



CENTRAL CASCADES **ADAPTIVE MANAGEMENT AREA**

An Invitation to an Adaptive Management and Monitoring Workshop

Beyond the Buzzwords: an Early Progress Report on Adaptive Management
Wednesday, March 10th, 1999 ~ DoubleTree Hotel, Springfield, OR

The Central Cascades Adaptive Management Area is sponsoring a one-day workshop in order to share information and results from monitoring and adaptive management area projects within western Oregon and across the Adaptive Management Area (AMA) network. It will be an opportunity to see how monitoring and adaptive management projects have been or will be used to change and adapt land management practices in western Oregon, Washington, and Northern California. Discussions and presentations will also address how adaptive management has linked people and communities with ecosystem management.

The format for the workshop will be a general session with several presentations, a panel discussion, a simultaneous poster session, and

opening and closing talks on the future of adaptive management and the Adaptive Management Areas.

Anyone who is interested is invited to participate in the workshop. It is free and open to the public, however we would like an RSVP by March 3, 1999. Please reply to Pam Druliner at (541) 822-3317 or at pdruline/r6pnw_willamette@fs.fed.us.

The workshop will be held in the Heritage Room of the DoubleTree Hotel, 3280 Gateway Road, Springfield, Oregon. It will be from 8:30 a.m. to 4:30 p.m.

Workshop agenda and poster sessions are listed on pages 8-9.

Transitions

Coordination for the Central Cascades AMA is again in transition. Jean Nelson Dean who has been sharing coordination duties with John Cissel since the 1997 is moving to a new position in Montana. Her duties will be in transition for a period and this may affect the distribution of this newsletter.

In addition, the Cascade Center for Ecosystem Management newsletter, previously inserted in the CCAMA newsletter, will be discontinued after this printing. We hope these changes do not result in any major inconvenience to you. Please contact John Cissel if you have any concerns. Thank You.

Some Examples of 1998 Central Cascades Adaptive Management Area's Achievements

Blue River Landscape Study Monitoring

by John Cissel, Willamette National Forest

The Blue River Landscape Study is a large-scale, long-term project designed to develop and monitor the effectiveness of an alternative landscape management strategy. The strategy uses historical disturbance regimes as a general model for management activities intended to achieve the objectives of the Northwest Forest Plan. The primary goal is to sustain native habitats, species and ecological processes while providing a sustained flow of wood fiber for conversion to wood products. Timber harvest and prescribed fire are used to create future stand and landscape patterns similar to historical landscapes. The study includes the entire Blue river watershed (approximately 57,000 acres) where the H.J. Andrews Experimental Forest is located.

A multi-scale monitoring plan is being implemented to evaluate the effectiveness of the landscape management plan. Some monitoring components are continuing long-term studies (e.g. stream discharge and northern spotted owl demographic monitoring) and others were initiated in 1998. Permanent pre-treatment plots were installed for trees, vascular plants, and epiphytic lichens across a range of stand conditions and treatments. Tree measurements included species, diameter, height, lichen commu-

nity composition and biomass were measure in conjunction with the tree plots. Three replications of each stand and treatment type were measured. These plots will be periodically remeasured after the timber harvest, prescribed fire and reforestation activities are completed.

Monitoring of stream temperature and stream-breeding amphibian response to timber harvest activities in the watershed was initiated in two sets of three stream reaches in 1998. Each of the three stream reaches represents a different approach to riparian and adjacent upslope management. Temperature sensors were placed and permanently marked in multiple locations and left throughout the summer. Amphibian searches were conducted in the summer as well. Sensors will be placed in the same locations in future years and the amphibian searches will be continued.

Contacts: John Cissel (Willamette National Forest), Fred Swanson (Pacific Northwest Research Station), Steve Acker (Oregon State University), Bruce McCune (Oregon State University), Matt Hunter (Pacific Northwest Research Station), Shanti Berryman (Oregon State University), and Jim Mayo (Willamette National Forest).

H.J. Andrews Experimental Forest Stream Temperature Study

by John Cissel, Willamette National Forest

A multi-year study is underway to assess the patterns of summer stream temperatures in the Lookout Creek watershed, and to understand the factors controlling changes in temperature. The study is assessing streams at both small basin and whole watershed scales using several dozen temperature sensors. Stream temperature patterns are complex and appear to be controlled by multiple interacting factors. While temperatures are generally higher and more variable in downstream stream reaches, stream temperature changes do not always parallel air temperature patterns. In addition, the condition of adjacent

streamside vegetation does not always exert a strong influence on stream temperature. Stream channel morphology appears to play a strong role in stream temperature patterns. For example, bedrock exposures tend to elevate temperatures while passage of streams through alluvium tends to quickly cool streams. This study will continue for another year when final analyses will be conducted and documented.

Contacts: Sherri Johnson (Oregon State University), Stan Gregory (Oregon State University) and John Cissel (Willamette National Forest)

Moose Creek Uneven-Age Management Study

by Suzanne Schindler, Willamette National Forest

During 1998, the Sweet Home Ranger District initiated a new study in the Moose Creek Block of the Central Cascades Adaptive Management Area.

The Moose Creek Study is unique because it is looking at older stands between 80-120 years old. Many stands are or will be in this age class in the near future, but there is limited information on how these age of stands will respond to partial harvest management treatments.

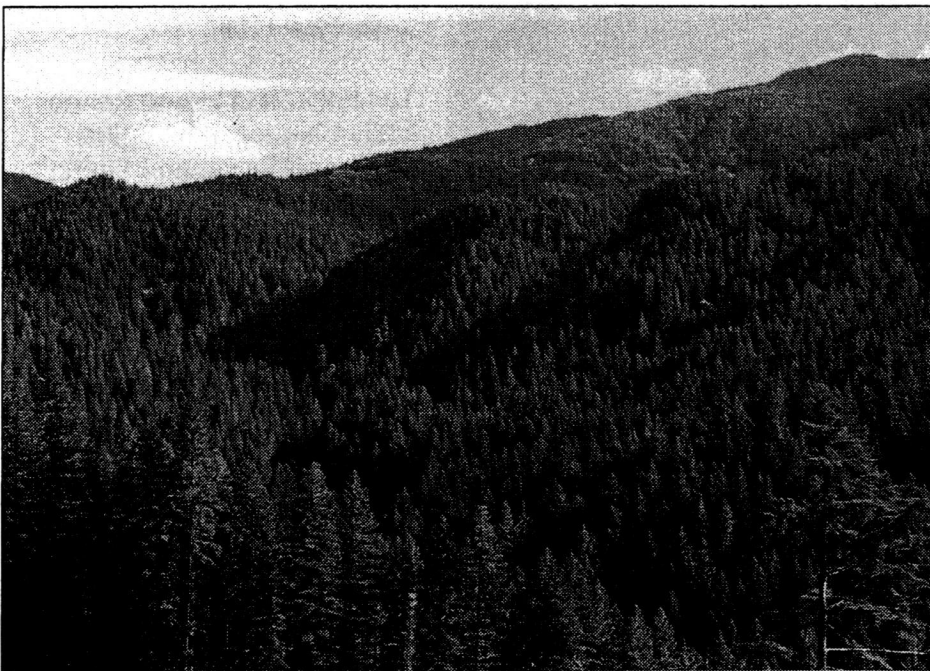
The study is located in the Moose Creek Subwatershed on the Sweet Home Ranger District. Moose Creek flows into the South Santiam River near the western edge of the Willamette National Forest boundary approximately 15 miles east of Sweet Home.

The purpose of the study is to explore active versus passive management for uneven-aged forest stands that retain late-successional conditions. The study will compare five approaches to the formation of uneven-aged stands from mature forest stands aged 80-120 years in the Western Cascade Mountains. Passive management will include no harvest or salvage of timber. Active management will include thinning to

different densities to enhance residual tree vigor and to create an uneven-aged managed forest with the goal of providing both late-successional habitat and periodic timber harvest. The study will test the effect of four stocking level on the development of late-successional conditions. Also tested will be the effect of thinning to achieve a regular or irregular texture on the scale of a few acres. This involves thinning to enhance even distribution of residual trees versus enhancing an uneven distribution of residual trees.

Information on both natural and artificial regeneration will be developed. Several species of trees will be planted in the understory of the partial cutting treatments to add an understory layer and test which species perform best. The study will involve approximately 300 acres within the Central Cascades Adaptive Management Area. Data will be collected both pre and post initial and second harvest (age 0 and 10 years), and at five-year intervals. Three results will be written and published in an appropriate format including: 1) Establishment, 2) 10-year results, and 3) 20-year results.

The study consists of 20 units, each approximately 15 acres in size. Each unit contains nine plots and each plot includes sub-plots and variable plot sampling. Accomplishment in 1998 consisted of establishing seven of the 20 study units and recording pre-harvest information. One of the challenges of beginning this project was the short lead time between project funding, completion of the Environmental Impact Statement, and plot installation. Sampling protocols needed to be developed on short notice and in many cases unit design and layout were occurring concurrently with plot installation.



Overview of the Moose Creek drainage.

Plot installation and pre-harvest measurement on the remaining 13 units is planned for the summer of 1999. Harvest is currently scheduled during the last quarter of fiscal year 2000 with post harvest measurements to be taken in the summer of 2002.

Contacts: Bill Emmingham (Oregon State University, Principal Investigator), Bill Porter (Sweet Home Ranger District), John Cissel (Willamette National Forest).

Camas Prairie Restoration Project

by Alice Smith, Willamette National Forest

The goal of the Camas Prairie Restoration Project is to promote camas production through restoration of a degraded prairie wetland. Elements of the project include camas seed collection and propagation, removal of invading Oregon ash trees and non-native blackberries, prescribed burning, dispersed recreation management, and planting camas seeds and bulbs. The project was initiated as an interagency and intergovernmental Challenge Cost-Share project involving the Bureau of Land Management (BLM) Eugene District, the Siletz, Klamath, and Grande Ronde Indian Nations, private contractors, Oregon State University, and Lane Community College.

Restoration activities at Camas Prairie have been ongoing for two years and additional work remains to be done. In 1996, Mike Southard, BLM Eugene District archaeologist, contracted with Oregon Woods to grow camas bulbs from seed

gathered at the site. The following year the Siletz Indian Nation provided youth crews to remove the invading Oregon ash trees and blackberries, and to assist in gathering additional seed. The tribes serve also as consultants on traditional plant species appropriate to the site. Lane Community College Archaeology Department provided the labor for seed collection and did a literature search on plant species of cultural value. Vegetation plots were installed to determine the density of camas plants prior to treatment and cultural resource surveys were initiated. In 1998, additional archaeological mapping was done and more camas seed was collected with assistance from Oregon State University, Eugene BLM, and tribal members. An abandoned road running through the site was bermed to discourage off-road vehicle use in the fragile wetland prairie. Personnel for the Sweet Home and Detroit Ranger Districts of the Willamette

National Forest did a prescribed burn at the site in September, 1998.

The Siletz and Grande Ronde Indian Nations, the Eugene BLM, and Tawanas Forest Restoration assisted the Sweet Home Ranger District in planting the camas bulbs and seed in the fall of 1998, and will continue to work on controlling invading species. A management plan for the Camas Prairie will be developed with tribal involvement and review.



Camas Prairie



CASCADE CENTER *Research & Management* NEWS No. 6

WINTER 1998/1999

H.J. ANDREWS FOREST • ECOSYSTEM RESEARCH • EDUCATION • ADAPTIVE MANAGEMENT

The Cascade Center for Ecosystem Management is a research & management partnership among the Pacific Northwest Research Station, Oregon State University and the Willamette National Forest. Established in 1991, the Center integrates research and management programs historically centered on the H.J. Andrews Experimental Forest near Blue River, Oregon. The mission of the Cascade Center is to develop, apply, demonstrate, and share new research findings with resource managers and interested individuals.

CASCADE
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LAST ISSUE OF CASCADE CENTER NEWS:

*Cascade Center News to fully
merge with AMA Newsletter*

In an effort to streamline our efforts at the Cascade Center, we have decided to incorporate information from our research and management programs into the Central Cascades Adaptive Management Area newsletter. We are currently developing a Cascade Center

website which will also provide information on new publications, Cascade Center and Andrews Experimental Forest events, and short updates on key research findings. The Cascade Center site should be up and running in early Spring 1999. Look for a link from the Andrews Long-Term Ecological Research home page at: www.fsl.orst.edu/lter.

ANDREWS FOREST 50TH CELEBRATION

On Friday August 21, nearly 300 people gathered at the H.J. Andrews Experimental Forest east of Blue River, Oregon to celebrate the 50th anniversary of the Andrews Forest program. In addition to key representatives from the National Forest System, Oregon State University, Forest Service Research, and the National Science Foundation, spe-

cial guests included fourteen descendants of Horace Justin Andrews.



The Andrews family

TEACHING THE TEACHERS: 20 L.A. SCIENCE TEACHERS TO ATTEND SEMINAR AT ANDREWS FOREST IN MAY

Twenty high school science teachers from the Los Angeles area will be spending four days at the Andrews Forest engaged in hands-on field research with scientists from the Andrews and Cascade Center programs. The objective of the seminar is to provide an example of an integrated scientific approach to ecosystem management and the concept of adaptive management.

The seminar is sponsored by the Los Angeles County Office of Education and is funded by the Los Angeles Systemic Initiative (LA-SI) and the Eisenhower Fund. Most of the teachers have participated in other LA-SI programs including a similar four day seminar in either the Eastern Sierras or Yosemite National Park conducted by field science professionals and resource managers from the USDI Bureau of Land Management, USDA Forest Service and the USDI National Park Service.

VITAL SIGNS:

Water temperature monitoring in headwater streams in the Blue River Landscape Study

Long-term temperature monitoring was initiated this summer (1998) in small headwater streams in the Blue River watershed. Temperature sensors were placed in terminal headwater streams in two timber sale areas expected to be harvested in 1999 or 2000. By monitoring pre- and post-harvest stream temperatures we hope to (1) characterize variability in summer temperature regimes of these small headwater streams, (2) compare pre- and post-harvest temperature regimes with state temperature standards, and (3) quantify the effect that Blue River Landscape Study (BRLS) canopy retention prescriptions have on summer temperature regimes in these small streams. This effort is part of a larger monitoring program developed to help evaluate the results of the landscape management approach being implemented in the Blue River watershed.

Concern for the condition of aquatic ecosystems has driven many changes in land management activities in recent decades. The Northwest Forest Plan (NFP), published in 1994, includes an extensive Aquatic Conservation Strategy designed to restore and maintain aquatic ecosystems on federal lands in the Pacific Northwest. Standards and Guidelines in the NFP prescribe wide no-harvest riparian reserves adjacent to all streams, including intermittent streams, while upper slopes are managed intensively for timber production. By contrast, in the BRLS the rates of timber harvest and the landscape- and stand-level pattern of canopy retention are guided by a natural fire regime template. Therefore, a complete forest canopy is not often left near intermittent streams (except for reasons of slope instability, or other site-specific concerns). Instead, 15-70% canopy cover is retained in harvest units, and the distribution of canopy retention is weighted toward streams. Harvest rates are substantially lower in the landscape study due to longer rotations (100-200 years). No-harvest buffers are retained adjacent to fish-bearing streams.

Because the BRLS is affording somewhat less canopy protection to small headwater streams than prescribed in the NFP, the Cascade Center for Ecosystem Management has initiated long-term monitoring of water temperature and other ecosystem attributes in several streams in the basin.

We chose three streams each in the vicinity of two timber

sales recently sold in the Blue River watershed: North Fork Quartz (NFQ), and Blue River Face (BRF) (Fig. 1). Two harvest units from each sale were used in this monitoring

effort: one with a prescribed buffer and one with the standard prescription for non-fish-bearing streams as described previously for the BRLS. In addition, in the vicinity of each timber sale, a "control" stream was selected for comparison in a stand that would not be harvested. Three temperature sensors were placed in all harvest units and control streams: near the upper terminus of the stream channel, at the bottom of the unit, and one centered between. In addition, in the NFQ timber sale area, sensors were placed several hundred meters below the harvest units at the bottom of each tributary, just prior to its confluence with North Fork Quartz Creek.

Figure 2 illustrates the results of the first year of data collection, pre-harvest. One of the sensors was faulty, and one

Figure 1: locator map of the Blue River watershed in the Willamette National Forest of Oregon.

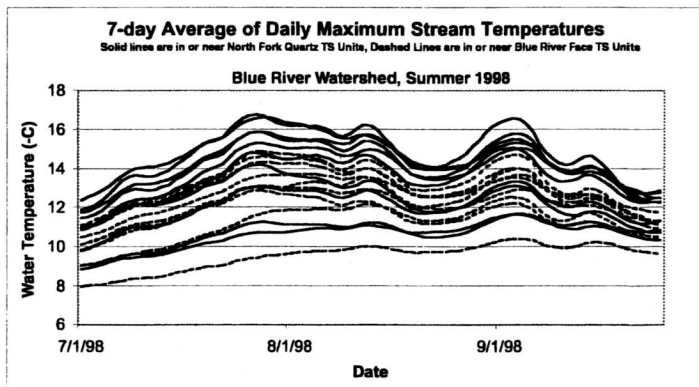
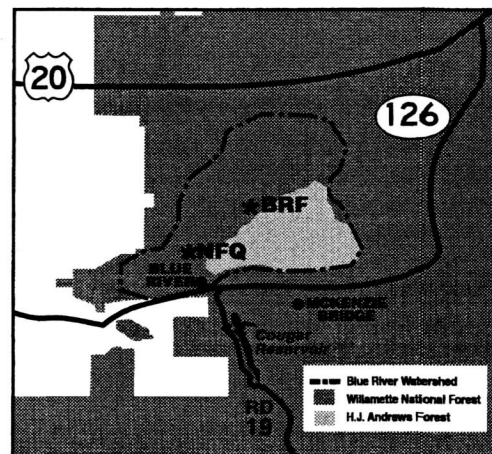


Figure 2: 7-day Average of Daily Maximum Stream Temperatures at 19 Locations in 6 Streams in the Blue River Watershed, Summer 1998, Prior to Timber Harvest

other was left high and dry when the streams dried up; therefore, data from only 19 of 21 sensors are shown. Notice the variability present in these streams. Some show summer peaks in temperature in mid-summer along with more variation through the summer season. Others show a slow, gradual increase in temperature through the summer, not peaking until late in the season. The NFQ streams (solid lines) are in a region of generally steeper slopes, and shallower soils, and more bedrock is exposed in the stream channel. In contrast, BRF streams (dashed lines) are in a region of more gentle topography, with deep volcanic deposits, and little or no bedrock exposure. The higher temperatures and variability in many NFQ streams indicate that stream temperature in these streams may be more controlled by energy inputs from solar radiation, while BRF stream temperatures may be more controlled by an extensive body of cold ground water.

The state standard for maximum stream temperature (7-day average of daily maxima) for the Blue River watershed is 64°F (17.8°C). Summer peaks (7-day average of daily maxima) were several degrees below this standard for most streams, but approached within about 1 degree Celsius for one stream in the NFQ timber sale area. An additional set of sites, in the northeast part of the watershed, is scheduled to enter the monitoring program in summer 1999.

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LINX PROJECT EXPLORES CONNECTIONS WITHIN AND BETWEEN RIVER ECOSYSTEMS

This summer Oregon State University researchers implemented a foodweb study on Mack Creek in the H.J. Andrews Forest as part of an intersite comparison, the Lotic Intersite Nitrogen eXperiment (LINX). This stream ecosystem study is designed to track movements of nitrogen through the aquatic foodweb community. Micro-amounts of N¹⁵ (atomically labeled ammonium) were dripped into Mack Creek over the course of six weeks beginning in July. Intensive sampling was conducted before, during, and after the experiment to examine nitrogen processing and uptake in multiple trophic levels within the stream (algae, detritus, microbes, macroinvertebrates, fish, frogs, and salamanders) and in adjacent terrestrial areas (riparian vegetation, water ouzels, dragonflies).

Nitrogen is an element of considerable interest in stream ecosystems. It limits productivity in some flowing waters while in others it is present to excess. Because streams serve as key hydrologic and biogeochemical links between uplands and downstream ecosystems, understanding how changes in climate, atmospheric deposition of nitrogen, or land use will affect landscapes requires working models of the structure and function of stream processes.

Mack Creek is one of ten sites nationwide selected for the study. Sites range in latitude from the tropics to the arctic and encompass broad gradients in background nitrogen levels, productivity, and hydrology. This range of ecosystems will provide robust tests of the influence of potential factors on nitrogen uptake, retention, and recycling. For more information, contact Linda Ashkenas, Department of Fisheries and Wildlife, Oregon State University: (541) 737-1966, email: linda.ashkenas@orst.edu.

NEW PUBLICATIONS:

A Landscape Plan Based on Historical Fire Regimes for a Managed Forest Ecosystem: the Augusta Creek Study

This new 82-page PNW Research Station publication describes the development of vegetation management regimes for the 19,000 acre Augusta Creek area based on the frequency, severity, and spatial pattern of historical fire regimes in the area. Analysis showed a greater amount of late-successional habitat, larger patches, and better habitat connectivity would result from application of this strategy as compared to literal application of standards and guidelines in the Northwest Forest Plan. The Augusta Creek Study was the forerunner for the Blue River Landscape Study currently being implemented in the Blue River watershed (approximately 57,000 acres).

Research Publications of the H.J. Andrews Experimental Forest, Cascade Range, Oregon: 1998 Supplement

This 94-page bibliography is a 10-year update to two previously published bibliographies on the research publications of the H.J. Andrews Experimental Forest. Published in conjunction with the 50th anniversary of the Andrews Forest, this bibliography lists approximately 700 publications, abstracts, theses, and unpublished reports associated with re-

search at the Andrews forest since 1988. Citations are referenced under appropriate keywords.

For a copy of either document, contact Pam Druliner at (541) 822-3317 or via email at:

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NEW SCIENCE AND MANAGEMENT PUBLICATION SERIES AVAILABLE

Science Findings is a relatively new monthly publication covering key issues in natural resource science and management. Published by the USDA Forest Service, Pacific Northwest Research Station, the series was introduced in February 1998. Eleven issues are currently available and cover topics ranging from a worldwide perspective on wood supply and demand to the effect of military maneuvers on biodiversity in southern California. At six pages, *Science Findings* is easily digestible and well-designed. To get on the mailing list contact Diane Smith at (503) 808-2127 or <desmith/r6pnw@fs.fed.us>. Science Findings is also available on the web at: <www.fs.fed.us/pnw/>.

The following hardcopy publications are available with request via mail or fax from: Publications, Cascade Center/HJ Andrews Forest, FSL, 3200 SW Jefferson Way, Corvallis, OR 97331 Fax: Publications (541) 758-7760

RESEARCH LITERATURE

- ☐ Acker, S.A.; Sabin, T.E.; Ganio, L.M.; McKee W.A. 1998. Development of old-growth structure and timber volume growth trends in maturing Douglas-fir stands. *Forest Ecology and Management* 104: 265-280.
- ☐ Acker, S.A.; Zenner, E.K.; Emmingham, W.H. 1998. Structure and yield of two-aged stands on the Willamette National Forest, Oregon: implications for green tree retention. *Canadian Journal of Forest Research* 28(5): 749-758.
- ☐ Kellogg, Loren D.; Milota, Ginger B.; Stringham, Ben. 1998. Logging planning and layout costs for thinning: experience from the Willamette Young Stand Project. Res. Contr. 20. Corvallis, OR: Oregon State University, Forest Research Laboratory. 20 p.
- ☐ Miller, Eric A.; Halpern, Charles B. 1998. Effects of environment and grazing disturbance on tree establishment in meadows of the central Cascade Range, Oregon, USA. *Journal of Vegetation Science*. 9: 265-282.
- ☐ Peck, JeriLynn E.; McCune, Bruce. 1997. Remnant trees and canopy lichen communities in western Oregon: a retrospective approach. *Ecological Applications* 7(4): 1181-1187.
- ☐ Rasmussen, Mary C.; Ripple, William J. 1998. Retrospective analysis of forest landscape patterns in western Oregon. *Natural Areas Journal*. 18(2): 151-163.
- ☐ Swanson, Frederick J.; Johnson, Sherri L.; Gregory, Stanley V.; Acker, Steven A. 1998. Flood disturbance in a forested mountain landscape: interactions of land use and floods. *Bioscience* 48(9): 681-689.

CASCADE CENTER COMMUNIQUE & PROJECT 1-PAGERS

- ☐ Hunter, Matthew G. 1993. *Communique #1: Young managed stands*. 16pp.
- ☐ Hunter, Matthew G. 1995. *Communique #2: Residual trees as biological legacies*. 28pp.
- ☐ Cascade Center: Purpose, roles, distinguishing features. 1996.
- ☐ The Young Stand Thinning and Diversity Study: Managing for diversity. 1996.
- ☐ Very Young Stand Management: An adaptive management case study. 1996.
- ☐ Long-Term Ecosystem Productivity: Integrated research site. 1996.
- ☐ The Blue River Landscape Study: Testing an alternative approach. 1997.
- ☐ The Northern Spotted Owl: Central Cascades demography study. 1997.
- ☐ Dead Wood, Bugs, Fungi, and New Forests: The log decomposition study. 1998.
- ☐ Chanterelle Mushroom Productivity: Response to young stand thinning. 1998.



Sorting camas bulbs.



The Camas Prairie Restoration Project shared the Willamette National Forest Ecosystem Management Award for 1998. The project is located on the Sweet Home Ranger District and is included in the Central Cascades Adaptive Management Area.

Contact: Alice Smith or Tony Farque (Sweet Home Ranger District)

Gate Creek Partnership Project

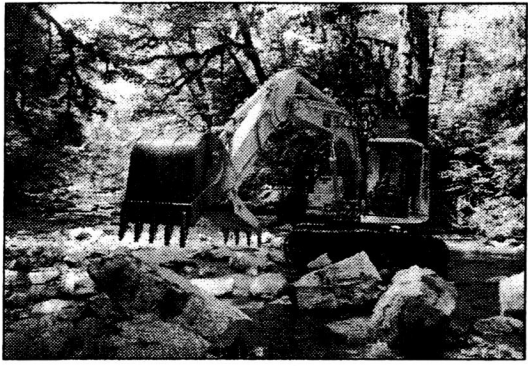
by Maryanne Reiter, Weyerhaeuser Company, and Karen Martin, Bureau of Land Management

The Gate Creek watershed, a tributary to the middle McKenzie River was selected as a project site of a unique fish habitat enhancement partnership due to its diverse fish species and ownership patterns. Habitat for such fish species as chinook salmon, rainbow trout and potentially bull trout, which might forage in the lower reaches, exists in Gate Creek, while landowners include private timber companies and federal agencies.

In 1995, Giustina Land and Timber, Giustina Resources, Weyerhaeuser Company, the Bureau of Land Management (BLM) Eugene District, the Willamette National Forest, Oregon Department of Fish and Wildlife and the Oregon Department of Forestry worked together in various capacities to enhance near-term and long-term fish habitat in Gate Creek. Near-term habitat enhancement

projects included placing logs and boulders in the stream to increase in-channel habitat complexity. The long-term supply of large wood to the stream was improved by increasing conifer growth in riparian areas.

Money for the projects originated with a matching grant for Bring Back the Natives for the watershed analysis work done by Weyerhaeuser in 1995 and road treatments and fish passage improvements accomplished by all three private timber companies. Bring Back the Natives is a cooperative effort between the National Fish and Wildlife Foundation, the Bureau of Land Management, the Forest Service, the Bureau of Reclamation, U.S. Fish and Wildlife Service and Trout Unlimited to restore native aquatic species and their habitats through local and regional partnerships.



Gate Creek after boulder placement.



Past forest practices including harvest of trees adjacent to the stream and direct removal of wood from streams, as well as natural disturbances such as fires and floods left many stream channels with low amounts of in-channel and stream-adjacent wood in the Gate Creek watershed. Many previously disturbed riparian areas are now dominated by hardwoods (mainly red alder) as a result. While hardwoods provide many functions to stream channels, conifers provide more long-term stability once they fall into the stream channel because they are more durable.

To increase the long-term supply of conifers in the South Fork of Gate Creek, approximately 12 acres (8 acres on private and 4 on federal lands) of hardwood/shrub-dominated stands were cleared and planted with conifer. Near-term in-

channel habitat complexity was increased by the addition of over 100 pieces of large wood that had previously been deposited high on stream banks during the 1996 flood. In the North Fork of Gate Creek, small diameter conifer stands were more abundant than in the South Fork. These stands were thinned to increase near-term growth and potentially increase the rate at which large woody debris enters into the stream. In addition, large boulders were added to the North Fork to increase habitat complexity.

Because the Gate Creek fish enhancement partnership project was so successful, many of the partners, plus managers for Hancock Timberlands are looking to work together in the Deer Creek drainage of the McKenzie Watershed.

Contact: Karen Martin (McKenzie Resource Area, Eugene BLM)

Quartz Creek

by Dave Bickford and Sam Sweetland, Willamette National Forest

In 1998 several partners completed an in-stream enhancement project in Quartz Creek on lands included in the Central Cascades Adaptive Management Area, Blue River Ranger District. These partners included Rosboro Lumber Company, Oregon Department of Fish and Wildlife, East Lane Soil and Water Conservation District, and the Forest Service.

The goals of the project were to reintroduce large woody material to the stream as a source of flow deflection, organic matter and cover for aquatic organisms. The project was done by removing a debris "trash-rack" constructed on Forest Service land to collect migrating in-stream restoration material. This structure originally was intended to prevent potential risk to downstream im-

provements such as bridges. However, risk from restoration projects to improvements downstream was determined to be minimal due to observation since the trash rack was constructed in the late 1980s. A five-year study of restoration projects above the trash rack by Oregon State University researchers found low rates of migration of woody debris. In addition these same studies found little difference in the rates of migration between attached (cabled-down) and unattached woody debris. Even during the significant February 1996 flood low quantities of debris migrated downstream to the trash rack.

Lower portions of Quartz Creek reaches had low quantities of in-stream wood. The woody debris in the trash rack was used to treat portions of

Quartz Creek with large woody debris placements in the lower reaches. Further restoration efforts on Quartz Creek will include riparian plantings.

The project was the first on the Blue River Ranger District to use the Wyden Amendment, which allows federal resources to be used in restoration efforts on private land. Expenditure of government funds off of federal lands must be for the public interest and benefit. Additionally, these funds may only be used for projects that either restore, protect or enhance ecosystems.

Contacts: Brad Leavitt or Tina Haugan, Willamette National Forest



Quartz Creek trash rack.

Beyond the Buzz Words: An Early Progress Report on Adaptive Management

WORKSHOP AGENDA

8:30 - Welcome, logistics - Darrel Kenops (Willamette National Forest, Forest Supervisor)

8:40 - Adaptive management: promises and progress - George Stankey (Pacific Northwest Research Station)

9:00 - Session 1 - Landscapes of the future

- Alternative approaches to restoring late-successional habitat at the landscape scale - Andy Gray (Pacific Northwest Research Station, North Coast AMA)
- Testing a landscape dynamics approach: the Blue River Landscape Study - John Cissel (Willamette National Forest, Central Cascades AMA)
- Implementing and monitoring forest landscape design objectives: Little Applegate watershed - Carol Spinos (Rogue River National Forest, Applegate AMA)
- Panel commentary - future directions and applications of landscape management planning - Fred Swanson (Pacific Northwest Research Station, Central Cascades AMA), Miles Hemstrom (USDA Forest Service Region 6), Rich Dreihobl (Medford District Bureau of Land Management, Applegate AMA)

10:30 - Break

11:00 - Session 2A - Interacting with our neighbors

- Willamette Province Northwest Forest Plan monitoring: what's working and what's not - Neal Forrester (Willamette National Forest) and Cole Gardiner (Willamette Province Advisory Committee, citizen volunteer)
- Monitoring citizen and agency interactions: lessons for adaptive management - Bruce Shindler (Oregon State University)

11:45 - Lunch

12:45 - Session 2B - Interacting with our neighbors continued

- Ecosystem Workforce project: the Sweet Home application - Rolf Anderson (recently retired from the Willamette National Forest, Central Cascades AMA)
- Watershed Councils as a forum for adaptive management - John Runyon (McKenzie Watershed Council Coordinator)
- Lessons learned from collaboration in the Applegate watershed - Jack Shipley (Applegate Partnership) and Rich Dreihobl (Medford District Bureau of Land Management, Applegate AMA)
- White Pass Discovery Team: an experiment in social learning - Betty Klattenhoff (White Pass School District, Cispus AMA)

2:10 - Break

2:30 - Session 3 - Using the tools of science to answer management questions

- Maintenance of mature and old growth sugar pine by thinning - Ellen Michaels Goheen (SW Oregon Insect and Disease Technical Center, Little River AMA)
 - Using wind hazard ratings and stand growth projections to target stands appropriate for proactive and passive management - Pil Sun Park (University of Washington, Cispus AMA)
 - 10 years of monitoring stream restoration: Quartz Creek - Randy Wildman (Oregon State University, Central Cascades AMA)
 - Modeling alternative young stand treatments - Steve Garman (Oregon State University, Central Cascades AMA)
- 4:00 - Are AMAs and agency use of adaptive management on the right track? - Nancy Graybeal (Forest Service Region 6, Deputy Regional Forester - invited)**

POSTER PRESENTATIONS

- Adaptive monitoring design: a case example with northern spotted owls in Oregon's central Cascades
- Alternative silvicultural treatments for young plantations in the Pacific Northwest
- Blue River Landscape Study: testing an alternative approach
- Stream amphibian monitoring in the Blue River Landscape Study, west-central Cascades of Oregon
- Headwater stream temperature monitoring in the Blue River Landscape Study, west-central Cascades of Oregon
- Epiphytic lichen monitoring in the Blue River Landscape Study, west-central Cascades of Oregon
- Tree and vascular plant monitoring in the Blue River Landscape Study, west-central Cascades of Oregon
- Camas Prairie Restoration Project
- Creating wolf trees during precommercial thinning
- Demonstration of Ecosystem Management Options (DEMO): a study of green tree retention levels and patterns in western Oregon and Washington
- Designation by description: post-logging results in 45 year-old managed stands
- Little River Adaptive Management Area - healthy forests / healthy streams
- Maintaining grassland ecology with prescribed fire
- Native plant restoration in the Central Cascades AMA
- North Santiam turbidity study
- Vegetative rehabilitation: restoring native biological diversity
- The Young Stand Thinning and Diversity Study: evaluating alternative pathways in young managed stands
- Response of birds to thinning in young Douglas-fir stands in the Oregon Cascade range
- Response of small mammals to thinning in young Douglas-fir stands in the Oregon Cascade range
- Timber harvesting studies: results from the Young Stand Thinning and Diversity Study
- Chanterelle mushroom productivity responses to young stand thinning
- Critical public perceptions of forest successional pathways: testing alternative stand treatments
- Road Obliteration Study
- Testing active and passive approaches to develop late-successional habitat from mature stands: Moose Creek uneven-aged management study
- Vegetative cutting: a unified approach
- Working together: the Applegate Watershed Council
- Ecosystem management in the Applegate AMA
- Willamette basin alternative futures analysis
- Willamette Province Interagency Executive Committee - Restoration Projects
- Landscape Stratification and its Relationship to Coarse Woody Debris, Fire and Silvics
- Effects of Prescribed Fire on Riparian Reserve Habitat and Biota
- Effects of fertilization on terrestrial fauna and water quality
- The Phoenix density management project
- Bayesian decision analysis for implementing and monitoring forest landscape design objectives

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