments, and NEPA projects. Support spanned many programs including developed recreation, trails, roads, silviculture, aquatics, wildlife, lands and special uses.

### Other accomplishment highlights include:

- In partnership with the ecology and wildlife programs, the botany staff completed a second year of wetland inventories across the Forest. Components of the surveys include assessing hydrological characteristics, botanical resources, and wildlife use. The goal of this work was to obtain basic information and recommend management strategies (conservation, restoration or enhancement) for each wetland.
- Continued with the restoration of Cranberry Bog Botanical Area that included native plantings and invasive weed treatment. This project also includes habitat restoration for *Carex pauciflora*, a rare sedge.
- Documented 19 new occurrences of the sensitive moss, *Iwatsukiella leucotricha* in the Matheny timber sale planning area, and a single new population of *Carex anthoxantha* during wetland surveys conducted in the Three Peaks Botanical Area.
- Hired a graduate student, Stephanie Hart, to enter sensitive species information into NRIS for the Botany program. So far, she's entered 65 new botanical EOs, 15 revisits by Rare Care, and 10 surveys. We're hoping to continue working with her to get our invasives information entered into NRIS in FY13.



Figure 1. A total of 19 new occurrences of *Iwatsukiella leucotricha*, a sensitive moss, were documented in 12 different Matheny timber sale units.



Figure 2. Cranberry Bog Restoration project. Approximately 12,000 *Carex obnupta* plugs and 1000 live willow stakes were planted this year. Cranberry Bog is a Botanical Area that supports the sensitive sedge, *Carex pauciflora*.

### 2012 Accomplishments

<u>Fund Code</u>	<u>Acres</u>	<u>Activity</u>
NFWF NFTM NFWW	1100	TES plant monitoring, inventory, and surveys
NFWF SRS2	10	TES habitat restoration
NFWF NFIM	50	TES wetland inventory
<b>Total</b>	<b>1160 acres</b>	

### Partners/Cooperators

Washington Conservation Corps; Clallam County Noxious Weed Control Board, Rare Care

### Contacts:

Susan Piper – Wildlife, Botany, and Invasive Plants Program Manager, 360.956.2435  
Cheryl Bartlett – Botanist and Invasive Plant Program Coordinator, 360-956-2283



**Olympic National Forest**  
1835 Black Lake Blvd. SW Suite A  
Olympia, WA 98512-5623



# Rogue River-Siskiyou National Forest

## 2012 Botany Program Accomplishments

### Botany program FY 2012 activities and highlights:

- FY12 ISSSSP project work: Completed field investigation of *Silene hookeri* ssp. *serpentinicola* in Oregon, Redwood Forest Fungal Inventory, and Sensitive Bryophytes in Wetlands on the Gold Beach and Powers Ranger Districts.
- Compliance monitoring of the annual McGrew Trail 4-wheel drive events in *Arabis macdonaldiana* occupied habitat.
- Rare plant population monitoring; *Illiamna latibracteata*, *Horkelia tridentata*, *Sidalcea malachroides*, *Ericameria arborescens*.
- Aspen Restoration contract (cutting encroaching conifers and slash treatments) completed at 11 locations on High Cascades RD. Tall enclosure fencing contract (around newly-created openings) completed at 5 of these locations (Figure 1).
- Blue Rock Meadow Restoration contract (cutting encroaching conifers and slash treatments) completed, 80 acres.
- Whitebark Pine restoration activities in the eastern Siskiyou
- Walch Meadow (wetland) Fall and Spring fence maintenance.
- Botanical presentations, field trips, summer camps, and participation at County Fairs, local schools, Shady Cove Wildflower Show, Ashland July 4<sup>th</sup> wildflower show, and other public events; over 1000 people reached.
- Final T.J. Howell Botanical Drive Interpretive sign installed.
- NRIS TESP data entry and data cleanup.
- Ongoing Wagner Gap meadow enhancement and OHV barriers.
- Completed contract work for 18 acres of early seral dependent Sensitive plant (*Arctostaphylos hispidula*) habitat restoration on the Gold Beach Ranger District. Cutting competing vegetation and piling and burning to stimulate seed bank germination.
- Reintroduced 4 new populations of *Sidalcea malachroides* and augmented 2 populations of *Ericameria arborescens* on Gold Beach Ranger District.
- Fence construction around Star Flat meadow to curtail OHV impacts to four sensitive wetland plants (6 acres).
- Rare plant (*Illiamna lactibracteata* and *Sophora leachiana*) habitat enhancement at Horse Creek Meadow, 16 acres.

### Significant botanical discoveries in FY 2012:

- *Erigeron stanselliae* (sp. nov.) described by Kenton Chambers from maritime montane Jeffrey pine savannah habitat. Gold Beach RD botany personnel documented the local abundance and delineated the extent of the known locations in 2012.
- First documented Oregon occurrence of *Silene serpentinicola*.
- 1 new Oregon occurrence of *Arabis macdonaldiana* discovered.
- 2 new occurrences of *Fritillaria gentneri* discovered.



Figure 1. New tall fence and not-yet-burned slash piles. Fence will exclude grazing/browsing animals after an opening was created around a declining aspen patch at Daniel Flats

### 2012 Accomplishments (from WFRP database)

<u>Units</u>	<u>Activity</u>
314 acres	Rare plant habitat enhancements
38 presentations, 2 products	Botanical presentations, field trips, and interpretive products
2940 acres	Rare plant habitat inventoried

**Expenditures (FY12 Allocations):** NFWF \$92,000, NFVW \$20,000, NFIM \$25,000, SRS2 (RAC) funds \$15,000.

### Partners/Cooperators

Native Plant Society of Oregon, Pacifica, Southern Oregon University, Oregon Department of Agriculture, Medford District BLM, Ski Ashland, Portland State University.

**Contact: Forest Botanist , 541-618-2056**



**Rogue River-Siskiyou National Forest**  
Medford Interagency Office  
3040 Biddle Rd.  
Medford OR 97504

# Siuslaw National Forest

## 2012 Botany Program Accomplishments

In 2012, the Botany Program provided support to landscape vegetation management, road reconstruction and decommissioning, recreation, fish and wildlife habitat improvement, special forest products, invasive species control, and special use permit projects on the Forest. Services include surveys for threatened, endangered, sensitive, survey and manage species, and invasive species, botanical evaluations, invasive species risk assessments, sensitive species monitoring, and assistance in developing native plant material sources.

- Completed 18 biological evaluations
- 2,235 acres surveyed for sensitive plant species.
- Documented 14 new sensitive or survey and manage sites representing 6 lichens species.
- Monitored and re-inventoried the Forest's known sites of bristly-stem checker-mallow (*Sidalcea hirtipes*; Figure 1).
- Continued sensitive pink sand verbena (*Abronia umbellata* ssp. *brevifolia*) re-establishment work at four sites totaling 80 acres (Figure 2).
- Administered 3 agreements and 7 contracts for sensitive species re-introduction and monitoring, invasive species treatment, and native seed grow-out.



Figure 2. Native Plant Society of Oregon field trip to a pink sand verbena re-introduction site in September, 2012.



Figure 1. All bristly-stem checker-mallow habitat on the Forest (approx. 70 ac.) was re-inventoried and mapped in 2012.

### 2012 Acre Accomplishments

Acres	Funding	Activity
1,200	NFTM	TES plant inventory
1,025	NFRW	TES plant inventory
7	URMN	TES plant inventory
3	URMJ	TES plant inventory
120	NFWF	TES plant monitoring
10	NFIM	TES plant monitoring
70	NFVW	TES plant monitoring
80	NFWF	TES habitat improvement
2	NFVW	TES habitat improvement

### Partners/Cooperators

Institute for Applied Ecology, Bureau of Land Management, TEAMS.

Contact: Marty Stein, 541-563-8417



**Siuslaw National Forest**  
3200 SW Jefferson Way  
Corvallis, OR 97339

# Umatilla National Forest

## 2012 Botany Program Accomplishments

The Botany program supported a total of 28 projects in 2012 including sensitive species surveys in support of CE's, BE's, and EA's. Support spanned many programs including recreation, roads, timber sales, aquatics, wildlife, lands, invasive plant management, two grants awarded under the regional ISSSSP program, and two challenge-cost-share funded projects.

- Completed 56,350 acres of inventory for various projects.
- Continued monitoring of federal species of concern *Trifolium douglasii* on North Fork John Day Ranger District.
- Continued monitoring of federally threatened species *Silene spaldingii* for an ongoing study investigating response of the species to controlled fire.
- Completed 20 BE's and signed-off on 4 CE's for various projects
- Published "A Pocket Checklist to Vascular Plants of the Umatilla National Forest" through Service First listing all known vascular plant species documented on the Umatilla National Forest since plant surveys were initiated in mid- 1980's.
- Discovered 4 sensitive vascular & non-vascular plant taxa new to the Umatilla N.F. during the 2012 field season (Figure 1).
- Discovered 2 vascular plant species new-to-science; an *Erigeron* (Figure 2) and a *Packera*, a third species, a *Cryptantha*, may also be undescribed – taxonomic evaluation is pending.
- Discovered approximately 20 new populations or subpopulations of rare vascular & non-vascular plants on the Umatilla N.F through project work and ISSSSP activities.
- Continued collecting site data for habitat modeling for First Foods plant species in partnership with CTUIR.
- Conducted surveys for federally threatened species *Silene spaldingii* in conjunction with a challenge-cost-share award.



Figure 1. Rare species *Listera borealis* – recognized on the Umatilla N.F. for the first time in 2012. Photo by Mark Darrach.



Figure 2. *Erigeron* sp. nov. – an undescribed species discovered in July of 2012 on the Umatilla National Forest. Photo by Mark Darrach.

### 2012 Accomplishment Highlights

Units	Funding	Activity
1200 acres	NFIM	ISSSSP rare plants
2100 acres	NFWF	<i>Silene spaldingii</i> population mapping / inventory / monitoring
50,000 acres	NFWF	First Foods project inventory

#### Partners/Cooperators:

Deschutes-Ochoco N.F. / University of California Berkeley / College of Idaho / University of Montana / University of Washington & Burke Museum / Confederated Tribes of the Umatilla Indian Reservation

#### Contacts:

Joan Frazee 541-278-3931 / Mark Darrach 541-278-3706



**Umatilla National Forest**  
72510 Coyote Road  
Pendleton, OR 97801

# Umpqua National Forest

## 2012 Botany Program Accomplishments

- Documented numerous new locations of rare plants including new sites of vascular plants, lichens, mosses and fungi.

- Collected pre-burn data for Umpqua kalmiopsis (*Kalmiopsis fragrans*) in the Limpy Rock Research Natural Area (RNA) through a partnership with the Oregon Dept. of Agriculture's Plant Conservation Program. This azalea-like shrub occurs only on the Umpqua NF. Its habitat is thought to be at risk to unnaturally hot fires due to fire exclusion (Figures 1 and 2).

- Through a partnership with Oregon State University, reestablished vegetation monitoring plots in Limpy Rock RNA that had been initially established in the early 1980s. Evaluation of these data will document changes in the plant community after decades of fire exclusion and then after prescribed burning. Burning is scheduled to begin in the fall of 2013.

- Attempted the first experimental planting of Kincaid's lupine (*Lupinus oregonus*) that had been grown at the R.S. Berry Seed Bank and Plant Conservation Program located at Portland State University under a Challenge Cost Share Agreement. This species is listed as threatened under the US Endangered Species Act and was planted in oak habitat that had been cleared of encroaching Douglas-fir.



**Figure 1.** Oregon Dept. of Agriculture botanists collecting Umpqua kalmiopsis pre-burn data in the Limpy Rock RNA.



**Figure 2.** Umpqua kalmiopsis

- Completed inventory in the second of three areas to determine the population size and extent at the only known population in the world of Acker Rock buckwheat (*Eriogonum villosissimum*) using volunteer rock climbers. This species is confined to crevices and shelves of the vertical cliff faces at this monolith.

- Inventoried parts of the Mount Thielsen Wilderness Area and the adjacent Oregon Cascade Recreation Area for high elevation rare plants. This resulted in finding the first location on the Umpqua of the rare liverwort, *Lophozia laxa*.

- Monitored population trends of Umpqua Mariposa lily (*Calochortus umpquaensis*) and Kincaid's lupine.

- Modeled potential habitat for pale blue-eyed grass (*Sisyrinchium sarmentosum*) using Maxent, a machine-learning model that estimates species distributions by evaluating environmental variables where known sites occur against the rest of the study area. The model was validated in the field resulting in several new locations on the Mt. Hood and Gifford Pinchot NFs.

**Contact:** Richard Helliwell, 541-957-3337



**Umpqua National Forest**  
2900 NW Stewart Parkway  
Roseburg, Oregon 97471

# Wallowa Whitman National Forest

## 2012 Botany Program Accomplishments

In 2012, the Botany Program accomplished several projects:

- Inventoried 800 acres for the threatened *Mirabilis macfarlanei*. Established new monitoring plots at 2 EOs. Read existing monitoring plots in the Imnaha and Snake River Canyons.
- Monitored the threatened *Silene spaldingii* in cooperation with the Nature Conservancy. Discovered new populations in the Imnaha River canyon.
- Established pilot study to monitor *Lomatium erythrocarpum* in the Elkhorn Mountains. Revisited half the known range for *L. erythrocarpum*. Expanded one EO, discovered one new EO.
- Revisited most of the known range for *Boechera hastatula* (*Arabis hastatula*). Expanded one site. Detected no plants at 2 sites.
- Monitored *Lomatium greenmanii* on Ruby Peak.
- Relocated historical site of *Pentagramma triangularis*; expanded known population.



Figure 2. *Lomatium erythrocarpum*



Figure 1. Monitoring *Mirabilis macfarlanei*

### 2012 Accomplishments

#### Acres Funding Activity

1500	NFWF	TES plant inventory
200	NFWF	TES plant monitoring
1000	NFIM	TES plant Inventory
200	NFIM	TES plant monitoring

#### 2900 Total

#### Partners/Cooperators

U.S. Fish and Wildlife Service  
The Nature Conservancy  
Oregon Department of Agriculture

**Contact:** Gene Yates, 541-523-1390



**Wallowa-Whitman  
National Forest**  
P.O. Box 907  
Baker City, OR, 97814

# Willamette National Forest

## 2012 Botany Program Accomplishments

### Surveys

- Documented 16 new sensitive species locations (Figure 1)
- Completed 6567 acres of inventory
- Regional ISSSP project: high elevation bryophyte surveys
- New species: *Sisyrinchium sarmentosum*, *Bartmaria stricta* (1<sup>st</sup> documented site in Oregon), *Ptychostomum pacificum* (newly described species)

### Monitoring

- Monitored 14 sensitive plant populations
- 2<sup>nd</sup> year of monitoring the effectiveness of release on legacy trees and response of understory to release and seeding at Jim's Creek with UO Dept. Landscape Architecture
- Monitored the effect of prescribed fire on recovery of former tree island habitat at Grasshopper Mt.
- Monitored forage enhancement methods at Brock Meadow

### Habitat Enhancement

- CCS TRACS projects: pulled weeds from three meadows and pruned trees for huckleberry enhancement with North Santiam High crew and contractors near Outerson Mt., Detroit RD; pulled St. Johnswort from *Romanzoffia thompsonii* meadows and grew out seedlings for restoration of *Arabis hastatula* around Iron Mt., Sweet Home RD
- Whipfelled and piled 20 acres at Gertrude Lake in Calapooya 1 meadow enhancement project (Figure 2); completed NEPA for Calapooya II and funded 200 ac survey for arch and fuels; Mule Meadow restoration weed removal, Middle Fork RD

### Environmental Education

Conducted 23 environmental education activities such as hikes , camps and Outdoor schools, reaching 1755 people.

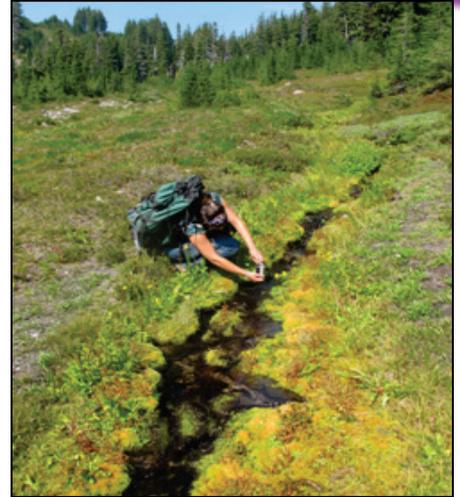


Figure 1. Botanist collecting bryophytes from small mossy glacial streams on Park Butte, above Jefferson Park.

### 2012 Accomplishments

Acres	Funding	Activity
10	NFWF	Terrestrial habitat enhance.
5067	NFTM	TES plant inventory
250	NFXN	TES plant inventory
270	NFWF	TES plant monitoring
30	SRS2	Terrestrial habitat enhance.
330	WFHF	Terrestrial Habitat enhance.
<b>5957</b>		<b>Total Acres</b>

**Partners/Cooperators:** Portland General Electric, EWEB, Cascade Mycological Society, North American Truffle Association, UO Dept. Landscape Architecture, North Santiam High School, Walama Restoration Project, Berry Botanical Garden, Lane ESD, REI, Walmart, TNC, McKenzie River and Oakridge School Districts, McKenzie Garden Club, Girl Scouts, Native Plant Society, Lane County Garden Assoc.

**Contact:** Jennifer Lippert , 541 225-6440

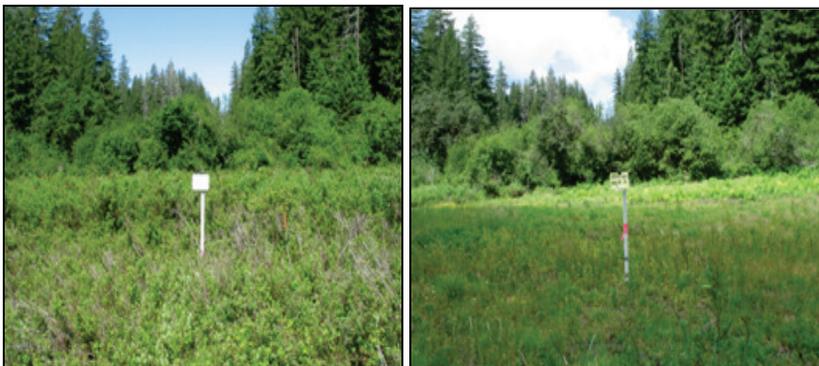


Figure 2. Pre and post forage habitat enhancement at Brock Meadow, Middle Fork District. Meadow was masticated and burned.



**Willamette National Forest**  
3106 Pierce Parkway, Suite D  
Springfield, Oregon 97477

# US Forest Service Pacific Northwest Region

## 2012 Botany Program Accomplishments: Acronyms

### Acronyms used in the Botany Accomplishment Reports

ARRA	American Recovery and Reinvestment Act
BA	Biological Assessment
BE	Biological Evaluation
BLI	Budget Line Item
BPA	Bonneville Power Authority
CE	Categorical Exclusion
CERCLA	Comprehensive Environmental Response and Compensation and Liability Act (SuperFund)
CGEI	Columbia Gorge Ecology Institute
CMLG	Legacy Capital Improvement and Maintenance (BLI)
CMRD	Roads Capital Improvement and Maintenance (BLI)
CMTL	Trails Capital Improvement and Maintenance (BLI)
COE	Corps of Engineers
CRWE	Watershed Restoration and Ecosystem Enhancement (BLI)
CTUIR	Confederated Tribes of the Umatilla Indian Reservation
DU	Ducks Unlimited
EIS	Environmental Impact Statement
EO	Element Occurrence
ERFO	Emergency Relief for Federally Owned Roads
EWEB	Eugene Water & Electric Board
FACTS	Forest Activity System
IDT	Inter-Disciplinary Team
ISSSSP	Interagency Special Status/Sensitive Species Program
ESD	Education Service District
NFIM	National Forest Inventory and Monitoring (BLI)
NFLM	National Forest Land Ownership Management (BLI)
NFMG	National Forest Minerals and Geology Management (BLI)
NFRW	National Forest Recreation/Heritage/Wilderness (BLI)
NFTM	National Forest Timber Management (BLI)
NFVV	National Forest Vegetation and Watershed Management (BLI)
NFWF	National Forest Wildlife and Fisheries Habitat Management (BLI)
NFXF	NFS Federal External Reimbursement Program
NFXN	NFS Non-Federal External Reimbursement Program
NMFS	National Marine Fisheries Service
NRIS TESP	Natural Resources Information System Threatened and Endangered Species Plants
NZ	North Zone
ODA	Oregon Department of Agriculture
ODOT	Oregon Department of Transportation
OHV	Off Highway Vehicle
ORBIC	Oregon Biodiversity Information Center
RAC	Resource Advisory Committee
RAP	Resources and People
RNA	Research Natural Area
RTRT	Reforestation Trust Fund (BLI)
SPFH	State and Private Federal lands Forest Health
SZ	South Zone
TES	Threatened and Endangered Species
TPBP	Botanical Products (BLI)
WADNR	WA Department of Natural Resources
WCC	Washington Conservation Corps
WFHF	Hazardous Fuels Program
WFRP	Wildlife Fisheries and Rare Plants Database
WNHP	Washington Natural Heritage Program
WRFH	Forest Health Protection Federal Lands (BLI)
YCC	Youth Conservation Corps

**Regional Contact:** Mark Skinner, 503-808-2150



**USDA Forest Service**  
**Pacific Northwest Region**  
P.O. Box 3623  
Portland, Oregon 97208-3623





# Invasive Plants

## Program Accomplishments



Eradicating the Aquatic "Class A" Noxious Weed *Yellow Floating Heart* with bottom barrier installation

**Fiscal Year  
2012**

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# Pacific Northwest Region

## 2012 NFS Invasive Plant Accomplishments

The Pacific Northwest Region experienced substantial challenges managing invasive plants in FY 2012. Despite these challenges, we were able to treat 52,968 acres using 20 different funding codes.

Other Regional highlights include:

- Completing another invasive plant EIS and Record of Decision covering two forests (Deschutes and Ochoco).
- Invasive European beachgrass (*Ammophila arenaria*) was chemically treated to improve nesting habitat for threatened western snowy plover. Anticipated results are reduced cost and increased effectiveness compared to past mechanical treatments.
- Treated invasive plants in meadows to benefit Mardon Skipper butterfly, a candidate for listing under the Endangered Species Act, with the US Fish and Wildlife Service and other partners.
- Surveyed more than 20 waterbodies for aquatic invasive species. One site of Eurasian watermilfoil was confirmed through DNA analysis.
- Cooperated with over 130 different partners.
- Worked with the High Desert Museum on the display *Invasive Pervasives*, which reached 155,000 visitors.
- Cooperated with the Pacific Northwest Invasive Plant Council EDRR program to have high priority trails surveyed by trained volunteers.



Figure 1. Learning about reed canarygrass (*Phalaris arundinaceae*).



Figure 2. Dalmatian toadflax (*Linaria dalmatica*) and bio-control, toadflax stem weevil (*Mecinus janthinus*, inset)

- Observed significant eradications and reductions of Dalmatian toadflax infestations (> 98% reduction) in several Oregon forests due to the release and spread of the bio-control, *Mecinus janthinus*.
- Surveyed 2,755 acres and treated 91 infestations of yellowtuft alyssum, a new invasive in North America, totaling 140 acres.
- Presented our Regional Invasive Plant Manager of the Year award to Barbara Mumblo on the Rogue River-Siskiyou NF.

### Challenges

- Budget reductions
- 2012 had a late, wet spring and cool temperatures, shortening the treatment season, and road washouts prevented access to sites.
- Plans continue for extensive planting of *Arundo donax* for biofuel in Oregon.
- The court found that the Wallow-Whitman had done an inadequate analysis of cumulative effects and we will have to issue a Supplemental EIS.

Contact: Shawna L. Bautista, 503-808-2697



**Pacific Northwest Region**  
Natural Resources  
PO Box 3623  
Portland, OR 97208

# Pacific Northwest Region

## 2012 State & Private Invasive Plant Accomplishments

Region 6 has excellent relationships with our State and private partners when it comes to invasive plant work and 2012 was another very successful year.

Our primary partners for Forest Health Protection invasive plant funding are the Oregon and Washington Departments of Agriculture, and the Oregon Department of Forestry. In addition, we partner with Deschutes County in Oregon. Our cooperative work allows efficient treatment, survey, inventory, education and outreach activities to benefit the lands and citizens of both states as well as nearby National Forest System lands. Treatments of existing infestations are conducted across ownership boundaries, resulting in effective management of the weed populations.

### Accomplishments highlights for FY2012 include:

#### Deschutes County

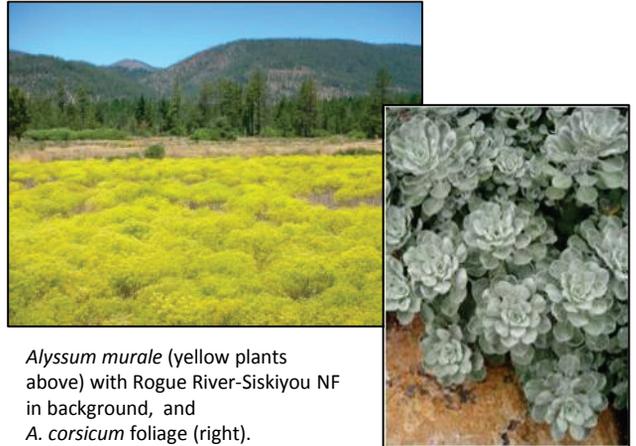
- Conducted 29 inspections totaling 2,454 acres of hay and straw fields, allowing growers to obtain “weed free” certification.

#### Washington Department of Agriculture

- Supported Noxious Weed Control Boards in 8 counties.
- Treated all knotweed sites in Franklin County and all known yellow starthistle sites in Chelan County.
- Supported the Washington Invasive Species Council.
- Supported statewide biocontrol program including release and monitoring of biocontrol agents.
- Supported early detection / rapid response efforts in four counties.
- Developed and printed 5 new EDRR postcards.



Jennifer Andreas, WSU Extension, inspecting biocontrols on Dalmatian toadflax.



*Alyssum murale* (yellow plants above) with Rogue River-Siskiyou NF in background, and *A. corsicum* foliage (right).

#### Oregon Department of Agriculture

- Updated the “WeedMapper” online database.
- Supported statewide biocontrol program, including release and monitoring of biocontrol agents and studies on new agents.
- Supported the statewide weed free forage program which certified 3,191 acres of hay and straw.
- Conducted 97 monitoring activities and 58 treatment projects.
- Conducted 57 education and outreach activities.
- Supported the Oregon Invasive Species Council.
- Continued support for eradication efforts on a new invader to North America, *Alyssum corsicum*, and its close ally, *A. murale* in southern Oregon.

#### Oregon Department of Forestry

- Treated approximately 342 acres of noxious weeds on forest lands in western Oregon.

**Contact:** Shawna L. Bautista, 503-808-2697



**Pacific Northwest Region**  
Natural Resources  
PO Box 3623  
Portland, OR 97208

# Columbia River Gorge National Scenic Area

## 2012 Invasive Plant Accomplishments

### Highlights for invasive plants work include:

Balfour/Klickitat, Collins Slide and other restoration efforts continue to have weed control work completed to ensure native planting success and to control knotweed and other key weeds. Some of this work is in critical western pond turtle habitat. These efforts include over 80 acres.

Six counties within the CRGNSA continue to work collaboratively with us to control weed infestations at various locations throughout the Gorge. Funding for this work comes through RAC, from state grants and from NFVW and WF. Several partnerships are critical, such as with WIPA and EMSWCD. These efforts are addressing infestations of Garlic Mustard, Ivy, and False brome to name a few.

The Columbia Gorge Cooperative Weed Management Area implemented a very successful Early Detection / Rapid Response project. The result was the protection of sensitive habitats on state, local and federal land by reporting existing weed data to a single database, inventorying 40 priority sites, holding four "Weed Watcher" trainings and installing boot brushes and signs at 25 key trailheads. This project was even featured on Oregon Field Guide:

[www.opb.org/programs/ofg/segments/view/1836](http://www.opb.org/programs/ofg/segments/view/1836)

### Contact:

Robin Dobson: 541-308-1717  
Mark Kreiter: 541-308-1744 and/or  
Brett Carre: 541-308-1718

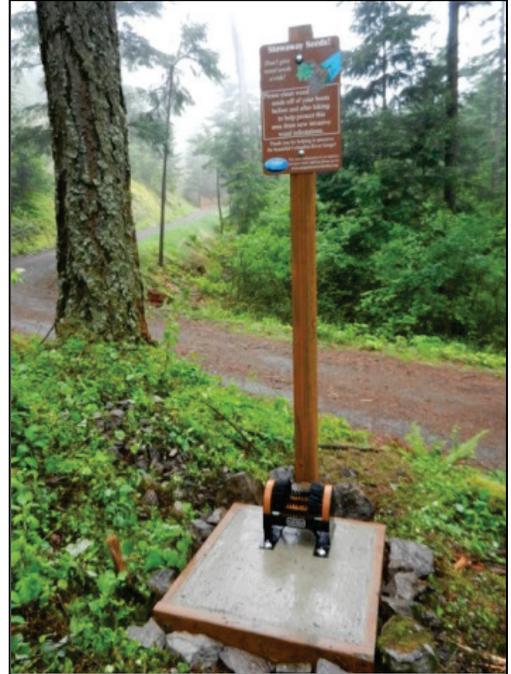


Figure 1. Example of a boot brush station and sign along a trailhead to reduce transport of weed seeds to uninfested areas.

### 2012 Accomplishments

Acres	Fund Code	Activity
500+	NFXF	Restoration
45	NFWF	Restoration
65	NFVW	Weed Control
110	NFVW HF SPS4	Restoration

### Partners/Cooperators

COE, BPA, WDFW, FOG, Ashcreek Forest Mgt, LCEP, OR State, CGEI, WIPA, EMSWCD, and 5 (Skamania, Klickitat, Wasco, Multnomah, Hood River) counties.



### Columbia River Gorge NSA

902 Wasco Ave., Suite 200  
Hood River, OR 97031

# Deschutes National Forest

## 2012 Invasive Plant Accomplishments

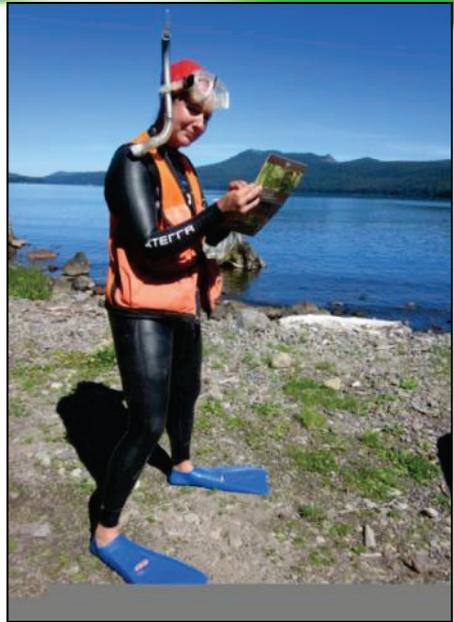
The Deschutes NF Invasive Plant Program had a very successful year. Control, surveying, and working with partners remain the emphasis.

Highlights include:

- Signed a Record of Decision for *Invasive Plant Treatment*, an integrated treatment project which includes the use of herbicides and early detection/rapid response. Began implementation in September, completing 697 acres of invasive plant control using herbicide.
- Conducted surveys on 14 waterbodies throughout Central Oregon for aquatic invasive species. One site of Eurasian watermilfoil were confirmed through DNA analysis.
- Volunteers contributed 1,298 hours surveying and controlling noxious weed infestations, and revegetating disturbed areas to prevent noxious weeds.
- Worked with the High Desert Museum on the display *Invasive Pervasives*, which reached 155,000 visitors.
- 78 acres were seeded with native plants to prevent noxious weed establishment.
- 5,525 acres and 90 miles of weed surveys were completed on roadsides, wildfires, and project areas.
- Approximately 492 people were reached through 39 hours of public meetings, trainings, and field trips.
- Implemented an integrated strategy to control/contain 6,094 acres of invasive plants; including: 1,928 acres with herbicide; 4,166 ac manual; 0.1 ac solarization of orange hawkweed.



*Volunteers plant native species to prevent noxious weed invasion (National Public Lands Day)*



*Desiree Johnson is suited up for aquatic invasive surveys*

### 2012 Accomplishments

Acres treated = 6,094

USFS Invasives funding = 4,862 ac.

Title II = 341 ac.

Collaborative Forest Landscape Restoration = 847 ac.

Other USFS funding = 44 ac.

Total Funding = \$275,977

USFS Invasives funding = \$192,390

Title II = \$50,304

Collaborative Forest Landscape Restoration = \$28,000

Other USFS funding = \$5,800

### Partners/Cooperators

Gilchrist School, Rosland Elementary, Wolftree, LaPine Elementary School, Northwest Youth Corps, Youth Conservation Corps, Heart of Oregon Corps/Americorps, National Forest Foundation, Deschutes County Sheriff's Office, Deschutes County Weed Board, Camp Sherman Weed Warriors, Earthwood Homes, City of Sisters, High Desert Museum, Sisters High School, Youth National Guard, Friends of the Metolius, Crooked River WMA, Oregon Department of Agriculture, Jefferson County, Deschutes County, Oregon Department of Transportation.

Contacts:

**Debra Mafera**, Invasive Plant Program Manager (541.416.6588);

**Maret Pajutee**, Sisters RD (541.549.7727);

**Christina Veverka**, Crescent RD (541.433.3234);

**Marlo Fisher**, Bend/Ft. Rock RD (541.383.4743)



**Deschutes National Forest**

63095 Deschutes Market Rd

Bend, OR 97701

# Fremont-Winema National Forests

## 2012 Invasive Plant Accomplishments

### Accomplishment highlights include:

#### Cooperative Projects:

- Treatment of FS and private lands on Winter Rim, Augur Meadow, Clover Flat, and Thomas Creek vicinity with the Lake County CWMA.
- Provided employment for 1 Integral Youth Services crew while treating 545.2 acres.
- Through an agreement with Lake County CWMA:
  - Multiple medusahead sites on NFS lands within the vicinity of other cooperative projects on private lands were surveyed and prepped for treatment in 2013.
  - Aerial survey for leafy spurge, medusahead, and musk thistle around the Goodlow Mountain RNA will be completed in 2013.

#### Treatment:

- Continued use of herbicide ID/IQ contract and agreement with Klamath County for herbicide application. Treated 1,149.3 acres with herbicide.
- Treated 860.9 acres manually through the use of force account crews.
- 216 new infestations discovered.
- 1,075 previously treated sites “inactive” in 2012.

#### Prevention:

- Provided input to 9 planning projects and 1 BAER report.
- Implemented prevention measures during underburn and timber sale projects.
- Inspected 32 pits/quarries.
- Surveyed 927 acres prior to timber sale implementation and approximately 3,300 acres for new sites.



Figure 1. Force account crews performing manual control on musk thistle within the 2002 Winter Fire.

### 2012 Accomplishments

Acres	Fund Code	Activity
1,214.3	SRS2	Title II
1,028.5	NFVW	Base Program
276.2	CFLN	Collaborative Forest Landscape Restoration
36.4	NFXN	Grants (Mule Deer Foundation) Ruby Pipeline
<b>2,555.4</b>	<b>TOTAL</b>	

#### Partners/Cooperators

ODA, Klamath County, Integral Youth Services, Lake County CWMA, Mule Deer Foundation.

**Contacts:** Lucas Phillips – 541-947-6251  
Missy Anderson – 541-783-4085  
Jeannette Wilson – 541-576-7593



**Fremont-Winema National Forests**  
1301 S. G Street  
Lakeview, OR 97630

# Gifford Pinchot National Forest

## 2012 Invasive Plant Accomplishments

### Invasive Plant Target Accomplishments:

2012 was the biggest year ever in controlling invasive plants. District Weed Coordinators did an outstanding job of treating infestations and working with partners. We treated a total of 8,238 acres implementing our site specific EIS on the forest, 2,965 acres of chemical treatment and 5,273 acres of manual treatment.

**Education and Outreach:** *A variety of events, and field visits reached more than 4,500 people.*

### Events included:

- Weed rodeo at Mt St Helens National Volcanic Monument.
- Invasive information at Sturgeon Festival, Get Outdoors Day, Old Apple Festival, Earth Day, Portland Sportsman Show, Cowlitz Valley fishing Day, and Mt. Adams Fishing Day – 2000 people.
- Created Invasive Information Boards at forest and district offices, recreation sites and trailheads - 2500 people.

### Invasive Plant Surveys:

- 6,000 acres were monitored within treatment areas.

### Additional forest projects:

- **Integrated project on the Muddy River** utilized partner support from Mt St Helens Institute and Skamania County to control Scotch broom in the Muddy River watershed.
- **Invasive treatment at Wind River Nursery Fields** with Rocky Mountain Elk Foundation funding improved elk forage.
- **Invasive treatments in meadows to benefit Mardon Skipper** - with US Fish and Wildlife Service, Skamania County and Klickitat County weed groups to treat invasives at Cave Creek, Lost Meadows and Lost Creek meadows.

### The invasive staff participated in the 10 year Wilderness Challenge.

The district invasive leads created and implemented teaching module for Wilderness Invasive plant survey team and completed the specialist input / report for the Wilderness Information Needs assessment. A survey crew completed a survey on the major trails and heavy dispersed use areas in 7 wildernesses.

Initiated treatment of English holly at Cowlitz Valley admin sites that was spreading into the Forest.

Cooperated with the Nisqually River CWMA, Pierce County Conservation District, and White Pass School District to send Cowlitz Valley Discovery Teams to help with **knotweed bending**, in preparation for herbicide treatment, on previously untreated infested areas of the Nisqually watershed.

Identified a **new invasive species of hawkweed**, *Hieracium murorum*, not previously found on the Forest, in the Nisqually watershed.

**Coordinated lake survey** on high use lakes by the aquatics and terrestrial groups. No aquatic invasive were found.



RMEF Mouse eared hawkweed survey, Toutle River, Mt St Helens National Monument

### 2012 Accomplishments

<b>Expenditures:</b>	<b>\$ 398,049 Total Funding</b>
\$ 157,000	Base Program (NFVW)
\$ 53,000	Timber Sale Collections (CWKV)
\$ 182,149	Title II (RAC)
\$ 4,400	US Fish & Wildlife
\$ 1,600	Rocky Mountain Elk Foundation

**Partners/Contractors/Coop:** Mt St Helens Institute, Rocky Mountain Elk Foundation, US Fish and Wildlife Service, Gifford Pinchot Task Force, Cowlitz, Pierce, Lewis, Skamania and Klickitat Counties Weed Control; Washington Department of Transportation, Cowlitz Valley Discovery Team, White Pass School District, Nisqually River CWMA.

### Contacts:

Carol Chandler, Invasive Program Manager 360-891-5106;  
Linda Swartz North Zone Invasive lead, 360-497-1164;  
Andrea Ruchty South Zone Invasive lead 509-395-3414;  
Jennifer Deshong South Zone Tech;  
Ken Meyer Data Steward 360-891-5013



**Gifford Pinchot National Forest**

10600 NE 51<sup>st</sup> Circle  
Vancouver, WA 98682

# Malheur National Forest

## 2012 Invasive Plant Accomplishments

### Accomplishment highlights include:

- Treated 39 acres from 95 infestations with mechanical treatment (mowing/ pulling/ grubbing); completed by Forest Service personnel and partners.
- Monitored 34 acres from 93 infestations to determine effectiveness of recent mechanical treatments.
- Continued to make substantial progress on the Invasive Plant EIS effort with TEAMS Enterprise.
- Updated and completely reanalyzed the Forest-wide inventory of invasive plants: over 2000 acres across 3000 sites were reanalyzed for the EIS effort.
- Observed significant eradications and reductions of Dalmatian toadflax infestations (> 98% reduction) across the Forest and adjacent areas due to the release and spread of the bio-control, *Mecinus janthinus* (Figure 1).



Figure 2. Houndstongue (*Cynoglossum officinale*), a significant invasive plant on the Malheur NF.



Figure 1. Dalmatian toadflax (*Linaria dalmatica*) and bio-control, toadflax stem weevil (*Mecinus janthinus* , inset)

### 2012 Accomplishments

<u>Acres</u>	<u>Fund Code</u>	<u>Activity</u>
39	NFWW	Mechanical treatments of invasive plants
34	NFWW	Monitoring of invasive plant treatments

**Partners/Cooperators:** Confederated Tribes of Warm Springs, Harney County, The Nature Conservancy, Oregon Department of Agriculture, Oregon Department of Transportation.

**Contact:** Joseph Rausch 541-575-3141



**Malheur National Forest**  
431 Patterson Bridge Road  
P.O. Box 909  
John Day, OR 97845

# Mt. Baker-Snoqualmie National Forest

## 2012 Invasive Plant Accomplishments

### Accomplishment highlights include:

- Mt. Baker-Snoqualmie National Forest treated and accomplished in FACTS 2,134.5 acres, primarily accomplished through the work of partners listed here and the addition of a new seasonal invasive plant biological technician.
- 55% of the treated acres were monitored in 2012 and monitored sites had an average control efficacy of 86%.
- Volunteers contributed over 2,567 hours controlling, surveying and mapping noxious weed infestations and conducting site restoration (Figure 1 and Figure 2).
- Outreach projects and presentations engaged 386 youth and adults.
- Adopted survey protocol and continued inspection of FS and commercial stockpiles/quarries, in conjunction with county weed staff, and assessed for weed-free status.
- Continued Invasive Plant Treatment NEPA EIS.
- Achieved approximately 83% control of knotweed species from FY11 within Glacier Creek and Upper Nooksack River on the Mt. Baker Ranger District. All sites re-treated in FY12, including more miles surveyed this year than any other since start of project.
- 86% of all knotweed patches within Sauk River (Skagit Wild and Scenic River system) have been eliminated, protecting 1,813 acres of floodplain in the upper basin on the Darrington Ranger District. 40% reduction of new patches detected in FY12.



Figure 1. North American Packgoat Association after a day of pulling and eating spotted knapweed at Ranger Creek Airstrip.



Figure 2. Northwest Youth Corps pulling weeds in Wild Sky Wilderness.

### 2012 Accomplishments

Acres Treated = 2,134.5  
NFVW = 657.2 acres, CMRD = 58 acres, CWKV = 41.4 acres, CONT = 620.2 acres,  
SRS2 (RAC) = 720.7 acres, and OFED = 36 acres.

### Partners and Cooperators

Whatcom, Skagit, Snohomish, King, Pierce, and Kittitas County Noxious Weed Boards, Washington State Department of Transportation, WSU integrated Weed Control Project, Skagit Fisheries Enhancement Group, Mountains to Sound Greenway Trust, Puget Sound Energy, InterIM WILD program, Middle Fork Snoqualmie and Alpine Lakes Wilderness Weed Watchers, Ryther Group, Washington Department of Natural Resources, Northwest Youth Corps, North American Packgoat Association, The Mountaineers, National Forest Foundation, Seattle Parks and Recreation Outdoor Opportunities, Skagit River System Cooperative.

### Contacts:

Sarah Callaghan, Forest Invasive Plant Specialist 425-783-6042  
Laura Potash, Botany Program Manager 425-783-6043  
Shauna Hee, North Zone Botanist 425-854-2635



**Mt. Baker-Snoqualmie National Forest**  
2930 Wetmore Ave, Suite 3a  
Everett, WA 98201

# Mt. Hood National Forest

## 2012 Invasive Plant Accomplishments

In 2012, the Mt. Hood National Forest successfully implemented its fifth year of noxious weed treatment and prevention since signing the *Site-Specific Invasive Plant Treatments* FEIS in March 2008.

### Accomplishment highlights include:

- Treatment of Japanese knotweed, orange hawkweed, spotted & diffuse knapweed by state-certified herbicide applicators under formal Agreements with three cooperators.
- Second year of multi-agency coordinated response to Garlic mustard found within one mile of the Forest Boundary.
- Noxious weed surveys and treatment conducted on roads scheduled for decommissioning.
- Invasive plant displays at county fairs and Ranger District open houses.
- Environmental education in conjunction with hand removal of noxious weeds with Youth Conservation Corps (YCC), Northwest Service Academy, Portland Urban League, Catlin Gable school, and other local school students.
- Major survey/treatment effort by ODA to control orange hawkweed (*Hieracium aurantiacum*) near Lolo Pass.



Figure 1. FS employee removes Spotted Knapweed (*Centaurea maculosa*) from a riparian restoration area. (photo by L. Cartwright)



Figure 2. Mt. Hood National Forest employee treating Orange Hawkweed (*Hieracium aurantiacum*), 2012 (photo by C. Wesseler).

### 2012 Accomplishments

Acres	Fund Code	Activity
881	NFWW	Invasive plant treatment
231	SRS2	Title II funding
20	CWKV	Invasive plant treatment
90	SSCC	Retained receipts
34	WFHF	CCS funding
<b>1,256</b>	<b>TOTAL</b>	Weed Acres treated

### Partners/Cooperators:

Oregon Department of Agriculture; Oregon Department of Transportation; Wasco, Hood River, Clackamas, and Multnomah Counties; Hood River SWCD; Sandy River Basin Watershed Council; Portland Water Bureau; Columbia Gorge Cooperative Weed Management Area.

### Contacts:

Linda Cartwright (541) 467-5113  
David Lebo (503) 622-3191



**Mt. Hood National Forest**  
16400 Champion Way  
Sandy, OR 97055

# Ochoco National Forest and Crooked River National Grassland

## 2012 Invasive Plant Accomplishments

The Ochoco National Forest and Crooked River National Grassland Invasive Plant Program had a very successful year. Highlights include:

- Signed a Record of Decision for *Invasive Plant Treatment*, an integrated treatment project which includes the use of herbicides and early detection/rapid response. Began implementation in September, completing 114 acres of invasive plant control using herbicide.
- Accomplished 97 acres of revegetation using native species for invasive plant prevention.
- Educational programs - Over 300 people were reached through 59 hours of public meetings, events, educational programs, and field trips.
- Volunteers put in 66 hours controlling noxious weed infestations, surveying, and setting up monitoring plots.
- Implemented an integrated strategy to control/contain 4,258 acres of invasive plants.

Methods included:

- 2,312 ac of herbicide control
- 30 ac with biocontrol agents
- 1,916 ac manual control
- 70 ac and 39 miles of invasive plant survey



*Medusahead removal from The Island Research Natural Area, Crooked River National Grassland*



*Learning about reed canarygrass (Phalaris arundinaceae)*

### Contacts:

Debra Mafera, Invasive Plant Program Manager, 541-416-6588  
 Krista Lopez, Paulina RD, 541-416-6635  
 Mark Lesko, Lookout Mountain RD & Crooked River NG, 541-416-6416

### 2012 Accomplishments

Fund Type	Funding	Acres Accomplished
USFS funding	\$153,856	3,173.2
Title II	\$ 50,628	864.1
Partner funding	\$ 5,000	61.6
Other USFS	\$ 20,731	65.9
Contributed	\$ 0	93
<b>Total</b>	<b>\$230,215</b>	<b>4,257.8</b>

### Partners/Cooperators

Northwest Youth Corps, Redmond Proficiency Academy, Friends and Neighbors of the Deschutes, Youth Conservation Corps, Rocky Mountain Elk Foundation, Blue Mountain Elk Initiative, Heart of Oregon Corps, Jefferson County Community Justice, Wheeler SWCD, Crook County Weed Control, Oregon Department of Agriculture, Jefferson County Weed Control, Grant SWCD, Crooked River Weed Management Area, Oregon Department of Transportation, Bureau of Reclamation, Western Federal Lands Highway Division, Western Wildland Environmental Threat Assessment Center



### Ochoco National Forest

3160 NE 3<sup>rd</sup> St.  
 Prineville, OR 97754

### Crooked River National Grassland

813 SW Highway 97  
 Madras, OR 97741

# Olympic National Forest

## 2012 Invasive Plant Accomplishments

In 2012, the Olympic National Forest successfully treated a total of 867 acres of weeds on the Forest, which is over 140% of target. Over two-thirds of these acres were accomplished with Title II funds, with almost all of the actual treatments being done by our four County Weed Boards.

Other accomplishment highlights include:

- Inventoried over 65 recreation residence lots in the Quinault area of the Forest for weeds, and contacted each cabin owner regarding weeds on their lots and what to do about them. Treated highest priority weed species on the lots. Inventory, outreach, and treatments were funded by Title II.
- Continued reed canary grass eradication efforts at the Pine Lake restoration site, including removal of almost an acres worth of landscape fabric which had been installed two years ago. Completed two separate herbicide treatments, and planted 10,500 graminoid plugs and 2000 live willow stakes. Project funded by Title II in FY12.
- Inventoried 20 rock pits, and completed 28 separate treatments at rock sources throughout the Forest. A total of 45 acres were treated in rock pits, which was funded by NFMG in FY12.
- Contractor treated 19 acres adjacent to planned pre-commercial thin projects that were heavily infested with everlasting peavine.
- Weed eradication and restoration efforts continue at Cranberry Bog Botanical Area.
- Treated a large infestation of Canada thistle in a series of meadows in the Buckhorn Wilderness. This treatment was completed by Clallam County and Olympic NF staff, and the Backcountry Horsemen.



Figure 1. WCC removing landscape fabric at Pine Lake. All bare ground shown in photo was previously occupied by reed canary grass at almost 100% cover. Live willow stakes planted last year are in foreground.

**Contacts:**

Susan Piper, Wildlife, Botany and Invasive Plant Program Manager, (360) 956-2435  
Cheryl Bartlett, Botanist and Invasive Plant Program Coordinator, (360) 956-2283



Figure 2. Knotweed at a recreation residence lot at Lake Quinault.

### 2012 Accomplishments

Acres	Fund Code	Activity
599	SRS2	Title II
166	CMLG	Road Decommissioning
45	NFMG	Rock Pits
32	CWKV	Timber Sales
19	NFVW	PCT Peavine Eradication
6	NFWF	Cranberry Bog

**867 acres TOTAL**

### Partners/Cooperators

Clallam, Jefferson, Mason and Grays Harbor Counties Noxious Weed Control Boards; Washington Conservation Corps; Quinault and Skokomish Tribes; Skokomish Watershed Action Team, Backcountry Horsemen of Washington.



**Olympic National Forest**

1835 Black Lake Blvd SW, Suite A  
Olympia, WA 98512

# Okanogan-Wenatchee National Forest

## 2012 Invasive Plant Accomplishments

This year was particularly challenging with the late, wet spring and cool temperatures, and road washouts preventing access to sites, and yet we accomplished a tremendous amount of work.

**Oka-Wen National Forest Invasives EIS:** IDT compiling the Draft EIS for completion in early 2013. ROD in late spring 2013.

### • 2012 Invasives Treatments

- 5,786 acres of herbicide treatments.
- 198 acres of manual control, principally handpulling low density invasive plant infestations.
- Biological controls placed on Dalmatian toadflax .

### • Invasives Inventories

- 9,250 acres, 61 road miles , and 9 miles of BPA powerline corridors were inventoried for the occurrence of priority invasive plants and new invaders.

### Invasive Species Monitoring

- Post-treatment effectiveness monitoring was completed on more than 50% of herbicide treated acres and manually treated areas.

### Invasive Plant Prevention and Rehabilitation

- Approximately 86 acres of seeding for ecosystem restoration purposes (mostly decommissioned roads and mine reclamation) as well as prevention of recurring invasive populations.
- 2 rock quarries, private and NFS lands, were inspected and certified as weed-free.
- District invasives coordinators worked with partners, stakeholders, and public agencies to implement Cooperative Weed Management Areas and International Cooperatives for aquatic weeds.
- Gold Creek pond rehab planting 7000 native plants with 3 work parties of 35 adults and 60 youth.

### NRIS INV Data Management & FACTS

- All data was entered into FACTS. The new NRIS/FACTS interface was taking too long.

### CWMA's

- The USFWS joined the Upper Yakima CWMA.
- The power line corridor was mapped for invasives.
- New areas and trails were mapped.

### Education

- Joint program with WSU. Biological control program for 25 high school students and 100 elementary school students.
- Invasive plant education & pulled Oxeye Daisy with 60 Ryther's students from Seattle.

### Weed Free Feed Education/Certification

- Inspected and certified 5 fields for certified Weed Free Feed for Permittee, BCH and Public use.
- Made frequent public contacts to educate on Weed Free Feed requirements

### Recommendations:

- Continue use of contracts, especially smaller local personal services contracts, RAC projects, and CWMA projects. Without these opportunities, our target would not be reached.



Figure 1. Cle Elum Ranger District new spray equipment .

**Year Awarded/Allocated:** FY2012

**Expenditures \$ 704,740 Total**

Base Program (NFVW) \$332,000

Timber Sale Collections (CWKV) \$1,500

Title II (SRS2) \$246,000

Others: Wildlife & Fish (NFWF), State & Private (SPFH)

**Partners:** Chelan County Noxious Weed Board, Washington State Noxious Weed Board, Washington State Department of Agriculture, Okanogan County Weed Board, private landowners, WSDOT, Kittitas County Noxious Weed Board, King County Weed Board, MBS NF, Mtns to Sound Greenway, Iron Horse State Park, Washington Department of Fish and Wildlife, Bonneville Power Administration, Upper Yakima Watershed CWMA, Yakima County Weed Board, WSU, Conservation Northwest, and Washington State Dept. of Wildlife.

**Contact:** Maura Laverty, Ph: 509-664-9384



**Okanogan-Wenatchee National Forest**  
215 Melody Lane  
Wenatchee, WA 98801  
509-664-9200

# Rogue River-Siskiyou National Forest

## 2012 Invasive Plant Accomplishments

Total acres treated for invasive plants on administrative sites, forest and range lands, meadows, road and river corridors, recreation sites, lakes, and rock quarries.

- 920 acres treated manually and mechanically
- 10 acres treated with biocontrols
- 1,047 acres treated with herbicides

### Treatment highlights include:

- Treated 91 infestations of yellowtuft, totaling 140 acres.
- 15 acres of Yellow Starthistle and 12 acres of Rose Campion removed in the Wild Rogue Wilderness.
- 6 acres of Purple Loosestrife treated with bio-control agents released on the Rogue River.
- 255 acres of Himalayan blackberry treated in meadows and rangeland.
- 2 acres of English ivy removed by NYC from the banks of the Elk River.
- Plastic mulch removed and native grasses planted on 40 inactive weed infestations.
- 1+ acres manual eradication of yellow floating heart (a Class A Aquatic Noxious Weed) from a popular recreation lake on the Siskiyou Mountains Zone

### Education and Prevention highlights include:

- Invasive plants information display and staffing at the OSU Land Steward Workshop, OSU Tree School, Buncom Day, Let's Pull Together Event
- Invasive plants presentations at several public events and venues.
- Inventoried gravel pits/quarries on federal and private lands
- Installed noxious weed road signs with assistance from the Jackson County CWMA.
- Surveyed 2,755 acres for yellowtuft alyssum on lands of mixed ownership in Josephine County. Yellowtuft prevention and detection coordination with cooperators.



**Figure 1.** Sowing native grass seed over previously mulched weed infestation.



**Figure 2.** Noxious weed prevention sign on Siskiyou Mountains Zone.



**Figure 3.** Eradicating the Aquatic "Class A" Noxious Weed *Yellow Floating Heart*

### 2012 Accomplishment and Expenditure Summary

Fund Code	Acres
Base Program (NFVW)	893
Title II (SRS2)	619
Timber Sales (CWKV)	140
Partners	325
<b>Total</b>	<b>1,977</b>

### Expenditures:

NFVW \$233,000, RAC funding \$115,000, CWKV \$40,000.

### Partners/Cooperators:

BLM, USFWS, USFS Pacific NW Research Station, The Nature Conservancy, CWMA (Jackson, Josephine, and Siskiyou), Upper Rogue Watershed Council, GE Forestry, J Raymond Forestry, MSM Forestry, Curry County Weed Board, Coos County Corrections Crew, Jackson County Community Justice Crew, Oregon Youth Employment Initiative, Northwest Youth Corps, and Student Conservation Association.



**Rogue River-Siskiyou NF**

3040 Biddle Road  
Medford, OR 97504

# Siuslaw National Forest

## 2012 Invasive Plant Accomplishments

For 2012, the Invasive Plant Program targeted invasive plant populations that are degrading habitats of threatened or sensitive species and rare plant communities. Emphasis was also placed on the treatment of roads and rock pits which serve as sources of weed infestation.

### Program Highlights include:

- Invasive European beachgrass (*Ammophila arenaria*) was chemically treated to improve nesting habitat for threatened western snowy plover. Anticipated results are reduced cost and increased effectiveness compared to past mechanical treatments.
- Second year treatment of invasive knotweed species along threatened coastal coho salmon streams has reduced weed cover by as much as 90 percent.
- First year chemical treatment of European beachgrass at Sand Lake Research Natural Area with a goal of restoring a rare native dune grassland. Previous manual control methods proved only marginally effective against beachgrass.
- Inventoried 3,100 acres for invasive species.



Figure 1. **Sand Lake Research Natural Area.** Invading European beachgrass (right) was chemically treated in September, 2012 to restore ecological function to a coastal sand dune native grassland .



Figure 2. **Big Creek.** Following a second year of treatment, dense infestations of giant knotweed (some dead canes still visible) were reduced in cover by greater than 90 percent .

### 2012 Accomplishments

#### SRS2 – Secure Rural Communities

- Scot's broom (41 ac.), Japanese knotweed (32 ac.), European beachgrass (25 ac.), Himalayan blackberry (13 ac.), giant knotweed (6 ac.), Himalayan knotweed (1 ac.).

#### NFVW – Vegetation Management

- European beachgrass (196 ac.), false brome (178 ac.), gorse (102 ac.), giant knotweed (54ac.), Scot's broom (3 ac.), Canada thistle (3 ac.), tansy ragwort (2 ac.), yellow flag iris (1 ac.), Japanese knotweed (1 ac.), Himalayan knotweed (1ac.), meadow knapweed (1 ac.).

#### STWD – Stewardship

- false brome (50 ac.).

#### CWKV – Timber Sale Collections

- Scot's broom (55ac.), tansy ragwort (50 ac.).

#### Contributed or Volunteer

- Himalayan blackberry (12 ac.), Scot's broom (10 ac.), tansy ragwort (2 ac.).

- Total Acres Treated - 839

### Partners/Cooperators

Oregon Department of Agriculture, Lincoln County Soil and Water Conservation District, Lincoln County Road Department, Salmon-Drift Watershed Council, Siuslaw Soil and Water Conservation District, TEAMS, Mid-Coast Cooperative Weed Management Area.

**Contact:** Marty Stein 541-563-8417



**Siuslaw National Forest**  
SW Jefferson Way  
Corvallis, OR 97339

# Umpqua National Forest

## 2012 Invasive Plant Accomplishments

- Managed 321 acres of false brome with herbicide.
- Managed 63 acres of spotted and diffuse knapweed at 19 sites with herbicide.
- Managed 2581 additional acres of priority weeds including blackberry, Canada thistle, Italian thistle, Japanese knotweed, Malta thistle, meadow knapweed, rush skeletonweed, Scotch broom, St. Johnswort, vinca, yellow archangel, yellow starthistle and additional sites of false brome with a variety of manual methods.
- Surveyed all the water impoundments associated with the North Umpqua Hydroelectric Project for aquatic invasive species through partnership with the Center for Lakes and Reservoirs at Portland State University and PacifiCorp.
- Managed many of weed infestations with the Al Kennedy Alternative High School, the Phoenix Alternative High School and the Jefferson Conservation Corps.
- Experimented with tarping and manual removal of a yellow floating heart infestation while beginning NEPA planning for a long-term solution for this Class A weed.



Figure 1. Spotted knapweed.



Figure 2. The crew experimenting with landscape fabric to control an infestation of yellow floating heart.

### 2012 Accomplishments

Fund Code	Acres
Timber Sales (CWKV)	307
Base Program (NFWW)	2284
Timber (NFTM)	124
Title II (SRS2)	250
<b>TOTAL</b>	<b>2965</b>

### Partners/Cooperators:

Oregon Department of Agriculture  
PacifiCorp  
Douglas County Soil and Water Dept.  
Douglas County Weed Board  
Center for Lakes and Reservoirs  
Upper Willamette Weed Management Area  
Douglas County Weed Management Area  
Al Kennedy Alternative High School  
Phoenix Alternative High School  
Jefferson Conservation Corps

Contact: Richard Helliwell, Ph: 541-957-3337



**Umpqua National Forest**  
2900 NW Stewart Parkway  
Roseburg, Oregon 97471

# Wallowa-Whitman National Forest

## 2012 Invasive Plant Accomplishments

In 2012 the Wallowa-Whitman National Forest completed several invasive plant projects:

- Continued Implementation of the Invasive Plants Treatment Project Record of Decision and began treatment of the Invasive Plants across the forest.
- Effectively treated a total of 2,440 acres of invasive plant sites with an average outcome of 74% control.
- Completed Title II projects to control purple loosestrife along the Snake River, meadow hawkweed in the Eagle Cap Wilderness and whitetop in Baker County, as well as several other invasive plants in cooperation with Wallowa Resources, Oregon Dept. of Agriculture and Tri-County Cooperative Weed Management Area.
- Made initial release of biocontrol agent on puncturevine in the lower Imnaha River canyon.
- Monitored post-fire burned landscape and treated 200 acres of invasive plants (Cactus Mountain Fire).

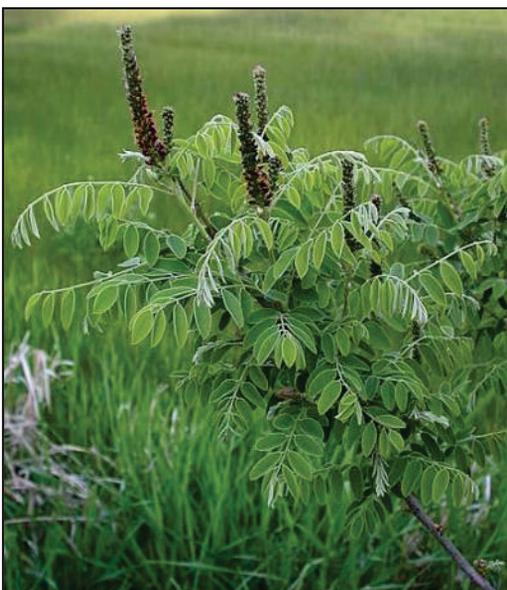


Figure 1. *Amorpha fruticosa*, false indigo, a new invader along the Snake River



Figure 2. Results of 2011 trial applications of glyphosate (aquatic formulation) on Himalayan blackberry in Hells Canyon

### 2012 Accomplishments

Acres	Fund Code	Activity
59	RBRB	Range Betterment
200	WFSU	Wildfire
1345	NFVW	Base Program
12	PTNR	Partnerships
824	SRS2	Title II

### 2440 TOTAL

### Partners/Cooperators

Oregon Department of Agriculture  
Tri-County Cooperative Weed Management Area Wallowa Resources

### Contacts:

Gene Yates 541-523-1390  
Beckijo Smergut-Wall 541-426-5529  
Josh White 541-523-1940



**Wallowa-Whitman National Forest**  
PO Box 907  
Baker City, Oregon 97814

# Willamette National Forest

## 2012 Invasive Plant Accomplishments

Components of the Willamette NF Invasive Plant Program and their highlights include:

### Treatment:

6330- acres – 4571 acres using manual and mechanical methods and 1759 acres using herbicides.

### Survey:

- Survey of Blowout Road (back side of Detroit Reservoir ) for false brome yielded 12 new sites.
- Surveys on Linn County side of North Santiam River specifically targeting knotweed.

### Special Projects:

- Title 2 funded false brome treatment with Middle Fork Willamette WC and blackberry/Scotch broom treatment in Mule Meadow Restoration
- Post burn monitoring for study on the effects of prescribed burning on false brome in timber harvest units with UO Master's student on McKenzie District

### Cooperative Relationships:

- Forest Botanist is FS representative on the Western Invasives Network Steering Committee
- District Botanists are members of Upper Willamette and Mid Willamette Cooperative Weed Management Areas

### Education/Outreach/Prevention:

- Weed outreach program to residents of Idanha and Detroit with Marion County cooperators. Surveyed 65 properties and hosted a weed identification training. The idea is to help prevent escape of weedy species from private onto adjacent FS land.

**Contact:** Jenny Lippert 541 225-6440



**Willamette National Forest**  
3106 Pierce Parkway, Suite  
Springfield, Oregon 97477



Figure 1. Edge between treated and untreated false brome in the forested understory at Foley Ridge, McKenzie Ranger District

### 2012 Accomplishments

252,000	NFWW Base Funding	2559 ac
142,646	CWKV Timber Sales	1759 ac

In addition we accomplished integrated weed treatments while doing other activities. The following list shows the acreage for integrated weed treatments:

Timber (NFTM)	20
Wildlife (NFWF)	158
Wildlife Partnerships (NFXN)	10
Payment to Counties (PSRS)	300
Fuels (WFHF)	77
Road Maintenance (CMRD, CMLG)	1424

**Partners/Cooperators:** Oregon Department of Agriculture Weed Control Program, Eugene and Salem BLM, Eugene Water and Electric Board, PGE, BPA, Consumer Power, Middle Fork Willamette Watershed Council, North Santiam Watershed Council. Marion County, Marion SWCD, Youth Conservation Corps Crews on Middle Fork and McKenzie RDs





# Native Plant Restoration

## Program Accomplishments



Planting willow stakes for a riparian habitat improvement project on the Malheur National Forest

**Fiscal Year  
2012**

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# Pacific Northwest Region, US Forest Service Native Plant Restoration Program

## 2012 Accomplishments

In FY12, the Region made great strides in acquiring and using native plant materials (grass, forb, and shrub seed, as well as hardwood cuttings and seedlings) to restore biodiversity, resilience, and ecosystem function to National Forest system lands. A variety of fund types were used, including NFWW, NFWF, NFTM, WFHF, CMRD, CMLG and others to manage forest programs and accomplish work such as:

- surveying and mapping collection sites for key species.
- collecting seed and cuttings.
- process materials at R6 Bend Seed Extractory.
- producing native seed and cuttings in nursery or agronomic settings.
- collaborating with other resource specialists to establish seed and planting stock for habitat enhancement, invasive plant control, and restoration of disturbed or degraded sites.

Other activities include developing seed zones and plant movement guidelines to ensure adaptation to current and future climates, and providing training and technical support to help build program capacity, expertise, and success in native plant restoration.

### Plant Material Development

- A new regional IDIQ contract was awarded to qualifying growers for grass and forb seed production. Over 70,000 pounds of seed and 75 tons of weed free straw were purchased under the previous 5-year contract, including 11,000 pounds of seed and 25 tons of straw in FY12 alone.
- R6 Bend Seed Extractory (BSE) processed nearly 20,000 pounds of wild collected and J. H. Stone Nursery harvested seed. These involved 1863 different seedlots from multiple federal agencies and clients in 14 western states.
- The Clarno Hardwood Production Facility (OCH NF) provided over 50,000 native willow and cottonwood cuttings to eastern Oregon forests and partners, and established 3 new beds to meet expanding demands.

### Seed Zone Development

- Continued field support for an interagency (USFS, ARS, BLM) collaborative seed zone studies for bottlebrush squirreltail, a key restoration species for harsh, arid sites.



### Support Services/Training/Tech. Transfer

The R6 Restoration Services Team (RST) provided:

- revegetation services (via reimbursable agreements) to the Western Federal Lands Highway Division, ODOT, WSDOT, City of Bend, and Confederated Tribes of the Warm Springs/Bonneville Power Administration. Work involved revegetation plan development, plan implementation, and project monitoring on 12 roadside projects and one large-scale rangeland restoration project. RST also worked on construction storm water plans and wetland mitigation projects.
- provided revegetation consultation and site visits to national forests for energy corridor planning, mine reclamation, meadow reconstruction, post-fire rehabilitation, and ski area restoration. The team is available for consultation on all aspects of restoration.

### **Regional Contact:**

Vicky Erickson, 541.278.3715  
[verickson@fs.fed.us](mailto:verickson@fs.fed.us)

### **Program Website:**

<http://fsweb.r6.fs.fed.us/natural-resources/native-plants/>



**Pacific Northwest Region  
US Forest Service**  
Natural Resources Staff  
333 SW 1st Avenue  
Portland, OR 97204

# Region 6 Bend Seed Extractory Native Plant Restoration Program

## 2012 Accomplishments

The Region 6 Bend Seed Extractory purchased new equipment, upgraded existing equipment and developed & documented new technologies for processing the ever-increasing native species seed needs of the Federal seed program. Reporting numbers reflect extractory accomplishments for the period June 1, 2011 through May 31, 2012.

### Number of diverse native species and pounds processed:

- 12,631 pounds of nursery harvested and grow-out seeds were received, processed, & packaged from R6 JH Stone Nursery.
- 6,088 pounds of wild seed collections were received, processed, packaged & placed into storage for future use or shipped to growers or back to the unit for site projects.
- 1,863 different field & nursery grown native species seed collections were received from 14 western states, collected by the FS, BLM, NPS, FHWA, BIA & other government organizations.

### Visitors to the Bend Seed Extractory:

- The 2012 Joint Annual Meeting of the Intermountain Container Seedling Growers Association, Western Forest and Conservation Nursery Association, & Intertribal Nursery Council was located in Bend, featuring a tour of the extractory. This conference included visitors from throughout the United States, Mexico, Canada, and the Dominican Republic.
- Wilkin Encarnacion, Yuley Encarnacion, Wilman Placido, Porfirio Peralta, Yoni Rodriguez, and Rumarda Urbaz came to the extractory from the National Native/Endemic Seedbank and the National Botanic Gardens of the Dominican Republic. They came for hands on seed processing training using machines at the extractory and attended the 2012 Joint Annual Meeting.



Figure 1 . Hands-on seed processing training

**FY12 Income/Expenditures:** \$564,000

**Staff:** 9 PFTs and temporary employees  
4 STEP students

**Type of Projects:** Processing, packaging, imaging, documenting and improving native species field seed collections for storage, seed increase and future use.

**Partners/Clients:** USFS, BLM, NPS, FHWA, BIA, & other government organizations.

**Contact:** Nita Rauch, Extractory Manager  
541-383-5646

**Extractory Website;**

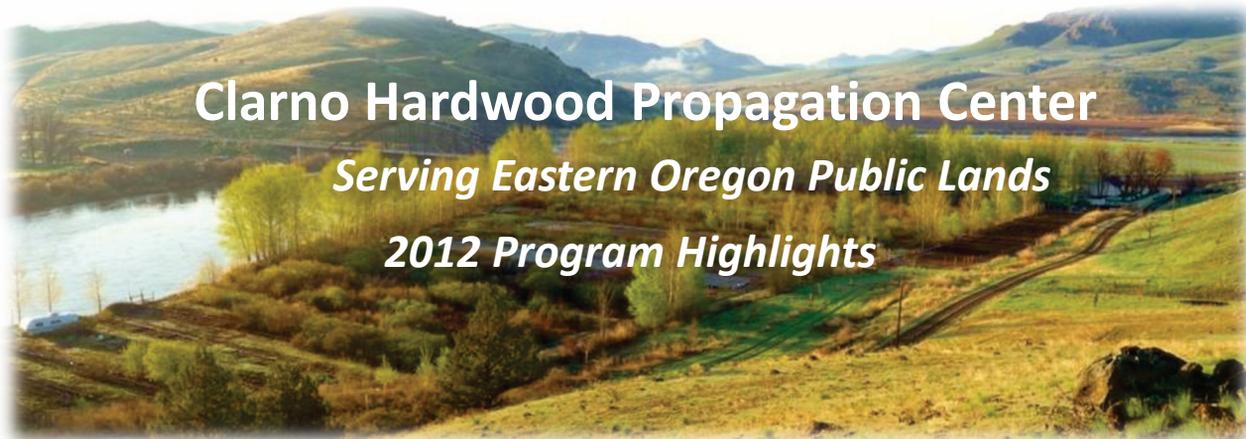
<http://fsweb-ochdes.r6.fs.fed.us/seed-extractory/>



**Region 6 Bend Seed Extractory**  
Deschutes National Forest  
63095 Deschutes Market Road  
Bend OR 97701



Figure 2. Bend Seed Extractory staff and visitors from the Dominican Republic



# Clarno Hardwood Propagation Center

## Serving Eastern Oregon Public Lands

### 2012 Program Highlights

The Clarno Hardwood Propagation Facility is a FS and BLM collaborative project in Central Oregon that supports R6 Native Plant Restoration Program Goals. Annually, over 50,000 native willow and cottonwood cuttings are harvested for large scale riparian projects.

#### **FY12 Highlights:**

- Established 3 new beds (13,125 sq ft) of salix and cottonwoods from 537 plant accessions to meet continued supply demands with vigorous material.
- Collaborated with Prineville BLM in assisting with 5 acres of native cottonwood restoration planting along John Day River.
- In 2012, the facility provided cuttings for the following units: OCH, DES, MAL, UMA, FRE, HOOD and WW National Forests; Prineville, Burns and Vale BLM units, Oregon State Parks, National Park Service (John Day Fossil Beds), CTWS (Confederated Tribes of Warm Springs) conservation areas including Pine Creek, Oxbow and Middle Fork.
- Cuttings provided to the following non-profits through watershed council partnerships: TSID (Three Sisters Irrigation District), CRWC (Crooked River Watershed Council): Nature Conservancy (Juniper Hills), ONDA (Crooked River), and Oregon Trout.
- 2 federal and 4 private native plant nurseries were used for seedling production of harvested material.
- Collaborated with Department of Agriculture ARS (Logan, Utah) in establishing a native legume planting trial on-site.
- Collected 6-yr survival and growth data from cottonwood movement study.
- This program wouldn't be possible without the assistance of the BLM, various youth crews, and the additional support from colleagues and volunteers.



Figure 1. Establishing hardwoods, Clarno



Figure 2. New beds (Fig 1 and 2) before and after establishing 2012.

**Year Awarded: 2012**  
**Base Funding: \$20,000 Total NFN3**  
**Contact: Chris Jensen**  
 (541-383-4779).



Figures 3 & 4. Over 7,000 poles harvested for deep planting.

**Managed by Ochoco National Forest**  
 3160 NE 3<sup>rd</sup> Street  
 Prineville, Oregon 97754



# Colville National Forest Native Plant Restoration Program

## 2012 Accomplishments

The Colville National Forest Native Plant Restoration Program continues to focus on developing stocks of native grasses, forbs, and shrubs for restoration projects.

**New foundation seed collections** were made across the Forest of 91 gallons of uncleaned seed from 22 species (18 shrubs, 3 sedges and 1 forb) between 2160 and 4250 feet in elevation (Fig. 1). Sedge and forb seeds were planted at Coeur d'Alene Nursery for increasing and use for future projects, and the shrub seed was stored at the nursery.

**Restoration** efforts continue at the Growden Dam removal site, where 2240 alders were planted on 8 acres by the Forest Service and students from Republic and Kettle Falls schools (Fig. 1). Six monitoring plots were read. About 7100 1-year-old shrubs from 14 species are growing at the nursery for use next year.

On 2 acres along the North Fork of Chewelah Creek 200 shrubs of Douglas maple, snowberry, and Nootka rose were planted. On the Middle Branch LeClerc Road Relocation Project, 1500 alder and Douglas hawthorn plugs were planted on 2.3 miles of decommissioned roads along with 250 western white pines and Ponderosa pines. Berms on closed Forest Road 9518245 were planted with 50 alders. The Forest Damage Response Team seeded locally collected blue wild rye on several areas (10 acres total) damaged by off-road vehicles.

**Funds were also used to** locate and map 42 native plant collection sites across the Forest, pay for seed cleaning, testing and storage; collect hardwood cuttings; provide revegetation consultation; develop/track budgets; and administer agreements.

**Contact:** Kathy Ahlenslager 509-684-7178.



**Colville National Forest**  
765 S. Main  
Colville, WA 99114



Figure 1. Oceanspray spread out to dry on racks, August 2012.

**Year Awarded:** 2012

**Project completion:** 2012

**Expenditures: \$33,000 Total**

\$19,000 (NFN3)

\$ 9,000 (NFVW)

\$ 5,000 (NFTM)

**Partners/Contractors/Coop:** Coeur d'Alene and J. Herbert Stone Nurseries, Colville Tribe, and Kettle Falls and Republic schools.



Figure 2. Republic High School students planting alder plugs at former Growden Dam site, May 2012.

# Deschutes National Forest Native Plant Restoration Program

## 2012 Accomplishments

The Deschutes National Forest Native Plant Restoration Program continues to focus on developing/planting stock of native grasses, forbs, and shrubs for restoration projects. In addition to the highlights below, funds were used to test/clean/store seeds; develop contracts; provide revegetation consultation; develop project revegetation plans; and develop/track budgets.

### **Seed and Propagule Propagation:**

- Extended existing task order and initiated a new task order for forb seed propagation of penstemons, phacelia, lupines, & buckwheat for the Skyliner Rd./City of Bend waterline project (Bend/Ft. Rock).
- 56 lbs. of penstemon and phacelia seed was produced by Benson Farms, and a small amount (~ 1 lb.) of Oregon sunshine seed by Coeur d'Alene nursery for future restoration projects (Bend/Ft. Rock).
- Provided field assistance to Clarno Hardwood Production Facility.
- Contracted production of 50 trees, 500 grass and 350 bitterbrush plugs, and propagation of a variety of forbs (Crescent).

### **Seed Collection:**

- Collected Oregon sunshine seed from a hydroseeded area and packaged it for dissemination to the public at a Forest Celebration Day.

### **Restoration Projects:**

- Seeded disturbed areas at Mt. Bachelor Ski Area with 65 lbs. native seed and planted 500 seedlings at Lava River Cave (Bend/Ft. Rock).
- Continued landscaping new office building with hydroseeding a variety of grasses and forbs (Fig. 1) as well as seeding a separate area with 50 lbs. of native grass/forb seed (Bend/Ft. Rock).
- In partnership with Wolfree, elementary students helped seed native grasses and transplant native trees/shrubs (Crescent).
- 120 volunteers planted 1,650 native trees, shrubs, forbs, and grasses, restoring riparian and upland habitats on National Public Lands Day. Also, Sisters High School Students planted 450 native trees & shrubs to restore decommissioned roads and campsites along Whychus Creek (Sisters, Tale of Two Rivers Conservation Campaign; see USFS Region 6 YouTube video: <http://www.youtube.com/watch?v=JD2i5YI-40k>)



Figure 1. Area hydroseeded with native forbs and grasses at the new Deschutes/Bend/Ft. Rock District office.



Figure 2. Crescent District employees mulching an eroding slope.

<b>Year Awarded:</b>	2012
<b>Expenditures:</b>	<b>\$62,456 Total Funding</b>
	\$ 6,456 NFN3
	\$23,000 NFTM
	\$26,000 NFWF
	\$ 2,000 NFWW
	\$ 5,000 WFHF

**Partners:** Deschutes Basin Native Seedbank, Benson Farms, Clearwater Native Plant Nursery, FS Coeur d'Alene Nursery, Dorena Genetic Resource Center; Upper Deschutes Watershed Council, Wolfree, Gilchrist School, National Forest Foundation, Trout Unlimited, Friends of the Metolius, Clarno Hardwood Production Facility, Deschutes County.

**Contacts:** Katie Grenier (541-383-5564); Charmane Powers (541-383-4730); Christina Veverka (541-433-3234); Maret Pajutee (541-549-7727), Marlo Fisher (541-383-4743).



Figure 3. Bend/Ft. Rock employees planting natives in front of the new office building.



Figure 4. A family participates in native plant restoration, Sisters District.



**Deschutes National Forest**  
63095 Deschutes Market Road  
Bend, Oregon 97701

# Eastern Oregon Area Genetics Program

## OCH, DES, WIN-FRE, CRNG, MAL, WAW & UMA NFs

### 2012 Program Highlights

In 2012 the Eastern Oregon Area Genetics Program collaborated with, and provided support to a diverse collection of internal and external cooperators. Below is a brief list of highlights. *Not all program activities are listed.*

#### Climate Change Response:

- Re-established Phenology Monitoring Station on the Pringle Falls Experimental Forest .
- Established a weather station and phenology monitoring study at Kelsey Butte Seed Orchard.

#### Education and Outreach

- Volunteer mentor at 3<sup>rd</sup> Annual YCC Career Day (with L. Roby OCH NF).
- Children's Forest 'Naturehood' curriculum development- Ponderosa Elementary (with S. Ferrell BFR RD).

#### Admin Studies in Support of Operations

- Bottlebrush Squirreltail Common Garden Trial (with USFS, BLM, PNWRS, ARS-Pullman, and ARS-Sydney).
- Basalt Milkvetch and Western Prairie Clover seeding trials (with ARS-Provo).
- Ponderosa pine plantation screening (molecular genetic) (with B. Kaiser UMA NF and NFGEL).
- Established permanent Whitebark Pine monitoring plots in the Warner Mtns. (with K. Chadwick MTH NF).



Figure 3. OCH and DES NF employees in coordination with high school students from the Redmond Proficiency Academy install a common garden study of the important restoration grass Bottlebrush Squirreltail at the OSU Research Farm near Powell Butte, OR



Figure 1. BFR RD Technician Sandy Conaway installs a time lapse camera to monitor reproductive henology of bitterbrush at Pringle Falls xperimental Forest.



Figure 2. BFR RD Genetics and Reforestation Technician Chris Jensen prepares to climb a Ponderosa pine and install a weather station sensor at the Kelsey Butte Seed Orchard.

#### 2012 Partners/Cooperators

- ARS-Pullman Western Regional Plant Introduction Center** (RC Johnson, Mike Cashman)
- ARS-Sydney Northern Plains Agricultural Research Laboratory** (Erin Espeland)
- ARS-Provo Forest and Range Research Laboratory** (Doug Johnson, Shaun Bushman)
- USFS PNW Research Station** (Francis Kilkenny, Brad St. Clair)
- University of Nevada – Reno** (Beth Leger)
- Oregon State University** (Tim Van Domelen)
- Pringle Falls Experimental Forest** (Andy Youngblood)

Contact: Matt Horning, 541-383-5519



**Deschutes National Forest**  
63095 Deschutes Market Rd.  
Bend, OR 97701

# Fremont-Winema National Forests Native Plant Restoration Program

## 2012 Accomplishments

A contract was awarded and funds obligated:

- 1,000 lbs. of *Elymus elymoides*
- 1,800 lbs. of *Deschampsia cespitosa*

Partnership and appropriated funds were used to produce and deliver:

- 750 lbs. *Bromus carinatus*
- 155 lbs. *Deschampsia cespitosa*
- 692 lbs. *Elymus elymoides* (2 different lots)
- 1,500 lbs. *Elymus glaucus* (3 different lots)
- 450 lbs. *Festuca idahoensis*
- 200 lbs. *Leymus cinereus*
- 1,011 lbs. *Poa secunda* (2 different lots)
- 1,400 hardwood seedlings of 2 different species (Fall 2011)
- 265 sedge plugs (Fall 2011)
- 71 shrub seedlings (Fall 2011)

12 lbs. of uncleaned *Elymus glaucus* seed was collected with help from Integral Youth Services.

Appropriated funds were used to collect 1 lb of *Alnus incana* seed and 225 cuttings and root segments for 5 hardwood/shrub species.

Forest supplied the Modoc National Forest with 1,527 lbs. of native grass seed for revegetation work after the 2012 Barry Point Fire. The reimbursement funds (approx. \$23,000) will be used to collect and grow out additional lots in 2013.

Funds were also used to: locate and map new source populations; test, clean, and store native seeds; and develop and administer contracts and agreements.

Through the work of the cone collection crew in Sisters, 45 lots of whitebark pine cones were collected and delivered. A portion of the collection was completed on genetic trees for 1 seed zone, while the rest was general collection within 3 different seed zones.



Figure 1: Sedge plugs from Karma's Forest

Dorena Genetic Resource Center delivered 260 2-year-old *Chrysolepis chrysophylla* seedlings for project planting. Dorena went above and beyond successfully producing plants from seed, even though this is not a species that is usually grown.

<b>Expenditures:</b>	<b>\$ 79,464 Total</b>
\$ 26,200	(NFTM/NFVW)
\$ 5,295	(NFXF)
\$ 47,969	(SRS2)

**Partners/Contractors/Coop:** Integral Youth Services, USFWS, Benson Farms, Karma's Forest Nursery, Dorena Genetic Resource Center, Clarno Stool Beds.

**Contacts:** Lucas Phillips 541-947-6251  
Missy Anderson 541-783-4085  
Jeannette Wilson 541-576-7593



**Fremont-Winema National Forest**  
1301 South G Street  
Lakeview, OR 97630

# Gifford Pinchot National Forest Native Plant Restoration Program

## 2012 Accomplishments

### Seed Growout Contracts:

We have 2 contracts for seed growout this year (Benson Farms) which resulted in procurement of the following:

- 603 lbs. Idaho fescue

### Collection Site:

A small service contract was used to accomplish seed collection of California brome on Westside seed collection sites on the South Zone of the Gifford Pinchot National Forest, in preparation for FY13-FY14 foundation seed collection.

### Seed use:

Native grass seed was utilized for the re-vegetation of a number of culvert replacement and other aquatic restoration projects, road decommissioning with partners, stabilizing timber sale landings and skid trails, and a mine reclamation site, all totaling about 20 acres on the Forest.

### Native Plan Garden:

Cowlitz Valley Ranger District Office created a native plant garden. The garden demonstrates how native species can be integrated into home landscaping in the community. It shows the beauty and habitat for native animals including pollinators. It also displays the reduced needs for watering, fertilizer and mowing. More than 25 species with a range of preferences for sun and shade were established in the garden.



Figure 1. Cowlitz Valley Native Plant Garden



Figure 2. This American Lady butterfly fed on native plants both as a caterpillar and an adult.

**Year Awarded/Completed:** 2012  
**Expenditures: \$36,000 Total**  
\$ 26,000 (NFTM03)  
\$ 10,000 (NFVW03)

**Partners/Contractors/Coop:** Benson Farms Inc.

#### Contacts:

**HQ:** Carol Chandler (360) 891-5106  
**S. Zone:** John Scott (509) 395-3413 or  
Andrea Ruchty (509) 395-3414  
**N. Zone:** Linda Swartz (360) 497-1164



**Gifford Pinchot National Forest**  
10600 N.E. 51<sup>st</sup> Circle  
Vancouver, WA 98682

# Malheur National Forest Native Plant Restoration Program

## 2012 Accomplishments

**Revegetation Projects** – Native plant materials were used for restoration, revegetation, and habitat improvement projects:

- *Riparian Habitat:* River channel restoration and culvert replacements projects that improved critical fish habitat (Figure 1) used a total of 8,000 willow cuttings; 2,000 cottonwood cuttings; 400 red-osier dogwood cuttings, 1,620 lbs. of wetland grass/forb seed mix; and 10,000 lbs. of weed-free native grass mulch.
- *Fire Rehabilitation:* 1,500 lbs. of upland grass/forb seed mix was used to seed 38 miles of dozer and hand lines for the Parish Cabin Fire and other fires.
- *Forage Improvements:* 600 lbs. of upland seed mix was used for big game and rangeland habitat improvements associated with timber sales, range allotments, and road decommissioning projects.
- *Mining Reclamation:* 40 lbs. of upland seed mix was used to seed disturbed areas associated with two active mining claims.
- *Utility Corridors:* 60 lbs. of upland seed mix was used to seed areas disturbed as a result of powerline corridor maintenance.
- *Vegetation Stewardship:* 120 lbs. of upland seed mix was used to seed landings, slash piles, and skid trails for fuels treatments and restoration stewardship projects.

**Seed Production** – 825 lbs. of mountain brome and 70 lbs. of slender hairgrass were procured and delivered from previous contracts. New contracts were awarded to produce 1000 lbs. of mountain brome and 900 lbs. of bluebunch wheatgrass . Additionally, contracts for the production of 1000 lbs. of Great Basin wildrye, 800 lbs. of bottlebrush squirreltail , and 400 lbs. of prairie junegrass are in progress (e.g. Figure 2).

**Seed Collection and Source Mapping** – Seeds were collected and their source populations were described and mapped for one forb and two grass species: 7 lbs. of woolly sunflower, 10 lbs. of prairie junegrass, and 12 lbs. of bluebunch wheatgrass.

**Program Management** – Funds were also used to provide restoration and revegetation consultation to districts and partners; manage the budget and coordinate the program; administer and inspect contracts; and pay for seed cleaning, testing, and storage.



Figure 1. Crew planting willow stakes for a riparian habitat improvement project.

**Year Awarded:** 2012

**Project completion:** 2012, ongoing

**Expenditures: \$38,000 Total**

\$ 20,000	(NFTM)
\$ 10,000	(NFVW)
\$ 5,000	(WFHF)
\$ 3,000	(NFN3

carryover)

**Partners/Contractors/Coop:** Benson Farms, Western Reclamation, Eastern Oregon Stewardship, Siskiyou BioSurvey, Natural Resource Conservation Service, Oregon Youth Conservation Corps, Oregon Department of Transportation, Confederated Tribes of Warm Springs, The Nature Conservancy, Deschutes Basin Native Seed Bank.

**Contact:** Joseph Rausch 541-575-3141



**Malheur National Forest**

431 Patterson Bridge Road  
P.O. Box 909  
John Day, OR 97845



Figure 2. Native grass production field at Benson Farms, Inc.

# Mt. Baker-Snoqualmie National Forest Native Plant Restoration Program

## 2012 Accomplishments



Wow! 6770 potted native plants staged for planting!



Wow! Lively contingent of 60 Microsoft employees at Gold Creek Pond helping with restoration on September 21, 2012 - a "Day of Caring".

### Native Plant Restoration at Gold Creek Pond

**Wildlife Viewing Area.** In 2011 we hired a contractor to collect native plant materials from the project site, and this September they delivered one pound of rough cleaned pearly everlasting s (*Anaphalis margaritacea*) seed (a lot when you consider there are 17,669 seeds per gram); 3,100 four-inch pots of wild strawberries (*Fragaria vesca* and *F. virginiana*); 1,770 gallon-sized containers of hardhack spirea (*Spirea douglasii*), and 1,900 gallon sized containers of snowberry (*Symphoricarpos albus*). The MBS has partnered with Conservation Northwest to coordinate large volunteer work parties and conduct long-term monitoring. In 2012, the baseline monitoring plan was completed and baseline monitoring plots were established. This was followed by 3 smashingly successful work parties with a total of 143 volunteers, worth \$24,928 in labor!

**Native Plant Revegetation** in the Baker River Hydro Relicensing Project was helped by "The "Kulshan Kids" and "North Cascades Wild" who planted sword ferns (*Polystichum munitum*). Red huckleberry (*Vaccinium parvifolium*), and grand fir (*Abies grandis*) were transplanted at Excelsior Campground by Whatcom County Corrections Crew, who salvaged the plants from construction areas.

**Native Plant Restoration at Harlan Meadow.** In 2012, Botany program staff collaborated with the USFS Ecology Program, North Cascades National Park, and the Tulalip Indian Tribe to survey and design a meadow restoration project. In early FY 2012 we spent 2 days harvesting seeds of native grasses, rushes, sedges, and thin-leaved huckleberry (*Vaccinium membranaceum*) which will be propagated at the NOCA greenhouse.

**On-going Seed Increase and Plant Propagation.** We continue to grow-out a variety of native plant materials. In FY12 ,we used allocated funds to increase the bed size at Fourth Corner Nursery in Bellingham to produce seeds of piggyback (*Tolmia menziesii*), fringe cup (*Tellima grandiflora*), and goatsbeard (*Arunucus dioicus*). Seeds may be ready for final harvest in 2014.

Year Awarded: 2012

Expenditures:	\$ 3,000 (NFIM)
	\$10,000 (NFVW)
	\$20,000 (NFTM)
	<u>\$11,900 (SRS2)</u>
	\$44,900 total

**Partners/Contractors/ Cooperators:** Conservation Northwest, Defenders of Wildlife, WA Native Plant Society, Microsoft, EarthCorps, Mobilize Green, J. Herbert Stone Nursery, Couer d'Alene Nursery, Judd Creek Nursery, WA Association of Conservation Districts, Karma's Forest, Fourth Corner Nursery, Mountaineers Naturalists, Central Washington University, Kulshan Kids, North Cascades Wild, N Cascades National Park, Tulalip Indian Tribe, Whatcom County Corrections Crew.



**Mt. Baker-Snoqualmie National Forest**  
2930 Wetmore Ave, Suite 3a  
Everett, WA 98201

Laura Potash Forest Botanist & South Zone Botanist 425-783-6043  
Sarah Callaghan Invasive Plant Specialist 425-783-6042  
Shauna Hee North Zone Botanist 360-854-2635

# Mt. Hood National Forest Native Plant Restoration Program

## 2012 Accomplishments

*This year native plant materials played an increasing role across various program areas. We continue building capacity to supply our restoration needs with native grass and forb seed, shrubs, and specialty tree seedlings.*

### Seed Increase Contract Funds Obligated

- 200 lbs. *Festuca idahoensis* (Idaho fescue)
- 200 lbs. *Achillea millefolium* (common yarrow)
- 64 lbs. *Lupinus latifolius* (broadleaf lupine - Eastside)
- 35 lbs. *Lupinus latifolius* (broadleaf lupine - Westside)

### Seed Collection

11.7 lbs. (raw weight): For direct sowing at high elevation disturbed sites, including at Mt. Hood Meadows ski resort and Timberline Lodge facilities.

6 species: 4 wildflower forbs and 2 sedges

>2.7 lbs. (raw weight): Foundation seed for propagating planting stock and seed increase.

9 species: 5 forbs and 4 shrubs

### Restoration Project Implementation

- Seeded blue wildrye and California brome on:
  - 50 mi. decommissioned roads
  - 25 mi. equivalent total of road maintenance sites
  - Various disturbed sites (mostly <1 ac.), including at timber sales, ski resorts, dispersed campsites, facilities.
- Transplanted 2,300+ plants (7 forb, 14 shrub, and 8 conifer species) and seeded with blue wildrye and California brome across Timothy Lake area campgrounds and day use sites (> 7 ac.).
- Staked 80 black cottonwood cuttings (at 3 elevation bands) at culvert upgrades, decommissioned stream crossings, and other riparian sites. Collected additional foundation cuttings for continued propagation at Clarno stouling beds (with support from Bend Ft. Rock RD, Deschutes NF).
- Monitored 2 ac. at Mt. Hood Meadows ski resort for revegetation of Canada goldenrod and pearly everlasting sown in 2011.

**Funds also supported** native seed cleaning and storage, and for salaries to collect native plant materials, develop and administer contracts, track inventory, and implement and monitor revegetation.

R6 Restoration Services Team continued cooperative restoration efforts along Hwy. 35 Improvement Projects (20 ac.), including seeding with strategic mixes of grasses and forbs, and planting custom-grown shrubs and trees.

**Contact:** Wesley Wong (503) 668-1764



**Mt. Hood National Forest**  
16400 Champion Way  
Sandy, Oregon 97055



*Workhorse species*

*Broadleaf lupine (*Lupinus latifolius*) seed increase plots produced a third year of high yields after native soil inoculation (June 7, 2012).*

**Year Awarded:** 2012

**Project completion:** 2013

**Expenditures: \$15,582 Total**

\$ 5,000 (NFWF)  
\$ 5,000 (CMLG)  
\$ 3,485 (NFTM)  
\$ 1,527 (NFVW)  
\$ 500 (NFN3)  
\$ 70 (FSEC)

**Partners/Contractors/Coop:** Dorena Genetic Resource Center, R6 Restoration Services Team, Benson Farms Inc., Portland General Electric, Oregon Department of Transportation, Federal Highways Administration, Mt. Hood Meadows ski resort, SkiBowl resort, Timberline Lodge (RLK & Co.).



*Riparian rehabilitation along the Clackamas River*

*Black cottonwood vigorously sprouts three months after planted as a dormant cutting (June 26, 2012).*

# Ochoco National Forest & Crooked River National Grassland Native Plant Restoration Program

## 2012 Accomplishments

The Ochoco National Forest Native Plant Restoration Program continues to focus on developing/planting stock of native grasses, forbs, shrubs and trees for restoration projects. In addition to the highlights below, funds were also used to test, clean, and store native seeds; develop contracts; provide revegetation consultation & develop revegetation plans; develop/track budgets. **An outstanding year of habitat restoration, Ochoco Botanists collaborated with other resources to plant 550 cottonwoods, 895 alders, 2,000 bitterbrush, 600 willows (plants or as wattles/bundles to stabilize stream banks), 1,420 other shrubs (rose, currant, dogwood, mock orange), 350 sedges, and 100's of lbs. of native grass seed.**

### **Seed and Propagule Production/Purchase:**

- Completed a purchase agreement with a local nursery for 3,000 bitterbrush seedlings to be planted on the Crooked River National Grassland in 2014.

### **Seed Collection:**

- Collected tufted hairgrass seed for future seed production.

### **Restoration Project Implementation:**

- Ochoco and Deschutes NF employees teamed up to plant 2,000 bitterbrush seedlings and 200 willows and cottonwoods on Crooked River National Grassland.
- On the Crooked River National Grassland, sowed native grass and forb seed on 10 acres of prescribed burn and on a dozer line in a wildfire area; also sowed native and cultivar seed to determine seedling effectiveness (using photo points) in a fuels treatment area.
- On Lookout Mt. District, 400 lbs. of native grass seed was sown by timber sale purchasers on log landing and skid trail areas.
- Ochoco and BLM Botanists teamed up to plant 50 cottonwood and willow plants on BLM land within the Ochoco NF boundary.
- Paulina District planted cottonwoods, alder, and sedges at the Sugar Creek Culvert Replacement Project, and worked with Trout Unlimited and 10 volunteers to plant 250 willows, 50 wild rose, 50 wax current and 10 red dogwoods at the Little Summit tributary stream restoration project.

### **Revegetation Project Planning:**

- Developed an integrated (botany, engineering, fish, hydrology) revegetation plan for Sugar Creek Culvert Replacement Project.



Figure 1. Ochoco and Deschutes NF employees teamed up to plant 2,000 bitterbrush seedlings and 200 willows and cottonwoods, Crooked River National Grassland.



Figure 2. Redmond Proficiency Academy students plant squirreltail for a native plant genetics study to help in future restoration projects.



Figure 3. Black cottonwoods waiting to be planted at Sugar Creek Culvert Replacement Project, Paulina District, Ochoco NF.

**Year Awarded:** 2012

**Expenditures:** \$33,945 Total Funding

\$ 10,000 NFWW

\$ 20,000 NFTM

\$ 3,945 NFWF

**Partners/Contractors/Coop:** Clearwater Native Plant Nursery, Trout Unlimited, Rocky Mountain Elk Foundation, Wolftree, Crooked River Watershed Council, Benson Farms, Deschutes Basin Native Plant Seedbank, Clarno Hardwood Facility.

**Contacts:** Mark Lesko (541-416-6416)  
Katie Grenier (541-383-5564)  
Krista Lopez (541-416-6635)



**Ochoco National Forest**  
3160 NE 3<sup>rd</sup> Street  
Prineville, Oregon 97754

# Okanogan-Wenatchee National Forest Native Plant Restoration Program

## 2012 Accomplishments

Using FY12 NFTM, NFWW, CMRD, CMLG, NFN3 and other funds we accomplished the following:

Managed native plant programs with the objective of providing native plant materials, principally, native grass, forb, and shrub seed, cuttings, or plants to restore biodiversity, resilience, and ecosystem function to disturbed or degraded sites on National Forest system lands. Funds were used to manage local programs, including: 1) planning appropriate species collections, 2) surveying and mapping collection sites, 3) collecting native plant materials, 4) process materials at R6 Bend Seed Extractory, 5) increase native seed using R6 Restoration Services Contract, and 6) sow native seed or plant native stock in appropriate project sites for restoration, rehabilitation, or revegetation purposes.

### Accomplishments for FY12 include:

- Reconnaissance, assessment, and mapping sites for native seed collection in 2012 and future years.
- Collected 218 lbs. of seed for 20 native grass, forb, and shrub species for future seed increase and use (including *Agrostis exarata*, *Agrostis scabra*, *Bromus carinatus*, *Calamagrostis rubescens*, *Danthonia intermedia*, *Festuca occidentalis*, *Poa curtifolia*, *Vahlodea atropurpurea*, *Achillea millefolium*, *Lupinus latifolius*, *Acer circinatum*, *Amelanchier alnifolia*, *Cornus sericea*, *Lonicera involucrata*, *Mahonia nervosa*, *Rosa gymnocarpa*, *Rubus spectabilis*, *Sambucus racemosa*, *Sorbus scopulina*, and *Sorbus sitchensis*).
- Awarded contracts for seed increase of four native grass and forb species (*Poa secunda*, *Pseudoroegneria spicata*, *Festuca idahoensis*, and *Phacelia hastata*) to meet future restoration seeding needs on three ranger districts. Amount of seed to be produced during the next two years is 1,057 lbs.
- Purchased and planted 6,832 containerized native plant seedlings for restoration purposes on diverse sites including abandoned mines (Fig. 1), recreational trailheads, flood-damaged roads and campgrounds, and lake and pond habitat.
- Implemented revegetation project seeding of native grasses, forbs, and shrubs on 94 acres including campgrounds, skid trails, fire lines, and abandoned mines. Also seeded 1 mile of decommissioned road.
- Revegetation projects used over 1,700 lbs. of grass and forb seed (including *Pseudoroegneria spicata*, *Bromus carinatus*, *Poa secunda*, *Achillea millefolium*, *Elymus glaucus*, *Festuca idahoensis* and *Poa curtifolia*).
- Repair and maintain controlled environment seed storage capability for three zones on the Forest (North, Central, and South Zones) at a cost of \$3,960.
- Procured 165 lbs. of surplus local grass seed (*Festuca idahoensis*) for revegetation projects.



Figure 1. Volunteers and native plant restoration on the Azurite Mine site on the Methow Valley RD..

### Year Awarded: 2012

**FY12 Expenditures:** \$337,085 (NFWW, CMRD, NFN3, CMLG, CFLN, ERFO, NFTM, NFMG, CWFS, NFWF, RICZ, P6G75A )

**Partners/Contractors/Coop:** Benson Farms Inc, WA Dept. of Transportation, R6 Restoration Services, Methow Natives, Derby Canyon Natives

### Contacts:

SO - Rod Clausnitzer, 509-826-3278

Chelan & Entiat RDs - Brigitte Ranne,  
509.682.4941

Cle Elum RD - Helen Lau, 509.852.1074

Methow Valley RD - Kelly Baraibar, 509.996.4019

Naches RD - Jodi Leingang, 509.653.1450

Tonasket RD - Larry Loftis, 509.486.5160

Wenatchee River RD - Lauri Malmquist,  
509.548.2575



**Okanogan-Wenatchee National Forest**  
215 Melody Lane  
Wenatchee, WA 98801



Figure 2. Cle Elum RD *Bromus carinatus* grass seed production field in the Columbia Basin.

# Olympic National Forest Native Plant Restoration Program

## 2012 Accomplishments

### Native Grass Seed Production:

- The Olympic National Forest received delivery of 4500 pounds of native grass seed (blue wildrye and California brome) and twelve tons of certified weed-free straw harvested from grass seed production fields. We are now using source-identified local native grass seed for all revegetation, restoration, and erosion control projects across the forest.
- We completed foundation seed collection for future grass seed production for the Pacific Ranger District.
- We located collection sites for Roemer's fescue, which will be used for foundation seed for prairie and open woodland restoration.
- We are investigating methods for increase of Columbia brome, a native grass species with great potential for use in shady restoration sites, but which has proven difficult to produce under commercial seed production conditions.

### Site-Specific Restoration Projects:

- We collected foundation beargrass seed for a beargrass savanna restoration site.
- In collaboration with the Aquatics and Engineering programs, we completed revegetation of drainage features and outcropping along approximately 20 miles of decommissioned road.
- Production of 10,000 sedge plugs is underway for the Mint Meadow wetland/meadow restoration site.
- We implemented restoration planting of over 25,000 sedge plugs and hundreds of hardwood live stakes at the Cranberry Bog (photo below) and Pine Lake shoreline restoration sites.



Figure 1. Blue wildrye grass seed production field (Photo by Jerry Benson)



Figure 2. Source-identified blue wildrye grass seed. (Photo by Robin Shoal)



Figure 1. Sedge plugs at the Cranberry Bog restoration site (Photo by Cheryl Bartlett)



**Olympic National Forest**  
1835 Black Lake Blvd SW  
Olympia, Washington 98512

**Year Awarded/Completed: 2012**

**Expenditures:**

\$ 35,000 TOTAL

\$ 8,000 CMRD

\$ 27,000 NFTM

**Partners/Contractors:** Bend Seed Extractory; Benson Farms Inc.; Green Tree Landscaping Inc.; Karma's Forest Wholesale Nursery; NRCS Corvallis Plant Materials Center; Siskiyou Biosurvey LLC; Sound Native Plants; Western Reclamation Inc.; Washington Conservation Corps.

**Contact:** Robin Shoal 360-956-2376

# Western Washington Area Genetics Program Olympic, Gifford Pinchot, & Mt. Hood NFs

## 2012 Accomplishments

**Climate Change Vulnerability Assessment** – a vulnerability assessment of forest trees was completed for all of Region 6, providing vulnerability rankings and suggested action items for climate change adaptation.

**Taylor's checkerspot genetics** – sample collection was completed for a population genetics assessment of the now endangered Taylor's checkerspot butterfly. Analysis will be done at NFGEL.

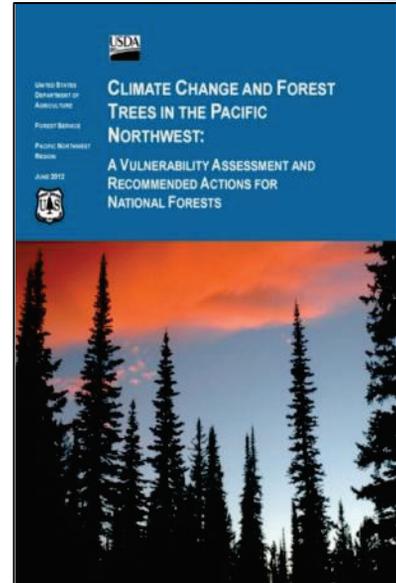
**Golden Chinquapin** - Leaf collections were completed for a total of ~700 samples from 22 populations covering the range of the species. Analysis will be done at NFGEL.

**Oregon white oak restoration strategy** – a strategy for conservation and restoration of Oregon white oak on the east side of the Columbia River Gorge National Recreation Area, Mt. Hood, and Gifford Pinchot National Forests has been developed for release in early 2013.

**WBP restoration program** – management of the regional WBP restoration program included seed collections in OR, WA, and NV, and limber pine.

### 2012 Partners/Cooperators

**USFS NFGEL Laboratory** (Valerie Hipkins)  
**USFS PNW Research Station** ( Brad St. Clair, Richard Cronn, Connie Harrington)  
**WDFW** (Ann Potter)  
**USFWS** (Ted Thomas)  
**Quinalt Indian Nation** (Jim Hargrove)  
**Confederated Tribes of Warm Springs** (Ryan Singleton, Greg Bjornstrom)  
**WCC** (Darryll Bordon)  
**The Nature Conservancy** (Jim Evans)  
**NPS** (Wende Rehlaender, Ben Becker)  
**BLM Arcata Field Office** (Hank Harrison)  
**California State Parks** (Mike Walgren, Craig Swolgaard)  
**UC Berkeley** (Rob York)  
**WSU Extension** (Jim Freed)



### SEED ORCHARDS

**Removal of buildings at South Fork Orchard** – two excess buildings at the MHNH South Fork seed orchard that had become a maintenance and safety liability were donated to the Confederated Tribes of Warm Springs who dismantled and removed the buildings. The only cost to the USFS was the removal of the concrete pads for a total cost of ~\$1200.

**Phenology monitoring year 2** – a second year of data was collected on phenology of Pacific silver fir and western white pine. This data along with weather records will be used as a baseline to monitor impacts of climate warming.

**Improvements at Dennie Ahl** – working with Engineering and a contractor, a French drain was installed in front of the main building to direct roof runoff away from the bay doors; working with Wildlife, bird and bat boxes were installed to improve habitat and provide nesting sites.

**Fire staging** – during the Steel Bridge fire, fire crews used the orchard as a staging area for fire operations headquarters and crew quarters.



**Contact: Andy Bower**  
**Olympic National Forest**  
1835 Black Lake Blvd. SW  
Olympia, WA 98512

# Rogue River-Siskiyou National Forest Native Plant Restoration Program

## 2012 Accomplishments

### 2012 Farm Seed Production:

- 1200 lbs. *Bromus carinatus* seed from Pacific NW Natives
- 1325 lbs. *Festuca roemerii* seed from Benson Farms
- 665 lbs. *Elymus glaucus* seed from Pacific NW Natives
- 600 lbs. *Festuca rubra* seed from Pacific NW Natives
- 51 lbs. *Festuca californica* from J. Herbert Stone FS Nursery

### 2012 Wild Seed Collections:

- *Danthonia californica*, *Festuca roemerii*, *Stipa lemmonii*, *Ceanothus cuneatus*, *Rubus parviflorus*, *Vaccinium parvifolium*, *Rubus ursinus*, *Mahonia aquafolium*, *Gaultheria shallon*, *Acer macrophyllum*.

### New contracts were awarded and funds obligated to produce:

- ½-acre to 1-acre seed production plantings of Roemer's fescue, California brome, California oatgrass, and California fescue at J. Herbert Stone FS Nursery (JHSN).
- Small first generation new plantings at JHSN; *Elymus glaucus*, *Stipa lemmonii*, *festuca roemerii*, *Danthonia californica*.
- 3,420 containerized plants from 8 different native species to be grown at Dorena Genetic Resource Center.

### Restoration project implementation:

- Continued re-vegetation efforts at Blue Ledge Mine.
- Volunteer watering and care of planted whitebark pines (Fig. 2).
- Ashland Forest Resiliency Project; diversity seedings (Fig. 1).
- With Student Conservaton Association interns, planted over 1,500 shrubs and forbs from 5 different native species for several engineering projects along the Lower Rogue River.
- Sowed over 1,000 lbs. of native grass into the wild for Wildlife, Invasive Plant, Riparian Restoration and Engineering projects on Gold Beach and Powers RDs .
- Southern Oregon University volunteers planted 300 shrubs and forbs at McGribble Meadow (OHV damage restoration).

### Other Projects:

- Viability test results obtained for 40 older grass seed lots.
- Prepared re-vegetation prescriptions for three future large scale native plant restoration projects (Copper Salmon Wilderness, Bradford Wall and Big Redwood Culvert). Plants are being propagated this winter and will be ready for out planting in Fall of 2013 and 2014.

### Funds were also used to:

- Help managing seed crops at J. Herbert Stone Nursery.
- Write seeding/fertilizer/site prep prescriptions and assemble seed for various other wildland restoration projects.
- Pay seed cleaning and storage costs.



Figure 1. Lomakatsi Restoration seeding Winburn Ridge in Ashland Watershed, Sept. 2012.

<b>Expenditures:</b>	\$ 5,000 (NFWW)
	\$ 32,000 (NFTM)
	\$ 15,000 (CWKV)
	\$ 5,000 (RAC)

**Partners/Contractors/Cooperators:** Pacific Northwest Natives, Benson Farms, Lomakatsi Restoration, Ski Ashland, Bend Seed Extractory, Dorena Genetic Resource Center, Southern Oregon University, Student Conservation Association.

### Forest Contact:

Wayne Rolle, Forest Botanist 541-618-2056, wrolle@fs.fed.us.



Figure 2. Norm Jensen collecting whitebark pine cones on Mt. Ashland, October 31, 2011.



**Rogue River-Siskiyou National Forest**  
Supervisor's Office  
3040 Biddle Road  
Medford, OR 97520

# Siuslaw National Forest Native Plant Restoration Program

## 2012 Accomplishments

In 2012 the Native Plant Program produced planting stock and seed used for the restoration of upland meadows, estuaries, habitat for the federally threatened Oregon silverspot butterfly, and re-vegetation of disturbed or bare soil resulting from project activities. A total of 1,650 pounds of seed grown from wild-collected foundation material was delivered, and 4000 willow cuttings and 11,300 plugs were planted.

### Seed Delivered:

- 1,000 lbs Alaska brome (*Bromus sitchensis*)
- 650 lbs Roemer's fescue (*Festuca idahoensis* ssp. *roemeri*)

### Cuttings Planted:

- 4,000 Hooker's willow (*Salix hookeriana*)

### Plants Produced: 11,300 Total

- early blue violet (*Viola adunca*)
- yarrow (*Achillea millefolium*)
- pearly everlasting (*Anaphalis margaritacea*)
- coastal wormwood (*Artemisia suksdorfii*)
- Canada goldenrod (*Solidago canadensis*)
- coast strawberry (*Fragaria chilensis*)
- aster (*Aster chilensis*)
- dune tansy (*Tanacetum camphoratum*)

### Seed Collected:

- yarrow (*Achillea millefolium*)
- Olympic onion (*Allium crenulatum*)
- field chickweed (*Cerastium arvense* ssp. *strictum*)
- Menzies larkspur (*Delphinium menziesii*)
- wooly sunflower (*Eriophyllum lanatum*)
- wallflower (*Erysimum capitatum*)
- bluehead gilia (*Gilia capitata*)
- Martindale's lomatium (*Lomatium martindalei*)
- Cardwell's beardtongue (*Penstemon cardwellii*)
- Douglas' catchfly (*Silene douglasii*)

### Restoration Projects Implemented:

11,300 containerized plugs were planted in support of Oregon silverspot butterfly habitat restoration, willow cuttings were used to re-vegetate the former Pixieland Amusement Park, areas of disturbed soil were seeded with native grass for timber sale, watershed restoration, and road projects, and upland meadow habitat was enhanced with native seed.



Figure 1. Seed mix trials at an Oregon silverspot butterfly habitat restoration site following solarization . Photo: Marty Bray USFS

<b>Year :</b>	2012
<b>Expenditures:</b>	<b>\$44,770 Total</b>
	\$20,000 (NFTM)
	\$ 9,960 (NFWF)
	\$ 9,310 (CWFS)
	\$ 4,500 (NFVW)
	\$ 1,000 (SRS2)

**Partners/Contractors:** USFWS, NRCS Corvallis Plant Materials Center, Oregon Coast Aquarium, Oregon Zoo, Woodland Park Zoo, Siuslaw Soil and Water Conservation District, Mid-Coast Watershed Council, Salmon-Drift Watershed Council, Benson Farms, Western Reclamation, Institute for Applied Ecology, Willamette Gardens.

**Contacts:** Marty Stein 541-563-8417  
Doug Glavich 541-750-7048  
Marty Bray 541-563-8452



Figure 2. Coastal wormwood in production at NRCS Corvallis Plant Materials Center. Photo: Amy Bartow NRCS



**Siuslaw National Forest**  
3200 SW Jefferson Way  
Corvallis, OR 97339

# Umatilla National Forest Native Plant Restoration Program

## 2012 Accomplishments

### New Contracts Awarded and Funds Obligated:

New task orders were awarded to

- Coeur d'Alene nursery to establish small increase field of *Thermopsis montana* (mountain goldenbanner)
- To L&H Seeds and Benson Farms to grow 500 pounds of blue wildrye and 500 lbs of California brome from fields to be sown in 2013 for North Fork John Day District.
- To Benson Farms to grow 1000 pounds of California brome from field to be sown in 2013 for Pomeroy District.

### Seed purchased from ongoing increase fields:

- Purchased 8 lbs of parsnipflower buckwheat from Benson Farms for the great biochar experiment at Rocky Mountain Research Station.
- Purchased 750 lbs of Idaho fescue, 750 lbs of Sandberg's bluegrass, 550 lbs of blue wildrye, 550 lbs of bluebunch wheatgrass, 2000 lbs of California brome from Benson Farms for Pomeroy District.

### Seed Collections and cuttings:

- Collected 10 lbs seed of a forb, goldenbanner on Walla Walla District.
- Collected 12 lbs seed of elderberry and small collections from red osier dogwood, black hawthorn, and serviceberry.
- Cuttings taken from clones at Clarno stool beds and the Forest to produce 600 black cottonwood, 600 willow, 200 quaking aspen at Plant Works for North Fork John Day District projects.
- Collected and propagated 1500 native shrubs of various species at Coeur d'Alene nursery for planting on Pomeroy District.

### Planting/Restoration Project Implementation:

- Planted 1968 lbs seed of native grasses and forbs on timber sales, Phillips Cr decommissioned road, Umatilla Forks and Woodward campgrounds, Buck Cr cabin, Bluewood ski area, culvert replacement sites, Cold Spring Fire, Camp Creek mine and other disturbed sites on all four districts.
- 700 shrubs (willows, red osier dogwood, black cottonwood, Lewis' mock orange) planted and caged with help of Ukiah school children, USFS personnel, North Fork John Day Watershed Council in riparian areas on North Fork John Day District.
- 1865 shrubs (thinleaf alder, red osier dogwood, black hawthorne, willow, black cottonwood, dwarf rose, Nootka rose, Lewis' mock orange, blue elderberry, serviceberry, prickly currant, sticky currant, quaking aspen) planted and caged by USFS personnel for Wall Creek watershed project.
- Maintained native plant demonstration garden at Tollgate visitor center.



Figure 1. Northwest Youth Corps maintaining buck and pole fence to protect aspen on Walla Walla District. Photo by Betsy Kaiser

**Year Awarded:** 2012

**Project completion:** 2012 and beyond

**Expenditures: \$98,833 Total**

\$43,000 (NFTM)

\$14,000 (NFN3)

\$ 5,000 (WFHF)

\$ 10,000 (CMLG)

\$ 20,133 (SRS2)

\$ 6700 (CWKV)

**Integration:** Other BLIs and grants contributed to accomplishments as a result of program integration esp. the Watershed and Aquatic Restoration Program.

**Partners/Contractors:** Benson Farms, Dorena Genetic Resource Center, Plantworks, NRCS Plant Material Center, Clarno, Rocky Mountain Research Station, Coeur d'Alene Nursery, WDFW, Confederated Tribes of the Umatilla Indian Reservation (CTUIR), Nez Perce Tribe, Northwest Youth Corps., OSU seed lab

**Contacts** Joan Frazee 541-278-3931; Karen Prudhomme 541-427-5391.

NOTE: Native plant expenditures shown in box above include salary for Karen Prudhomme for management of task orders under regional seed production and restoration services contracts; and NFN3 carryover to obligate task orders for new seed increase contract.

**Monitoring** took place on plantings at Jubilee Lake campground; Woodward Campground, Jarboe Creek riparian restoration.



**Umatilla National Forest**

2517 S.W. Hailey Ave.  
Pendleton, OR 97801

# Umpqua National Forest Native Plant Restoration Program

## 2012 Accomplishments

### Seed Collection and Propagation

400 lbs. of Prairie junegrass (*Koeleria cristata*) and Roemer's fescue (*Festuca roemerii*) were purchased from Benson Farms. A new field of blue wildrye was established at the JH Stone Nursery.

Wild seed collections of forbs were made for the Oak Flats restoration project. Species collected included: camas (*Camassia* spp.), yellow iris (*Iris chrysophylla*), red columbine (*Aquilegia formosa*), ookow (*Dichelostemma congestum*) and Oregon geranium (*Geranium oregonum*). Additional collections of native grass, shrub and forb species were gathered for additional projects.

Umpqua Botany personnel continued to partner with the Roseburg Phoenix High School to develop a successful native plant nursery on school grounds.

### Restoration Project Implementation

Working with the Federal Highways Administration, seeded a native grass species mix along the now-completed North Umpqua Highway Project and planted approximately 2000 seedlings of native shrubs.

Planted native sedges and other wetland species at the Stinkhole wetlands enhancement project and native, trees, shrubs and grasses at a large pipeline reroute project. Both projects were funded by PacifiCorp.

Additional transplants were interplanted with last year's native plantings at the Clearwater Falls Recreation area to compensate for mortality from last year's drought.

Two acres of closed system roads were amended with straw or dry cake biosolids, turned with an agricultural disk, and seeded with native grasses and forbs.

Tiller Elementary School students restored a formerly blackberry infested riparian area by the Three C Rock Campground with native tree and shrub plantings through the South Umpqua rural Community Partnership (SURCP).



**Figure 1.** Reseeding native grasses along the North Umpqua Highway subsequent to road reconstruction.

**Expenditures: \$162,000 Total**  
\$107,000 (CWKV) \$7,000 (CMRD)  
\$7,400 (CWFS) \$23,000 (NFTM)  
\$40,000 (NFVW) \$10,000 (CMLG)

**Partners/Contractors/Cooperators:** PacifiCorp, Coeur d'Alene Nursery, JH Stone Nursery, Benson Farms, Roseburg Phoenix School, Tiller Elementary School, Federal Highway Administration, South Umpqua rural Community Partnership (SURCP).

**Contact :** Richard Helliwell, 541-957-3337



**Figure 2.** Wetland creation project immediately after planting as a mitigation measure for relicensing of the North Umpqua Hydroelectric Project.



**Umpqua National Forest**  
2900 NW Stewart Parkway  
Roseburg, OR 97471-1274

# Wallowa-Whitman National Forest Native Plant Restoration Program

## 2012 Accomplishments

The Wallowa-Whitman National Forest Native Plant Restoration Program continues to work to develop an inventory of native grasses, forbs, and shrubs to provide for various restoration projects across the forest.

During 2012 we were able to complete the ARRA collection and propagation contracts of 2010. In addition, funds were used to locate and map collection sites, pay for seed cleaning, testing and storage. Also provided assistance and mixed seed for restoration projects and administered contract agreements.

### Restoration project implementation –

Provided approximately 3,275 pounds native grass and forb seed to 22 projects across the forest for rehabilitation of 200 – 275 acres.

- 100 lbs. - Medical Springs- skid trails and landings
  - 50 lbs. - Bald Angel skid trails and landings
  - 50 lbs. - HorseFly skid trails and landings
  - 100 lbs. - Sugar skid trails and landings
  - 100lbs. - Chicken Hill skid trails and landings
  - 80 lbs. - Road Closure
  - 200 lbs. - Range Improvement
  - 850 lbs. - Meadow Creek Aquatic Restoration
  - 450 lbs. - Battle Creek Aquatic Restoration
  - 20 lbs. - Dark Canyon culvert and stream restoration
  - 50 lbs. - Thorn Springs Range and Riparian restoration
  - 150 lbs. - Sundry Stewardship, skid trails and landings
  - 250 lbs. - Sheep Timber Sale, skid trails and landings
  - 5 lbs. - Pinus Aspen Restoration, skid trails and ford
  - 70 lbs. - Moonshine T.S. skid trails and landings
  - 100 lbs. - Cactus Mt Fire suppression rehab project,
  - 150 lbs. - Cactus Mt BAER project
  - 100 lbs. - Mud Creek Fire suppression rehab work/  
weed treatment.
  - 50 lbs. - Culvert replacement work.
  - 50 lbs. - Restoration work on dispersed campsites
  - 50 lbs. - Green McCoy and Bovine timber sales
  - 50 lbs. - Hang Glider Launch site project on Mt Howard.
- 3,275 lbs.**



**Wallowa-Whitman National Forest**  
P.O. Box 907  
1550 Dewey Avenue  
Baker, OR 97814

### **New foundation seed collections**

#### **Purchased –**

580 lbs. Idaho fescue  
260 lbs. bluebunch wheatgrass  
100 lbs. of bottlebrush squirreltail  
**940 lbs.**

#### **Collected –**

15 lbs. native grass seed (bluebunch wheatgrass,  
Sandberg's bluegrass, and Idaho fescue)  
5 lbs. native grass seed (mountain brome)  
20 lbs. native shrub seed (big sagebrush)  
**40 lbs.**



Figure 1. Prairie Junegrass field, BFI, Inc. Washington

**Year Awarded:** 2012

**Project completion:** 2012

**Expenditures: \$45,000 Total**

\$25,000 NFTM

\$ 5,000 NFWF

\$ 5,000 WFHF

\$10,000 CMLG

#### **Partners/Contractors/Coop:**

Benson Farms, Inc., Bend Seed Extractory, Karma's Forest, Great Bear Restoration, The Nature Conservancy, Wallowa Resources, and Shepridge Farm and Forestry.

**Contacts:** Robyn Darbyshire, Jerry Hustafa, Lynne Smith & Penny Hall (541-962-8558)

# Willamette National Forest Native Plant Restoration Program

## 2012 Accomplishments

### Seed Growout Contracts:

We currently have 1 existing and 3 new task orders on the Regional Grass Seed Growout contract resulting in procurement of the following:

- 22 Tons of native weed-free grass straw
- 4569 # blue wildrye seed
- 2350 # California brome seed

We expect delivery of 500 lbs. of Columbia brome early next fiscal year.

### Seed Collection:

Due to the fact that 2011 was a very wet year and seed did not mature until late, additional seed was collected for the Respect the River project, including salmonberry, twinberry, California brome and Oregon sunshine on Detroit District and cascara and dwarf Oregon grape on Sweet Home District. Pearly everlasting, goldenrod, Oregon sunshine, lupine and deervetch were collected by YCC members and spread on temporary and decommissioned roads, a bridge replacement and on invasive species removal sites on McKenzie District.

### Wildlife Forage Growout:

Corvallis Plant Material Center established seed increase plots of *Iris tenax*, *Eriophyllum lanatum*, *Lotus unifoliatius*, *Lotus crassifolius*, *Penstemon cardwellii*, and produced plugs of *Trifolium variegatum* to be used to create seed increase plots in the spring of 2013.

### Cooperative Projects:

Using funds from a CCS called Keeping it Native!, we initiated seeding trials at Santiam Pass ATV Area. Plugs were successful in all but the harshest sites, so our main partner, [Walama Restoration](#), will be growing plugs and planting them on site with grant funding in 2013 and beyond. [Native Grounds Nursery](#) will be growing 500 plants with seed provided by Sweet Home District for their Respect the River riparian restoration. And [Eagle's Pride Nursery](#) grew 100 native plants for McKenzie District.

In 2012 Detroit District created a new partnership with [Stayton High School](#) for a 3-4 year seed growout project. High school students will be responsible from growing 300 plants per year with genetically local seed provided by the Forest Service.



Figure 1. Walama Restoration Project crew monitoring plug survivorship in closed ATV trails at Santiam Pass

**Year Awarded/Completed:** 2012

**Expenditures: \$ 91,000 Total**

\$ 10,000 (CMLG)

\$ 8,000 (CMRD)

\$ 31,000 (NFTM)

\$ 5,000 (NFN3)

\$ 20,300 (SRS2)

\$ 3,900 (WFHF)

\$ 12,800 (CWKV)

**Partners/Contractors/Coop:** Benson Farms Inc., Western Reclamation, Native Grounds Nursery, Corvallis Plant Material Center, Trillium Gardens, Walama Restoration Project, McKenzie Youth Conservation Corps, Stayton High School, McKenzie High School's Eagles Pride Nursery

**Contact:** Jenny Lippert 541-225-6440



Figure 2. Sample of Nursery Bed being developed on Detroit Ranger District



**Willamette National Forest**

3106 Pierce Parkway, Suite D  
Springfield, Oregon 97477





