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Forest Service
Fremont-Winema
National Forests

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FREMONT-WINEMA NATIONAL FORESTS

Monitoring and Evaluation Report

Fiscal Year 2010

The Fremont-Winema Forest Monitoring Report compares forest accomplishments with what was projected for yearly accomplishments in Chapter 4 of the two Forest Plans (see table 2010 ACCOMPLISHMENT OF OUTPUTS AND SERVICES on page 10). A summary of what the Forest accomplished is presented under the headings below along with a description of monitoring actions taken in 2010 for hydrology, fisheries, wildlife, and botany. Much of the work was conducted in preparation of future actions and the information gathered was used in developing and analyzing those future projects.

Vegetation Management

Accomplishments for vegetation management in 2010 are listed below:

- The Forest offered fourteen timber sales and awarded twelve of them. Included in sales offered were two salvage sales and three biomass sales (two of the biomass sales had no bids). The Forest offered a total of 57 million board feet in FY 2010, 11 million board feet was carryover from the previous year.
- Timber sales harvested this year improved forest health and wildlife forage on 6,066 acres through commercial thinning and salvage.
- The Forest completed two new stewardship projects, Dent South and Stack Stewardship, under the 10 year stewardship contract with Collins Pine. An estimated 18 million board feet of timber from three stewardship projects was made available for harvest in FY10.
- The Forest continues to implement the Red Zone Safety Project. In FY 2010, dead and dying trees were removed from one campground and two timber sales sold. Work progressed on three additional timber sales to be offered in FY 2011.
- The Forest sold approximately 3,000 personal use firewood permits totaling almost 14,000 cords and an additional 790 free-use firewood permits totaling approximately 6,700 cords. The Forest also sold 143 permits of commercial firewood totaling 877 cords.
- There was a total of 890 acres reforested this year the majority was in past wildfire areas with a minor amount in mountain pine beetle-caused tree mortality areas.
- Timber stand improvement projects encompassed approximately 8,300 acres.

Forest Health

The 2010 aerial survey of mountain pine beetle infestations indicate an expansion of light tree mortality (less than 10 trees per acre) onto 100,000 acres that have not had previous mortality. In the areas of past mortality, about 80,000 acres continued to have additional mortality that cumulatively would be considered to have a moderate level of tree mortality (10 to 50 dead trees per acre). Tree mortality in the Yamsay Mountain and Crane Mountain infestation areas continued to expand into new areas. Mortality is expanding on the Chiloquin Ranger District with two areas of recent infestation, one north of Spodue Mountain and the other west of Feugo Mountain. While the mountain pine beetle is a natural component of lodgepole pine forest, epidemic outbreaks are cyclic and coincide with the natural life span of the trees, generally between 80 to 150 years of age. The mountain pine beetle can affect all western pines, including whitebark pine.

Hydrology/Aquatics/Watersheds

The Forest Plans' Standards and Guidelines provide direction to meet Forest goals by maintaining and improving water quality, fish habitat, and other water related resources. Various protocols have been established on the Forest to monitor water quality.

Stream temperature monitoring was conducted on the Forest at 76 locations this past year. Objectives for monitoring include watershed characterization, long-term monitoring to provide baseline for comparison to other sites, monitoring thinning units, and monitoring stream restoration projects.

Water quality was monitored bi weekly at two locations on Jack Creek from June – September in order to assist in evaluation of effectiveness of riparian fencing for protection of Oregon Spotted Frog habitat.

Groundwater levels were monitored in the Jack Creek Watershed. A network of piezometers was installed with deployment concentrated in the vicinity of three fens located in Wilshire, Johnson, and Dry Meadow with additional dispersed sites in the Jack Creek valley, tributary valleys, and wetlands. The network includes areas characterized by wetland plant communities as well as areas where ground water levels were expected to be within 1 m of the surface during late summer (August). These were installed to evaluate the allocation of water for cattle while protecting ground water dependent ecosystems and determine down valley impacts of withdrawal for cattle watering and the response of the system to changing climate.

Wildlife

The Forest continues to focus on habitat inventory and restoration efforts for wildlife, especially those habitats for species of conservation concern. In 2010, conifer encroachment was thinned on 551 acres to improve Oregon spotted frog and other riparian habitats and juniper was cut on 734 acres to improve sage grouse and mule deer winter range habitat. In addition, the following collaborative programs continue to gather information on various species of concern:

- **Oregon spotted frog**: egg mass surveys continue. The Forest participated in a Klamath Basin-wide interagency survey effort, which included the Bureau of Land Management, US Fish and Wildlife Service, US Geologic Survey, and several private landowners. Efforts to plan and implement improvement and restoration of Oregon spotted frog habitats on national forest lands are underway. Revisits of historic localities of Oregon spotted frog, a US FWS candidate species, suggest the species has been lost from 70 to 90 percent of its historic range.
- **Northern spotted owl**: the Forest continued its cooperative agreement with Oregon State University to monitor northern spotted owl nest occupancy, nest productivity, and nestling survival rate for active northern spotted owl nests on the Klamath Ranger District.
- **Mollusks surveys**: the Forest conducted surveys for mollusk species of concern, including five species currently on the Regional Forester's Sensitive Species list for the Pacific Northwest Region. The surveys are part of the range allotment planning and management efforts across the Forest.
- **Bald eagle and peregrine falcon**: monitoring of bald eagle and peregrine falcon nesting success at known nest sites across the Forest was continued.
- **Neo-tropical migratory birds**: monitoring efforts continued for these populations, in cooperation with the Klamath Bird Observatory and the Institute for Bird Populations.

Fisheries:

- **Fish Habitat**: The Forest surveyed 45 miles of stream habitat in 2010. The survey data provides a record of current physical stream conditions and baseline information about the aquatic species present. Stream survey data is also used to identify aquatic habitat restoration projects and as a monitoring tool to document the success of past restoration projects. In 2010 the forest accomplished 152 miles of stream habitat restoration and 5 acres of lake habitat restoration.

- **Fish habitat and grazing**: There are 15 stream channels that are measured at a minimum of every five years to detect changes in channel dimensions over time. Ten channel cross-sections are monitored at each location; in 2010 two new sites were established on Thomas Creek and Barns Valley. Riparian condition, bank stability and photo points were assessed at three of the locations this year.
- **ESA Aquatic Species Recovery Actions**: Monitoring is being conducted on streams in critical habitat or on stream channels that may influence habitat for Lost River Suckers. Opened up over 2 miles of shortnose sucker habitat with a culvert replacement in Horse Canyon Creek. A removal of a culvert barrier in the lower North Fork Sprague River resulted in bull trout (and lamprey) access to over 90 miles of quality habitat. The culvert was replaced with a 34 ft channel spanning bridge. Road improvements along FS 3413 road reduced sediment inputs to 3 miles of Three-mile Creek, the single remaining population of bull trout on the Winema National Forest.

- **Invasive Aquatic Species:** Improvements to the Threemile Creek Fish Barrier provided long term stability and function which will prevent brook trout interaction with bull trout within this stream. The Forrest provided ODFW with technical assistance in the planning of brook trout removal from 3 miles of Three-mile Creek.

Botany

The Forest botany program has three main focus areas: development of native plant materials for restoration projects; prevention and control of invasive plants; and rare plant management. Below are some highlights from 2010.

- **Native Species**: New contracts were awarded and funds obligated to produce 1,700 lbs of native grass seed. Seed from the populations of three native grasses were collected with help from partners Integral Youth Services and REACH INC. These lots will be multiplied with future seed production contracts. The Forest worked with the Dorena Genetic Resource Center to evaluate methods for growing chinquapin shrubs to use in future revegetation of recreation areas. Partnership funding was used to produce 5,000 hardwood seedlings of 7 different species and 1,000 sedge plugs for various watershed restoration projects in the Klamath Basin.
- **Invasive Plants**: The Forest completed 2,697 acres of invasive plant treatment, exceeding target by 400 acres. 413 new infestations were located during surveys. 804 previously treated sites were found to be inactive, with no plants present in 2010. Prevention measures were implemented during underburn, stream restoration, and timber sale projects. Prevention and identification training was held for forest personnel. Partners and cooperators in the Forest's invasive plant program included Oregon Department of Agriculture, Klamath County, Integral Youth Services, REACH Inc, and the Lake County Cooperative Weed Management Area.
- **Rare Plant Surveys**: A report for 2009 bryophyte and carex surveys in fens on Chemult District was completed, and another 700 acres of habitat was surveyed. 95 sites of sensitive plants have been found in Chemult fens during the past two years. Surveys were also conducted on 850 acres of dry meadow and scabland habitats for Bolander's spikerush. 26 sites of this species were mapped. The Forest completed ISSSSP funded fungi surveys in spring, 2010. 36 sites of sensitive and strategic species were found, including *Sedecula pulvinata*, a rare hypogeous fungus documented in Oregon for the first time.
- **Rare Plant Management**: The Forest completed planning and signed a decision to restore and maintain pumice grapefern habitat with non-commercial thinning treatments. Baseline monitoring was established prior to treatment. Monitoring of red root yampa at Pelican Barn was conducted and indicated the population was shifting into the wetter part of the meadow. Seed was collected for future establishment of populations in conjunction with a watershed restoration project, which

should improve water storage in the meadow. The Forest partnered with Oregon Department of Agriculture to outplant the State Listed species Oregon semaphore grass at a site along Thomas Creek.

Range

The Forests provided grazing to 50 permittee's by authorizing a total of 72,038 AUM's. This is under the 74,134 permitted AUM's available and is a reflection of the total non use taken by 3 permittee's and partial non use taken by several permittee's. The Forests completed rangeland and other resource assessments on 3 allotments, resulting in updated Allotment Management Plans for these allotments. The Forests are currently working on 3 additional AMP's to be completed in 2011. Two miles of new pasture fence was constructed to implement recently developed AMP's. Several spring source protection projects were implemented. The Forests continue to monitor range allotment management to insure continued compliance with programmatic biological opinions issued by the U.S. Fish and Wildlife Service.

Recreation

There have been various accomplishments in recreation for the Fremont-Winema National Forests.

- Foremost among these accomplishments is the Travel Management Environmental Assessment. The Travel Management Rule was established to assist National Forests nationwide by providing them better planning tools to help manage their roads, trails and areas designated for motor vehicle use. The forest analyzed three alternatives and implemented Alternative 3. This alternative designates approximately 6,426 miles of roads and 173.5 miles of trails for a total of 6,599.5 miles designated for motorized use. Approximately 165 miles of ML 1 will be designed motorized trail. Alternative three represents a blend of input from the public, local government, landowners and other agencies. The travel rule was signed **July 8, 2010** by Rick Newton, Acting Forest Supervisor. Implementation of the decision will begin with the publication of the Motor Vehicle Use Map (MVUM) in spring 2011.
- A Recreation Facilities Analysis (RFA) was completed for the forest in 2008. The RFA is an analysis process developed nationally to help forest align their developed recreation sites with the unique characteristics of the forest, projected recreation demand, visitor expectations and revenue. Through the RFA process, the Forest drafted a "program of work" outlining the proposed management of these sites over the next 5 years. The following is a summary of the management actions defined in the "program of work":
    - Major facility replacement at 18 developed recreation sites; none were replaced in FY 2010.
    - Facility improvements at 17 developed recreation sites. Some improvements were made in previous years, but none were accomplished in FY 2010.
    - Restore the Fremont Point recreation cabin
    - Reduce deferred maintenance backlog of approximately $1,966,000
    - Increase fees at eight developed recreation sites. Most of these fees were increased in FY2010.
    - Start charging fees at 10 developed recreation sites. This was accomplished in FY 2010.
    - Partially remove or reduce services at 10 developed recreation sites
    - Convert two developed recreation sites into dispersed recreation spots. Completed in FY 2009

- No additional facilities proposed for concessionaire operation. No additional concessionaire facilities were proposed in FY 2010.

Social and Economic Aspects

Secure Rural Schools Act, Title II Program

For the FY 2010 program, the Fremont-Winema RAC recommended and the Forest approved approximately $1.8 million of Title II funding for 26 watershed restoration projects including $1.2 million for Klamath County and $622,000 for Lake County.

- Of the 26 projects awarded, 16 are in Klamath County and 10 are in Lake County. Nine of the funded proposals were submitted by private landowners and agencies outside of the Forest Service, including U.S. Fish and Wildlife Service, Klamath Watershed Partnership, Oregon Department of Forestry, Oregon Parks and Recreation Department, Town of Lakeview, Lake County Coop Weed Board, Clean Forest Project, Goose Lake Watershed Council. The other 17 projects were located on the Fremont-Winema National Forest.
- The funded 2010 projects involve hazardous fuels reduction, bark beetle mitigation, fish passage and connectivity, wildlife habitat improvement, aspen regeneration, erosion control, noxious weed treatments, trash clean up, stream channel restoration, wildlife habitat improvement and meadow and riparian restoration. The majority of these projects are well on their way to completion. In addition to land stewardship benefits, these projects created employment opportunities to members of local communities. The 2010 Title II accomplishments continue to build upon previous year projects and are integrated to meet strategic landscape level restoration objectives.

Tribal Government Relations; Working in Partnership with the Klamath Tribes

The Forest remained active with project consultation and partnerships with the Klamath Tribes. The Forest meets with the tribe quarterly to discuss projects that will appear in the Schedule of Proposed Actions (SOPA) and districts meet with them over projects of specific interest to the Tribes. There were several areas of partnerships and consultation worth highlighting.

- Recovery Act Tribal Forest Improvement Training Program is a Success: With the assistance of Fremont-Winema NF, forestry consultants, OSU Extension staff and other partners, the Klamath Tribes designed, created and is implementing a training program that has produced two highly qualified ten-person forest restoration crews. Through the grant program and support of partners, a curriculum was designed that provided classroom and field instruction in basic forest management, silviculture, contracting, timber marking, layout and implementation of prescriptions. Participants are given increasingly more complex training and tasks that enable them to progress from trainees to qualified crewmembers that, through field exercise projects provided by the Forest, Oregon Department of Parks and Recreation, The Nature Conservancy and several private timber land owners, are now skilled in hazardous fuels reduction, pre-commercial thinning, whip felling, slash abatement, vegetative restoration, wildlife habitat improvement, and other forest improvement activities.

Field accomplishments involved the completion of manual thinning, fuels reduction and slash abatement work on over 900 acres of private forest lands and lands managed by state and federal agencies. In addition, 150 acres were treated on TNC Sycan Marsh lands and 45 acres were treated in collaboration with Lomakatsi Project on private land.

- Partnership in Forest Management: The Forest and Tribes continue to work together to incorporate the Tribes' Forestry plan objectives through environmental analysis and project implementation. Jerry Franklin and Norm Johnson provided a Forest Restoration workshop for Forest line officers, staff and program managers in June 2010 that highlighed tribal management objectives for former reservation lands.

- Supporting At Risk Youth: The Chiloquin District and Forest Botany Program continued to implement an agreement with Integrated Youth Services and the Klamath Tribes to support a summer at risk youth program that provides summer work, conservation education programs, and the teaching of life and work skills.

- Travel Management: The Forest and Tribes came to agreement regarding the implementation of the Travel Rule and off road management activities as it relates to tribal members exercising treaty rights on former reservation lands.

Community Partnerships

The Forest continues to build upon existing partnerships and develop new partnerships. Partnerships in resource management and community programs include The Nature Conservancy, Klamath Outdoor School, Klamath Bird Observatory, Klamath Lake Forest Health Partnership, Klamath Watershed Partnership, Lake County Watershed Councils, Klamath Basin Rangeland Trust, Backcountry Horsemen, Northwest Youth Corp, Integrated Youth Services, Lake County Cooperative Weed Board, Klamath County Corrections, Bureau of Land Management, US Fish and Wildlife Service, Oregon Department of Fish and Wildlife, Oregon Department of Parks and Recreation, Oregon Department of Forestry, and Oregon State University. Projects and programs supported by these partnerships included everything from wildlife habitat protection, neotropical bird and aspen rejuvenation research, forest interpretation, fish passage, weed control, trail construction and maintenance, and meadow and stream restoration. More than $.5 million in matching funds, leveraged resources and expertise was realized by Forest programs.

Roads and Transportation

In 2010, forest crews verified use and road objectives on approximately 1,360 miles of National Forest System roads. This information was useful in developing the Forest's travel management program and helps the Forest provide the public accurate information about road use. This inventory will continue in the future and will be used to update the Forest's road inventory to better reflect the type of motorized use desired by public and the Forest for resource management. The Forest will be better able to produce Motor Vehicle Use Maps and Forest visitor maps that would be more helpful to the public. As part of the inventory, the Forest road crews improved the public's usability of the road system by installing approximately 1,500 signs in 2010.

In 2010 several Forest Roads and stream crossings were improved for drivability and resource protection beyond what occurred under the yearly road maintenance program.

- Forest Roads 3513 and 3513-110, 3.4 miles, were rehabilitated by storm-proofing road drainage structures and placement of aggregate surfacing to prevent siltation of Threemile Creek. This work helps to reduce direct road impacts to the bull trout habitat.
- Two open-bottom culverts were installed on a 0.4 miles stretch of Forest Road 3704 to reduce the potential of a washout by increasing flow capacity and provide improved aquatic passage under the road.

- Bauers Creek's fish passage connectivity was improved by replacing the crossing with a 12 foot open-bottom culvert, allowing for unrestricted natural stream flow.
- The Forest striped 1.4 miles of paved road and reconstructed by grinding deteriorated asphalt pavement 3.4 miles of Roads 3790 and 3752 replacing the pavement with crushed aggregate surface.
- The North Fork Sprague River Bridge was constructed to replace a 14-foot diameter culvert to improve aquatic passage.
- A wood bridge on Varney Creek was replaced with a box culvert to provide a stronger structure to access the storage barn and provide better high water passage.
- Two different timber sales in 2010 reconstructed 6.55 miles of roads.

Implementation of Forest Plan Standards and Guidelines

The Forest continues to focus on Plan Standards and Guidelines through project planning and implementation monitoring. Projects have been implemented as planned. The majority of actions implemented on the Forest were consistent with the Forest Plans and did not require forest plan amendments. There were three projects with forest plan amendments that were determined to be non-significant in 2010. The findings were consistent with 36 CFR 219 and did not apply to other actions. It is expected that other projects will need amendments for the newer findings of the US Fish and Wildlife Service that reduces the size of protection zones around bald eagle and spotted owl nest sites. At some time in the future these changes will be made to both Forest Plans. There were two Forest Plan amendments for each of the Forest Plans.

Fremont Forest Plan Amendments

- Amendment 35: A non-significant amendment specific to the Ruby Pipeline Project exempting the construction from several forest plan standards and guidelines for soils, seeps and springs, visual quality where the pipeline crossed MA 6, and replacing dedicated old growth lost by the pipe installation.
- Amendment 36: This non-significant amendment has made to make the Forest plan direction consistent with the 2005 Travel Management Rule; standard D Transportation 2. for Management Area 7 on page 161will be replaced with the words "Motorized vehicle use is prohibited outside of roads, trails, and areas designated in the Motor Vehicle Use Map, consistent with 36 CFR 212."

Winema Forest Plan Amendments

- Amendment 19: A non-significant forest plan amendment specific to the Fremont-Winema National Forests Travel Management Project. Item 10-19 will be added to page 4-71 saying "Motorized vehicle use is prohibited outside of roads, trails, and areas designated in the Motor Vehicle Use Map, consistent with 36 CFR 212." Several standards were also changed for protection for northern spotted owls and bald eagles consistent with new science.
- Amendment 20: This is a non-significant forest plan amendment specific to the Westside Project. It amends the table under Standard and Guideline 4-10 on page 4-48 by adding a line to the table shortening the zone of protection to 1/4 mile for northern spotted owls and 1/8 mile for bald eagles. The timing for the nesting/roosting season changes to March 1 to August 10 for northern spotted owls with no change for bald eagles. The changes above for bald eagles would also be included for Management Area 9A Standard and Guideline 3.

The *2010 Accomplishment of Outputs and Services* table on the following page shows numerically what the Forest has produced in comparison to what was planned. Since implementation of the Forest Plans, the Forest has produced well below projected levels in all categories that involve ground-disturbing work,

except reforestation and watershed improvements. This highlights the major emphasis on ecosystem restoration. The recreation related outputs are low due to insufficient funding to do the planned work. Generally, budget levels are limiting outputs in program areas including recreation, timber and fuel treatments.

For more information about forest monitoring see: www.fs.fed.us/r6/frewin/projects/monitoring/

2010 ACCOMPLISHMENT OF OUTPUTS AND SERVICES

MONITORING ITEM	FOREST PLAN PROJECTED OUTPUTS Winema	2010 ACCOMPLISHMENTS Fremont	Green denotes the 2010 Data
FOREST MANAGEMENT			
Allowable Sale Quantity [1]			
MMBF/Year	19	25	46[3]
Timber Sale Quantity [2]			
MMCF/Year	35	28	115[3]
MMBF/Year	167	155	58[3]
Silvicultural Treatments (Ac/Year)			
Commercial Thinning	2,700	7,500	3,888
Overstory Removal	1,600	0	0
Regeneration Harvest	500	8,900	0
Selection Harvest	8,400	12,500	1,942
Salvage Cut	13,700		236
Reforestation (Ac/Year)	6,400	4,000	890
Timber Stand Improvement (Ac/Year)[4]	14,400	8,000	8,317
Fuel Treatment (Ac/Year)[5]	27,600	20,00	49,557
TRAVEL MANAGEMENT			
Road Const./Reconstr (Miles)			
Forest Road Program	22		61
Timber Purchaser Roads	31	156	
Total Road System (Miles)	5,517		12,875
Road Access Mgmt (Miles)			
Open for Use			6,588
Closed to Use			6,287
Road Access Type (Miles)			
Passenger Car	510		1,078
High Clearance Vehicle	2,120		5,510
Intermittent Access	2,887		6,287
RECREATION			
Dev Recreation Construction (PAOT)	695	-	0
Trail Const/Reconstruction (Miles)	124	-	165
RANGE			
Permitted Livestock (AUM)	13,000	70,100	72,038
WILDLIFE			
Habitat Improvements			
T&E Species			
Structures	-	-	
Miles	-	-	
Other Species			
Structures	-	1,450	0
Acres	-	1,100	570
WATERSHED			
Watershed Improvements			
Restoration (Acres)	10	250	5

1. Chargeable volume is the quantity of timber that may be sold, from the area of suitable land covered by the Forest Plan, for a time period specified by the Plan. This quantity is usually expressed on an annual basis as the "average annual allowable sale quantity". On the Fremont NF, chargable volume includes volume down to 9 inches DBH. On the Winema NF, chargeable volume includes volume down to 7 inches DBH.
2. The volume of timber planned for sale during the first decade of the planning horizon. It includes the allowable sale quantity (chargeable volume) and any additional material (non-chargeable volume) planned for sale. Expressed as the average for the first decade.
3. Source: PTSAR Report
4. Timber Stand Improvement is precommercial thinning, the cutting of small diameter trees, less than 8 inches DBH, to sustain growth and vigor.
5. Fuel Treatments include 20,982 acres of underburning and 19,266 acres of other fuel treatments.