



OREGON DEPARTMENT OF FORESTRY
AND
STATE AND PRIVATE FORESTRY COMMUNITY
OREGON PLAN
STATEWIDE WORK PROGRAM
JUNE 7, 2000

Acknowledgements

The contributions of each part of our diverse Oregon state and private forestry community are valuable components within the fabric of the Oregon Plan. We represent small woodland owners, small to large companies, state owned lands, and the organizations that support these groups. To accomplish the goal of revising our Work Plan, a steering committee was selected from members of the Oregon Forest Industries Council, Oregon Small Woodlands Association, the Oregon Department of Forestry, Associated Oregon Loggers, Oregon State University Extension Service, and the Oregon Forest Resources Institute. Special thanks is given to Paul Adams, Rick Barnes, Mike Barsotti, Jeff Boechler, Mike Bordelon, Ken Faulk, Derek Godwin, Chris Jarmer, Leslie Lehmann, Russ McKinley, Jim Muck, Tom Partin, Thomas Rosetta, Barte Starker, Rex Storm, Steve Truesdell, and Roy Woo for their participation on the steering committee. Our work could not have been accomplished without the assistance of Oregon Department of Forestry staff, Liz Dent, Jim Paul, Keith Mills, Jerry Clinton, Dave Degenhardt, Diana Enright, Scott Plamondon, Rob Lundblad, Jim Cathcart, Logan Jones, Jim Mair, Paul Bell, Jan Pugh and Sharon Martin. David Morman provided guidance and direction throughout the review process.

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EXECUTIVE SUMMARY

This Work Plan is a demonstration of the commitment of Oregon's private and state forestry community to improving salmon habitat and water quality through sound forest practices. The community represented in this document is composed of non-federal forest landowners and managers, including those who manage State, industrial and small family forests, plus organizations that support these groups through education and training, such as the Oregon Forest Resources Institute, Associated Oregon Loggers and the Oregon State University Extension Service. The dedication of this diverse group of forest managers to conduct their operations in an environmentally sound manner is evidenced by a compelling list of accomplishments.

Although the Forest Practices Act provides a strong regulatory foundation for improving watershed health, much of the habitat improvement work is being accomplished by the forestry community through voluntary actions. It is hoped that, by highlighting exemplary volunteer efforts, this Work Plan will provide insight into the scope of the forestry community's commitment to environmental excellence and will encourage such voluntary work to continue.

The Oregon Plan for Salmon and Watersheds' 1999 Watershed Restoration Inventory documents the accomplishments and contributions that the forestry community is making to improve water quality. The report shows that the majority of reported watershed restoration activities are being conducted on non-federal forestlands. Such activities include in-stream and riparian habitat enhancement, fish passage installations and road improvements.

Accomplishments:

- Road improvement projects are well ahead of schedule, with over 12,000 miles of road surveyed and over 2000 miles of road improved, vacated, closed, or relocated.
- More than 600 fish passage improvements projects have resulted in over 400 miles of stream habitat made accessible to fish.
- More than 4,500 fish presence surveys have been completed (ODF files and database).
- A number of monitoring projects have been completed or are underway.
- An array of educational materials, technical workshops and certification programs, useful for landowner groups across landscapes, are now available through the work of the Oregon Forest Resources Institute, OSU Extension Service, the Associated Oregon Loggers and the Oregon Department of Forestry.

Challenges:

- Oregon needs a coordinated federal policy that encourages and supports voluntary habitat improvement projects.
- Incentives, customized for the type of ownership are needed to encourage volunteer habitat improvement projects.

- The forestry community cannot solve the salmon problem on its own and must encourage other landowner groups to build upon its efforts.
- Encouragement and liability limits are needed to ensure that all projects are reported.
- Oregon needs to provide resources to increase effectiveness monitoring if habitat improvement projects are resulting in species recovery.
- Volunteer efforts need to be better recognized and rewarded.

INTRODUCTION:

The Oregon Department of Forestry (ODF) and forestry community partners have revised our Oregon Plan Work Program in response to the Governor's Executive Order 99-01, to prioritize and redefine the agency's measures to protect and restore salmonids on non-federal forestlands in a timely and effective manner. Previous measures have been geographically expanded to address salmonid ESUs statewide. For additional clarification, ODF's measures have now been grouped into nine broad categories that reflect:

- ODF 1: Oregon Department of Forestry Monitoring
- ODF 2: Landowner Monitoring and Assessments
- ODF 3: Voluntary Private Landowner/Operator Activities
- ODF 4: Oregon Department of Forestry Regulatory Activities
- ODF 5: State Forests Management Activities
- ODF 6: Assistance to Family Forest Landowners
- ODF 7: Urban Forest Community Assistance
- ODF 8: Cooperative Efforts in Information, Assistance, and Education
- ODF 9: Awards and Recognition

Previous codes used to identify the 63 ODF measures in the Oregon Plan Steelhead Supplement have been retained in parentheses following each activity title for cross reference purposes and an index is provided in Appendix B. Given the now statewide scope of the Oregon Plan, local activities have been encompassed by broader, more generic activities. While not diminishing the importance of these local activities, the change in the way forestry measures are described will make the accomplishments of the numerous local activities easier to track and report over time.

PRIORITIZATION SCHEME:

Through a process of adaptive management, the method of prioritizing the forestry community's activities to restore salmonids and improve water quality has evolved. The Forest Practices Act and forest practice rules continue to provide the mechanism for preventing practices which may have been detrimental to fish populations and watershed health. With this sound regulatory foundation, and through the encouragement of the Oregon Plan for Salmon and Watersheds, the forestry community's focus is becoming progressively voluntary in approach.

Road improvement and fish passage efforts were a first priority during the initial phase of landowner voluntary efforts under the Oregon Plan, particularly on industrial forestlands and state managed lands. These projects are now well under way and a new examination of the forestry community's protection and restoration priorities is warranted.

The diversity within the forestry community and the diversity of the state's forest resources require an approach to Oregon Plan activity prioritization which is somewhat unconventional. We represent small woodland owners, small to large companies, state

owned lands, and the organizations that support these groups. The contributions of each part of this community is a valuable part of the fabric of the Oregon Plan. This means that for a small woodland owner with 40 acres, the top priority may be one which for a large industrial acreage may be a low priority. Therefore, we have chosen to avoid assigning fixed values of high, medium or low priorities to our Oregon Plan activities. In short, we are committed to proactively do what we can, where we can, with the resources at hand in an efficient and economical manner. The following prioritization plan has resulted:

1. Promote long-term understanding, acceptance, and support of the Oregon Plan's goals and objectives on forestlands, through education, support and technology transfer for those who are engaged in conducting habitat enhancement or improvement projects. This top priority includes actively seeking support for incentives for forestland owners and operators, and working to encourage a supportive, coordinated federal process which fosters volunteer habitat improvement projects.
2. Activities that, based on assessments, will have a high potential to immediately improve, restore and enhance fish habitat and water quality.
3. Activities that, based on assessments, will continue to improve, restore and enhance fish habitat and water quality over time.

In addition, the forestry community, in coordination with the Oregon Department of Fish and Wildlife has developed an *Interim Statewide Criteria for Identifying Salmonid Areas to Apply Voluntary Forestry Activities* (See Appendix A) to assist landowners and operators in deciding where restoration projects may be the most beneficial.

HISTORICAL PERSPECTIVE:

As part of the Oregon Plan for Salmon and Watersheds, in October of 1995, the Oregon Department of Forestry (ODF) and forestry community partners developed a series of management strategies to protect and restore salmonids in a timely and effective manner. When the state adopted the Steelhead Supplement of the Oregon Plan in the spring of 1998, 63 Oregon Department of Forestry management measures contained in the Oregon Plan and the Steelhead Supplement were also adopted on a statewide basis. This list included some measures that were recognized as clearly local in scope.

In October 1999, the Steelhead Supplement list was used as the foundation for developing forestry measures specifically applicable to the Willamette Basin. This information was used in developing the “Willamette Chapter” of the Oregon Plan, which is now being reviewed by the Willamette Restoration Initiative Board.

ODF 1: OREGON DEPARTMENT OF FORESTRY MONITORING

1.1 COORDINATE AND INTERPRET RESEARCH, MONITORING AND INFORMATION SHARING THROUGH THE OREGON PLAN MONITORING TEAM – ODF PLAYS A LEAD ROLE IN THE OREGON PLAN MONITORING TEAM.

BACKGROUND:

The Oregon Plan for Salmon and Watersheds (OPSW) Monitoring Team has responsibility for planning, coordinating, integrating and implementing monitoring activities to evaluate the success of OPSW and to identify necessary adaptive changes. This is to be done in a way to ensure acceptance and accountability of the monitoring results by effectively communicating with the Joint Committee on Stream Restoration and Salmon Recovery (JCSRSR), Independent Multidisciplinary Science Team (IMST), landowners and other interests.

GOAL:

The Monitoring Team will provide a forum for development and coordination of public and private monitoring activities in support of salmon recovery efforts, assist in establishing priorities for monitoring activities, coordinate resource monitoring activities; and provide timely and effective distribution of information for adaptive management.

OBJECTIVES:

Identify the critical monitoring questions to assess the effectiveness of the OPSW and develop understanding, acceptance and support of the monitoring program with OPSW cooperators and other interests.

Assist in the development, prioritization, and implementation of monitoring methods and assessment activities involving multiple agencies.

Assist in the development of compatible monitoring plans among independently operating agencies, watershed councils, and other interests.

Support the integration of public, private, and locally organized efforts to conduct OPSW monitoring in the development and implementation of monitoring projects, development of consistent monitoring protocols, and by communicating the results of monitoring efforts.

Identify data collection and information management standards appropriate to facilitate the exchange of information among public and private partners.

Identify and communicate research needs to OPSW partners and research institutions.

Provide the framework for reporting the status of OPSW implementation and effectiveness.

Identify and implement necessary adaptive changes to the OPSW Monitoring Plan.

ACTION ITEMS:

- The Monitoring Team will continue to develop and refine the OPSW Monitoring Plan, particularly as implementation of the OPSW expands to all parts of the state. Team members will help develop overall monitoring strategies as well as to develop and articulate OPSW Strategic Monitoring Plans for their respective agencies.
- Team members will work to coordinate monitoring activities, make available maps or other information about the specific location and purpose of active and planned monitoring actions
- The team will develop monitoring protocols that describe specific monitoring techniques, establish mechanisms for quality control, and identify compatible and accessible formats for collecting and reporting information.
- The Monitoring Program Leader will maintain a summary list and status report of all monitoring protocols developed for use in connection with the OPSW. With this information shall be a contact list of mentors to assist in the use of each protocol.
- The Monitoring Program Leader shall report information indicating adaptive changes needed to the OPSW to the Implementation Team for appropriate action. The results and conclusions of coordinated monitoring activities will be summarized and provided to agencies for use in adaptive management of the OPSW.
- The Monitoring Program Leader will coordinate the preparation and submittal of an annual progress report on implementation of the monitoring plan to the Independent Multidisciplinary Science Team (IMST), the Joint Legislative Committee for Stream Restoration and Species Recovery, and the Governor's Office.
- An annual OPSW Monitoring Workshop and Program Summary will be organized and presented by the Monitoring Team.

- The Monitoring Team will coordinate with the Oregon Watershed Enhancement Board to communicate results from the monitoring program, provide review of appropriate grant proposals for technical and scientific merit, and to help coordinate monitoring efforts with Watershed Councils.
- The Monitoring Team will coordinate with the IMST, providing information relevant to their activities and to respond to their recommendations as applicable to the OPSW Monitoring Program.

FUNDING:

Funding is provided by each participating agency.

WORK SCHEDULE:

- Core team members meet monthly (*ongoing*)
- Additional team members meet quarterly (*ongoing*)
- Workgroups formed and meet as needed to accomplish specific assignments (*ongoing*)
- Annual Monitoring Workshop to share results and receive input (*April 26 & 27, 2000*)
- Develop Oregon Plan Monitoring Strategy (*Spring 2000*)

1.2 FOREST PRACTICES MONITORING PROGRAM (ODF 10S, 57S)

BACKGROUND:

Oregon Department of Forestry has developed and implemented a program to monitor the implementation and effectiveness of the forest practice rules. The forest practices monitoring program has been substantially enhanced over the past four years. The program is guided by a strategic plan that was developed through involvement of many interests. The strategic plan identifies the monitoring questions, and priorities, and established process for developing methodologies and improving coordination. The plan is updated periodically with public involvement.

GOAL:

To provide information in a timely manner to the Board of Forestry regarding forest practice rule effectiveness and implementation. Recommendations for rule revisions are made based on study results, which indicate inadequacy of the rule. If rules are shown to be effective and properly implemented, then revision is not recommended.

OBJECTIVE:

The objectives of the forest practices monitoring program are to:

- A. Evaluate the implementation of forest practice BMPs (implementation monitoring);
- B. Determine if the BMPs are meeting their intended purpose (effectiveness monitoring);
- C. Validate assumptions on which rules may have been developed; and
- D. Encourage coordinated monitoring.

ACTION ITEMS:

Project is in place.

FUNDING:

Contained within the Forest Practices budget.

WORK SCHEDULE:

1994 - Road sediment and stream temperature.

1995 - Road sediment and stream temperature.

1996 - Road sediment, stream temperature, riparian conditions and storm impacts.

1997 - Road sediment, stream temperature, riparian conditions, storm impacts and chemical application.

1998 - Road sediment, stream temperature, chemical application, fish passage, BMP compliance, and riparian condition.

1999 – Stream temperature, chemical application, fish passage, BMP compliance, and stream shade.

2000 – Stream temperature, fish passage, and BMP compliance.

2001 – Reevaluate monitoring strategy.

MONITORING:

An annual monitoring report is required by rule to be presented to the Board of Forestry.

1.3 MONITORING OF RIPARIAN MANAGEMENT AREAS UNDER THE FOREST PRACTICES ACT (ODF 11S)

BACKGROUND:

In the fall of 1994 the Oregon Department of Forestry adopted new water protection rules. The rules require specific riparian management leave areas (RMAs) with some flexibility for active management under certain stand conditions. Large wood recruitment is a primary focus of the new rules. See Activities 1.9 and 4.2 for additional details.

GOAL:

The riparian monitoring project will look at the effectiveness of the 1994 water protection rules in maintaining and creating sources of current and potential large wood, shade, and in maintaining effective riparian stand structure in terms of stream protection and wildlife habitat.

This project will provide an on-the-ground understanding of future recruitment of large wood from riparian stands prior to harvest operations, and after harvest operations. The project will also evaluate the effectiveness of the riparian rules in maintaining shade and wildlife habitat components. RMAs will be evaluated based on their effectiveness to supply these functions to the stream system both pre- and post-operation.

OBJECTIVE:

1. Determine the effectiveness of the 1994 forest practice rules in providing for short-term and long-term sources of large wood.
2. Evaluate the effectiveness of the 1994 stream protection rules in maintaining stream shade.
3. Evaluate the basal area requirements in relation to what is available prior to harvest.

ACTION ITEMS:

Oregon Department of Forestry Forest Practices Monitoring Program will establish plots on 25 – 30 harvest units prior to harvest. Surveys will be

conducted prior to and after harvesting to determine the effect of harvesting on stand structure, large wood recruitment and shade.

FUNDING:

Oregon Department of Forestry Forest Practices Monitoring Budget.

WORK SCHEDULE:

- June 1996-1998 - intensive pre-and post-harvest inventory.
- 1998-1999 - analyze data
- *Study complete Spring of 2000, a final report will be available summer 2000.*

MONITORING:

The results of this study are being used in the current evaluation of riparian rules by the Forest Practices Advisory Committee. A larger sample size and a random selection method are recommended for future monitoring. Future monitoring will take place based on priorities and available resources.

1.4 MONITORING EFFECTIVENESS OF BMPS IN PROTECTING WATER QUALITY DURING AERIAL APPLICATIONS OF FOREST PESTICIDES (ODF 12S)

BACKGROUND:

The Board of Forestry recently reviewed and revised the state's forestry chemical application rules. As part of the chemical rule revisions the Board adopted OAR 629-620-700 committing Oregon Department of Forestry to monitoring compliance with and the effectiveness of the chemical and other petroleum rules.

The department will implement an overall monitoring program on a representative sample of operations across the state. The program will consist of observation, vegetation surveys, and water quality sampling.

GOAL:

The goal of this project is to monitor effectiveness of Best Management Practices in protecting water quality and riparian vegetation during aerial applications of forest pesticides operations.

OBJECTIVE:

The objectives of the project will be to:

1. Monitor water quality on 25 volunteered aerial application sites;
2. Assess if chemicals were applied to protected riparian areas in quantities sufficient to impair the vegetation's ability to provide the required attributes (14 randomly selected operations).

ACTION ITEMS:

The department will implement this project to test the effectiveness of the forest practice rules in protecting riparian function and water quality during aerial application of pesticides.

FUNDING:

Forest Practices Monitoring Budget.

WORK SCHEDULE:

1996 - develop monitoring protocol.

Fall 1997- Spring 99 – collect water quality samples and survey vegetation.

Water Samples:

Samples will be collected before the operation, and 15 minute 2, 4, 8 and 24 hours after the first swath has been sprayed near the buffer strip. Runoff sampling will be conducted after the first runoff-producing rainfall event on a subset of samples as resources permit.

Vegetation Surveys:

Vegetation surveys will be conducted on 14 operations randomly selected for the department's monitoring program.

Final Report: *(Project complete, March 2000), Final report and executive summary available.*

MONITORING:

Preliminary findings were reported to the Board of Forestry in summer 1999. Future monitoring will be based on funding and resource priorities. Refer to Activity 4.4 for additional details.

1.5 STORMS OF 1996 MONITORING PROJECT (ODF 13S)

BACKGROUND:

The storm of February 5 to 8, 1996 resulted in many landslides, channel changes, and other effects to natural resources, public, and private resources. Initial assessment indicates there are several thousand landslides in the storm area. Many locations had over twenty inches of combined rainfall-snowmelt over four days, with a few over thirty inches. This is an extreme amount of water, and without the flood control dams, it would have caused very severe damage to all towns and cities adjacent to the Willamette and Columbia Rivers, regardless of land use. Evidence of channel impacts includes hundreds of washed-out stream crossing fills and hundreds of miles of scoured channels which resulted from the landslides and washed-out stream crossings.

GOAL:

The goal of the project is to determine which forest practices and designs successfully minimized or contributed to impacts. The project includes intensive on-the-ground data collection regarding landslides, debris torrents, roads, channel impacts, and fish habitat.

OBJECTIVE:

1. Determine the accuracy and precision of remote sensing data in identifying landslides, channel impacts, and landslide-prone areas.
2. Determine landslide frequency and channel impacts particularly as they relate to forest practices.
3. Examine relationships between storm impacts and forest stand structure.

ACTION ITEMS:

This measure was developed with the involvement of a coordination team, a team of four experts representing four different disciplines, Oregon Department of Forestry State Lands Program, Oregon State University Forest Engineering Department, and Oregon Department of Fish and Wildlife.

The coordination team was composed of corporate and small private landowners, USFS, BLM, ODFW and ODF.

The USFS and the BLM provided ODF with a report of the initial Phase I findings of their study. Phase I consisted of an assessment of the storm boundaries and a windshield survey of locations of landslides. Phase II was a region-wide project and consisted of a synoptic view of patterns of disturbance using GIS referenced information; a detailed stream crossing survey to determine causal mechanisms of failures; watershed performance studies; and an assessment of fish structure durability under these flood conditions. Individual forests coordinated with ODF on forest specific projects which coupled with the ODF project.

OSU, through the Forest Engineering Department, incorporated a graduate student and research assistant into the flood project. Their portion focused on road related landslides and washouts within the ODF study sites.

Immediately following the flood, ODF completed an aerial reconnaissance of the storm-impacted areas. The storm boundaries and areas with particularly high rates of landslide and debris torrent impacts (referred to as "red zones") were delineated. Six landslide study sites were then selected. Each of the sites was ten square miles in area. Three were intentionally selected to represent the red zones and three were randomly selected. The purpose of this design was two-fold. First by selecting red zone sites, documentation of forest practice effectiveness in areas known to be impacted by the storm was possible. The randomly selected sites provided a broader perspective of storm effects. Secondly, the ten square mile areas were designed to encompass multiple land ownership's (federal, state, industrial private, small private) which provided a range of management history. The sites are referred to as Mapleton, Tillamook, and Vida. The three randomly selected sites are Vernonia, Dallas, and Estacada.

Land management history for all six study sites was gathered by ODF. This included harvest and regeneration schedules as well as road construction history and specifications.

Six protocols were developed to address the different components of the study. These protocols address road drainage (OSU); road-related landslides (OSU); non-road related landslides (ODF); channel impacts (ODF); torrent jams (ODF); and fish habitat (ODFW). The OSU and ODFW protocols were implemented on all six sites.

FUNDING:

Funding is contained within ODF budget.

WORK SCHEDULE:

Finalize protocols: June 1996
Data collection: July to September (ODF, OSU) 1996 and 1997
Summary report Board of Forestry: January, 1997
Draft Report Board of Forestry: March 1997
Final Report Board of Forestry: Summer of 1999
(Project Complete June 1999), Final report and executive summary are available.

MONITORING:

Data collection was completed during the summer of 1996 on six study sites. This project was repeated in areas affected by the November 1996 storm in Coos and Douglas counties. The November storm project will be implemented during the summer of 1997. The combination of data from the six 1996 study sites and the two 1997 sites will broaden the department's understanding of the link between forest practices and landslide frequency, and how varying storm characteristics affect that link. Findings were presented to the Board of Forestry in 1999. Findings are being considered during the forest practice rule evaluation conducted by the Forest Practices Advisory Committee.

1.6 MONITORING WATER TEMPERATURE PROTECTION BMPS (ODF 14S)

BACKGROUND:

One of the objectives of the water protection rules is to protect water quality. The forest practice rules were revised in 1994. This monitoring project was established to determine if the forest practice rules are effective at meeting the goals of stream temperature protection. Stream temperature is one of the water quality parameters that forestry has the potential to affect. Many studies have documented increases in stream temperature as a result of harvesting. Likewise, many studies have demonstrated that maintaining a vegetative buffer along the stream can nearly eliminate the impacts from harvesting. See Activity 3.2 for additional details.

GOAL:

The goal of this project is to determine if forest practices are effective at protecting and maintaining stream temperature at levels that provide high quality aquatic habitat.

OBJECTIVE:

1. Investigate stream and riparian characteristics that influence stream temperature.
2. Test the effectiveness of riparian management prescriptions in maintaining stream temperature at a site and a watershed scale.
3. Determine if riparian prescriptions result in stream temperatures at or below the Oregon Department of Environmental Quality state standards for water quality.
4. If stream temperature increases are observed as a result of harvesting, determine recovery rates.

ACTION ITEMS:

Monitor small Type N streams.

Monitor stream temperature after harvesting on sites harvested with a general RMA prescription and on sites with a Hardwood Conversion Prescription.

Monitor stream temperature at a basin scale to determine the effects of harvesting at a larger scale.

Monitor stream temperature before and after harvesting to determine the effects of harvesting on inherent rates of warming.

FUNDING:

Funding historically was provided partially by an EPA grant and under a cooperative contract among DEQ, OSU and ODF. Currently funded under the Forest Practices Monitoring Budget.

WORK SCHEDULE:

Small Type N Streams: (*Completed 1995*) Final report available.

General Prescription and Hardwood Conversion Monitoring: (*Completed 1997*). Final report available.

Basin Scale: Initiated 1996, preliminary report available 2000, ongoing.

Pre- and post-harvest monitoring: Initiated 1996, preliminary report in 2000, ongoing.

MONITORING:

Monitoring will continue at the current sites for at least three more years. During the 2001 re-evaluation, temperature monitoring will be redesigned to capture random and larger sample sizes. Volunteered sites will still be needed to implement pre-harvest to post-harvest comparisons.

1.7 EVALUATION OF ROAD AND TIMBER HARVEST BMPs TO MINIMIZE SEDIMENT IMPACTS (ODF 15S)

BACKGROUND:

Roads are recognized as the largest source of sediment associated with forest management. This four-year monitoring project was originally intended as an evaluation of whether Oregon's forest practices for roads were minimizing the delivery of sediment by means of surface erosion to waters of the state.

A random sample of road segments was selected from non-federal lands in western Oregon for monitoring. The sample is representative of the ODF geo-regions, ownership patterns (state, large industrial, and small non-industrial), and road characteristics (age, use, gradient, etc.).

The project applied the road drainage protocol that was developed, tested and refined during the first year of the project (FY94). This protocol provides information on the locations of drainage systems, road characteristics, runoff routing, and whether there is evidence of sediment delivery.

The major winter storm of February 1996 resulted in many landslides, channel changes, and other effects to natural resources and to public and private resources in northern Oregon. This was an unusual but extremely important storm event, the type which shapes the long-term water quality and watershed characteristics. The storm has provided a unique opportunity to test forest practices developed over the last couple of decades for landslide prevention (acute sedimentation). At the same time the storm reduced both the short-term importance of chronic surface erosion and also the ability to accurately measure chronic surface erosion.

The Department of Forestry recommended slight modifications to the study methods, in response to storm-related changes to roads and watersheds. Roads in the survey area and in the storm area will be examined to identify and determine factors associated with new landslides, washouts, and gullies related to the drainage system. This monitoring will use the protocol used during previous data collection, with some modification for collection of landslide data.

Forest Practices staff initiated a process to scope potential approaches for monitoring forest road sediment best management practices (BMPs). Forest Practices staff worked closely with the Forest Engineering Department staff at Oregon State University to develop monitoring concepts. With input from forest landowners, agency personnel and other interested landowners, the methods were further refined. The methods were field tested on 18 miles of forest roads in northwest Oregon.

GOAL:

The purpose of this project is to provide land managers and appropriate agencies with specific information on road drainage practices that minimize sediment entry into streams and how these practices are implemented in western Oregon.

OBJECTIVE:

The objectives of this project are:

1. Develop relatively simple field methods for determination of sediment delivery potential from roads as these roads are currently maintained.
2. Survey erosion hazard, discharge structures, and potential for sediment delivery to waters of the state at randomly selected forest roads in each of the five western Oregon geo-regions.
3. Investigate road-related landslides and washouts that occurred during the storm of February 1996 and their relationship to forest practice rules.
4. Develop a comprehensive road erosion hazard inventory protocol for landowners.
5. Provide outreach and training to facilitate the use of the protocol.
6. Develop a comprehensive road management guidebook.

7. Develop a technical issue paper for the Board of Forestry.

ACTION ITEMS:

Planned work for completion of this project includes:

1. Conduct field training sessions on use of the comprehensive road inventory protocol. Training began in the spring of 2000 and will be an ongoing activity.
2. Finish and summarize landslide data analysis (FY96).
3. Write and present a comprehensive report for the Oregon Board of Forestry (FY 2000).
4. Develop and publish a BMP guidebook (FY97).(*Completed January 2000*)

FUNDING:

This project is funded primarily through DEQ and ODF. The Tillamook Bay National Estuary project and the Tillamook State Forest are cooperating to partially fund and utilize this work.

WORK SCHEDULE:

See action items above.

1.8 EVALUATE IMPLEMENTATION OF FISH PASSAGE GUIDELINES (ODF 16S).

BACKGROUND:

Forest practice rules require that stream crossings be designed and installed to pass adult juvenile fish and a 50-year stream flow event. The goal of the forest practice rule is to ensure that all instream structures pass both juvenile and adult fish, upstream and downstream, whenever such movement would normally take place. Technical criteria and guidelines for adult and juvenile fish passage have been recently established. These criteria and guidelines will be followed by all state agencies when designing or approving projects. However, the criteria and guidelines, while developed using the best available science, have not been validated by monitoring. The study conducted under this activity focused on implementation of the guidelines.

GOAL:

The goal of the activity was to monitor the implementation of the adult and juvenile fish passage guidelines and determine what percent of newly constructed and reconstructed crossings are likely to pass juvenile and adult fish.

OBJECTIVE:

The objective of this study is to answer the following questions:

1. What percent of stream crossings are in compliance with the written plans?
2. What percent of stream crossings have a high likelihood to pass juvenile fish?
3. What percent of stream crossings have been installed in accordance with ODF guidelines?
4. What percent of stream crossings have been installed with adequate capacity for a 50-year flow?

ACTION ITEMS:

Implement a pilot study on 50 stream crossings.

Implement final study on 100 stream crossings.

FUNDING:

Funded through existing ODF Forest Practices Monitoring Program.

WORK SCHEDULE:

- Develop interim fish passage guidance: *(Completed and updated in 2000)*.
- Pilot study to monitor compliance: *(Completed in 1999)* Final report and executive summary available.
- Final study to monitor compliance: In progress, final report available in 2001.

MONITORING:

The implementation monitoring assumes that proper implementation of the fish passage guidelines will result in a stream crossing that will pass juvenile fish. Still needed is a study to validate this assumption and determine the durability of the installation over time.

Preliminary findings were presented to the Board of Forestry in 1999. A final report will be available in 2001. Future monitoring will be based on priorities and available resources. For additional details see Activity 4.9.

1.9 BMP COMPLIANCE AUDIT PROGRAM (ODF 23S)

BACKGROUND:

The Department of Forestry achieves FPA rule compliance through a balanced program of rule education, technology transfer and enforcement. However, to ensure that its compliance program is producing desired results and to identify methods to improve compliance, a statistically reliable sample of BMP compliance is needed.

Within this activity ODF will develop and implement a compliance auditing program within the next two years. The compliance auditing program will provide a statistically valid sample of the level of compliance and help establish how identified compliance problems are best resolved. See Activities 1.3 and 4.2 for additional details.

GOAL:

By 1999, identify level of overall forest operations in compliance with the forest practice rules and determine if adjustments to compliance program or program administration are needed.

OBJECTIVE:

The objectives of this program are:

1. Determine, through statistically valid sampling, the level of operator/landowner compliance with best management practices (BMPs).
2. Identify opportunities to improve program administration, operator education, and technology transfer or rule clarity.

ACTION ITEMS:

In addition to normal inspection programs:

1. Develop methods to sample and evaluate forest operation compliance levels with BMPs (*draft plan completed September 1997*).
2. Implement pilot study and final program.
3. Report results to Board of Forestry and interests.
4. Identify and implement opportunities to enhance compliance if necessary.

FUNDING:

Funding for Department compliance audit program is contained within ODF's existing budget.

WORK SCHEDULE:

Develop and implement pilot study: (*Completed 1999*). Pilot study report and executive summary are available.

Implement final version of compliance monitoring project: 1999-2000, in progress.

Final report: 2001

MONITORING:

Preliminary findings were presented to Board of Forestry in 1999. The final report will be presented in 2001. Future monitoring will be based on priorities and available resources.

1.10 OREGON PLAN MEASURE AND ACTIVITY IMPLEMENTATION MONITORING

BACKGROUND:

The goal of the many activities listed in this document are to aid in the recovery of salmon and fresh water habitat. The activities cover a diverse range of management practices that will be applied throughout the state of Oregon. The benefits of such practices may be subtle at first and take many years to manifest themselves in the salmon population. The Oregon

Department of Forestry in cooperation with private landowners, watershed councils, the research community, OWEB, and other state agencies will monitor the implementation and effectiveness of the activities.

GOAL:

The goal of this activity is to evaluate the success of Oregon Plan management activities in improving freshwater habitat and associated riparian and upland areas. It is also to determine the rate at which the practices are being implemented. This will be best achieved through a coordinated effort within Oregon Department of Forestry and between the agency and private landowners, watershed councils, the research community, OWEB, and other state agencies.

OBJECTIVE

The specific objectives are linked to each individual activity. In general the objective of this activity is to:

- Update the forest practices monitoring program to incorporate effectiveness and implementation monitoring of salmon plan activities that are not currently being addressed and coordinate with those efforts currently underway.
- Update the forest practices monitoring program to better coordinate with efforts currently underway by OWEB, DEQ and ODFW to monitor implementation of the Oregon Salmon Plan, as well as trends and baselines in freshwater habitat and fish distributions.

ACTION ITEMS:

Update the forest practices monitoring strategy to reflect specific Oregon Salmon Plan measures.

Coordinate with Oregon Plan participants to determine where the needs are.

Implement the updated monitoring strategy.

FUNDING:

Funding for measuring the success of Oregon Plan activities is contained within the Forest Practices Monitoring Budget, and other participants. Additional funding has been requested for the 2001–2003 biennium.

The implementation of watershed restoration activities is tracked by OWEB through the Oregon Plan Watershed Restoration Inventory. The inventory includes data collection, database management, GIS data development, data distribution, and annual reporting.

MONITORING:

All newly identified monitoring tasks will be implemented based on monitoring program priorities and available resources.

**ODF 2: Landowner (State and private forest landowner)
Monitoring and Assessments**

2.1 STREAM HABITAT ASSESSMENTS (ODF 4S and 25S)

BACKGROUND:

Since 1993, industrial forest landowners and state forestlands have contracted with ODFW to complete stream habitat surveys following a modified Hankin and Reeves protocol (ODFW protocol).

Landowners plan to continue to provide funding for or conduct additional assessments during the next several years. The focus of these assessments will be streams containing ESA-listed fish species.

For additional information see ODFW Measure I.B.2. at <http://www.oregon-plan.org> under Reports.

GOAL:

To assess the condition of salmonid habitat throughout all forested watersheds. To work with ODFW to complete stream surveys to be used by the forestry community and for other local efforts to complete watershed assessments.

OBJECTIVE:

To provide an information base for restoration of salmon spawning and rearing habitat through participation in ODFW's inventory of habitat quality.

ACTION ITEMS:

See ODFW measure I.B.2. responsibilities.

FUNDING:

Funding for the project is provided by the ODFW.

WORK SCHEDULE:

See ODFW measure I.B.2. work schedule.

MONITORING:

Annual reporting.

2.2 LANDOWNER MONITORING AND ASSESSMENT PROJECTS (ODF 41, 42, 43, 44, and 45)

BACKGROUND:

A number of industry landowners have voluntarily initiated monitoring projects to monitor a variety of watershed conditions. The studies include measurement of some or all the following parameters: channel morphology, turbidity, sedimentation, pH, temperature, bed load movement, fish presence, salmon spawning surveys, and flow. Some of the studies are conducted to obtain background information used to assist the company in prioritizing actions to improve salmon habitat, while others are assessing the effectiveness of habitat restoration projects.

More detailed information can be obtained by contacting the individual company.

GOAL:

To quantify changes in watershed health after implementing restoration projects, road maintenance and repair.

OBJECTIVE:

To monitor specific watershed characteristics to provide information needed to continuously improve on restoration and enhancement efforts.

SELECTED EXAMPLES:

The list is not intended to be all inclusive, and additional assessments are likely to be conducted as our focus becomes statewide.

1. The **South Siletz Monitoring Project**, previously ODF 41S, is a voluntary action by Boise Cascade to quantify changes in stream health after implementation of road enhancement projects on the South Fork Siletz River.
2. The **North Fork Coquille monitoring Assessment**, previously, ODF 42S, consists of several long-term monitoring projects Menasha is conducting in the North Fork basin of the Coquille River. These projects include fish presence, extent surveys, aquatic habitat surveys, salmon spawning surveys, and some temperature monitoring. This work was started in the summer of 1993.
3. The **South Fork Coos River Monitoring Assessment**, previously ODF 43S, is a study that Menasha is conducting to survey salmon spawning on tributaries of the S. Fork Coos River.
4. The **Coos River Mainstem Monitoring Assessment**, previously ODF 44S, is a salmon spawning survey (a minimum of two coho life cycles) that Menasha is conducting on Goat Creek, a tributary of the Coos River. These surveys began in 1994 and 1995.
5. The **Coquille, Siletz and Sixes Watershed Monitoring**, previously ODF 45S, is a long-term monitoring project implemented on Georgia Pacific lands in the three basins. The project began in 1994 and will continue indefinitely.

FUNDING:

The monitoring projects are funded by the individual companies.

WORK SCHEDULE:

The work schedule for each monitoring project is unique for each company conducting assessment work.

MONITORING:

Monitoring of these projects is conducted and maintained by the individual company.

2.3 LANDOWNER WATERSHED ASSESSMENTS AND ANALYSES (ODF 47, 48, 49, and 50)

BACKGROUND:

A number of companies have taken the initiative to conduct watershed assessments and analyses. While some companies have undertaken analysis of all watersheds within their ownership, others have focused their efforts on sensitive or critical watersheds. These investigations not only assist the company in prioritizing restoration efforts, but the information is often shared with local watershed councils and other groups conducting restoration efforts.

GOAL:

To conduct watershed analyses in locations pertinent to a companies ownership or within strategic geographic locations.

OBJECTIVE:

To obtain background information useful in assessing watershed conditions, which will enable companies to effectively direct their restoration efforts. In addition, the information gained is often shared with the larger community and is a meaningful contribution toward examining watershed conditions across landscapes, including broader watershed assessments.

SELECTED EXAMPLES:

The list is not intended to be all inclusive, and additional assessments and analyses are likely to be conducted as our focus becomes statewide.

1. The **Coos, Millicoma and Upper Siuslaw Rivers Watershed Analysis**, previously ODF 47S, is a watershed analysis that Weyerhaeuser is completing for all their ownership in Oregon. This analysis follows modified protocol used by the State of Washington under their Forest Practice Act.
2. The **South Fork Siletz Watershed Analysis**, previously, ODF 48S, is a watershed action by Boise Cascade Corporation to assess the geomorphic vulnerabilities of the system, determine stream health and assess any road concerns.
3. The **Ecola Creek Watershed Analysis**, previously ODF 49S, is a watershed analysis that Willamette Industries (formally Cavenham) is

conducting to identify sensitive or high risk areas, requiring special care in management decisions and operations.

4. The **Kilchis Watershed Analysis**, previously ODF 50S, is an assessment project to assess possible cumulative effects of changes in hydrology, sediment routing and other factors due to land use practices throughout the Kilchis watershed channel network (Tillamook Bay NEP Monitoring Program).

FUNDING:

Funding for the watershed assessments is provided by the individual company.

WORK SCHEDULE:

The work schedule for the watershed analysis projects is unique for each company.

MONITORING:

Each company maintains the monitoring data related to specific watershed analyses.

ODF 3: Voluntary Private Landowner/Operator Activities

Note: Refer to Appendix A for a description of the *Interim Statewide Criteria For Identifying Areas To Apply Voluntary Forestry Activities* listed under Measure 3. These criteria may be revised once “priority areas” are defined and designated by Oregon Department of Fish and Wildlife (ODFW), as required by the Governor’s Executive Order No. EO 99-01.

3.1 ROAD EROSION AND RISK PROJECT (ODF 1S)

BACKGROUND:

Many forest roads built prior to the development of the Oregon Forest Practices Act or prior to the current BMPs pose increased sediment risk to fish habitat. Forest landowners are implementing a voluntary program to identify risks from roads and to address those risks.

GOAL:

The goal of this project is to: 1) implement a systematic process to identify road related risks to salmon and steelhead recovery; 2) establish priorities

for problem solution; 3) design and implement actions to reduce road related risks.

Roads assessed by this project will include all roads on non-federal forest land used as part of an industrial or state forest operation since 1972, regardless of when they were constructed. Emphasis will be given to road systems constructed prior to current forest practice standards and road systems in areas.

OBJECTIVE:

This action will make improvements to road elements such as road fills, stream crossings, and drainage and surface problems to improve fish passage and habitat, and water quality.

These improvements will also reduce the risks of adverse watershed affects associated with roads and major storm events such as the storm that occurred in February 1996.

Priority schemes take the following points into consideration:

1. Assess and repair older roads not consistent with current standards and with imminent threat to waters of the state.
2. Replace stream crossing structures that block fish passage.
3. Remove fills that have high potential to fail and enter waters of the state.
4. Reduce washout hazard
5. Add cross drainage for filtering near stream crossings.

ACTION ITEMS:

1. Protocol has been developed in a joint effort among ODFW, OSU, ODF and OFIC. The protocol addresses risks from road surface, fill and cut slopes, and stream crossing structures. The protocol was developed in two test basins (Scoggins Creek and Kilchis River). Transfer of protocol will be accomplished through training sessions *(completed 1997)*.
2. An assessment plan has been developed among the cooperators *(completed 3/97)*.

3. A database by landowner has been developed through the Oregon Watershed Enhancement Board (OWEB) to retain reported information and track project progress.
4. A road management guidebook has been developed that includes alternatives for solving identified problems. A project team met during 1997 and 1998 and the guidebook was produced in January, 2000.

FUNDING:

The funding commitment for implementation of this project by forest landowners over the next ten years is estimated to be approximately \$130 million. Technical support funding is provided by ODF and DEQ.

Database tracking and reporting related to The Oregon Plan Watershed Restoration Reporting Form and The Oregon Plan Watershed Restoration Inventory annual report is funded through OWEB.

WORK SCHEDULE:

- Road inventory protocol *completed* (Keith Mills, ODF).
- Assessment plan based upon priorities *completed March 30, 1997* (OFIC).
- Road Management Guidebook *completed January 2000* (Keith Mills, ODF).
- Assessment work *completed by January 1, 2002* (OFIC landowners).
- The target for completing necessary remediation actions on culvert and road problems in priority areas is January 1, 2007 (OFIC landowners).
- The target for completing necessary remediation actions on culvert and road problems outside of priority areas is January 1, 2012 (OFIC landowners).

MONITORING:

This effort will be monitored by ODF in cooperation with OFIC and ODFW. Project information is reported on The Oregon Plan Watershed Restoration Reporting Form and documented in The Oregon Plan Watershed Restoration Inventory annual report. At the end of ten years, landowners will be evaluated on substantive progress made.

3.2 CONIFER RESTORATION (ODF 8S)

BACKGROUND:

The benefits of large conifer trees for fish habitat have been well demonstrated. Many riparian areas in Oregon that once supported conifer stands are now alder dominated. Forest practice rules adopted in the fall of 1994 effecting vegetation retention requirements have been changed to allow the conversion of conifer sites currently dominated by brush and hardwoods back to conifers.

This measure can only be implemented on conifer sites and only on sites where current RMA conifer basal area is less than half of that required by stream size and stream type under the general water protection rules. No more than half of the total stream length within the harvest unit can be converted and the conversion blocks cannot exceed 500 feet in length. The conversion blocks must be separated from each other by a minimum of a 200 feet retention block where the general vegetation retention prescription is applied. See Activity 1.6 for additional details.

This management measure includes modifications of applications within Oregon Plan identified priority areas. In lieu of the standard procedures within the rules, hardwood conversions within priority areas will be subject to additional review and will require a site specific plan to be submitted and reviewed.

GOAL:

To restore riparian conifers on conifer sites, while assuring potentially adverse effects are fully considered. The long-term benefit of re-establishing a conifer stand must outweigh the short-term risk to stream temperature.

OBJECTIVE:

On sites where the native tree community would be conifer dominated, but due to historical events the stand has become dominated by hardwoods, in particular, red alder, the rules allow management to produce conditions suitable for the re-establishment of conifer. In this, and other situations where the existing streamside vegetation is incapable of developing characteristics of a mature streamside stand in a "timely manner," the desired action will provide functional stream shade, some woody debris, and bank stability in the short-term while creating conditions in the streamside area to attain desired future conditions more quickly than would otherwise be achievable under natural succession.

ACTION ITEMS:

RMA conifer restorations have been implemented since January 1995.

Proposed conversions within “high priority,” “temperature limited,” or “sensitive stream reaches” (See Appendix A) will be subject to additional review and will require a site-specific plan to be submitted by the operator. Plans will be reviewed by Forest Practices Foresters, in consultation with ODFW.

Supplemental written technical and administrative guidelines for hardwood conversions proposed within these stream reaches have been developed. Guidance provides direction for review of site specific plans to make assessments of potential impacts to the affected streams.

FUNDING:

Landowners will provide the resources needed to complete this activity. Database tracking and reporting related to The Oregon Plan Watershed Restoration Reporting Form and The Oregon Plan Watershed Restoration Inventory annual report is funded through OWEB.

WORK SCHEDULE:

ODF forest practices inspection program is responsible for determining compliance by operators.

Written technical and administrative guidelines for RMA hardwood conversions have been developed for consistent implementation and are contained in the *Forest Practices Rule & Statute Guidance Manual*.

Supplemental written technical and administrative guidelines for hardwood conversions proposed within stream reaches, where additional review is required, have been developed by ODF.

MONITORING:

Effectiveness monitoring has been initiated. Effectiveness monitoring included post-operation stream temperature data collection to evaluate the effects of conifer restoration on stream temperature. *(Study completed in 1997, final report is available)* See activity 1.6 for additional details.

More monitoring needs to be done to evaluate compliance, frequency of implementation, the effects on stream temperature, and the success in conifer establishment. Future monitoring will be based on monitoring program priorities and as resources allow.

Project information is reported on The Oregon Plan Watershed Restoration Reporting Form and documented in The Oregon Plan Watershed Restoration Inventory annual report.

3.3 ADDITIONAL CONIFER RETENTION ALONG FISH-BEARING STREAMS (ODF 19S)

BACKGROUND:

Under the Forest Practices Act, meeting the "desired future condition" of mature forest conditions for riparian management areas is based upon basal area (BA) targets. The basal area targets are designed to achieve a stand with the characteristics of a mature forest within the RMA. The "standard" basal area targets were developed based upon some assumptions. Current monitoring data indicate the target may under-represent the actual stand conditions within the RMA, the potential for achieving the desired future condition, and the corresponding large wood delivery is reduced.

GOAL:

To ensure that in key stream reaches the actual conifer basal area retained in a RMA will meet the "desired future condition" to the maximum extent practicable and in the most timely manner as established under the Water Protection Rules.

OBJECTIVE:

To maximize the potential of meeting the desired future condition established under the Water Protection Rules by retaining additional conifer trees in key fish bearing streams when the actual stocking exceeds that stocking assumed under the standard target.

ACTION ITEMS:

For fish-bearing stream reaches matching the applicable interim criteria in Appendix A, forest landowners will voluntarily retain conifer BA in RMAs so that no more than 25 percent of the excess conifer basal area above the standard target is harvested. Forest practices foresters are available to work with individual landowners in deciding when to apply this activity. While the decision to meet specific requests is an individual decision of each forest landowner, the number of reported habitat improvement projects contributed by this group to date is evidence of a strong commitment.

FUNDING:

Landowners will provide the resources needed to complete this activity. Database tracking and reporting related to The Oregon Plan Watershed Restoration Reporting Form and The Oregon Plan Watershed Restoration Inventory annual report is funded through OWEB.

WORK SCHEDULE:

ODF and ODFW develop guidance - May 1997 (*completed*).

MONITORING:

Project information is reported on The Oregon Plan Watershed Restoration Reporting Form and documented in The Oregon Plan Watershed Restoration Inventory annual report.

3.4 INCREASE RIPARIAN MANAGEMENT AREA FOR SMALL TYPE N STREAMS (ODF 20S)

BACKGROUND:

Establishes limited RMAs of 20 feet for small Type N streams for the purpose of retaining snags and downed wood.

GOAL:

To increase the potential availability of large wood to streams.

OBJECTIVE:

To provide large wood for potential fish habitat and sediment storage.

ACTION ITEMS:

OFIC member landowners will voluntarily establish 20 foot RMAs along Type N stream reaches meeting the applicable interim criteria in Appendix A. Within these RMAs, in addition to the retention requirements of the Forest Practices Act rules, all snags and downed wood (with the exception merchantable blowdown) will be retained where operationally possible.

FUNDING:

Landowners will provide the resources needed to complete this activity. Database tracking and reporting related to The Oregon Plan Watershed

Restoration Reporting Form and The Oregon Plan Watershed Restoration Inventory annual report is funded through OWEB.

WORK SCHEDULE:

Implementation began in 1995 and is ongoing.

MONITORING:

The implementation and effectiveness of these projects will be monitored as part of the forest practices monitoring program as priorities and resources allow. Project information is reported on The Oregon Plan Watershed Restoration Reporting Form and documented in The Oregon Plan Watershed Restoration Inventory annual report.

3.5 ACTIVE PLACEMENT OF LARGE WOOD DURING FOREST OPERATIONS (ODF 21S)

BACKGROUND:

This action provides a more aggressive and comprehensive program for placing large wood in streams currently deficient of large wood. Placement will be accomplished following ODF/ODFW placement guidelines (Activity 4.6, previously ODF 31).

GOAL:

To provide large wood to streams currently deficient of material in a more timely, efficient, and cost effective manner.

OBJECTIVES:

The objective of this measure is to provide a system that will provide for a more comprehensive and aggressive program for large wood recruitment.

ACTION ITEMS:

ODF and ODFW jointly develop recommended placement targets involving the number and size of pieces to be placed by stream size.

Forest landowners complete placement targets as active operations occur along large wood limited stream reaches meeting the applicable interim criteria in Appendix A.

FUNDING:

Funding for development of placement targets is contained within current agency budgets. Funding of large wood enhancements will be provided by landowners completing them. Database tracking and reporting related to The Oregon Plan Watershed Restoration Reporting Form and The Oregon Plan Watershed Restoration Inventory annual report is funded through OWEB.

WORK SCHEDULE:

ODF/ODFW develop placement targets June 1997 (*completed*).

MONITORING:

The implementation and effectiveness of these projects will be monitored as part of the forest practices monitoring program as monitoring program priorities and resources allow. Project information is reported on The Oregon Plan Watershed Restoration Reporting Form and documented in The Oregon Plan Watershed Restoration Inventory annual report.

3.6 25 PERCENT IN-UNIT LEAVE TREE PLACEMENT AND ADDITIONAL VOLUNTARY RETENTION (ODF 22S)**BACKGROUND:**

The Forest Practices Act requires retaining two trees per acre on "clear-cut" harvest types. This is a separate requirement than required by the water protection rules. These trees referred to as in-unit leave trees must be left on all units exceeding 25 acres in size. The purpose of these trees is to contribute to the overall maintenance of wildlife, nutrient cycling, moisture retention and any other resource benefits of retained wood.

The State Forester can by statute direct that 25 percent of these in-unit trees be placed in or adjacent to riparian management areas (RMAs) of Type F and D streams. Landowners can voluntarily choose to retain additional in-unit trees along Type N, D or F streams.

GOAL:

To retain up to 100 percent of the in-unit trees along Type N or F stream reaches meeting the applicable interim criteria in Appendix A when ODF, in consultation with ODFW, determine additional retention along streams is beneficial to salmonid recovery.

OBJECTIVE:

To retain additional trees in and along key stream reaches. These trees will be an additional source for large wood recruitment and shade as well as providing other wildlife attributes.

ACTION ITEMS:

ODF in consultation with ODFW will develop protocol and guidance for operational implementation of this management action (*completed*). In addition OWEB provides documentation and tracking of projects.

ODF forest practices foresters in consultation with ODFW biologists began implementation on operations starting after April 1997. The ODF Forest Practices inspection program is used for administration.

OFIC industrial forest landowners have voluntarily agreed to retain in-unit trees along specific stream reaches meeting the applicable interim criteria in Appendix A when requested by ODF or ODFW. In addition OFIC members will voluntarily change the ratio of 50 percent conifer and 50 percent hardwood to 75 percent conifer and 25 percent hardwood when requested on a site-specific basis.

FUNDING:

Funding for on-the-ground administration of this measure is contained within the ODF Forest Practices budget. Database tracking and reporting related to The Oregon Plan Watershed Restoration Reporting Form and The Oregon Plan Watershed Restoration Inventory annual report is funded through OWEB.

WORK SCHEDULE:

Twenty five percent in-unit leave tree placement currently in place is administered by the ODF forest practices inspection program.

Guidance development by ODF and ODFW was completed September 1997.

Forest landowners are committed to working with ODF and ODFW to meet the goals of leave tree placement. While the decision to meet specific requests is an individual decision of each OSWA member, the number of reported habitat improvement projects contributed by this group to date is also evidence of a strong commitment.

MONITORING:

Project information is reported on The Oregon Plan Watershed Restoration Reporting Form and documented in The Oregon Plan Watershed Restoration Inventory annual report.

3.7 VOLUNTARY NO-HARVEST RIPARIAN MANAGEMENT AREAS (ODF 62S)

BACKGROUND:

While the FPA water protection rules may allow some tree harvest within RMAs, forest landowners often elect not to harvest within these designated riparian management areas in conjunction with harvest units. Limited data suggest that no-harvest RMAs may be retained as often as 63 percent of the time.

Oregon's FPA water protection rules require vegetation retention components within RMAs along fish use streams for forest harvest operations. Generally, no tree harvesting is allowed within 20-feet of all fish bearing, domestic-use and all other medium and large streams unless stand restoration is needed. In addition, all snags and downed wood must be retained in every RMA (with exceptions related to safety). RMA widths are correlated to stream size. RMAs along large streams are 100 feet in width, while medium streams are 70 feet, and small streams are 50 feet.

GOAL:

To provide additional habitat benefits within strategic locations.

OBJECTIVE:

Voluntary retention of additional trees along fish bearing streams to enhance future large wood, shading and other attributes.

ACTION ITEMS:

This management measure is currently implemented.

FUNDING:

This is a voluntary project provided by forest landowners. Database tracking and reporting related to The Oregon Plan Watershed Restoration Reporting Form and The Oregon Plan Watershed Restoration Inventory annual report is funded through OWEB.

WORK SCHEDULE:

The decision to implement this activity is made on a case by case basis by the individual land owner or company.

MONITORING:

Project information is reported on The Oregon Plan Watershed Restoration Reporting Form and documented in The Oregon Plan Watershed Restoration Inventory annual report.

3.8 HABITAT RESTORATION PROJECTS (ODF 5S, 6S, 7S, 39S, 40S, 46S, 51S AND 52S)

BACKGROUND:

A number of local groups have formed which are open to all landowners that share a commitment to stream habitat conservation, restoration and enhancement through cooperative means and who can contribute valuable resources of time, equipment and funding. These projects sometimes include construction or restoration of off-channel habitat (alcoves, etc.) along forest streams. The OFIC, in coordination with other partners, has played an instrumental role in providing long-term stable funding for habitat restoration groups.

In order to streamline the Oregon Department of Forestry’s Work Plan, previous ODF measures related to habitat conservation projects have been grouped into one activity.

GOAL:

To engage in collaborative, grass roots groups dedicated to the goal of habitat restoration.

OBJECTIVE:

To assist in the formation and ongoing effectiveness of local habitat restoration efforts.

SELECTED EXAMPLES:

The following groups have formed and are ongoing. The list is not intended to be all inclusive, and additional groups are likely to form as our focus becomes statewide.

1. The **North Coast Salmonid Habitat Restoration Project**, previously ODF 5S, is an existing program that has been in place since 1996. Membership is open to all landowners that share a commitment to stream habitat conservation, restoration and enhancement through cooperative means and who can contribute valuable resources (time, equipment, dollars) to support the project's objectives.
2. The **Mid-Coast Restoration Project**, previously ODF 6S, has been modeled after the North Coast Restoration Project. Membership is open to all landowners that share a commitment to stream habitat conservation, restoration and enhancement through cooperative means and who can contribute valuable resources (time, equipment, dollars) to support the project's objectives.
3. The **Lobster Creek Whole-Basin Coordination Restoration Project**, previously ODF 39S, is a whole-basin restoration project to restore native salmonid populations, modeled after Hancock Timber Resource Group's (HTRG) strategy used in the Knowles Creek efforts in the Siuslaw basin. Partners in this project include HTRG, ODFW, the USDA Forest Service, and the Pacific Rivers Council.
4. The **Upper Siuslaw Enhancement**, previously ODF 40S, is a voluntary action coordinated through Weyerhaeuser, the Oregon Wildlife Heritage Foundation and ODFW (Mid-Coast Habitat Restoration Project) for fish habitat improvement on tributaries of the upper Siuslaw River.
5. The **South Coast Technical Advisory Team**, previously ODF 52S, is a coordinating group of agencies and landowners in the south coast area which identify and prioritize habitat restorations within the area.
6. The **Palmer Creek Acclimation Ponds**, previously ODF 51S, is a voluntary project by Georgia Pacific at the request of ODFW. The company designed, developed and constructed acclimation ponds for the hatchery Siletz River winter steelhead and potential hatchery coho near Palmer Creek. The aim of the project was to create a terminal hatchery fishery in the Siletz River that will give greater access to hatchery fish, while at the same time allow for wild fish to spawn in the upper drainage with less disturbance.
7. The **Fish Passage Surveys**, previously ODF 46S, conducted by the Coos Watershed Association and Weyerhaeuser, entails surveying all 'major' anadromous fish culverts in the Coos River Watershed for problems with passage. Upon completion of the survey work in 1996, restoration work was to commence utilizing the priorities established by the project partners.

FUNDING:

Funding is provided by the partners, with the OFIC ensuring long-term stable funding.

WORK SCHEDULE:

The groups have formed and each has a unique, ongoing work schedule.

MONITORING:

Monitoring is conducted independently by each group.

3.9 FOREST PRACTICES ADVISORY COMMITTEE ON SALMON AND WATERSHEDS (ODF 63S)**BACKGROUND:**

Executive Order 99-01 signed by Oregon Governor Kitzhaber directs the Board of Forestry with the assistance of an advisory committee to determine what, if any, changes to forest practices are necessary to meet water quality standards and to protect and restore salmonids.

The Forest Practices Advisory Committee on Salmon and Watersheds is the advisory committee described in the Executive Order that is charged with making recommendations to the Board. To the extent possible, the Committee should make specific recommendations to the Board of Forestry in 2000.

The Committee includes representatives from environmental, forest industry, commercial fishing, sports fishing, logging, local government, labor, and small woodland owner interests. Department of Forestry staff, in collaboration with staff from the Oregon Departments of Fish and Wildlife and Environmental Quality, provides technical and policy assistance. The state agency representatives are providing assistance through information collection and interpretation, conducting field trips, giving presentations, providing information about current policy and rules, and synthesizing the groups collaborative efforts into a written recommendation for the Board.

GOAL:

Consistent with the Executive Order, and the mission and objectives of the Oregon Plan for Salmon and Watersheds, determine: (1) what, if any, changes to forest practices, both regulatory and voluntary, are necessary to meet water quality standards and to protect and restore salmonids and (2) make specific recommendations to the Board of Forestry.

OBJECTIVE:

Objectives of the committee include:

1. Develop a common understanding of issues and the relative importance of limiting factors, science, policy, and consideration for forestry operations and riparian conditions on non-federal lands.
2. Consider the best available information including the results of relevant monitoring data, field evaluations, the IMST report, and scientific information including information from state and federal government agencies, universities and private entities, to determine how well the forest practice rules meet water quality standards and protect and restore fish.
3. Building on the findings of the second objective, evaluate whether the relative combined contributions of the current forest practice rules and voluntary measures (and in consideration of the contributions provided by other land uses) will achieve the Oregon Salmon Plan recovery objectives. Where possible, evaluate the likelihood that the rules and measures will achieve the objectives.
4. Identify, if any, additional practices that might be necessary to meet commitments to the Oregon Salmon Plan and the Executive Order.
5. Evaluate the relative costs and benefits of additional practices that might further support the Oregon Salmon Plan recovery objectives. This evaluation would include an analysis of the relative impacts on landowners, the relative contributions of other land uses, consideration of alternatives including non-regulatory approaches and alternatives, which achieve the desired level of protection and are least burdensome to landowners.
6. Building on the work of the prior objectives, recommend a package that is necessary to meet commitments in the Oregon Salmon Plan and the Executive Order. If rule changes are recommended, develop findings consistent with ORS 527.714. Identify limitations in data and recommend appropriate monitoring or research.

7. Complete evaluations and recommendations in 2000 to present to the Board of Forestry.

ACTION ITEMS:

Collect information to evaluate and make recommendations to the Board of Forestry in 2000.

FUNDING:

Funding for the committee, and staff support, is provided from the Departments Forest Practices Budget.

WORK SCHEDULE:

The thirteen member committee was formed in January 1999, and has participated in the development of four issue papers dealing with fish passage, forest roads, landslides, and riparian functions. These issue papers have also undergone scientific review. The advisory committee has also incorporated the forestry report of the Independent Multidisciplinary Science Team into its discussions.

The committee is developing a list of policy options for the Board of Forestry to consider. Consensus is being reached on some options and a range of agreement exists on others. The options include proposals for new incentive approaches, cooperative strategies, and changes in Oregon's forest practice rules. The advisory committee plans to complete its discussions in 2000. A committee report will be provided to the Board of Forestry and be available to the public in 2000.

ODF 4: ODF Regulatory Activities

4.1 TECHNICAL AND POLICY REVIEW OF RULES AND ADMINISTRATIVE PROCESSES RELATED TO SLOPE STABILITY (ODF 3S)

BACKGROUND:

To analyze the effects of the February 1996 and November 1996 storms, the Department is in the process of collecting and analyzing landslide information from study zones within the storm areas, this project is described in Activity 1.5 (previously ODF 13S). As a follow-up of the monitoring effort the Board of Forestry will review the existing forest practice rules and program in relation to slope stability to determine if changes in rules or administration procedures are needed. The review

process will be two-fold focusing on public safety and impacts on fish habitat and water quality.

GOAL:

Review forest practice rules related to slope stability.

OBJECTIVE:

- Review public safety in relation to forest landslides in conjunction with harvest operations.
- Assess impacts on fish habitat.
- Assess impacts on water quality.

ACTION ITEMS:

Water Quality/Habitat Issues

Adaptive Management

1. Board of Forestry directs ODF to implement a technical/policy review of rules and administrative processes related to slope stability.
 - a) Complete data collection of two additional study sites under the Storms of 1996 Monitoring Project (Activity 1.5, previously ODF 13).
 - b) Vigorously pursue analysis of study data to determine frequency occurrence of landslides and potential water quality/habitat effects under different management scenarios.
 - c) Establish a technical group to assist ODF's review of rules and administrative processes.
 - d) Utilize existing scientific/technical literature related to landslides.

Regulatory Program

1. Continue to apply high-risk site rules/written plans.
2. Increase compliance monitoring on road and harvesting practices on high-risk sites.

Implement Voluntary Program

1. Road erosion and risk project (Activity 3.1, previously ODF 1S).
2. State Forest Land Road Project (Activity 5.1, previously ODF 2S).
3. Retain in-unit trees along small Type N streams.
4. Return all snags/downed wood within 20-foot RMAs along small Type N streams (Activity 3.4, previously ODF 20S).

Public Safety/Property Issues

1. Convene interim legislative committee to examine issues and make recommendations for addressing public safety/property damage issues by 1999 session.
2. Board of Forestry requests deferral of forest practices on high risk sites meeting certain parameters for two years until legislative committee makes recommendations.
3. Immediately implement project by ODF and state climatologist to develop reliable maps identifying public safety/property risks.
4. Request Legislature to fund OEM, National Weather Service and local public safety agencies to develop early warning system.
5. ODF to provide notification of operation to residents that have homes in historic forest tracts below operations.
6. Create hazard/risk notification protocol that can be used through local public safety agencies.

FUNDING:

Funding of hazard mapping portion of this project will be contained within ODF's Forest Practices Budget.

WORK SCHEDULE:

- March 1997 Board of Forestry provide direction to Department to implement review.
- June 1997 – Senate Bill 1211.
- 1998 – Task Force on Landslides and Public Safety.
- 1999 Senate Bill 12.
- October and November 1999 - FPAC review of landslide issues.

- Develop and implement compliance audit program (Activity 1.9, previously ODF 23S). *Pilot study completed.*
- Storm Impacts of 1996 (*Study completed June 1999*).
- Recommendations for modifications of “high-risk” site designations made.
- Recommendations being developed by the FPAC.
- Anticipate revisions to rule guidance in 2000.
- Anticipate further recommendations resulting from the FPAC process in 2000.
- Public safety and natural resource issues have been separated.

MONITORING:

Annual reporting.

4.2 INCREASED RIPARIAN PROTECTION (ODF 27S)

BACKGROUND:

Vegetation retention requirement rules along streams have been changed to reflect stream type and size. Previous retention requirements only applied a standard of vegetation retention to streams with "significant" fish use. Rather than using a distinct "shade" standard as the past rules did, these rules are designed to achieve and maintain a desired future condition similar to mature forests with an emphasis towards conifer species along most fish-bearing streams. The new standard uses live conifer basal area instead of number of trees as the vegetation-retention measures.

Generally, no tree harvesting is allowed within 20-feet of all fish-bearing, all domestic-use and all other medium and large streams unless stand restoration is needed. In addition, all snags and downed wood must be retained in every riparian management area (with exceptions related to safety). Provisions governing vegetation retention are designed to encourage conifer restoration on riparian forest land that is not currently in the desired condition. Future supplies of conifer on these sites are necessary to support stream functions and to provide fish and wildlife habitat.

These changes have resulted in an increase in the number of conifer trees, snags and downed woody debris required to be left along fish-bearing streams and medium and large non-fish bearing streams, the changes also increase tree density and RMA width. See Activities 1.3 and 1.9 for additional details.

GOAL:

The purpose of the water protection rules is to protect, maintain and, where appropriate, improve the functions and values of streams, lakes, wetlands, and riparian management areas. These functions and values include water quality, hydrologic functions, the growing and harvesting of trees, and fish and wildlife resources.

OBJECTIVE:

Establishing and maintaining a desired future condition similar to mature forests with an emphasis towards conifer species along most fish-bearing and many non-fish bearing streams. And to provide good instream habitat improvement over time across forested lands.

ACTION ITEMS:

This management measure is currently implemented.

FUNDING:

Current Oregon Department of Forestry Forest Practices Budget. An in-kind contribution is realized on the part of the forest landowner in lost timber revenue.

WORK SCHEDULE:

This management measure is in place. It is administered through the ODF Forest Practices inspection program. Written technical and administrative guidelines have been developed for consistent implementation (contained in *Forest Practices Rule & Statute Guidance Manual*, OAR 629-24-635).

MONITORING:

Validation, effectiveness, and compliance monitoring began in 1996. The vegetation retention targets have been based upon a number of assumptions. Validation monitoring will test some of these assumptions.

Effectiveness monitoring will include analysis of riparian vegetation structure pre- and post-operation. Effectiveness of riparian reforestation

efforts and success in hardwood conversion stands will also be analyzed. Progress on this work is provided under Activities 1.3 and 1.9.

4.3 PROTECTION OF SIGNIFICANT WETLANDS, INCLUDING ESTUARIES (ODF 28S)

BACKGROUND:

Significant wetlands on forestlands provide a wide range of functions and values, including those related to water quality, hydrologic function, fish and other aquatic organisms, and wildlife.

Forest practice rules requiring protection of riparian management areas around significant wetlands, including all estuaries were implemented in late 1991. While all wetlands are protected under the forest practice rules, this change requires the retention of riparian vegetation around the wetland in addition to retention of vegetation within the wetland.

Significant wetlands include all estuaries, any wetland larger than eight acres, bogs, and important springs in eastern Oregon.

GOAL:

The goals of significant wetlands protection are to maintain the functions and values of significant wetlands on forestlands over time, and to ensure that forest practices do not lead to site destruction or reduced productivity, while at the same time ensuring the continuous growth and harvest of forest tree species. In order to accomplish these goals, the rules focus on the protection of soil, hydrologic functions, and specified levels of vegetation retention.

OBJECTIVE:

To provide riparian management areas 100 feet in width for any wetland larger than eight acres, 100 to 200 feet for an estuary, and 50 to 100 feet from a bog.. The actual location and width of the selected RMA is based upon site-specific factors.

For all significant wetlands, operators shall provide the following to the wetlands and riparian management areas: 1) live tree retention (OAR 629-645-010); 2) soil and hydrologic function protection (OAR 629-645-030); 3) understory vegetation retention (OAR 629-645-040); and 4) snag and down wood retention (OAR 629-645-050).

ACTION ITEMS:

This management measure is currently implemented.

FUNDING:

Oregon Department of Forestry Forest Practices Budget.

WORK SCHEDULE:

This management measure is in place. It is administered through the ODF Forest Practices inspection program. Written technical and administrative guidelines have been developed for consistent implementation (contained in *Forest Practices Rule & Statute Guidance Manual*, OAR 629-645-000 - 050).

Compliance is assured through prior approval of written plans. Operators are required to submit written plans for Forest Practices Forester approval before the commencement of any operation within 300 feet of significant wetlands.

MONITORING:

Periodic implementation and effectiveness monitoring will be initiated based on priorities and available resources.

4.4 FOREST PRACTICE CHEMICAL PROTECTION RULES INCREASED BUFFERS (ODF 29S)

BACKGROUND:

The Board of Forestry has recently reviewed and revised the state's forestry chemical application rules. The changes include providing protection to vegetation required to be protected by the water protection rules, increasing distances for the exclusion of direct aerial application of fungicides and non-biological insecticides from 60 to 300 feet from the aquatic areas of Type F and Type D streams, large lakes and any lakes with fish use, any areas of standing open water larger than one-quarter acre, and significant wetlands.

The rule revisions follow 1994 changes in the water protection rules that resulted in a 20 to 30 percent increase in the number of miles of streams receiving the highest level of protection when chemicals are applied. See Activity 1.4 for additional details.

GOAL:

The purpose of the forest practice chemical and other petroleum product rules is to establish requirements that will help ensure:

1. Chemicals and other petroleum products used on forest land do not occur in the soil, air, or waters of the state in quantities that would be injurious to water quality or to the overall maintenance of terrestrial wildlife or aquatic life; and
2. The vegetative components of riparian management areas and sensitive resource sites receive protection on herbicide operations consistent with the purposes of the reforestation rules, the requirements of the sensitive resource site rules, and the vegetation retention goals of the water protection rules.

OBJECTIVE:

To increase buffer strips to 300 feet in width from the aquatic areas of the water types listed above for the exclusion of direct aerial application of fungicides and non-biological insecticides. It is anticipated that increasing the buffer strip width will greatly reduce the risk of fungicides and non-biological insecticides from entering waters of the State, and thus is likely to provide a higher level of protection to fish and aquatic invertebrates in regard to these chemical operations.

ACTION ITEMS:

The Board of Forestry adopted the new chemical rules September 1996, and implementation began in January 1997. Training and written guidance has been developed for the administration of the new rules by department forest practices foresters.

The new rules commit the department to conduct effectiveness monitoring and evaluation of the chemical and other petroleum product rules.

FUNDING:

Current Oregon Department of Forestry Forest Practices Budget.

WORK SCHEDULE:

Administration will be through the ODF forest practices inspection program, written technical and administrative guidelines have been developed for consistent implementation (See *Forest Practices Rule &*

Statute Guidance Manual, under Division 620 Chemicals and Other Petroleum Products).

MONITORING:

The Benchmark is to prevent forest chemicals from entering the waters of the state at levels injurious to fish, wildlife or water quality. Surface water criteria have been developed for each commonly used chemical labeled for use on Oregon forestlands. Monitoring is conducted to confirm that BMP compliance will result in these thresholds not being exceeded. See Activity 1.4 for more details on monitoring aerial chemical applications.

4.5 LARGE WOOD PLACEMENT INCENTIVES (ODF 30S)

BACKGROUND:

Large wood placement incentives were included in the September 1994 Forest Practice Water Protection Rules. Forest practice rules have been developed to provide landowner incentives to work with ODF and ODFW in the voluntary placement of large wood and other material where appropriate.

Woody debris diverts water flow, creating pools and providing cover. In the past, large wood's role in forming stream habitat was not understood or was ignored. In some smaller streams, splash dams were built to drive logs down to larger bodies of water, often scouring the streams and removing all woody debris. Also, logging operations in the past typically cut right to the edge of the stream, depriving the stream of wood input from the adjacent riparian area. Over time, this lack of input can cause a depletion of wood in the stream. Streams also were cleared of large wood for navigation and to improve fish migration.

There have been many attempts to add large wood to streams, beginning in the 1930's with the help of Civilian Conservation Corps work crews. In the Midwest, many of these efforts have led to documented increases in fish production. However, many of the past efforts in the Pacific Northwest have not increased fish production because the structures were not designed to handle the variation in flows and the greater stream slopes that occur in this region.

GOAL:

Many fish-bearing streams currently need improvement of fish habitat because they lack adequate amounts of large wood. The goal of this action is to provide incentives to operators to conduct approved stream improvement projects.

OBJECTIVE:

Provide a short-term supply of large wood to fish bearing streams while riparian management areas mature to provide these components.

ACTION ITEMS:

This management measure is currently implemented.

FUNDING:

Placement projects are funded by the companies completing them. ODF inspection funding is contained within ODF's Forest Practices Budget.

WORK SCHEDULE:

This action is voluntary with regulatory guidelines. Administration of this measure is accomplished by the ODF forest practices inspection program. Once a forest operator chooses to accomplish a habitat improvement project, they must obtain prior approval from the Department through a written plan.

To support this effort, a publication (ODF 31), "Large Wood Placement Guidelines" has been developed jointly by ODF and ODFW to guide landowners during woody-debris placement projects. Projects must comply with these guidelines or the operator must get site-specific approval of a detailed plan for the enhancement work. These projects are high priority inspection item for ODF Forest Practices Foresters.

MONITORING:

In addition, some monitoring has been conducted by ODFW to determine how some of the previous projects withstood the February 1996 storm. ODF will monitor this activity as prioritized in the monitoring strategy and resources allow.

4.6 LARGE WOOD PLACEMENT GUIDELINES (ODF 31S)**BACKGROUND:**

ODF and ODFW have developed a guidelines publication for operators to use in the placement of large woody debris in streams. The forest practices rules adopted in the fall of 1994 provide landowner incentives to place large woody debris in streams. If a proposed woody debris placement project meets the ODF guidelines contained in the publication

the process for acquiring state approval is streamlined. The landowner or operator still must either obtain prior approval of a forest practices written plan or obtain a Removal-Fill Permit from the Oregon Division of State Lands before proceeding with the project.

GOAL:

Provide guidelines for forest operators to follow in the placement of large wood.

OBJECTIVE:

Assure correct placement of large wood by operators and to reduce operator liability.

ACTION ITEMS:

This management measure is currently implemented. However, large wood placement monitoring is ongoing, as our knowledge of wood placement techniques improves, information in the current publication will become outdated leading to updated publications

FUNDING:

Department of Forestry Forest Practices and ODFW budgets.

4.7 FISH PRESENCE SURVEYS (ODF 32S, 59S)

BACKGROUND:

This measure will fund and complete an interagency "fish" (salmonids, game fish, and T&E fish) presence survey to improve efficiency of program deliveries and to ensure that protection is delivered as was intended by the forest practice rules and other programs. This survey also identifies barriers to fish passage.

OAR 629-635-200(11) adopted in 1994, directs the Department of Forestry in cooperation with ODFW to conduct a comprehensive field survey to identify fish use on non-federal forest land in Oregon.

When direction was provided, it was understood that the survey work was unfunded. The agencies were directed to seek grants and other sources of funds to complete the work. While OFIC contributed funds during the initial stages of the project, the majority of the survey work to date has

been accomplished using existing resources of the Department of Forestry and Department of Fish and Wildlife.

As funding becomes available survey priority is given to streams that operators have identified as having pending sales.

GOAL:

To complete a comprehensive fish presence survey to identify fish use on non-federal forestland waters in Oregon.

OBJECTIVE:

Improve efficiency of program deliveries and to ensure that protection is delivered as was intended by the forest practice rules and other programs. Also, to identify barriers to fish passage.

ACTION ITEMS:

Develop contracts for supervision and survey work to carry out the project.

FUNDING:

Approximately \$500,000 and 0.5 FTE were provided in both the 1997-99 and 1999-2001 ODF budgets for fish presence surveys. To date approximately 20 percent of the stream surveys have been completed.

Project work funded by ODF will not occur in the 2000 fish presence survey season, and possibly not in 2001, due to budget constraints. However, four survey crews will be working during the 2000 survey season as a result of cooperative agreements between Oregon Department of Forestry, the Oregon Department of Fish and Wildlife, and certain industrial forest landowners.

WORK SCHEDULE:

- During the 1997 fish presence survey season, 600 miles were surveyed for fish presence statewide.
- During the 1998 fish presence survey season, twenty-two crews were hired, and over 1400 fish presence surveys were completed in approximately 500 “crew-days.” This effort resulted in 443 miles of stream confirmed as Type F stream channels used by game fish, while 77 miles were removed from an assumed Type F status. A net addition of approximately 366 miles of Type F stream was entered into

the stream classification database. In addition to the fish presence surveys, 237 road culverts were measured and identified as impassable to fish (see Action 4.9 below). These surveys were accomplished in cooperation with Oregon Department of Fish and Wildlife district biologists.

- During 1999, statewide fish presence surveys were conducted by ten Oregon Department of Forestry districts in cooperation with the Oregon Department of Fish and Wildlife districts. Twelve crews were hired, with approximately 561 miles of stream survey completed, resulting in 361 miles of stream confirmed as Type F stream channels, and 78.5 miles removed from an assumed Type F status. This work resulted in a net addition of approximately 282 miles of Type F stream entered into the stream classification database. In conjunction with the fish presence surveys, 174 road culverts were measured and identified as impassable to fish (see Action 4.9 below).

MONITORING:

Survey results are mapped on official water classification maps.

During the summer of 1999, 39 hydrologic unit sub-basins, randomly located throughout western Oregon, were entered into the ODF stream classification GIS database.

4.8 INCREASE NUMBER OF STREAMS AND STREAM MILES PROTECTED (ODF 33S)

BACKGROUND:

The water protection rules implemented in the fall of 1994 effectively increased the number of streams and stream miles receiving increased protection from harvesting practices as compared to past forest practice rules.

Vegetation retention requirement rules along streams have been changed to reflect stream type and size. Past rule standards provided riparian protection standards based on a two-class system. The new system identifies seven geographic regions; distinguishes among streams, lakes, and wetlands and further distinguishes each by size; distinguishes among those streams that have fish or domestic use, or neither, and in each case describes the stream as large, medium, or small based on average annual flow.

All fish-bearing streams have a riparian management area (RMA) that includes a vegetation retention standard. Previously, a standard of vegetation retention applied only to those streams with "significant" fish use. Based on surveys completed before the rules were adopted these rules could increase by as much as 30 percent the miles of forest streams that receive protection consistent with fish use.

GOAL:

The goal of this measure is to increase the number of miles of protected stream by 25 to 30 percent. The purpose of the water protection rules is to protect, maintain and where appropriate, improve the functions and values of streams, lakes, wetlands and riparian management areas. These functions and values include water quality, hydrologic functions, the growing and harvesting of trees, and fish and wildlife resources.

OBJECTIVE:

Establishing and maintaining a desired future condition similar to mature forests with an emphasis towards conifer species along most fish-bearing and many non-fish bearing streams. And to provide good instream habitat improvement over time across forested lands.

ACTION ITEMS:

This management measure is currently implemented. Rule (OAR 629-635-200(11) directs the Department of Forestry in cooperation with ODFW to conduct a comprehensive field survey to identify fish use on non-federal forest land (see measure ODF 32).

FUNDING:

Current Oregon Department of Forestry Forest Practices budget.

WORK SCHEDULE:

This management measure is in place. It is administered through the ODF Forest Practices inspection program. Written technical and administrative guidelines have been developed for consistent implementation (contained in *Forest Practices Rule & Statute Guidance Manual*, Divisions 635, 640, 645, 650 and 655).

MONITORING:

Both validation and effectiveness monitoring began in 1996. The vegetation retention targets have been based upon a number of assumptions. Validation monitoring will test some of these assumptions.

4.9 IMPROVED FISH PASSAGE BMPs ON STREAM CROSSING STRUCTURES (ODF 34S)

BACKGROUND:

Forest practice rules adopted in the fall of 1994 require stream crossing structures to pass both adult and juvenile fish upstream and down stream. The new standard applies to all stream crossing structures installed after September 1, 1994. The February 1996 storm event has likely increased the process to replace older culverts and crossing structures with structures that meet the new standard.

GOAL:

Ensure that all new stream crossing structures on forestland installed or replaced after the fall of 1994 will pass both adult and juvenile fish upstream and downstream.

OBJECTIVE:

Upstream and downstream fish passage of both adult and juvenile fish.

ACTION ITEMS:

The rule standards are currently applied through "interim" technical guidance. The guidance includes detailed criteria about which structures will pass fish based upon stream gradient. FPF approval of written plans is based on this written guidance and in some cases consultation with ODFW. Additional refined guidance is being developed through a region wide partnership of natural resource agencies throughout the northwest.

FUNDING:

Oregon Department of Forestry Forest Practices budget.

WORK SCHEDULE:

This management measure is currently implemented. It is administered through the ODF Forest Practices inspection program. Written technical and administrative guidelines have been developed for consistent

implementation (contained in *Forest Practices Rule & Statute Guidance Manual*, OAR 629-24-622(5)(b)).

MONITORING:

Implementation monitoring has been initiated. A pilot study report and executive summary are available. Implementation and effectiveness monitoring will be continued based on monitoring program priorities and as resources allow. Refer to Activity 1.8 for additional details.

4.10 INCREASE DESIGN FOR LARGER FLOWS (ODF 35S)

BACKGROUND:

Water protection rules adopted in the fall of 1994 increased the BMP design standard for stream crossing structures to pass a 50 year storm event. The past design standard required stream crossing structures to pass 25 year events.

GOAL:

For stream crossings (culverts, bridges and fords) to pass peak flows that at least correspond to a 50-year return interval.

OBJECTIVE:

To prevent damage to aquatic habitat and water quality caused by stream crossing failures.

ACTION ITEMS:

This management measure is currently implemented.

FUNDING:

Current Oregon Department of Forestry Forest Practices budget.

WORK SCHEDULE:

This management measure is in place. It is administered through the ODF Forest Practices inspection program. Written technical and administrative guidelines have been developed for consistent implementation (contained in *Forest Practices Rule & Statute Guidance Manual*, OAR 629-24-622(5)(a)).

MONITORING:

Implementation monitoring has been initiated. A pilot study report and executive summary are available. Implementation and effectiveness monitoring will be continued based on monitoring program priorities and as resources allow. See Activity 1.8 for more details.

4.11 UPGRADED ROAD CONSTRUCTION AND FILL REQUIREMENTS (ODF 36S)

BACKGROUND:

In the fall of 1994 road construction BMPs were changed to specifically require that excavation and amount of road fill be minimized at stream crossings, and that any road fill greater than 15 feet deep require prior approval. Previous road construction BMPs were not as specific nor did they require prior approval for fills greater than 15 feet deep.

GOAL:

To minimize the volume of material in fills.

OBJECTIVE:

Requiring fill depths and widths installed after the fall of 1994 to be minimized, in combination with the new stream crossing design criteria of the 50 year storm event, should significantly reduce the likelihood of dam break floods from stream crossing failures and minimize the potential adverse effects of such events if they should occur.

ACTION ITEMS:

This management measure is currently implemented.

FUNDING:

Current Oregon Department of Forestry Forest Practices budget.

WORK SCHEDULE:

This management measure is in place. It is administered through the ODF Forest Practices inspection program. Written technical and administrative guidelines have been developed for consistent implementation (contained in *Forest Practices Rule & Statute Guidance Manual*, OAR 629-24-622(4)).

MONITORING:

This practice is monitored under Activity 1.9. See Activity 1.9 for more detail.

4.12 UPGRADED SKID TRAIL CONSTRUCTION AND FILL REQUIREMENT (ODF 37S)

BACKGROUND:

For ground based yarding equipment, BMPs were changed to specifically require that excavation and amount of fill for skid trails be minimized at stream crossings, and that for fills over eight feet deep prior approval is required.

GOAL:

Minimize excavations and the volume of material in fills at stream crossings.

OBJECTIVE:

To reduce the likelihood of dam break floods from crossing failures and to minimize potential adverse effects if they should occur.

ACTION ITEMS:

This management measure is currently implemented.

FUNDING:

Current Oregon Department of Forestry Forest Practices budget.

WORK SCHEDULE:

This management measure is in place. It is administered through the ODF Forest Practices inspection program. Written technical and administrative guidelines have been developed for consistent implementation (contained in *Forest Practices Rule & Statute Guidance Manual*, OAR 629-660-020(4)).

MONITORING:

Implementation and effectiveness monitoring will be scheduled as priorities and resources allow.

4.13 CLEARCUT LIMITATIONS (ODF 38S)

BACKGROUND:

ORS 527.740 restricts clearcuts and similar “Harvest Type 3 units” to 120 acres in size. Clearcut harvesting units that total a combined acreage greater than 120 acres must be separated by 300 feet until any adjacent areas are reforested and free to grow (generally at least four years).

Harvest Type 3 units include any harvest unit that requires reforestation after completion of harvest and wildlife leave trees (two per acre) and downed log retention.

GOAL:

To reduce any adverse effects of large, contiguous, regeneration harvest areas on riparian, aquatic resources and other forest resources.

OBJECTIVE:

To limit clearcuts and other similar harvest units on single ownerships to a maximum size of 120 acres in most situations.

ACTION ITEMS:

Provide inspections for compliance. The Department provides ongoing random inspections of forest operations based on priority and the potential for resource damage. In the event of non-compliance with this rule operators are subject to enforcement action. When non-compliance of the rules is documented enforcement action can be taken in the form of civil penalties, criminal action and repair orders.

FUNDING:

This action is funded through the Departments Forest Practices Budget. An in-kind contribution is realized on the part of the forest landowner in lost timber revenue.

WORK SCHEDULE:

This management measure is in place. It is administered through the ODF Forest Practices inspection program. Written technical and administrative guidelines have been developed for consistent implementation (contained in *Forest Practices Rule & Statute Guidance Manual*, ORS 527.740)

MONITORING:

Forest Practices inspection program.

4.14 FOREST PRACTICES ADVISORY COMMITTEE ON SALMON AND WATERSHEDS (ODF 63S)

BACKGROUND:

Executive Order 99-01 signed by Oregon Governor Kitzhaber directs the Board of Forestry with the assistance of an advisory committee to determine what, if any, changes to forest practices are necessary to meet water quality standards and to protect and restore salmonids.

The Forest Practices Advisory Committee on Salmon and Watersheds is the advisory committee described in the Executive Order that is charged with making recommendations to the Board. To the extent possible, the Committee should make specific recommendations to the Board of Forestry in 2000.

The Committee includes representatives from environmental, forest industry, commercial fishing, sports fishing, logging, local government, labor, and small woodland owner interests. Department of Forestry staff, in collaboration with staff from the Oregon Departments of Fish and Wildlife and Environmental Quality, provides technical and policy assistance. The state agency representatives are providing assistance through information collection and interpretation, conducting field trips, giving presentations, providing information about current policy and rules, and synthesizing the groups collaborative efforts into a written recommendation for the Board.

GOAL:

Consistent with the Executive Order, and the mission and objectives of the Oregon Plan for Salmon and Watersheds, determine: (1) what, if any, changes to forest practices, both regulatory and voluntary, are necessary to meet water quality standards and to protect and restore salmonids and (2) make specific recommendations to the Board of Forestry.

OBJECTIVE:

Objectives of the committee include:

1. Develop a common understanding of issues and the relative importance of limiting factors, science, policy, and consideration for forestry operations and riparian conditions on non-federal lands.

2. Consider the best available information including the results of relevant monitoring data, field evaluations, the IMST report, and scientific information including information from state and federal government agencies, universities and private entities, to determine how well the forest practice rules meet water quality standards and protect and restore fish.
3. Building on the findings of the second objective, evaluate whether the relative combined contributions of the current forest practice rules and voluntary measures (and in consideration of the contributions provided by other land uses) will achieve the Oregon Salmon Plan recovery objectives. Where possible, evaluate the likelihood that the rules and measures will achieve the objectives.
4. Identify, if any, additional practices that might be necessary to meet commitments to the Oregon Salmon Plan and the Executive Order.
5. Evaluate the relative costs and benefits of additional practices that might further support the Oregon Salmon Plan recovery objectives. This evaluation would include an analysis of the relative impacts on landowners, the relative contributions of other land uses, consideration of alternatives including non-regulatory approaches and alternatives, which achieve the desired level of protection and are least burdensome to landowners.
6. Building on the work of the prior objectives, recommend a package that is necessary to meet commitments in the Oregon Salmon Plan and the Executive Order. If rule changes are recommended, develop findings consistent with ORS 527.714. Identify limitations in data and recommend appropriate monitoring or research.
7. Complete evaluations and recommendations in 2000 to present to the Board of Forestry.

ACTION ITEMS:

Collect information to evaluate and make recommendations to the Board of Forestry in 2000.

FUNDING:

Funding for the committee, and staff support, is provided from the Departments forest practices budget.

WORK SCHEDULE:

1. The thirteen member committee was formed in January, 1999, and has participated in the development of four issue papers dealing with fish passage, forest roads, landslides, and riparian functions. These issue papers have also undergone scientific review. The advisory committee has also incorporated the forestry report of the Independent Multidisciplinary Science Team into its discussions.
2. The committee is developing a list of policy options for the Board of Forestry to consider. Consensus is being reached on some options and a range of agreement exists on others. The options include proposals for new incentive approaches, cooperative strategies, and changes in Oregon's forest practice rules. The advisory committee plans to complete its discussions in 2000. A committee report will be provided to the Board of Forestry and be available to the public in 2000.

4.15 IMPROVED INTERAGENCY COORDINATION OF FORESTLAND USE CHANGES

BACKGROUND:

The forest practice water protection rules may be applicable to any forestland, regardless of how the land is zoned or taxed or how any state or local statutes, ordinances, rules or regulations are applied. ODF is the Designated Management Agency under DEQ for regulation of water quality on non-federal forestlands. The Forest Practices Act provides that forest operators conducting operations in accordance with the forest practice rules are determined to be in compliance with Oregon's water quality standards.

Nothing in the Oregon Forest Practices Act prevents the conversion of forestland to any other use. ODA, DSL, DEQ, and local governments have direct state regulatory authority over aspects of activities not associated with commercial forest operations that could also potentially affect water quality standard compliance.

GOAL:

To ensure that water quality and other protection standards are maintained by improving interagency coordination when forestland is converted to a new use not compatible with the continued growing and harvesting of forest tree species.

OBJECTIVE:

When forestland is converted to a new use not compatible with the continued growing and harvesting of forest tree species, the associated activities will be appropriately handed off among the other appropriate regulatory agencies.

ACTION ITEMS:

Develop and implement a memorandum of agreement with DEQ, ODA, and DSL to formalize the coordination of respective jurisdictions in situations where forestland is converted to uses not compatible with forest tree cover.

FUNDING:

Funding for the development and implementation of a memorandum of agreement is provided from the Department's Forest Practices Budget.

WORK SCHEDULE:

The memorandum of agreement will be finalized by the end of 2000.

ODF 5: State Forests Management Activities

5.1 STATE FOREST LANDS ROAD EROSION AND RISK PROJECT (ODF 2S)

BACKGROUND:

State forest landowners have agreed to implement a voluntary program (to include 1996 storm damage) on state-owned lands to identify risks from roads and to address those risks. This proposed effort will upgrade at least 130 miles of road in each of the next three biennium. Many of the road systems were built prior to the Oregon Forest Practices Act to salvage Tillamook burn timber in the 1950's. The state forest land was in private ownership at that time.

GOAL:

To restore, upgrade and in some cases close state forest roads and stream crossing structures to meet current Forest Practices Act requirements.

OBJECTIVE:

The project will upgrade at least 130 miles of forest roads in each of the next three biennium. This effort will reduce the risk of erosion and sedimentation that could severely impact fisheries resources.

ACTION ITEMS:

Roads will be inventoried using new road inventory protocol developed by ODF and OFIC to identify high priority road repair/improvement projects. Roads will be re-constructed, improved or put to bed. All repairs and improvements will meet or exceed requirements of the revised Oregon Forest Practices Act rules.

FUNDING:

Storm damage portion (FEMA and District storm-related costs): Current biennium \$3 to \$4 million anticipated.

For the Phase 2 portion of this measure \$3 million dollars is available for the 97-99 biennium pending approval.

Road improvement program (Phase 2): The Department is requesting authorization to spend an additional \$3 million dollars and add 6.5 FTEs as part of a program option package for the 97-99 biennium to support this portion of the program. The revenue to implement this project is available awaiting authorization.

Database tracking related to The Oregon Plan Watershed Restoration Reporting Form and documentation in The Oregon Plan Watershed Restoration Inventory annual report is funded through OWEB.

WORK SCHEDULE:

- Project timeframe - July 1996 through 2002.
- Inventories are approximately 98 percent complete as of June, 2000.
- The GIS database design work has been initiated. A third of the districts have entered data into Excel or Access data bases and are using this information with GIS.

MONITORING:

Reconstruction, road closures, and repair work will be monitored by ODF road engineers using GIS data collection techniques. Project information is also reported on The Oregon Plan Watershed Restoration Reporting Form and documented in The Oregon Plan Watershed Restoration Inventory annual report.

5.2 NORTHWEST STATE FOREST LANDS MANAGEMENT PLAN (ODF 9S)

BACKGROUND:

Oregon Department of Forestry is preparing a NW Oregon State Forest Management Plan. A draft plan is expected to be completed by the fall of 2000. The plan will cover over 600,000 acres of state forest land and will address the full array of statutory mandates and Board and department policies. ODF is working closely with ODFW in developing the plan, and has solicited input from stakeholders through a variety of forums.

GOAL:

To produce a forest plan that:

(1) meets the Department's statutory obligations on Board of Forestry land, and its contractual obligation to the State Land Board on Common School Land; (2) is a comprehensive and integrated plan, taking into account a wide range of forest values; and (3) uses the technical information that can be reasonably obtained within the constraints of timelines and budgets. The plan will be used to develop a Habitat Conservation Plan, if possible, that serves as a means of complying with the federal ESA, and also achieves the purposes of the state ESA.

OBJECTIVE:

Plans are now in development and are not expected to be approved until late 2000. Riparian management practices will meet or exceed the Forest Practices Act to provide for multi-species needs. Watershed assessment will be part of implementation planning to provide for more effective placement of habitat enhancement projects. Investments in road and culvert surveys as part of watershed assessments will provide for more effective maintenance and upgrading of the road systems and will result in improved fish passage.

Focus will be on: (1) upgrading or stabilizing "legacy" roads; (2) improving fish passage, placing large wood and improving riparian conditions; and (3) reducing the risk of debris flows and sediment from roads constructed during the 1950s and early 60s.

ACTION ITEMS:

The Forest Management plan is being developed through a public process and requires approval by the state Board of Forestry and the State Land Board. The Habitat Conservation Plans will also require approval by these

state boards, as well as by the U.S. Fish and Wildlife Service. The high level of approval acts to assure implementation of the plans.

Some provisions under discussion and development in the planning process include: maintaining and developing mature streamside stands; employing site specific measures to maintain and improve salmon habitat, including the consideration of source/recovery areas; implementing upland management strategies so that they complement salmon habitat enhancement strategies; conducting fish population and habitat surveys and road assessments as a means of prioritizing areas for management actions; and continuing active participation in the North and Mid Coast Salmonid Restoration Initiatives, and the Tillamook Bay National Estuary Program.

FUNDING:

Funding for plan development is in the ODF budget. An initial request for additional resources that will be used for plan implementation is included in a program option package as part of the proposed 1997-99 program and agency budget.

WORK SCHEDULE:

Draft strategies refined (*Completed*).
Public review and input (*Completed*).
Development of district level plans (*Completed*).
Write Draft Management Plan (*Completed*)
Public Input (*Completed*)
Write final plan (*Completed*)
Review and seek approval from Board of Forestry and State Land Board (fall 2000)

MONITORING:

A monitoring plan will be developed as a component of the NW Plan and HCP. The monitoring plan will likely identify monitoring questions to explore, indicators to track, and benchmarks to measure against.

5.3 SITE-SPECIFIC PLANS FOR VEGETATION RETENTION WITHIN RMAs ON OREGON STATE FOREST LANDS (ODF 17S)

BACKGROUND:

As described in action 5.2 (previously ODF 9S), a long range management plan (LRP) and a Habitat Conservation Plan (HCP) are being developed for Oregon state forestlands. These plans, which will meet program and

agency mandates, take an integrated, comprehensive approach and address a wide range of forest resources, including riparian resources. These plans are progressing well, but due to more technical work that needs to be done, and the public input process, they are likely not to be completed until late 2000. The riparian strategies now in the draft plan addresses links to upslope habitats, consideration of salmonid core and recovery areas, and other important riparian management considerations.

In the interim, this measure will be applied so that the desired future condition of RMAs is achieved to the maximum extent practicable, and in the most timely manner. This is similar to action 3.3 (previously ODF 19S) described elsewhere in the plan that are being applied by other nonfederal landowners. This measure will also be implemented on Southwest (Grants Pass) state forest lands.

GOAL:

The goal of this action is to achieve mature forest stands within RMAs in the most timely manner and to the maximum extent practicable.

OBJECTIVE:

To maximize the potential of achieving mature streamside stands by retaining conifer trees based upon site-specific information, rather than standard targets in the forest practice rules.

ACTION ITEMS:

1. Develop and initiate Habitat Conservation Plans for site-specific areas.
2. Develop and initiate the NW Oregon State Forest Management Plan.

FUNDING:

All resources necessary to implement this project are currently funded and in place.

WORK SCHEDULE:

1. Initiate federal permits needed for Habitat Conservation Plans (*ongoing*).
2. Obtain Board of Forestry approval of the NW Oregon State Forest Management Plan (fall 2000).

3. Implement strategies in the NW Oregon State Forest Management Plan 2001.

MONITORING:

Riparian monitoring will be addressed in the site-specific plans.

5.4 WILDLIFE TREE PLACEMENT ON STATE FOREST LANDS (ODF 18S)

BACKGROUND:

The Forest Practices Act requires retaining at least two trees or snags per acre on "clear-cut" harvest units. This is separate from, and in addition to, the tree retention required by the water protection rules. The forest practice rules require that these trees and snags (referred to as in-unit trees), be left on all units exceeding 25 acres in size. The purpose of leaving these trees is to contribute to the overall maintenance of wildlife, nutrient cycling, moisture retention, and other benefits associated with retained wood.

In addition to the in-unit trees required by the forest practice rules, state land managers generally leave additional wildlife trees on a site-specific basis as called for in the forest management plan. This plan directs that trees and snags required by the forest practice rules be placed along Type N streams to assist salmon recovery. This activity is similar to action 3.6 (previously ODF 22) described elsewhere in the plan that are being applied by other nonfederal landowners.

GOAL:

To leave as many trees as possible in the RMA to achieve mature forest conditions as quickly as possible.

OBJECTIVE:

Where operationally possible, concentrate the retention of the required in-unit trees along Type N streams on all Northwest and Southwest (Grants Pass) state forestlands. State forest managers will consult with ODFW biologists to identify circumstances where it would not be desirable to retain in-unit trees in this manner.

ACTION ITEMS:

When operationally possible, required leave trees will be concentrated along Type N streams for sales on state forest lands with contracts

prepared by May 1, 1997. This will be in effect until the NW Oregon State Forest Management Plan is approved.

FUNDING:

Funding for on the ground administration and tracking of this measure is contained within the State Forest Lands budget.

WORK SCHEDULE:

This action will be applied to sale contracts prepared and sent to Salem by the districts after May 1, 1997.

MONITORING:

This is an interim measure, which will be in place until the NW Oregon State Forest Management Plan is approved. Monitoring of riparian areas will be based on the site-specific plans.

5.5 STATE FORESTLANDS STREAM HABITAT ASSESSMENT AND INSTREAM PROJECTS (ODF 24S)

BACKGROUND:

During 1994 and 1995, 305 miles of stream were surveyed for habitat on state forestlands by ODFW biologists. Fish distribution surveys have been done on 260 streams and stored on GIS. Contracts with ODFW are planned to complete assessments for the remaining streams and adjacent riparian areas. In stream projects will be used to create or enhance stream structure and habitat. Alder dominated riparian areas will be manipulated to reestablish conifers. The department has spent over \$.5 million on stream enhancement projects annually. Specific examples of this work are the Miami River in Tillamook County and the South Fork Wilson River in Washington County.

Most of these projects have been and where possible will continue to be done in conjunction with the North Coast Salmonid Restoration Project and watershed assessments as part of the NW Oregon Forest Management Plan.

GOAL:

To improve Salmon habitat (in-stream and riparian) on State Forest Lands.

OBJECTIVE:

To identify habitat restoration opportunities and with the assistance of local biologists design and construct instream structures and reestablish conifer in alder dominated riparian areas.

ACTION ITEMS:

Complete assessments for the remaining streams and conduct identified instream projects and riparian work. Currently an additional 92 enhancement projects have been identified on the Tillamook State Forest using this assessment process. Significantly more projects will be identified when the remaining assessments are completed.

FUNDING:

The Department has been spending over \$.5 million on stream enhancement projects annually.

As a Phase 2 measure the Department is requesting authorization to spend an additional \$1.15 million (from state lands revenues) during each of the next three biennia in support of these projects. Of this the Northwest Oregon Area has requested \$.75 million part of which will provide funding for an ODFW fisheries habitat biologist to assist with the implementation of habitat improvement contracts and a wildlife biologist to assist with implementation of the forest plan.

WORK SCHEDULE:

Complete assessments and projects by the close of the 2001/2003 biennia.

MONITORING:

Monitoring of the projects will be conducted by ODFW to insure the effectiveness of the projects and to apply lessons learned to other projects.

5.6 WESTERN OREGON STATE FORESTS HABITAT CONSERVATION PLAN (ODF 26S)

BACKGROUND:

The habitat conservation program was added as an amendment to the Endangered Species Act in 1993 (section 10 of the ESA). A HCP is a long-term agreement that allows incidental take of a threatened or endangered species in exchange for minimization and mitigation measures

that would benefit the population as a whole. The incidental take permit and HCP for the Elliott State Forest was signed in October 1995. The Elliott HCP permits sustainable timber harvest to fulfill statutory and constitutional mandates, while providing habitat for Northern Spotted Owls and Marbled Murrelets.

ODF is now developing a HCP for all other state forestland in western Oregon (Western Oregon State Forests HCP). This HCP is being developed in collaboration with Oregon Department of Fish and Wildlife, US Fish and Wildlife Service, and the National Marine Fishery Service. This HCP covers listed species as well as other species of concern. This comprehensive approach permits integration of species conservation requirements and address the needs of unlisted species on a landscape basis.

HCPs for state forestlands are also part of the State of Oregon's agreement with NMFS on the restoration of coastal coho. State forest HCPs will incorporate aquatic strategies that have a high likelihood of maintaining and restoring properly functioning aquatic habitat for salmon.

GOAL:

The goals of the proposed State Forest HCPs are to meet the requirements of the state and federal ESAs; develop, maintain and enhance habitat needs for listed and unlisted wildlife and fish species; manage forest resources to produce a sustained output of values; and provide for short-term certainty and long-term stability in the management of state forests to meet legal mandates.

OBJECTIVE:

- Obtain an incidental take permit for covered species.
- Minimize and mitigate the impacts of incidental take to the maximum extent practicable.
- The taking would not appreciably reduce the likelihood for survival and recovery of the species in the wild.

ACTION ITEMS

- Continue to develop and negotiate the with the federal services;
- Approval by the Board of Forestry (BOF) and the State Land Board (SLB); and
- Signed Implementation Agreement and Incidental Take Permit.

FUNDING:

Funding for HCP development is contained in the State Forest Program budget.

WORK SCHEDULE:

Review the final draft at the July 28, 2000 Board of Forestry meeting and submittal decision at September 6, 2000 BOF meeting. Review with SLB as necessary. Update Elliott HCP for Marbled Murrelets by October 2001 or obtain an extension from the services.

MONITORING

A monitoring and adaptive management plan will be a component of the HCP. The monitoring plan will identify question to explore, indicators to track, and benchmarks to measure against. The Adaptive management plan will lay out a course of action to change the HCP as new information is obtained or monitoring indicates new strategies are needed to obtain goals and objectives

ODF 6: Assistance to Family Forest Landowners

“OSWA members firmly believe maintaining the financial incentive to grow trees is the key to having healthy, productive forests in Oregon. This incentive will result in the protection and restoration of salmonid habitat.” OSWA and Steering Committee Members Ken Faulk and Rick Barnes

6.1 FOREST RESOURCE TRUST (ODF 54S)

BACKGROUND:

The Oregon Forest Resource Trust provides financial assistance for the forestation of under-producing forestlands. Under-producing lands are lands that once had forests, or are capable of growing forests, but currently not occupied by a manageable stand of trees or seedlings. These are areas that might have been converted to farm or pasture, burned over by forest fires or poorly managed prior to the passing of the Oregon Forest Practices Act. Lands requiring reforestation following timber harvest are not eligible. The trust works through a long-term contractual relationship with the landowner that runs with the land through a lien on the future timber arising from the forest created through the trust. There is no payback obligation for the monies unless the landowner chooses to harvest. If

harvest occurs, the landowner returns a pre-determined percentage share of net harvest revenues back to the trust for a specified, or expected, amount of harvest volume. For the first 25 years of the contract, landowners can exercise an option that allows them to buyout of the contract if the trust monies are paid back as a loan.

GOAL:

Encourage landowners to establish and maintain healthy forests through the forestation of under-producing forestlands for timber production, wildlife, water quality and other environmental purposes.

OBJECTIVE:

The program has five key objectives:

1. Financial and technical assistance for the forestation of under-producing forestlands.
2. Increase future timber supplies from family forestlands.
3. Restoration of upland forest habitats and forest riparian areas.
4. Job opportunities for reforestation and related contractors.
5. Provide a pathway for Oregon's long-term investment in the economic, social and environmental benefits family forestlands provide.

ACTION ITEMS:

This program is currently in place and is administered by the Oregon Department of Forestry, Forestry Assistance Program.

FUNDING:

\$1,500,000 dollars Klamath Cogeneration Project Funding
\$ 100,000 PacifiCorp Funding
\$ 25,000 Corporate Contributions

WORK SCHEDULE:

At present, 620 acres of under-producing land are enrolled under the trust with over 550 acres expected to reach a "free-to-grow" state by 2001. An additional 208 acres have been successfully reforested under the trust with trust monies paid back through the buyout option.

Planned Accomplishments, 1999-2001 Biennium

1. All existing Forest Resource Trust projects successfully established and “free-to-grow”
2. 1200 acres enrolled under contract by end of biennium
3. 750 acres actually planted during 2000-2001 planting season

MONITORING:

Funded projects are inspected and monitored by the Oregon Department of Forestry Service Foresters. Monitoring is almost yearly until projects are declared “free-to-grow”. From “free-to-grow” to age 30, monitoring is expected to be every 5 years. After age 30, monitoring is expected every 5-10 years up until the landowner harvests and repays the trust, or for compliance for 200 years.

6.2 STEWARDSHIP INCENTIVE PROGRAM (SIP) (ODF 55S)

BACKGROUND:

Federal cost share program which reimburses family forest landowners up to 75 percent of the cost of resource protection and enhancement projects.

GOAL:

Assist individual landowners develop and implement integrated resource management strategies on their forestlands.

OBJECTIVE:

Objectives of SIP are to assist non-industrial private forest landowners:

1. Develop Stewardship Plans,
2. with reforestation and afforestation,
3. improve forest stand vigor and health,
4. provide soil and water protection improvements,
5. provide riparian and wetland protection and improvement,
6. provide fisheries and habitat enhancement, and
7. provide wildlife habitat enhancement.

ACTION ITEMS:

The program is administered on the state level by ODF and on the national level by the USDA-FS. Landowners must have an ODF approved stewardship plan in place before being approved for other SIP practices. All SIP projects must be maintained for 10 years.

FUNDING:

SIP was authorized by Congress in the 1990 and 1996 Farm Bills. The amount of funding available is authorized by congress annually. Congress did not fund the SIP program in 1999 and 2000. An effort is being made to get SIP funding restored.

WORK SCHEDULE:

Individual landowner projects are approved monthly based on program priorities and available funds. Landowner sign-up is continuous at county USDA- Farm Services Agency (FSA) offices. Stewardship plans are developed by private or public resource professionals working with landowners. Other projects are developed jointly by landowners and ODF service foresters. Projects are inspected upon completion by service foresters to assure compliance with the project specifications.

MONITORING:

SIP projects are monitored by service foresters during and after completion, and a random five- percent of completed projects are monitored annually for program compliance and required landowner maintenance by an ODF staff coordinator.

6.3 CONSERVATION RESERVE ENHANCEMENT PROGRAM (CREP)**BACKGROUND:**

The Conservation Reserve Enhancement Program (CREP) is an addition to the Conservation Reserve Program (CRP). This enhancement program was approved in October 1998 in an MOU between the US Department of Agriculture (USDA), the Commodity Credit Corporation (CCC), and the State of Oregon. The CREP program provides financial assistance to landowners to set aside land and plant trees in riparian areas and wetlands. The program will rent the land for 10-15 years, and pay up to 75 percent of the costs to get it fenced and planted.

GOALS:

The Oregon CREP proposal is designed to address water quality degradation that is direct or indirect result of agricultural activities on private lands along freshwater streams. The Oregon CREP will seek to enroll up to 100,000 acres located along streams inhabited by salmonids and trout listed under the Federal Endangered Species Act. CREP also includes up to 5000 acres of cropped wetlands that are hydrologically connected to these streams or located in coastal estuaries

OBJECTIVES:

The six objectives of the Oregon CREP are directly related to improvement of riparian and aquatic ecosystems that provide key habitats for salmonids. They are:

- Restore 100 percent of the area enrolled for the riparian forest practice to a properly functioning condition for distribution and growth of woody plant species.
- Reduce sediment and nutrient pollution from agricultural lands next to the riparian buffers by more than 50 percent.
- Establish adequate vegetation on enrolled riparian areas to stabilize 90 percent of stream banks under normal (non-flood) water conditions.
- Reduce the rate of stream water heating to ambient levels by planting adequate vegetation on all riparian buffer lands.
- Help farmers and ranchers to meet the water quality requirements established under Federal law and Oregon's agricultural water quality laws.
- Provides adequate riparian buffers on 2,000 stream miles to permit natural restoration of stream hydraulic and geomorphic characteristics that meet the habitat requirements of salmon and trout.

ACTION ITEMS:

The Farm Service Agency will administer the program working with the Natural Resource Conservation Service (NRCS) and Oregon Department of Forestry (ODF) to determine eligible acreage and provide technical assistance to landowners planting trees along streams and wetlands.

FUNDING:

The CREP program is currently fully funded by USDA-FSA and the Oregon Watershed Enhancement Board (OWEB) through January of 2001. The program rents eligible lands from landowners using established

rates and provides 75 percent of the landowners cost to plant the riparian areas to trees and fence the area if needed.

WORK SCHEDULE:

The Farm Service Agency (FSA) works with the Oregon Watershed Enhancement Board on the implementation, promotion and outreach of CREP. FSA administers the program while NRCS and ODF work together to establish eligible acreage and develops an approved conservation plan to include tree planting. Landowner sign-up is continuous at county USDA- Farm Services Agency (FSA) offices. Projects are inspected upon completion by service foresters to assure compliance with the project specifications

MONITORING:

Oregon has developed a uniform system of reporting watershed restoration projects. The project reporting is done in a way that allows locations to be explicitly located and summarized by watershed or stream system. This is done by surveys that include juvenile fish surveys, spawning surveys, fish habitat surveys and water quality data gathering. This monitoring strategy will allow an evaluation over time of the effects of the CREP on critical attributes related to fish habitat.

6.4 FORESTRY INCENTIVE PROGRAM (FIP)

BACKGROUND:

The Secretary of Agriculture established a voluntary cooperative Forestry Incentives Program (FIP) with land users to develop, manage and protect non-industrial private forest land through encouraging the production of softwood and hardwood timber and other associated forest resources. ODF provides technical assistance to landowners planting trees or improving the health of young forest stands. Landowners are reimbursed with federal funds up to 50 percent of the cost to complete tree planting and/or tree improvement projects.

GOALS:

The goal is to assist non-industrial landowners with afforestation on suitable open lands, , timber stand improvement, and forest resource management and protection.

OBJECTIVES:

The objective of FIP is to increase the nation's supply of timber products with emphasis on:

- increasing the future supply of timber
- continued sustained yield, multipurpose management of non-industrial private forest land
- cost effective forest improvement practice
- enhancing other forest resources

ACTION ITEMS:

FIP is jointly administered at the national level by USDA-Natural Resources Conservation Service (NRCS) and FS and at the State level by NRCS with technical assistance provided by state foresters. Program development and cooperation is provided through the State Technical Committee.

FUNDING:

FIP was authorized by Congress in the 1990 and 1996 Farm Bills. The amount of funding available is authorized by congress annually. While this program continues to be funded the amount of funding has been steadily decreasing over the past few years. An extra \$50,000 has been allotted for 2000 to help landowners with severe Swill Needle Cast problems.

WORK SCHEDULE:

Individual landowner projects are approved based on program priorities and available funds. Landowner sign-up is continuous at county NRCS and USDA- Farm Services Agency (FSA) offices. FIP management and project plans are developed by State Forestry service foresters working with landowners. Projects are inspected upon completion by service foresters to assure compliance with the project specifications.

MONITORING:

FIP projects are monitored by service foresters during until completion. A random five- percent of completed projects are monitored annually for program compliance and required landowner maintenance by NRCS.

ODF 7: Urban Forest Community Assistance

7.1 GUIDELINES FOR DEVELOPING URBAN FOREST PRACTICE ORDINANCES

BACKGROUND:

Since the adoption of the Forest Practices Act 28 years ago, issues regarding the application of the FPA within urban areas have increased. As parcels closer to and within urban areas have been harvested, citizens have voiced a desire for greater levels and different types of forest protection than provided by administration of the FPA.

The FPA was designed to promote the proper management of Oregon's forests. Its mandates for reforestation and resource protection have ensured that forestland remains healthy and productive. The FPA was not designed to meet individual community goals within urban settings. The *Guidelines for Developing Urban Forest Practices Ordinances* publication has been developed to help cities and counties decide whether the level and type of protection offered by the FPA within urban growth boundaries (UGBs) and city limits as administered by the Oregon Department of Forestry (ODF) is appropriate for their needs. Where the FPA does not meet the goals and objectives of local government within UGBs and city limits, this publication can also help in the preparation of locally administered forest regulations.

GOAL:

The Oregon Department of Forestry, in cooperation with the Oregon Department of Land Conservation and Development, has developed *Guidelines for Developing Urban Forest Practices Ordinances* for cities and counties to use in the development of urban forest practice regulations.

OBJECTIVES:

This publication is designed to assist local governments in balancing community objectives with economic and environmental concerns as they relate to forest regulations. It outlines a process by which cities or counties can develop regulations that meet their particular goals while meeting state and federal legislative mandates to protect soil, air, and fish and wildlife resources.

ACTION ITEMS:

Prepare and publish guide.

FUNDING:

Funding is in place.

WORK SCHEDULE:

The Guidelines for Developing Urban Forest Practices Ordinances has been completed and is currently available at the Forest Practices, Forestry Assistance, and Urban and Community Forestry Salem offices. The guide is also available on the ODF Urban and Community Forestry Assistance program web page at <http://odf.state.or.us/fa/uf/pub/urbanfp.pdf>.

MONITORING:

With feed back from cities and counties and changes in legislation, future revisions to the guide will be made.

7.2 TREE CITY USA**BACKGROUND:**

The National Arbor Day Foundation, in cooperation with the U.S. Forest Service and the National Association of State Foresters, recognizes towns and cities across America that meet the standards of the TREE CITY USA program.

At least half of the trees in a typical city are on public property, along streets, in parks, and around public buildings. The TREE CITY USA program is designed to recognize those communities that effectively manage their public tree resources, and to encourage the implementation of community tree management based on four TREE CITY USA standards. These standards require that a city has a tree code, a tree board or department responsible for public tree care, spends \$2 per capita for their public tree program and observes an arbor day planting and proclamation.

The four standards provide structure for a community forestry program, require the program to demonstrate success based on the judgement of the state forester's office, and provide for an awareness and appreciation of trees among the residents of the community.

TREE CITY USA recognition can make a strong contribution to a community's pride, and puts communities in touch with other communities and resources that will help improve community forests.

GOAL:

To improve the health of urban and community forests by having a majority of Oregon cities achieve TREE CITY USA designation.

OBJECTIVES:

Increase the number of Oregon TREE CITY USA's. There are 240 incorporated cities in Oregon and in 2000, 33 cities achieved TREE CITY USA designation.

ACTION ITEMS:

- Provide assistance to cities to become TREE CITY USA.
- Provide awards and recognition to successful TREE CITY USA cities.

FUNDING:

Funding is in place.

MONITORING:

The program is monitored annually by the National Arbor Day Foundation and the Urban and Community Forestry Program.

7.3 GRANTS TO CITIES FOR RIPARIAN PROTECTION

BACKGROUND:

In 2000, \$25,000 is available for the 122 communities, within the Willamette River Basin, to use for riparian enhancement and restoration projects. The minimum grant request is \$1,000 with a maximum of \$5,000 each. These grants may be used by the communities for tree planting and related activities involved in the enhancement and restoration of riparian habitat especially associated with clean water and the recovery of salmon. A three year maintenance/establishment plan for the project will be required to monitor the success of the new plantings.

GOAL:

Improve riparian habitat in the Willamette River Basin through providing grants for the planting of trees and other riparian enhancement and restoration projects.

OBJECTIVE:

Administer grant program through June 2001.

ACTION ITEMS:

During the year 2000 administer grants from \$1,000 to \$5,000 each for a total of \$25,000.

FUNDING:

Funding is in place.

WORK PLAN SCHEDULE:

Complete grant program by June 2001.

MONITORING:

A three-year maintenance/establishment plan for the project will be required to monitor the success of the new plantings and restorative work.

ODF 8: COOPERATIVE EFFORTS IN INFORMATION, ASSISTANCE, AND EDUCATION

The ODF, OFRI, OSU Extension Service, and Associated Oregon Loggers communicate and coordinate their efforts with other key groups, and compile and use materials from these groups in work with landowners, operators, and the public. These Cooperators are an active and diverse resource for the forestry community and Oregonians, which provide various assistance and educational efforts. Depending on the program, leadership and other types of participation shift among the different groups. Collaboration provides greater results than if each organization worked alone and increases efficiency in delivery. A brief introduction to the Cooperators follows:

The Associated Oregon Loggers is a trade association, founded in 1969, to provide business services to contract logging firms and related businesses. In addition to providing services to loggers, the AOL also makes information available to the public about the industry and forestry in general.

The Oregon Department of Forestry provides leadership in forest policy and resource protection. The department's mission is "To serve the people of Oregon through the protection, management, and promotion of a healthy forest environment, which will enhance Oregon's livability and economy for today and tomorrow."

The Oregon Forest Resources Institute was established in 1991 by the Oregon Legislature to improve understanding of forest resources and practices and to encourage sound forest management. Since that time OFRI has collaborated on a number of programs and has produced a variety of educational materials that address fish habitat restoration and water quality on forest streams.

The Oregon State University Extension Service, begun in 1911, is a cooperative program of that offers educational programs, activities, and materials based on the best scientific knowledge available.

8.1 PLANNING AND COORDINATION

BACKGROUND:

Working with external Cooperators is a valuable tool in extending the effectiveness of the Oregon Department of Forestry programs. ODF staff throughout the state regularly participate in a variety of cooperative exchanges. ODF public affairs staff assists to emphasize the importance of cooperative riparian management and water quality enhancement.

GOAL:

To engage with other Cooperators in educational and interactive programs that will increase awareness and understanding of riparian management, water quality enhancement and fish habitat improvement and expand opportunities for wise forest-fish habitat stewardship.

OBJECTIVE:

1. Provide ODF Public Affairs staff to assist with OFRI programs, and to communicate riparian management, water quality enhancement and fish habitat improvement.
2. Provide ODF staff to participate on the Oregon Plan for Salmon and Watershed teams, including the Core, Outreach, Implementation, Monitoring, and regional area teams.
3. Provide ODF staff to coordinate with the OSU Extension Service and other similar organizations to plan, develop and present a variety of workshops and educational materials.
4. Many ODF staff regularly participate as members of local watershed councils, demonstration projects, and other forest practice water and fish-related programs with ODF Cooperators.

5. ODF and AOL join in a Memorandum of Agreement (MOU) for the purpose of promoting voluntary forest operator compliance, resource protection, and forest stewardship in support of AOL's Oregon Professional Logger Program.

ACTION ITEMS:

Coordination is already in place.

FUNDING:

These efforts are funded by the Oregon Department of Forestry and the participating Cooperators.

WORK SCHEDULE:

The Oregon Plan for Salmon and Watersheds Outreach Team meets monthly and public affairs staff attends.

The ODF Public Affairs Director is the liaison to OFRI.

ODF Forest Practices staff and AOL staff carry out responsibilities of the MOU to provide operator training, operator assistance, and Oregon Professional Logger operations review.

8.2 PUBLICATIONS AND AUDIO-VISUAL MEDIA

BACKGROUND:

The ODF, OFRI, OSU Extension Service, and AOL philosophies are based upon first preventing resource damage and promoting sound forest practices -- through the education of forest landowners and operators in the purposes and practices of forest resource protection to encourage voluntary compliance and pro-active forest stewardship.

Public perceptions are based on what it knows or has heard, so sharing of factual forest riparian information is critical to the success and acceptance of active management for forest streams and wetlands. Surveys have shown that most people in Oregon do not know about or understand the Forest Practices Act Rules and all its associated stream, water quality and fish habitat protection regulations.

A large amount of material exists about the Oregon Plan, salmon recovery, and forestry. Many of the publications are recent (such as the series of brochures by OFRI) and some are in the process of being updated (the ODF series of *Thanks for Asking*). The following description is intended to provide a small sampling of publications and audio-visual media, and a

contacts section has been included to show where additional information can be obtained.

GOAL:

The ODF, OFRI, OSU Extension Service, and AOL seek to provide forest landowners and operators with sufficient understanding of the purposes and practices so that they are able to, on their own initiative, successfully protect forest resources while managing those resources for their full range of benefits to Oregonians. The goal is to enhance internal and external public understanding of riparian management, water quality enhancement and fish habitat improvement

OBJECTIVE:

To make publicly available a range of publications and audio-visual media related to (1) stream habitat and culvert restoration activities; (2) proper conduct of forest practices; (3) forest stewardship; and (4) other technical forestry topics.

A SAMPLING OF ACCOMPLISHMENTS:

Some noteworthy publications and media from the OSU Extension Service include:

- Watershed Stewardship: A Learning Guide (EM 8714), technical book with 22 chapters.
- Woodland Workbook (EM 8258), technical publications that include watershed stewardship topics.
- Life on the Edge: Improving Riparian Function (VTP-33), videotape.
- Water Quality and Our Forests: Western Oregon Research (VTP-14), videotape.

In August 1999 the ODF printed and distributed a booklet illustrating proper installation of the road drainage structures called water bars. This Water Bar Systems Manual was prepared for U.S. Timberlands, Klamath Falls L.L.C. and offered by them for reprinting and distribution by the Department of Forestry and Associated Oregon Loggers, Inc.

In September 1999 the ODF completed Forest Practice Notes 4 (Revised) and 11, on the topics Road Maintenance and Ground-Based Harvesting respectively. Forest Practice Notes are a series of pamphlets that transforms administrative rule language into explanations for operator's everyday use.

In January 2000 the ODF completed a highly-illustrated Forest Road Management Guidebook addressing maintenance and repairs to protect fish habitat and water quality. Cooperators included the Oregon Forest Industries Council, Oregon Department of Fish and Wildlife, Oregon Department of Environmental Quality, and the Department of Forest Engineering at Oregon State University. Funding was contributed by a 319 grant from the U.S. Environmental Protection Agency and by the Oregon Forest Resources Institute.

The Forest Road Management Guidebook was used by ODF and the OSU Forest Engineering Department in a road stewardship workshop in March 2000 and were distributed as part of a series of OFRI-sponsored educational outreach workshops on culvert design and fish passage for foresters, forest managers, landowners and watershed councils in May and June 2000. Copies of the Guidebook are available from ODF or from OFRI.

AOL publishes and distributes educational materials and programs to its more than 800 member companies concerning sound forest practices and sustainable forestry. The programs help to promote riparian management, water quality enhancement and fish habitat improvement. This information expands opportunities for wise forest fish habitat stewardship in support of the Oregon Plan for Salmon and Watersheds.

A new position has been filled in ODF Public Affairs, dedicated mainly to Forest Practices and Forestry Assistance issues, including salmon recovery. Publications in the process of being updated include *Thanks for Asking* handouts on: Forest Practices, Reforestation, and Riparian Protection. Other messages to be developed include the final report from the ad hoc Forest Practices Advisory Committee on Salmon and Watersheds, and a Forest Practices Note publication regarding Watershed Assessment Guidance. A communication plan for the Forest Practices program is also being designed.

Through an interagency agreement with the Oregon Department of Fish and Wildlife, OFRI helped identify voluntary habitat restoration projects on forest streams in an inventory that preceded implementation of the Oregon Plan for Salmon and Watersheds. This formed the foundation for the Oregon Plan Watershed Restoration Inventory. OFRI also served on the outreach team for the Oregon Plan and collaborated with OSU, ODF and other public and private organizations to explain the goals of the Salmon Plan to operators, landowners and Watershed Council members through workshops and other education efforts.

OFRI has promoted public support of collaborative fish habitat restoration and stream improvement projects through its media and public

information efforts as well as its educational advertising program, and several OFRI publications address fish habitat enhancement and restoration needs and efforts. These include: a “Background Paper on Harvest and Regeneration in Oregon’s Commercial Forests,” which includes a description of the fish habitat problem, its relationship to forest practices and stream protection and enhancement measures that can be taken by forest managers; a special report, “Saving the Salmon,” describing Oregonians working together to find salmon health and survival solutions; two special reports in cooperation with the Evergreen Foundation, one describing the new voluntary emphasis on fish habitat restoration work and one examining the stream rules written into the Forest Practices Act in 1991 by the Oregon legislature; an overview of research findings on the status and future of salmon in western Oregon and northern California, and a technical report reviewing forest management and environment factors contributing to the decline of salmon and trout species. All of these materials are still available from OFRI. To obtain copies or information about OFRI-sponsored workshops see *Contacts* listed below.

FUNDING:

Funding and in-kind support is collected from many sources to create these products. Contributors of funds for development and printing include the Oregon Department of Forestry, the U.S. Environmental Protection Agency, the Oregon Forest Resources Institute, Associated Oregon Loggers, Inc., and U.S. Timberlands Klamath Falls L.L.C.

WORK SCHEDULE:

Publication and other public information functions are ongoing activities conducted by the OFRI, AOL, ODF, and OSU Extension Service. Some current projects include the Basic Forest Practices Workshop presentations begun in June 2000, and Forest Practice Notes to follow completion of a review of the water protection rules that is in progress.

MONITORING:

Publications are updated as rules and policies change.

In addition, publishing of stories and other information regarding landowner accomplishments in habitat restoration, such as award presentations. Available venues include news releases, the Forest Log and the Radio News Net.

CONTACT INFORMATION:

Associated Oregon Loggers
P. O. Box 12339
Salem, OR 97309-0339
503-364-1330 or 1-800-452-6023
E-mail: aol@oregonloggers.org
Website: www.oregonloggers.org

Oregon Forest Resources Institute
808 SW Third Avenue, Suite 480
Portland, OR 97204
Phone: 503-229-6718 or 1-800-719-9195
Fax: 503-229-5823
E-mail: OFRI@info.com
For more information: www.oregonforests.com.

Oregon Department of Forestry
State Forester's Office
2600 State Street
Salem, OR 97310
503-945-7200
Website: <http://www.odf.state.or.us>

OSU Extension Service
Publication Orders
Extension and Station Communications
Oregon State University
422 Kerr Administration
Corvallis, OR 97331-2119
541-737-2513
Website: <http://osu.orst.edu/extension/index.html>.

8.3 TRAINING PROGRAMS AND OTHER CONTACTS

BACKGROUND:

The Oregon Department of Forestry and Coordinators provide training programs, workshops, and other avenues of contact, such as participation in the Oregon State Fair and AOL Conferences.

GOAL:

To reach as many members of the public as possible as they participate in workshops or training seminars, visit exhibits at the Oregon State Fair in Salem or at other public venues such as the annual Logging Conference in Eugene, or Earth Day activities.

OBJECTIVE:

The state fair and other public outreach opportunities become part of the department's overall public involvement strategy, operating at both the state office and field office levels.

SAMPLING OF WORKSHOPS AND OTHER CONTACTS:

Some noteworthy OSU Forestry Extension training programs include:

- Watershed Stewardship classroom and field training programs, for watershed councils and other interested groups and individuals.
- Logger Education to Advance Professionalism (LEAP) classroom and field training program, for loggers and forest operators and including watershed stewardship topics.
- Master Woodland Manager classroom and field training, for woodland owners and including watershed stewardship topics.
- Basic Forestry Short Course, classroom training for woodland owners and including basic watershed and riparian management topics.

Forest Practices Program staff are currently working on a joint project with Associated Oregon Loggers, Inc. (AOL) to deliver topical forest practices workshops, including a Basic Forest Practices Workshop. These workshops are available to any forest landowner or operator and will fulfill new requirements. AOL has added to its requirements for companies who wish to qualify as Oregon Professional Loggers. The ODF forest practices workshops for operators are available beginning in early 2000.

A road stewardship workshop was held in March 2000 using The Forest Road Management Guidebook. The guidebook also was distributed as part of a series of OFRI-sponsored educational outreach workshops on culvert design and fish passage for foresters, forest managers, landowners and watershed councils beginning in 2000. Copies of the Guidebook are available from ODF or from OFRI.

OFRI continues its ongoing support for landowner training on watershed stewardship as part of an agreement with the OSU Extension Service, provides regular public and student tours that look at stream enhancement work, and offers other learning experiences, including internships for teachers.

OFRI's public outreach strategy includes a traveling forestry display. While it does not focus on water quality and fish habitat restoration, the display provides an opportunity for OFRI to distribute materials and information that convey a riparian habitat message. The staffed display

was exhibited at county fairs statewide and at the Oregon State Fair in 1999 and will make a similar circuit in 2000. It also was at the Oregon Logging Conference in February, the Earth Day/Arbor Day Teachers' Fair at the World Forestry Center in March, and at the OSU Extension "Tree School for forest landowners at Clackamas Community College, the Oregon Garden for Earth Day and the Oregon Coast Aquarium in April. The exhibit can be booked through OFRI by calling 503-229-6718.

The Oregon Department of Forestry has its own building at the Oregon State Fairgrounds and has room for several displays and handouts. While the annual theme is not always related to salmon, there is an opportunity to convey the riparian habitat message by providing numerous publications and handouts. The state fair and other public outreach opportunities become part of the department's overall public involvement strategy, operating at both the state office and field office levels.

FUNDING:

Funding is provided through each organization's budget.

WORK SCHEDULE:

This measure is in place with a variety of annual workshops, training seminars, exhibits and displays.

MONITORING:

Surveys of participants are conducted to assess the quality of workshops and training seminars.

Number of visits to the ODF pavilion, including any requests for publications or comments are maintained by the ODF Public Affairs Unit.

OFRI, OSU, and AOL maintain information pertinent to their outreach activities.

8.4 OREGON PROFESSIONAL LOGGER PROGRAM (ODF 53S)

BACKGROUND:

Associated Oregon Loggers, Inc. (AOL) directs the Oregon Professional Logger Program (OPL), that encourages professional growth and knowledge to advance forest stewardship in timber harvesting. American loggers have embraced sustainable forestry principles. The OPL qualifies contractors to meet goals of the Sustainable Forestry Initiative (SFI). With SFI, high standards of sustainability and professionalism are sought by

many private forest landowners, including those loggers contracting with them. The American Loggers Council encourages forest products companies and forest owners to adopt contractor incentives that promote logger education objectives of SFI. AOL administers the program and gives recognition for approved continuing education completed by an OPL company.

Highlights of the 4.5 year old program include *(initiated October 1995)*:

- 244 of 750 (33%) Oregon logging businesses and operators are recognized OPL companies,
- 510 of 750 (68%) Oregon logging businesses and operators are enrolled in the program,
- OPL program is endorsed by the American Forest & Paper Association as fulfilling logger training and education requirements for the Sustainable Forestry Initiative (SFI),
- Some 20+ AF&PA member companies in Oregon require participation in logger training and education programs by those businesses contracting for them, as well as for procured wood, and
- Oregon Professional Loggers are recognized throughout the industry, and operator participation in the program grows annually.

GOAL:

To encourage forest operator professional growth and knowledge that advances stewardship in forest management, safety and business. Loggers and forest operators are convinced that sound conservation policy and sound business practices go hand-in-hand.

OBJECTIVE:

To promote voluntary commitment by forest operators toward sustainable forestry and sound forest business practices. Encourage loggers and other operators to support practices that meet present needs without compromising healthy forests for future generations. This elevates operator dedication to forest stewardship through reforestation, growing and harvesting trees for useful products with the conservation of soil, water, wildlife and other resources.

ACTION ITEMS:

In order to initially earn Professional Logger status, a company must accumulate 32 credit hours within a 12-month period. Thereafter, 10 credit hours every 12 months maintains a company's Professional Logger

status. OPL credits are earned by attending workshops and seminars in forestry, safety, loss control, and business. Of the initial 32 credit hours, a six-hour 'Basic Forest Practices Workshop' is required. For OPL maintenance status, each year at least four of the 10 required credit hours must be completed in forest practices coursework.

The 'Basic Forest Practices Workshop' is offered by the Oregon Department of Forestry, at various locations around the state. ODF and other educational providers offer additional forest practices workshops, applicable toward OPL maintenance status. All OPL companies are encouraged to attend 'Basic Forest Practices,' even after initial status is attained.

ODF and AOL join in a Memorandum of Agreement (MOU) for the purpose of promoting voluntary forest operator compliance, resource protection, and forest stewardship in support of AOL's Oregon Professional Logger Program.

FUNDING:

Privately funded by logging businesses and other forest operators.

WORK SCHEDULE:

This measure has been in place for 4.5 years (since October 1995).

ODF Forest Practices staff and AOL staff carry-out responsibilities of the MOU to provide operator training, operator assistance, and Oregon Professional Logger operations review. MOU adopted in June 2000 to implement new logger education requirements of the Oregon Professional Logger program – that includes forest practices training, assistance and sanctions.

MONITORING:

Associated Oregon Loggers, Inc. administers the program, including, enrollment records, recognition, contractor assistance, updating the OPL Directory, letters, promotion, and issues training calendars. An Oregon Professional Logger remains in good standing until annual credit requirements or fees are not met, or if sanctions are issued for unprofessional conduct.

ODF 9: AWARDS AND RECOGNITION

9.1 LANDOWNER STEWARDSHIP AWARD (ODF 56S)

BACKGROUND:

The Landowner Stewardship Award is a cooperative recognition by ODF and ODFW to forest landowners to recognize the values and contributions made by them to the stewardship of fish and wildlife.

GOAL:

To provide recognition and incentive to landowners who voluntarily improve salmon habitat.

OBJECTIVE:

To provide a public demonstration by ODF and ODFW that the agencies recognize and value contributions made by landowners to stewardship of fish and wildlife.

ACTION ITEMS:

Program is in place.

FUNDING:

ODF and ODFW department budgets.

WORK SCHEDULE:

Present awards in the fall of the year.

SAMPLING OF AWARD WINNERS:

1999 Award Winners:

- Northwest Oregon Region Industrial: Miami Corporation of McMinnville
- Northwest Oregon Region Non-Industrial: Adam Novick of Eugene
- Southwest Oregon Industrial: Giustina Land and Timber of Eugene
- Southwest Oregon Region Non-Industrial: Bill Arsenault of Elkton
- Eastern Oregon Region Non-Industrial: Beyer Tree Farm of Prineville.

9.2: FOREST OPERATOR RECOGNITION PROGRAM

BACKGROUND:

It is the policy of the State of Oregon to encourage economically efficient forest practices that assure the continuous growing and harvesting of forest

tree species and the maintenance of forestland for such purposes as the leading use on privately owned land, consistent with sound management of soil, air, water, fish and wildlife resources and scenic resources within visually sensitive corridors (See ORS 527.630).

Annually ODF and the three citizen Regional Forest Practice Committees recognize forest operators who consistently exceed the requirements of the Forest Practices Act and rules through regional “Operator of the Year” awards, merit awards, and letters of commendation. Through this program, public understanding of the Forest Practices Program and its accomplishments is increased.

GOAL:

To establish guidelines for the Forest Practices Forest Operator Recognition Program.

OBJECTIVE:

To publicly recognize operators that consistently exceed the Oregon Forest Practices Act and forest practice rules, and to improve public understanding of the Forest Practices Act and its accomplishments.

ACTION ITEM:

1. Develop standards, including levels of recognition, size of operation, type of operation, nomination screening criteria, weighing factors, and number of awards (*Completed*).
2. Develop procedures and responsibilities (*Completed*).
3. Fully implement the Forest Operator Recognition Program (*Program implemented and ongoing*).

FUNDING:

Funding is provided within the ODF budget.

WORK SCHEDULE:

This program is in place and ongoing.

SAMPLING OF AWARD WINNERS:

1999 Award Winners:

1. Elwayne Henderson of Henderson Logging in Wallowa received the award for his consistent work protecting an enhancing fish habitat, and his ability to encourage landowners to build higher quality roads.
2. Greg and Jeff Maben dealt with road access problems, but put silvicultural practices ahead of financial considerations when they convinced a landowner to manage timber for the future.
3. Norb and Greg Schmitz of Schmitz Timber Company in Silverton were honored because they provided stream enhancement by carefully placing large wood in nearly one mile of a fish-bearing stream.
4. Awards of Merit were also given to four operators for their exceptional and consistent work. Those included Joe Waibel Logging in the Eastern Oregon Region, Hull-Oakes Lumber Company, and Leonard D. Dickey of Butte Creek Cutters, Inc. representing the Northwest Oregon Region, and Ken Sorensen Logging, Inc. of the Southwest Oregon Region.
5. Letters of Commendation were also presented to nearly 50 operators in all three regions for their extra concern regarding environmental protection on specific operations in 1999.

REFERENCES

Maleki, S.M., B.L.K. Riggers. 1999. Oregon Plan Watershed Restoration Inventory. Monitoring Program Report No. 1999-2 to the Oregon Plan for Salmon and Watersheds, Governor's Natural Resources Office, Salem, Oregon.

Oregon Department of Forestry Fish Presence Database, Salem, Oregon.

APPENDIX A
INTERIM STATEWIDE CRITERIA FOR IDENTIFYING
SALMONID AREAS TO APPLY VOLUNTARY FORESTRY ACTIVITIES

The following interim criteria are intended to guide forest landowners in directing voluntary salmonid habitat restoration activities. Landowners may use these criteria to identify strategic stream segments where voluntary restoration efforts are most likely to benefit salmonids. The following guidance identifies five general situations where voluntary restoration activities may be directed. A reference list of technical guides can be found in Part VI.

I. Streams Previously Designated as High Priority

Stream reaches within a planned operation area are a priority for salmonid habitat restoration activities if they exist in:

- A. A coastal watershed already designated as a “core area” under the Coastal Salmon Recovery Initiative, or
- B. A stream reach identified as a habitat restoration priority in one of the Oregon Wildlife Heritage Foundation/Oregon Department of Fish and Wildlife “Salmonid habitat restoration: guides to project selection,” or
- C. Part of a designated stream identified as high priority by an ODFW field biologist.

CONSIDER THESE STREAM REACHES A PRIORITY FOR APPLYING ONE OR MORE OF THESE VOLUNTARY RESTORATION ACTIVITIES AS APPROPRIATE:

- 3.2 – Conifer Restoration (ODF 8S) (Requires a site specific plan and review.)
- 3.3 – Additional Conifer Retention along Fish-Bearing Streams (ODF 19S)
- 3.4 – Limited RMA for Small Type N Streams (ODF 20S)
- 3.5 – Active Placement of large wood LW during Forest Operations (ODF 21S)
- 3.6 – 25% In-Unit Leave Tree Placement and Additional Voluntary Retention (ODF 22S)
- 3.8 – Voluntary No-Harvest Riparian Management Areas (ODF 62S)

II. Salmonid Streams Limited by a Lack of Large Wood

Salmonid streams that contain limited supplies of large wood are a priority for activities that increase the supply of this material. Priority restoration activities include placing large wood and/or leaving a supply of trees for future large wood within riparian areas. The ODFW is available to provide technical assistance.

Streams that meet the following criteria are good candidates for these voluntary restoration activities:

- Salmonids are present, or there is suitable, accessible habitat in the reach within the operation area, and
- The reach has a limited supply of either key or functional pieces of large wood, meaning there are fewer than 6 key pieces per 1000 feet of stream, or fewer than 45 functional pieces per 1000 feet.
- Key pieces include conifer materials at least 24 inches in diameter at the largest end, and that are at least 1.5 times longer than the bank full width of the stream if the root wad is attached and 2 times bank full width without the root wad. Key pieces have adequate length and diameter to be stable, and store other wood in complex accumulations that create very important fish habitat within a channel.
- Functional pieces include all woody material large enough to be stable within the active channel. For streams with a bankfull width less than 10 feet, the functional diameter at the largest end is 10 inches; 10 to 20 feet = 16 inches; 20 to 30 feet = 18 inches; greater than 30 feet = 24 inches. The piece must be at least 1.5 times longer than the bankfull width of the stream if the rootwad is attached and 2 times bankfull width without the rootwad.
- The reach is in a valley with side slopes of less than 60% slope and a valley bottom that is greater than 2.5-times the bankfull width. Use table 1 to determine the stream gradient and width combinations that are ideal conditions for large wood placement within those valleys meeting the criteria above (adapted from ODF large wood placement guidance, 1995):

Table 1: Ideal stream conditions for large wood placement.

Bankfull Width (ft)	Channel Gradient (% slope)
8-10	2-5%
10-15	1-5%
15-20	<4%
20-25	<2%
25-40	<1.5%

- The reach has been identified in a local watershed assessment to be lacking in large wood.

CONSIDER THESE STREAM REACHES A PRIORITY FOR APPLYING ONE OR MORE OF THESE VOLUNTARY RESTORATION ACTIVITIES:

- 3.2– Conifer Restoration (ODF 8S) (Requires a site specific plan and review.)
- 3.3– Additional Conifer Retention along Fish-Bearing Streams (ODF 19S)
- 3.4– Limited RMA for Small Type N Streams (ODF 20S)

- 3.5– Active Placement of large wood during Forest Operations (ODF 21S)
- 3.6– 25% In-Unit Leave Tree Placement and Additional Voluntary Retention (ODF 22S)
- 3.8– Voluntary No-Harvest Riparian Management Areas (ODF 62S)

III. Streams that may Supply Large Wood to Downstream Salmonid Habitat

Certain stream reaches are more prone to debris torrents than others. These reaches are an important source of large wood for downstream reaches if they meet the following criteria:

- Salmonid habitats exist downstream of the operation area stream reach, and
- The average stream gradient between the operation reach and the downstream target reach is 6 percent or greater, and upstream angle between tributary junctions is less than 70 degrees, and
- The downstream salmonid (target) reaches contain a limited supply of large wood (fewer than 6 key pieces per 1000 feet of stream, or fewer than 45 functional pieces per 1000 feet; see previous definitions).

CONSIDER THESE STREAM REACHES A PRIORITY FOR APPLYING ONE OR MORE OF THESE VOLUNTARY RESTORATION ACTIVITIES:

- 3.2– Conifer Restoration (ODF 8S) (Requires a site specific plan and review.)
- 3.4– Limited RMA for Small Type N Streams (ODF 20S)
- 3.5– Active Placement of large wood during Forest Operations (ODF 21S)
- 3.6– 25% In-Unit Leave Tree Placement and Additional Voluntary Retention (ODF 22S)
- 3.8– Voluntary No-Harvest Riparian Management Areas (ODF 62S)

IV. Temperature-Sensitive Stream Reaches

- Salmonid streams where habitat suitability may be limited by higher water temperatures are a priority for certain voluntary activities. Preferred activities are those that can result in summer water temperatures similar to historic levels by strategically retaining or protecting shade producing vegetation adjacent to streams. Streams that meet the following criteria are likely candidates for these actions:
- The riparian area is capable of growing shade-producing vegetation within the RMA.
- Maximum stream temperatures in the reach, or in downstream reaches, are higher than what occurred historically and have suitable accessible habitat to rear salmonids.

CONSIDER THESE STREAM REACHES A PRIORITY FOR APPLYING ONE OR MORE OF THESE VOLUNTARY RESTORATION ACTIVITIES:

- 3.3 – Additional Conifer Retention along Fish-Bearing Streams (ODF 19S)
- 3.4– Limited RMA for Small Type N Streams (ODF 20S)
- 3.6– 25% In-Unit Leave Tree Placement and Additional Voluntary Retention (ODF 22S)
- 3.8– Voluntary No-Harvest Riparian Management Areas (ODF 62S)

V. **Artificial Barriers to Fish Access**

Stream reaches containing artificial barriers preventing fish access are candidates for voluntary activities related to fish passage restoration if the conditions meet the following criteria:

- Fish are present downstream of the impassable barrier, and
- The reach is inaccessible to fish because of the barrier, and
- The reach would likely be accessible to fish if the artificial barrier can be removed.

CONSIDER THESE STREAM REACHES A PRIORITY FOR APPLYING THIS VOLUNTARY RESTORATION ACTIVITIES:

- 3.1– Road Erosion and Risk Survey (specifically, activities related to fish passage improvement) (ODF 1S).

VI. **Reference Guides**

The following guidebooks can be obtained by contacting the Oregon Department of Forestry or the Oregon Department of Fish and Wildlife.

- **A Guide to Placing Large Wood in Streams, May, 1995**
- **Oregon Aquatic Habitat Restoration and Enhancement Guide, The Oregon Plan for Salmon and Watersheds, May, 1999**
- **Water Quality Monitoring Technical Guide, The Oregon Plan for Salmon and Watersheds, July, 1999.**

*For forestry restoration efforts to be widely recognized, it is essential that restoration activities are reported using **The Oregon Plan Watershed Restoration Reporting Form** found in **The Oregon Plan for Salmon and Watersheds, Watershed Restoration Inventory** annual report. Visit the Oregon Plan website (<http://www.oregon-plan.org>, Status/Monitoring) to download a copy of the reporting form, or contact the Corvallis office of the Oregon Watershed Enhancement Board (OWEB) at (541) 757-4263, ext. 233.*

APPENDIX B

Former ODF Measure Code / New ODF Activity Code Cross Reference

<i>OLD ODF REFERENCE</i>	<i>NEW ACTIVITY ITEM</i>	<i>NEW ACTIVITY REFERENCE</i>
ODF 1S	ROAD EROSION AND RISK PROJECT	3.1
ODF 2S	STATE FOREST LANDS ROAD EROSION AND RISK PROJECT	5.1
ODF 3S	TECHNICAL AND POLICY REVIEW OF RULES AND ADMINISTRATIVE PROCESSES RELATED TO SLOPE STABILITY	4.1
ODF 4S	STREAM HABITAT ASSESSMENTS	2.1
ODF 5S	HABITAT RESTORATION PROJECTS	3.8
ODF 6S	HABITAT RESTORATION PROJECTS	3.8
ODF 7S	HABITAT RESTORATION PROJECTS	3.8
ODF 8S	CONIFER RESTORATION	3.2
ODF 9S	NORTHWEST STATE FOREST LANDS MANAGEMENT PLAN	5.2
ODF 10S	FOREST PRACTICES MONITORING PROGRAM	1.2
ODF 11S	MONITORING OF RIPARIAN MANAGEMENT AREAS UNDER THE FOREST PRACTICE ACT	1.3
ODF 12S	MONITORING EFFECTIVENESS OF BMPS IN PROTECTING WATER QUALITY DURING AERIAL APPLICATIONS OF FOREST PESTICIDES	1.4
ODF 13S	STORMS OF 1996 MONITORING PROJECT	1.5
ODF 14S	MONITORING WATER TEMPERATURE PROTECTION BMPS	1.6
ODF 15S	EVALUATION OF ROAD AND TIMBER HARVEST BMPS TO MINIMIZE SEDIMENT IMPACTS	1.7
ODF 16S	EVALUATION OF THE ADEQUACY OF FISH PASSAGE CRITERIA	1.8
ODF 17S	SITE-SPECIFIC PLANS FOR VEGETATION RETENTION WITHIN RMAS ON NORTHWEST AND SOUTHWEST (GRANTS PASS) OREGON STATE FOREST LANDS	5.3
ODF 18S	WILDLIFE TREE PLACEMENT ON STATE FOREST LANDS	5.4
ODF 19S	ADDITIONAL CONIFER RETENTION ALONG FISH-BEARING STREAMS IN PRIORITY AREAS	3.3
ODF 20S	LIMITED RMA FOR SMALL TYPE N STREAMS IN PRIORITY AREAS	3.4
ODF 21S	ACTIVE PLACEMENT OF LARGE WOOD (LW) DURING FOREST OPERATIONS	3.5
ODF 22S	25 PERCENT IN-UNIT LEAVE TREE PLACEMENT AND ADDITIONAL VOLUNTARY RETENTION	3.6
ODF 23S	BMP COMPLIANCE AUDIT PROGRAM	1.9
ODF 24S	STATE FORESTLANDS STREAM HABITAT ASSESSMENT AND INSTREAM PROJECTS	5.5
ODF 25S	FISH PRESENCE/ABSENCE SURVEYS AND FISH POPULATION SURVEYS	2.1
ODF 26S	WESTERN OREGON STATE FORESTS HABITAT CONSERVATION PLAN	5.6
ODF 27S	INCREASED RIPARIAN PROTECTION	4.2
ODF 28S	PROTECTION OF SIGNIFICANT WETLANDS, INCLUDING ESTUARIES	4.3
ODF 29S	FOREST PRACTICE CHEMICAL PROTECTION RULES INCREASED BUFFERS	4.4
ODF 30S	LARGE WOOD RECRUITMENT INCENTIVES	4.5
ODF 31S	LARGE WOOD PLACEMENT GUIDELINES	4.6
ODF 32S	FISH PRESENCE SURVEYS	4.7
ODF 33S	INCREASE NUMBER OF STREAMS AND STREAM MILES PROTECTED	4.8
ODF 34S	IMPROVED FISH PASSAGE BMPS ON STREAM CROSSING STRUCTURES	4.9

<i>OLD ODF REFERENCE</i>	<i>NEW ACTIVITY ITEM</i>	<i>NEW ACTIVITY REFERENCE</i>
ODF 35S	INCREASE DESIGN FOR LARGER FLOWS	4.10
ODF 36S	UPGRADED ROAD CONSTRUCTION & FILL REQUIREMENTS	4.11
ODF 37S	UPGRADED SKID TRAIL CONSTRUCTION AND FILL REQUIREMENT	4.12
ODF 38S	CLEARCUT LIMITATIONS	4.13
ODF 39S	HABITAT RESTORATION PROJECTS	3.8
ODF 40S	HABITAT RESTORATION PROJECTS	3.8
ODF 41S	LANDOWNER MONITORING AND ASSESSMENT PROJECTS	2.2
ODF 42S	LANDOWNER MONITORING AND ASSESSMENT PROJECTS	2.2
ODF 43S	LANDOWNER MONITORING AND ASSESSMENT PROJECTS	2.2
ODF 44S	LANDOWNER MONITORING AND ASSESSMENT PROJECTS	2.2
ODF 45S	LANDOWNER MONITORING AND ASSESSMENT PROJECTS	2.2
ODF 46S	HABITAT RESTORATION PROJECTS	3.8
ODF 47S	LANDOWNER WATERSHED ASSESSMENTS AND ANALYSES	2.3
ODF 48S	LANDOWNER WATERSHED ASSESSMENTS AND ANALYSES	2.3
ODF 49S	LANDOWNER WATERSHED ASSESSMENTS AND ANALYSES	2.3
ODF 50S	LANDOWNER WATERSHED ASSESSMENTS AND ANALYSES	2.3
ODF 51S	HABITAT RESTORATION PROJECTS	3.8
ODF 52S	HABITAT RESTORATION PROJECTS	3.8
ODF 53S	OREGON PROFESSIONAL LOGGER PROGRAM	8.5
ODF 54S	FOREST RESOURCE TRUST	6.1
ODF 55S	STEWARDSHIP INCENTIVE PROGRAM	6.2
ODF 56S	LANDOWNER STEWARDSHIP AWARD	9.1
ODF 57S	FOREST PRACTICES MONITORING PROGRAM	1.2
ODF 58S	FORMER MEASURE: LIABILITY LIMITS FOR FISH AND WILDLIFE ENHANCEMENT	DISCONTINUED
ODF 59S	FISH PRESENCE SURVEYS	4.7
ODF 60S	FORMER MEASURE: ADDITIONAL FOREST PRODUCTS HARVEST TAX	DISCONTINUED
ODF 61S	FORMER MEASURE : ANALYSIS OF "RACK CONCEPT" FOR DEBRIS FLOWS	DISCONTINUED
ODF 62S	VOLUNTARY NO-HARVEST RIPARIAN MANAGEMENT AREAS	3.7
ODF 63S	FOREST PRACTICES ADVISORY COMMITTEE ON SALMON AND WATERSHEDS	3.9, 4.14