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OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS 10/19/2000

State of Oregon
Department of Environmental Quality

AGENDA

ENVIRONMENTAL QUALITY COMMISSION
AND BOARD OF FORESTRY TOUR

October 19, 2000
9:15 a.m. to 5:00 p.m.
West Oregon District
24533 Alsea Hwy
Philomath, Oregon

Notes: Because of the uncertain length of time needed for each agenda item, the Commission may deal with any item at any time in the meeting. If a specific time is indicated for an agenda item, an effort will be made to consider that item as close to that time as possible. However, scheduled times may be modified if agreeable with participants. Anyone wishing to listen to the discussion on any item should arrive at the beginning of the meeting to avoid missing the item of interest.

The Board of Forestry and the Environmental Quality Commission will tour multiple sites to illustrate the implementation of the Oregon Plan by highlighting in-stream restoration and road improvement activities

The Commission has set aside November 6, 2000, for their next meeting. It will be held in Portland, Oregon.

Copies of staff reports for individual agenda items are available by contacting the Director's Office of the Department of Environmental Quality, 811 S. W. Sixth Avenue, Portland, Oregon 97204, telephone 503-229-5301, or toll-free 1-800-452-4011. Please specify the agenda item letter when requesting.

If special physical, language or other accommodations are needed for this meeting, please advise the Director's Office, 503-229-5301 (voice)/503-229-6993 (TTY) as soon as possible but at least 48 hours in advance of the meeting.

October 6, 2000

BOARD OF FORESTRY AND ENVIRONMENTAL QUALITY CCOMMISSION TOUR

West Oregon District
24533 Alsea Hwy, Philomath
Ph: (541) 929-3266

October 19, 2000 Tour Itinerary

Transportation will be provided by vans which will depart from Building 1, Department of Forestry, 2600 State Street, Salem, at 8:00 a.m. on October 19 and return approximately 5:00 p.m. If you prefer, you may drive southwest of Philomath and meet the tour participants at the West Oregon District Office at 24533 Alsea Highway at 9:00 (1 mile southwest of Philomath on Highway 34). Lunches will be provided for the Board and Commission members, invited guests and staff. FPAC members, ODF and DEQ staff who plan to attend are requested to **RSVP by October 16 to Kathleen Gomez at (503) 945-7488 or kgomez@odf.state.or.us** so that sufficient transportation and lunches can be provided.

This is an "all-weather" tour, thus participants should bring rain gear. Several stops will require walking down moderately steep slopes and through forest vegetation. Thus, participants should also wear sturdy boots and clothing that will protect against briars and nettles.

A map showing the location of the West Oregon District office is attached.

***Tour Objectives*:**

- **Present information within a field context about the key issues that were addressed by the ad hoc Forest Practices Advisory Committee Report. [See attached detailed information about each stop].**
- **Illustrate the implementation of the Oregon Plan voluntary measures by highlighting in-stream restoration and road improvement activities.**
- **Have discussion about the policy issues related to implementing the recommendations of the FPAC Report.**

8:00 a.m.	**Depart ODF Salem Office Compound via vans**
8:00 - 9:00	Travel to Philomath ODF office
9:15 - 9:35	**(1) West Oregon District Orientation** **Philomath Office** – Bill Lafferty, Ted Lorensen, and Lydia Taylor • Introductions • Overview of District • Review tour package and tour objectives • Review charge of the FPAC • Review of key statutory elements related to forest practices, the EQC and BOF

9:35 - 10:05 Travel to Seeley Creek

10:05 - 10:50 **(2) Seeley Creek - Stream/Road Restoration - Willamette Industries**
Phil Penttila, Gene Stevens
- Stream restoration/enhancement

10:50 - 11:05 Travel to Zahn Creek

11:05 - 11:30 **(3) Zahn Creek Landslide**
John Seward
- Role of debris torrents in maintaining habitat
- Impacts of roads and harvesting

11:30 - 11:45 Travel to Philomath office

11:45 - 12:05 Box Lunch

12:05 - 12:30 Travel to Devitt Creek

12:30 - 1:10 **(4) Devitt Creek - Riparian Protection - Starker Forests**
Randy Hereford, Ted Lorensen, Liz Dent and Tom Rosetta
- Water classification
- RMA's-stream protection issues
- Riparian and temperature monitoring results

1:10 - 1:40 Travel to County Line Road

1:40 - 2:15 **(5) County Line Road - Road Restoration Priorities - Starker Forests**
Jennifer Noonan and John Seward
- Roads monitoring results
- Road improvement and culvert replacement, setting priorities
- Technical issues in achieving compliance

2:15 - 2:45 Travel to Johnson Creek - Springer Family Forest

2:45 - 3:15 **(6) Springer Family Property**
Thad Springer and Ted Lorensen
- Family forest landowner issues and perspectives

3:15 - 3:45 Travel to Philomath

3:45 - 5:00 Travel to Salem

BOARD OF FORESTRY AND
ENVIRONMENTAL QUALITY CCOMMISSION
TOUR

October 19, 2000 Tour Itinerary

STOP 1 – WEST OREGON DISTRICT OFFICE

Overview of West Oregon District. Review tour objectives. BOF and EQC statutory relationship.

Key Points:
- Charge given to the FPAC.
- Statutory relationships between BOF and EQC.
- Protection and rule requirements of the FPA.

STOP 2 – SEELEY CREEK – STREAM RESTORATION AND ENHANCEMENT

This stop on Willamette Industries ownership illustrates activities undertaken as part of the Oregon Plan. Efforts include restoration of instream large wood. Enhancement includes creation of off-channel habitat.

Key Points:
- Past management has reduced instream large wood, modified riparian vegetation, and increased fish passage barriers.
- Restoration opportunities exist that can be pursued through regulatory or non-regulatory methods.
- There are federal regulatory barriers to restoration actions due to recent application of federal fill and removal law to large wood placement by Army Corps of Engineers.
- Restoration actions can have some short-term risks or impacts. Perceptions about these risks vary considerably.
- Opportunity for restoration often only occurs at the time of harvest or other management activity.
- Very few "hardwood conversions" are occurring.

Policy Questions:
- How do we provide an appropriate balance among the various conflicting concerns (risks versus benefits; incentives versus regulation) related to restoration?
- How do we encourage management on those sites where it is desirable?
- How do we deal with the complexity of "protection requirements."

STOP 3 – ZAHN CREEK LANDSLIDE

Large debris torrent resulting from massive rainfall surge that overwhelmed an outdated road stream crossing structure.

Key Points:

- Debris torrents provide large wood and sediment that can enhance habitat over the long-term.
- Roads can increase the number of debris torrents. Current road construction practices have reduced such impacts substantially. However, many roads were built prior to current standards. Road restoration practices are underway through the Oregon Plan.
- Stream crossing structures can prevent (desirable) movement of large wood and sediment downstream.
- New engineering designs and professional "paradigms" are needed.
- It is uncertain if timber harvesting impacts (under current rules) debris torrent rates over the long-term.
- IMST agrees that current practices related to harvesting are appropriate (with monitoring,) but raises concerns that current retention practices are not maintaining the large wood component of torrents.

Policy Questions:

- How do we provide an appropriate balance among the various conflicting concerns (short-term risks versus long-term benefits, public safety versus habitat, protecting infrastructure versus delivery of wood and sediment) related to landslides?
- How do we choose a protection strategy given the levels of scientific uncertainty related to movement and delivery of wood and sediment?

STOP 4 – DEVITT CREEK RIPARIAN PROTECTION

Recent clearcut harvest on Starker Forests showing "higher" riparian protection standards than current rules

Key Points:

- ODF with assistance from DEQ has conducted riparian monitoring to validate the assumptions related to and evaluate the effectiveness of 1994 rules.
- Data indicates that with regard to stream temperatures there is some indication that shade changes that may occur for small streams may not be adequate to meet water quality standards. For medium streams shade changes are less significant, but may not always be adequate to meet standards. For large streams shade changes are not significant.
- The assumption that the first 20 feet of an RMA is hardwood dominated was not validated for small and medium streams.
- Large wood functional level is a policy call.
- Forest lands currently have much higher levels of protection than other land uses. [Note: throughout the day we will see examples of "protection" on other land uses.]
- Forest lands go through a natural disturbance and succession cycle.

Policy Questions:

- Should forest lands be burdened with higher riparian protection standards than other land uses? If so, should there be "recognition of the differences?
- How do we recognize "natural disturbance" in setting protection objectives or standards?
- How do we deal with the complexity of "protection requirements."

STOP 5 – COUNTY LINE ROAD- SETTING ROAD RESTORATION PRIORITIES

Replacement of stream crossing culvert on Starker Forests ownership. Road evaluation and project prioritization. Results of roads monitoring.

Key Points:

- Many roads were built in good faith following past standards.
- Many landowners have voluntarily surveyed their road systems and are undertaking a process to upgrade roads.
- Magnitude of the road restoration work is significant. Many culverts do not pass fish and many roads do not have adequate cross drainage.
- Resources are limited. Family forest landowners have overall less resources to address these issues.

Policy Questions:

- Should restoration priorities be set by regulation?
- Should landowners be "required" through regulation or "encouraged" through voluntary programs to upgrade roads and stream crossings?
- How do we provide resources to assist landowners that have limited resources?

STOP 6 – JOHNSON CREEK - SPRINGER FAMILY FOREST

Multi-generation family forest. Active forest management within large fish stream riparian zone. Small family forest perspective of regulation consequences. FPA compliance monitoring site.

Key Points:

- Such landowners manage for a diversity of reasons.
- Landowner behaviors are often different than expected. Most landowners do not "enter" riparian areas even when they can.
- Such landowners are more likely to have individually greater impacts from regulation.
- Expertise and economic resources of family forest landowners often very limited.
- Maintaining forest land base is an important policy objective. Family forests can be converted to a less restrictive land use.

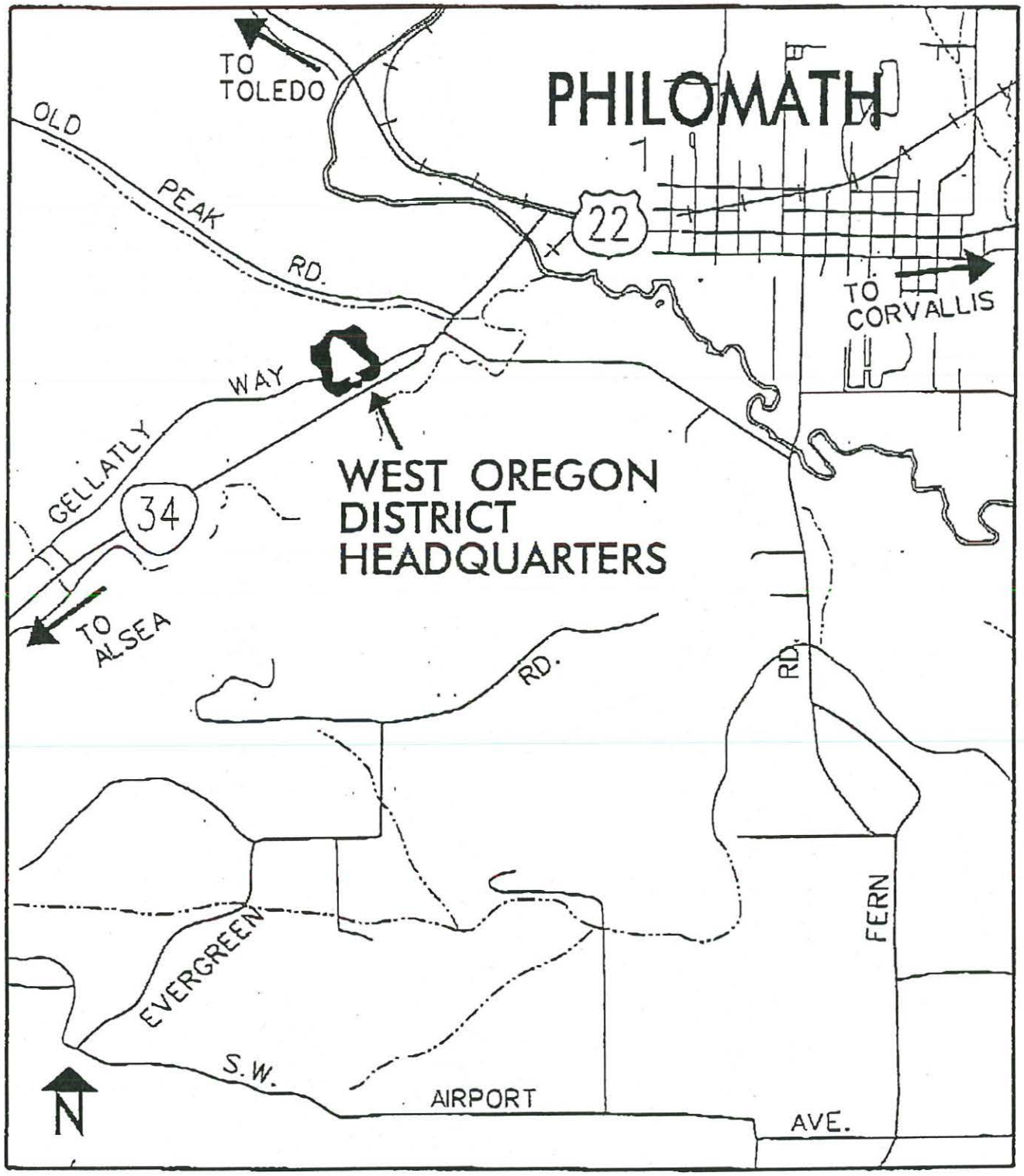
Policy Questions:

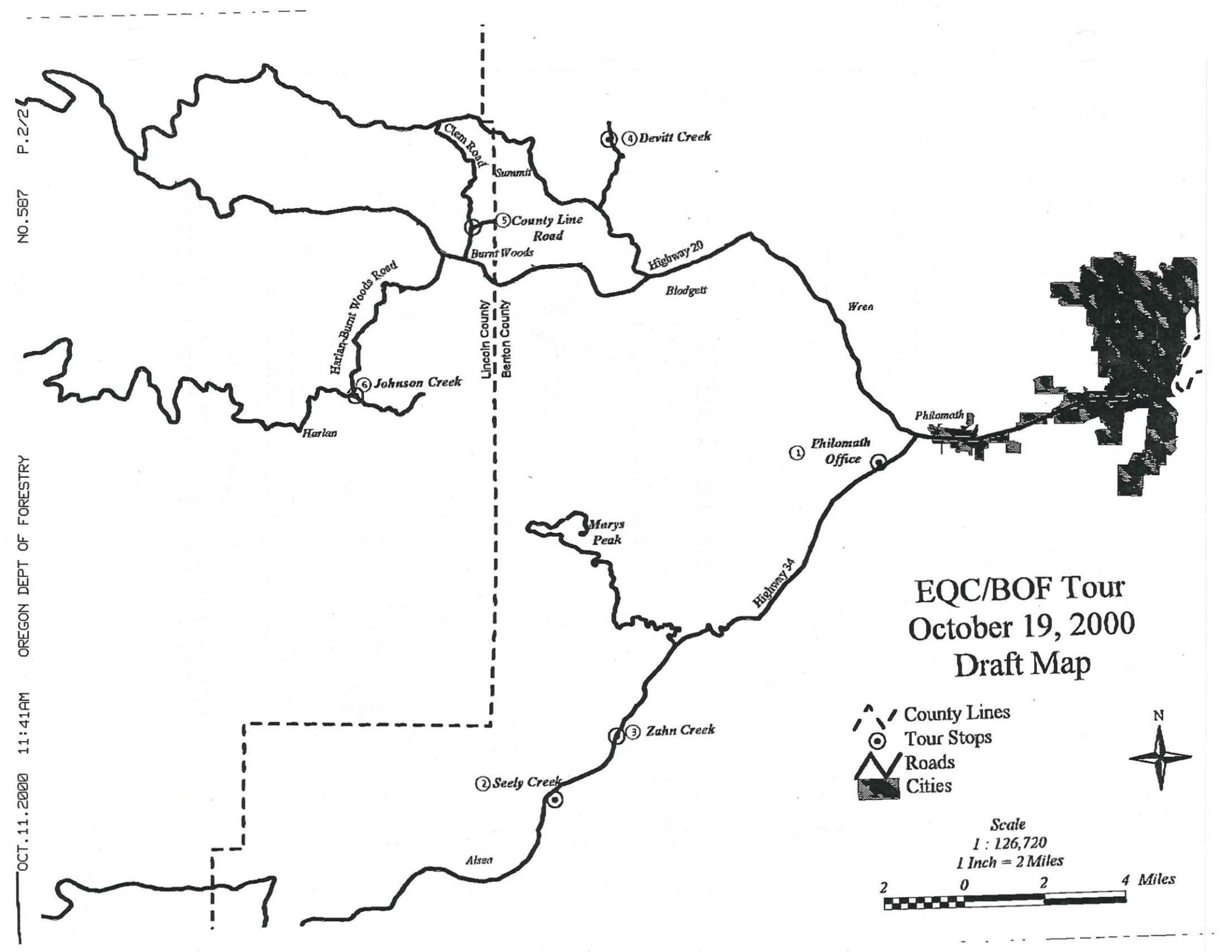
- How do we deal with the complexity of "protection requirements."
- Should family forest landowners be treated differently than industrial landowners?
- How do we anticipate and avoid negative consequences, since behaviors are often different than expected?

WEST OREGON DISTRICT

24533 Hwy. 34

1 mile southwest of Philomath on Hwy. 34




OCT.11.2000 11:41AM OREGON DEPT OF FORESTRY NO.587 P.2/2
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Summit
④ Devitt Creek
⑤ County Line Road
Burnt Woods
Highway 20
Blodgett
Wren
Harlan-Burnt Woods Road
Lincoln County
Benton County
⑥ Johnson Creek
Harlan
Philomath
① Philomath Office
Marys Peak
Highway 34
③ Zahn Creek
② Seely Creek
Alsea
EQC/BOF Tour
October 19, 2000
Draft Map
County Lines
Tour Stops
Roads
Cities
N
Scale
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1 Inch = 2 Miles
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MEMORANDUM OF UNDERSTANDING BETWEEN THE OREGON STATE DEPARTMENT OF ENVIRONMENTAL QUALITY AND THE OREGON STATE DEPARTMENT OF FORESTRY

I. Introduction and Statement of Purpose

A. Introduction

1. The Environmental Quality Commission (EQC) and the Oregon Department of Environmental Quality (DEQ) are responsible for implementing the Federal Clean Water Act in Oregon, ORS 468B.035, including adoption of water quality standards. The DEQ has adopted and the U.S. Environmental Protection Agency (EPA) has approved Oregon's water quality standards and its 1994/1996 303(d) list. DEQ intends to update and resubmit its 303(d) list to EPA in 1998 and subsequent years as required by federal regulations. DEQ is setting priorities for TMDL preparation.

2. Subsection 303(d) of the Federal Clean Water Act (the Act), 33 U.S.C. §1313(d), requires states to identify waters for which effluent limitations or other pollution control requirements required by local, State, or Federal authority are not stringent enough to implement applicable water quality standards, 40 C.F.R. §130.7 (b). These water bodies are referred to as "water quality limited." For each water on the 303(d) list that is not removed from the list by findings of water quality impairment due to natural conditions or best management practice (BMP) effectiveness, the state must establish a total maximum daily load (TMDL) allocation at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality. A TMDL is the sum of the individual wasteload allocations for point sources and load allocations for non-point sources and natural background, 40 C.F.R. §130.2(i).

3. TMDLs must be incorporated into the continuing planning process required by Section 303(e) of the Act and the continuing planning process must be included in the state's water quality management plan. Sections 208 and 319 of the Act, 33 U.S.C. §1288 and §1329, require the state to prepare non-point source management plans.

4. ORS 527.765 requires the Oregon Board of Forestry (the Board), in consultation with the EQC, to establish Best Management Practices (BMPs) and other rules applying to forest practices to ensure that to the maximum extent practicable non-point source discharges of pollutants resulting from forest operations do not impair the achievement and maintenance of water quality standards established by the EQC. The Oregon Department of Forestry (ODF) is the Designated Management Agency (DMA) by DEQ for regulation of water quality on nonfederal forestlands. Forest operators conducting operations in accordance with ODF BMPs are considered to be in compliance with Oregon's water quality standards.

5. The Board in consultation and with the participation and support of DEQ, has adopted water protection rules in the form of BMPs for forest operations, including, but not limited to, OAR Chapter 629, Divisions 635-660. These rules are implemented and enforced by ODF and monitored to assure their effectiveness. DEQ participates in the design and implementation of these monitoring efforts. The EQC, DEQ, the Board and ODF determined that pollution control measures required as BMPs under ORS 527.765 will be relied upon to result in achievement of state water quality standards.

6. The EQC, DEQ, the Board, and ODF are all committed to restoring salmon and meeting water quality through the Healthy Streams Partnership and Oregon Plan for Salmon and Watersheds, 1997 Oregon Laws, Ch. 7.

B. Purposes of MOU

The purposes of this memorandum of understanding:

1. To further define the respective roles and responsibilities of the EQC, the DEQ, the Board, and ODF in preventing, controlling and reducing non-point source discharges to achieve and maintain water quality standards;

2. To explain the process for determining whether (a) forest practices contribute to identified water quality problems in listed water quality limited streams; (b) if so, to determine whether existing forest practice rules provide sufficient control to assure that water quality standards will be met so that waters can be removed from the 303(d) list;

3. To describe the process for interagency coordination in revising forest practice rules, if necessary, to assure the achievement of water quality standards; and

4. To encourage the use of voluntary and incentive-based regulatory solutions to achieve and maintain water quality.

II. Forest Practice BMPs and Water Quality Standards

Since ODF is the DMA for water quality management on nonfederal forestlands and ODF's BMP's are designed to protect water quality, ODF and DEQ will jointly demonstrate how the Forest Practices Act (FPA), forest practice rules (including the rule amendment process), and BMP's are adequate protection pursuant to ORS 527.765. This demonstration of the ODF BMP program adequacy will be done at the statewide scale with due consideration to regional and local variation in effects including non-anthropogenic factors that can lead to water quality standard violations.

Water quality impairment related to aquatic weeds, bacteria, chlorophyll a, dissolved oxygen, flow modification, many nutrients, total dissolved gas, or toxics are generally not attributable to forest management practices as regulated by the FPA. However, it is generally accepted that forest management practices have in some cases caused documented changes in temperature, habitat modification, sedimentation, turbidity, and bio-criteria. Therefore, this statewide demonstration of FPA effectiveness in protection of water quality will address these specific parameters and will be conducted in the following order:

a. temperature (draft report target completion date Spring, 1999),
b. sedimentation and turbidity (draft report target completion date Summer, 1999),
c. aquatic habitat modification (draft report target completion date fall 1999),
e. bio-criteria (draft report target completion date end 1999), and
f. other parameters (draft report target completion date spring 2000).

The analyses will be presented in a format compatible with EPA region 10 guidance (pages 4-6, dated November 1995) regarding BMP effectiveness determinations, and will include:

a. "Data analysis of the effectiveness of controls relative to the problem": analyze relevant data and studies on the parameter and known control methods,
b. "Mechanisms requiring implementation of pollution controls": give a clear exposition of the rules/programs that are designed to provide for protection,
c. "Reasonable time frame for attaining water quality standards": discuss expected recovery times which may be long for some parameters because the ecological processes that bring recovery are long-term, and
d. "Monitoring to track implementation and effectiveness of controls": describe the scope and extent the effectiveness and implementation monitoring program and how they tie back to program changes for adaptive management.

In addition, these analyses will address attainment of state anti-degradation policy. These demonstrations will be reviewed by peers and other interested parties prior to final release. While analysis is being conducted and unless or until changes are made in accordance with ORS 527.765, the FPA and implementing rules will constitute the water quality BMP program for forestlands. These sufficiency analyses will be designed to provide background information and techniques for watershed based assessments of BMP effectiveness and water quality assessments for watersheds with forest and mixed land uses.

III. ODF and DEQ coordination for listed waterbodies (i.e., 303(d) list)

A. Waterbody Specific Coordination

The following coordination will occur between ODF and DEQ regarding the TMDL process and water quality management plans:

(a) For basins where agreement is reached that water quality impairment is not attributable to forest management practices (Figure 1), the forest practice rules will constitute the water quality compliance mechanism for forest management practices on nonfederal forestland. ODF will not participate in the development of the TMDL or water quality management plan except as requested to assist DEQ as ODF budgeted resources permit. If the basin associated with a listed waterbody is entirely or almost entirely on federal land or non-forestland ODF will have little or no involvement (Figure 1).

(b) For basins where water quality impairment is attributed to the long-term legacy of historic forest management and/or other practices, but ODF and DEQ jointly agree that the forest practice BMP's are now adequately regulating forest management activities and not adding to further degradation of water quality, the forest practice rules will be designated in the water quality management plan as the mechanism to achieve water quality compliance for forest operations. ODF will participate with the other DMAs in developing the water quality management plan as necessary.

(c) For basins where water quality impairment may be attributable to forest management practices and ODF and DEQ cannot agree that the current BMPs are adequately regulating forest management activities (Figure 1), the current forest practice rules will be designated in the water quality management plan as the mechanism to achieve water quality compliance for forest operations. However, ODF will design and implement a specific monitoring program as part of the basin plan to document the adequacy of the best management practices. The schedule and scope of the monitoring program will be jointly agreed to by DEQ and ODF. During the interim, while monitoring is being conducted, the current rules will constitute the water quality compliance mechanism. If the monitoring results indicate that changes in practices are needed in a basin, the DEQ and the Board will use OAR 629-635-120 to create watershed specific protection rules or use other existing authority to ensure that forest management activities do not impair water quality.

(d) For basins where both ODF and DEQ agree that there are water quality impairments due to forest management activities even with FPA rules and BMP's, the DEQ and the BOF will use OAR 629-635-120 to create watershed specific protection rules or use other existing authority to ensure that forest management activities do not impair water quality.

In deciding between conditions (a)-(d) above, the statewide rule sufficiency analysis (described in II) will be critical in determining which situation exists. If the practices and impairments are found by DEQ and ODF to be regional or statewide in nature the BOF will create or modify statewide or regional rules or design other effective measures to address the impairment.

B. Removal or Reclassification of Waterbodies

DEQ will propose removal of waterbodies (Figure 1) on the 303(d) list when:

(a) additional data indicates that the waterbody is not in violation,

(b) water quality parameters are found to be in violation for reasons other than human activities,

(c) TMDL's, or water quality management plans or their equivalents, have been established in compliance with the Clean Water Act §303, or

(d) the FPA, forest practice rules and BMP's are found to be adequate for a given water quality parameter in a given basin via the statewide demonstration or watershed based demonstration (see section II above) and all land affecting the listed waterbody is deemed forestland that is regulated under the FPA. Forest basins that have water quality impairment due to legacy conditions that will not be corrected by the current BMPs alone, remain listed with their present status until voluntary or incentive based actions are implemented that are intended to restore watershed conditions such that water quality standards can be met.

IV. Voluntary and Incentive-Based Approaches

DEQ and ODF will work jointly with landowners and watershed councils, as resources permit, to use innovative approaches to resolving water quality problems. DEQ and ODF will use other pollution control requirements when appropriate to restore watershed conditions such that water quality standards can be met in waterbodies listed under Section 303(d) of the Clean Water Act. These pollution programs include but are not limited to the following:

1. Oregon Laws 1997, ch. 553, The Green Permits Act,;
2. Oregon Laws 1995, ch. 413, The Forest Stewardship Act,;
3. Oregon Laws 1997, ch. 7, Healthy Streams Partnership and the Oregon Plan for Salmon and Watersheds;
4. DEQ's Environmental Management Systems Incentives Project;
5. Habitat Conservation Plans adopted and approved under the Endangered Species Act;
6. Project XL agreements with the EPA; and
7. Pollution Prevention Partnership agreements with the EPA.

Some of these alternative approaches will become critical and complementary to the forest practices program when attempting to restore water quality in streams with significant legacy

conditions caused by past actions such as channel simplification from splash damming and stream cleaning.

V. Other key coordination points for DEQ and ODF

There are two other issues that will require special coordination between DEQ and ODF These coordination issues regard:

1. Outstanding Resource Water designations and management measures, and
2. Coordination between the two agencies when there is a land use conversion.

Both agencies agree to open discussion on how to coordinate on these issues but they are separate issues that are not covered by this particular MOU.

VI. Signatures

Signed: James E. Brown

James E. Brown, State Forester
Oregon Department of Forestry

Date: 4/16/98

Signed: Langdon Marsh

Langdon Marsh, Director
Oregon Department of
Environmental Quality

Date: 4-17-98

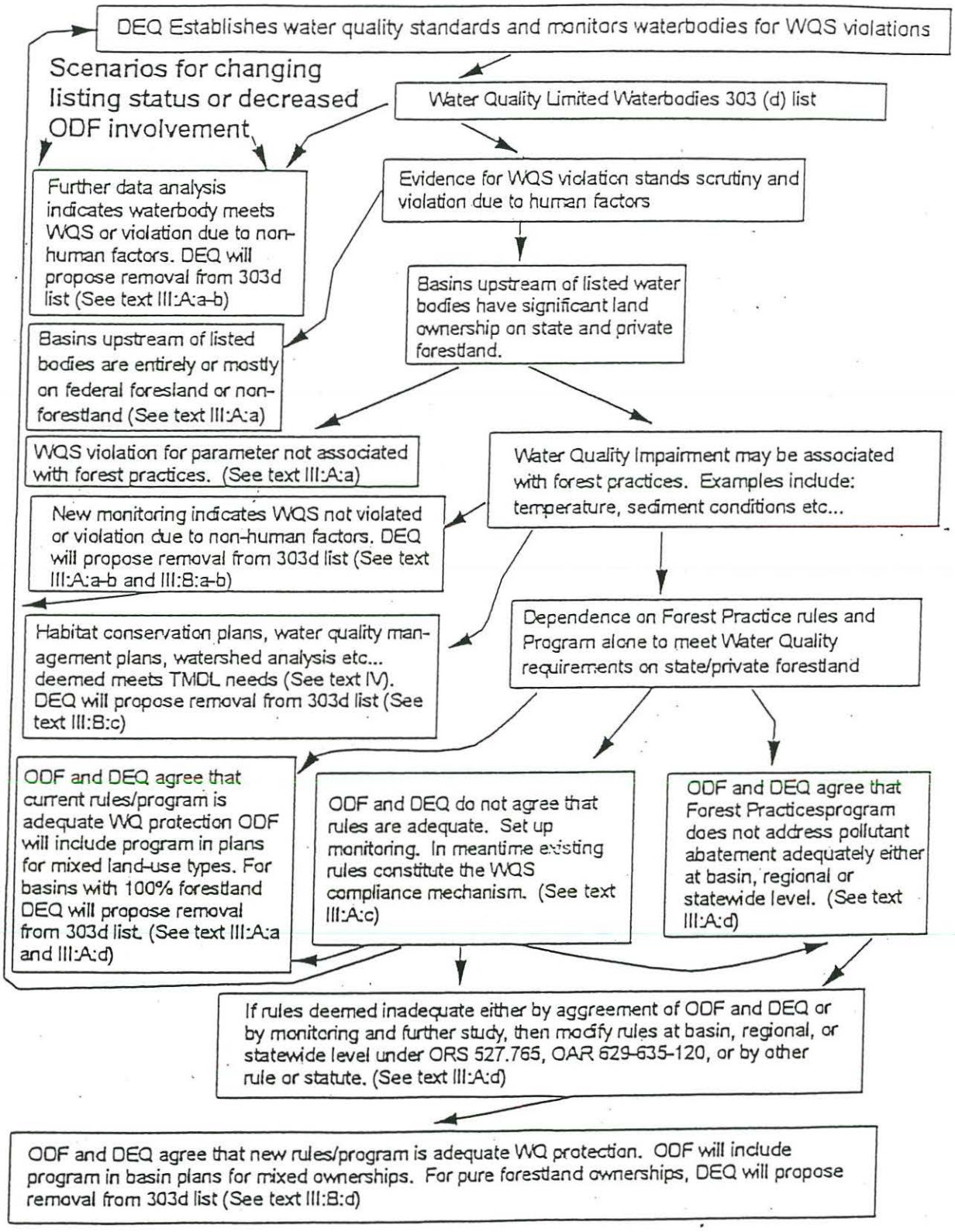


Figure 1. Treatment of waterbodies with forestland and mixed landuse and ownership lands listed as water quality limited under the 303(d) list

Intro/Executive Summary from
FPAC Report - August 2000

Introduction/Overview

The Oregon Plan for Salmon and Watersheds

The Oregon Plan for Salmon and Watersheds is conceived as a means to restore our native fish populations and their aquatic systems to productive and sustainable levels that will provide substantial environmental, cultural, and economic benefits.

The success of the Oregon Plan rests on the efforts and contributions of all Oregonians. Given the breadth of the undertaking, accomplishing its goals requires cooperation across the entire economic and geographic spectrum of the state. The Oregon Plan needs an engaged public concerned about the fate of the salmon and our watersheds. A cooperative undertaking, it melds the efforts of state, local, federal, tribal and private organizations, landowners and individuals.

Although it rests on a strong foundation of protective regulations, the Oregon Plan transcends regulation and encourages non-regulatory efforts to improve conditions for salmon and water quality. Some of the most important contributions to the Oregon Plan have been accomplished by private and quasi-governmental actions through watershed councils and voluntary restoration and enhancement activities.

The Oregon Plan spans the range of land uses and activities impacting salmon and water quality, including forest management, agriculture, fisheries, water management, hatchery management, industry and urban development. Governor Kitzhaber recognizes each of these interests and the roles of state agencies to achieve the goal of the Oregon Plan in his Executive Order No. EO 99-01 on the Oregon Plan for Salmon and Watersheds (Appendix 1). Many efforts have been launched to contribute to the Oregon Plan including watershed council plans and projects, Oregon's S.B. 1010 process dealing with the effects of agricultural practices on water quality, and forestland owner voluntary contributions. This report focuses entirely on commercial forest operations and forest practices.

The Ad Hoc Forest Practices Advisory Committee on Salmon and Watersheds

In the spirit of the Oregon Plan and in accordance with Governor Kitzhaber's Executive Order No. EO 99-01, the Board of Forestry created a diverse committee of Oregonians. The committee was charged with: (1) determining 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) making specific recommendations to the Board of Forestry. The committee's Charter (see Appendix 1) sets forth its background and purpose, parameters and assumptions, charge from the board, membership, and roles and responsibilities.

The Ad Hoc Forest Practices Advisory Committee has thirteen members representing a diverse group of Oregonians who care deeply about our salmon and watersheds; small and large forest landowners, environmental and sports-fishing organizations, logging and commercial fishing interests, local government, and labor unions. The Committee met for a year and a half beginning in January 1999. The members include:

Ron Cease, Chair, Hatfield School of Government, Portland State University
Geoff Pampush, Oregon Trout
Dan Newton, Oregon Forest Industries Council

Paul Ketcham, Portland Audubon
Gary Springer, Oregon Small Woodlands Association
Bill Arsenault, Oregon Small Woodlands Association
Paul Heikkila, Commercial Fishing/OSU Sea Grant Extension
Bill Street, Labor/Machinist Union
Liz Hamilton, Northwest Sportsfishing Industry Association
Blake Rowe, Oregon Forest Industries Council
Sue Cameron, Oregon Counties
Tom Hirons, Associated Oregon Loggers
Mary Scurlock, Pacific Rivers Council

Committee members examined the scientific literature and monitoring results and heard from scientists and policymakers. They received and reviewed a report on forest practices from the Independent Multidisciplinary Science Team (IMST), a distinguished team of scientists that was established by the legislature to analyze and recommend the scientific basis for the Oregon Plan. The committee deliberated on a series of issue papers, sought scientific review of the issue papers, and debated options to achieve objectives relating to fish passage, landslides, roads, landscapes, and riparian functions. The issue papers were organized in a manner to help the Board of Forestry consider scientific, operational, economic and policy issues. The papers set forth a large number of options that were developed and considered by the committee.

Committee members traveled to both the eastern and western sides of the state where they examined forest sites, streams, riparian areas and watersheds, considered fish, water quality and forest management needs, gained a deeper understanding of the scientific issues, operational constraints, tradeoffs and discussed their points of view.

They met a total of 29 days with the first public meeting on January 14, 1999 and their last meeting on June 9, 2000. The meetings were long, often difficult, and thought provoking. Members devoted a significant amount of time learning about the complex interactions between terrestrial and aquatic habitat and the effects on water quality. The full range of options considered is shown in the issue papers. Following lengthy deliberations, the committee achieved consensus or strong agreement on 24 recommendations that included not only regulatory changes but also incentives and voluntary activities. On some recommendations, the views of individual committee members differed, and these differences are noted in the report.

The members of the committee believe their work is complete. The recommendations were supported by members of the committee in the spirit of making significant and positive contributions for salmon and watersheds. The committee members embarked on their task with the understanding that they were working to advance the Oregon Plan. The effort did not attempt to specifically address sufficiency for particular federal laws or regulations, such as the federal Endangered Species Act or Clean Water Act.

There are some follow-up actions that will need to be addressed by the Board of Forestry. These tasks are:

- Further exploration of incentives through the Board charging the Family Forestland Committee to explore and build on the incentive options developed by the FPAC.

- Directing the Department to work with interests in Eastern Oregon to develop riparian measures for eastern Oregon forests.
- Ensuring the rule proposals are supported by the findings required under ORS 527.714.

While there are often 13 different opinions among the committee members, it is fair to say that there are two dominant mindsets. These two mindsets reflect viewpoints regarding a range of issues and how facts are received and interpreted by the committee members. These two mindsets had differences in viewpoints about the desired future conditions, the acceptable levels of risk and the probability of adverse effects. There were also different views on the relative importance of unintended consequences - land use change, disincentives for doing management, and maintaining a viable forest-based economy. The facilitators, committee members, and staff worked diligently to create solutions that considered and balanced the range of viewpoints and that reflected a spirit of compromise.

Summary of Major Issues

In carrying out their charge, the committee chose first to review four major technical issues related to the protection and restoration of salmonids: fish passage, forest roads, landslides, and riparian function. With the September 1999 delivery of the IMST Report to the committee, a fifth issue, "Landscapes" was added for committee discussion.

Fish Passage

Movement of fish throughout a watershed is necessary for a number of life history needs. Upstream and downstream migration of juveniles during low summer flow is often needed so they can find suitable habitat (e.g. avoid warm water temperatures, find food, escape predators, avoid competition, etc.). During winter, juveniles may move upstream or into side tributaries and off-channel habitats to escape flood flows.

Upstream migration of juveniles has been observed related to the presence and availability of beaver ponds and other fish-rearing habitat. Upstream migration of adults is important for access to spawning grounds. Loss of fish passage at road crossings and other human-caused barriers has many potential effects, including loss of habitat access and changes in fish genetics or community assemblages. "Impediment construction" has been identified as a major factor leading to the decline of salmonids in western Oregon. Fish passage blockages are a problem for virtually every type of land use with many of the most important barriers for salmonids being found on public roads and highways.

Forest Roads

All streams under natural conditions have sediment inputs at varying levels from terrestrial sources (background levels) depending upon soil, topography, vegetation and rainfall. Sediment enters water through various processes that include soil surface erosion, channel erosion and mass movements (landslides, debris flows), and these inputs can be either chronic or episodic.

Studies have indicated that high sediment levels can affect fish by increasing mortality, altering habitat, reducing growth rates, causing physiological stress, impairing homing instincts, and reducing feeding rates. Historically, forest roads (as opposed to timber harvesting) have been the primary source of sediment from forest management activities in the western United States.

High risk factors for forest roads include road surface erosion, road fill failure, and the proximity and hydrologic connection of road segments to streams. Roads can also directly alter stream channels and fish habitat, especially when roads are constructed parallel to streams and within the floodplain.

Landslides

Landslides are the dominant processes for erosion on steep forested slopes in western Oregon and throughout the Pacific Northwest (Swanson et al., 1987). A landslide is the movement of a mass of soil, rock or debris down slope. The typical landslide on steep forestlands begins as a relatively small and shallow feature (typical dimensions of 3 feet in depth, 30 feet in width, and 40 feet in length), and can initiate debris flows (a semi-fluid mass scouring or partially scouring soils on the slope along its path). Upon entering stream channels, debris flows often carry large amounts of wood and are referred to as debris torrents. Landslides can be both beneficial and detrimental to aquatic habitat. For example, they can deliver needed large wood and gravel that will benefit aquatic habitat, but they can also deposit sediment that will clog spawning beds.

Forest practices may alter both physical and biological (vegetative) slope properties that influence slope stability and the occurrence of shallow rapid landslides. Physical alterations can include slope steepening, slope-water effects, and changes in soil strength. Most physical alterations are the result of roads and skid roads.

Riparian Function

Large wood, shade (stream temperature), bank stability, litterfall, sediment filtration, and floodplain processes are all riparian functions in forests. While some or all of these functions may be provided for either directly or indirectly by the current forest practice rules and Oregon Plan voluntary measures, large wood, bank stability and stream temperature are the primary functions that the rules and measures are designed to address.

Large wood (also referred to as large woody debris; coarse woody debris; large organic debris) is an important component of salmonid habitat. Large wood is a key factor in the development of channel form, including off-channel rearing backwaters, side channels, and pools and riffles, that are important for salmon. Large wood loading of streams has been correlated to winter survival of juvenile salmonids and can increase fish numbers within a given watershed. Reductions in large wood will often result in habitat simplification, which has been shown to reduce the diversity of fish species.

Stream temperature is an important component of fish habitat and has a direct effect on the growth and survival of salmonids. The effect on fish of changes in stream temperature varies between species and within the life cycle of a given species (DEQ 1995). Critical life stages that occur during the warmest months in the summer are of particular concern. The various physiological and ecological processes of salmonids that are affected by temperature are well documented. Exposure to temperatures above optimum levels has the potential to adversely affect salmonid survival and recovery. The presence of cool-water refugia can help salmonids avoid areas with adverse stream temperatures and help sustain a population of sensitive species. When ambient stream temperatures are too warm, sensitive aquatic species can inhabit these patches of cool water habitat. Deep pools, cool springs, subsurface flow, and the junction of cooler tributary streams are all examples of cool-water refugia.

Landscapes

The IMST Report includes recommendations of which most could be considered within Oregon's current policy and socio-economic frameworks. One of their two longer-term policy recommendations is that Oregon should develop a new policy framework to encompass landscape (large watershed) level within the range of wild salmonids in Oregon.

The IMST report recommends a number of landscape elements that the Committee considered (see Appendix 3- IMST Report). The committee devoted one full meeting to hearing scientific and policy information on this topic and discussing the issue of "landscapes." During this meeting the committee sought further advice from the IMST Chair about the landscape recommendations. Based substantially on input from the IMST Chair and the other participants at the meeting, the committee concluded that this was a longer-term issue outside the sphere of influence of the committee. Therefore, an issue paper was not developed on this particular issue and the committee chose to recommend that the issue be moved forward to other policy-making bodies, including the Board of Forestry, for future action. The recommendations include a number of specific actions to help facilitate the development of landscape approaches.

Incentives

The committee discussed many methods to implement its recommendations. Among these methods were a number of incentive-based efforts. However, the committee recognized that many of the incentive-based methods need further development and that additional ideas are needed to help balance the regulatory recommendations that it has proposed. Therefore, the committee recommends that incentives be further explored through the Family Forestland Committee being charged by the Board to explore and build on the incentive options developed by the committee.

Development of the Issue Papers

The committee developed an issue paper for each of the four major technical issues, outlining the current scientific findings, watershed-scale effects, a description and evaluation of current applicable voluntary and regulatory measures, and suggestions for possible additional voluntary and/or regulatory measures. Each paper was peer reviewed by a number of scientists from across the Pacific Northwest with expertise specific to the issues, and their comments were reviewed and utilized by the committee. The papers also included the analyses and recommendations of the Independent Multidisciplinary Science Team related to the four issues. The papers served as the basis for evaluating the sufficiency of current voluntary and regulatory measures in maintaining water quality and protecting and restoring salmonids.

Out of these papers came a list of possible options designed to address those issues identified within the papers as opportunities to improve on existing measures. The committee spent many meetings discussing the four major issues and then developing and evaluating the various options under each issue. These papers serve as a permanent record of the breadth of technical information used by the committee in determining what specific recommendations were to go forward to the Board of Forestry.

Executive Summary
Forest Practices Advisory Committee on Salmon and Watersheds
Consensus and Strong Agreement Recommendations

The following is a summary of the recommendations that have received either "consensus" or "strong agreement" among committee members. "Consensus" support means all committee members present, or represented by proxy, at the meeting where the recommendation was discussed expressed support. "Strong Agreement" means no more than three of the thirteen committee members expressed non-support. "Majority " support referenced in the body of the report means at least seven committee expressed support, but four to six committee members expressed non-support.

Fish Passage

Recommendation A: The forest practice rules should be revised to ensure that if an upstream reach has the natural capacity to be a fish-bearing stream, but is currently a nonfish-bearing stream because of a stream-crossing structure that cannot pass fish, the reach will be classified as a fish-bearing stream. The extent of potential fish use upstream of the blockage will be determined using guidance to be developed based on field fish presence surveys and interim criteria. *(See Option #1 under Fish Passage for more information)*

Recommendation B: Forest landowners should accelerate the identification, prioritization, and restoration of existing stream-crossing structures (typically culverts) that currently do not pass fish on streams inhabited at any time of the year by anadromous or game fish species or fish that are listed as threatened or endangered species under the federal or state endangered species acts.

A new source of funding is necessary to encourage stream-crossing repair work. The new funds could be generated based on forestland ownership, on timber harvested, on acres harvested, on road miles, or through some other mechanism (a preference for a per acre assessment based on forestland ownership was expressed by the committee). Landowners could then apply for a credit against expenses incurred in voluntarily remediating legacy road and culvert problems. *(See Option #2 under Fish Passage for more information)* The funding mechanism would be phased out as landowners completed repair work.

Recommendation C: The forest practice rules should be revised to incorporate a physical habitat approach to designating fish use and non-fish use streams. ODF has developed interim classification guidelines to designate fish use based upon the physical characteristics of a stream. These guidelines were based upon fish presence survey data and could be used to classify streams that are fish use. The guidelines use either mapped or on-the-ground physical characteristics. The current stream classification rules would be amended to establish that fish use streams are any streams that meet the habitat criteria. The habitat criteria may need to be modified and improved based upon more recent and complete survey data. Key issues that will need to be addressed include the acceptable margin of error in applying a habitat model and opportunities for landowners to request field verification of habitat criteria. Fish presence survey

data, when available, will supercede the guidelines in designating fish or non-fish use. *(See Option #3 under Fish Passage for more information)*

Recommendation D: A funding source should be created for family forest landowners or the state should otherwise assist family forest landowners in obtaining funds from existing sources to expand the current voluntary road assessment effort to non-industrial private forestlands. This financial assistance would also be used to help family forest landowners replace stream crossings that are not adequately passing fish. *(See Option #4 under Fish Passage for more information)*

Forest Roads

Recommendation E: To address existing roads constructed using past practices or methods, such roads should be systematically evaluated and mitigated where appropriate for negative impacts or risks to:

1. Waters of the state;
2. Passage of juvenile/adult anadromous fish; and
3. Downstream passage of habitat elements.

"Other land-use" roads should use at least the same best management practices (BMPs) as required for forestlands.

The department should create specific road maintenance guidelines for high hazard locations, by developing and making improved guidance available to operators and regulators. The department should be given general authority to require additional cross-drainage installation as a maintenance requirement prior to an operation when current road condition and a proposed use will impair water quality. *(See Option #6 under Forest Roads for more information)*

Recommendation F: Cross-drainage structures on new roads should be installed so that the risk of sediment delivery to waters of the state from new roads is minimized.

While this is the current standard, the department should provide better guidance and training for achievement of the rules. Current rules provide authority for installation and maintenance of road cross-drains. Training and improved guidance that would emphasize the need for adequate spacing and the proper installation of road cross drains would be developed and implemented for operators/landowners and regulators.

The forest practice rules should be revised to better clarify the objectives for cross-drainage. For example, the rules might state that the objectives are to ensure that cross drains are installed in adequate numbers and in proper locations so that:

1. Road surfaces are protected from erosion and water retention;
2. Erosion of the roadside ditch is minimized;
3. Ditch water is not discharged onto unstable slopes; and
4. The amount of ditch water (and associated sediment) discharging directly into a stream is minimized. *(See Option #7 under Forest Roads for more information)*

Recommendation G: The forest practice rules should be modified to more specifically address wet-weather hauling. This should include development of two criteria, probably in rule form, to:

1. Address road use in wet weather to ensure that durable surfacing or other effective methods are used on road segments that can deliver sediment to streams; and
2. Require operators to cease heavy truck traffic on roads when the road surface is breaking down (only for segments that are delivering sediment to streams). "Breaking down" would be defined by both depth of ruts and by depth of muddy, fine sediment on the road. *(See Option #8 under Forest Roads for more information)*

Recommendation H: The department should develop clear decision-making criteria for evaluating proposed road locations in areas where there is a high risk of landslides, surface erosion, or of direct physical alteration to streams, riparian areas, lakes or wetlands. The criteria should identify preferred locations and construction practices that will result in roads being constructed in a manner that results in the lowest overall impact to water quality and fish habitat while allowing the landowners to achieve their management objectives (Method 5). The criteria should also direct the Department of Forestry to not approve road construction or reconstruction in the sensitive areas described above, if viable alternatives exist. *(See Option #10 under Forest Roads for more information)*

Recommendation I: Means should be developed or provided for the movement of large wood and sediment downstream at those crossings which may otherwise restrict movement. The transport mechanisms for large wood and sediments may be either stream storm flows or channelized debris flows. *(See Forest Roads Option #12 for more information)*

Recommendation J: Improved cooperative road system planning, maintenance and use is needed between federal and private forest landowners. *(See Option #16 under Forest Roads for more information)*

Recommendation K: Future forest road best management practice compliance and effectiveness monitoring should be implemented within the context of the Forest Practices Program's strategic monitoring plan and prioritized in context with available monitoring resources and other monitoring needs *(See Option #18 under Forest Roads for more information)*

Recommendation L: Additional training on forest road construction and maintenance should be provided for landowners and operators. *(See Option #19 under Forest Roads for more information)*

Recommendation M: The forest practice rules should be changed to require prior approval for ground-based harvesting on steep slopes where there is a significant risk of sediment delivery to streams. *(See Option #57 under Forest Roads for more information)*

Recommendation N: A road closure program should be developed that forest landowners, the Department of Forestry, and local law enforcement can use to limit public access onto sensitive road systems that have a high risk of delivering sediment to streams, or that directly impact aquatic habitat. (*See Option #59 under Forest Roads for more information.*)

Landslides

Recommendation O: All landslide-prone locations (now called "high-risk sites") should be identified prior to timber harvest operations. During the notification process, the department should inform the operator of the likely presence of high-risk sites in the operation area, based on coarse screen maps. The operator would then be expected to more specifically locate sites within the operation area by field reconnaissance. There is also the expectation that "significant" areas of high-risk sites which are not mapped will also be identified by the operator. *(See Option #45 under Landslides for more information)*

Recommendation P: The department should identify stream channels which are prone to debris flows and torrents. Identifying those channels which are capable of transporting large wood to Type F streams could make it possible to focus riparian prescriptions on those streams where greater benefit to aquatic habitats are likely.

The department should inform the operator during the notification process of the likely presence of debris-flow prone channels, based on coarse screen maps. The operator would then be expected to more specifically locate debris-flow prone channels by field reconnaissance. ODF would provide specific criteria to be used in field identification. *(See Option #46 under Landslides for more information)*

Recommendation Q: The locations most prone to landslides (now called "high-risk sites") should be managed with techniques that minimize impacts to soil and water resources.

To achieve this objective, the best management practices used to protect high-risk sites that are currently in guidance should be incorporated into the forest practice rules (Method 1) and a better case history basis for evaluating the effectiveness of those practices should be developed (Method 6). These standard practices are designed to minimize ground alteration/disturbance on high-risk sites from logging practices. *(See Option #47 under Landslides for more information)*

Recommendation R: It is important to leave trees or downed wood in locations where they provide wood to be moved by debris flows into fish-bearing streams.

To achieve this objective, it is realistic or appropriate to use a menu of potential methods to leave trees or downed wood, depending upon likelihood of wood delivery and operational efficiency. It is not appropriate to rely on a single strategy to provide this potential source of large wood. The operator should be required to select an appropriate option in cooperation with ODF. *(See Option #61 under Landslides for more information.)*

Riparian Functions

Recommendation S: The active placement of large wood or other structures in streams deficient in wood or other structures is necessary for short-term aquatic habitat improvement, but it should be done in a manner that still assures the timely achievement and maintenance of characteristics of mature forest conditions in the riparian management area in the longer term. A menu of methods should be developed to prioritize and guide placement of large wood. This

menu should include as one method placing wood along streams during an adjacent entry for harvesting. *(See Option #20 under Riparian Functions for more information)*

Recommendation T: Additional department resources should be allocated to monitoring the effectiveness of the water protection rules. At a minimum, current levels of monitoring must be maintained. Adequate resources should also be provided to enable the department to conduct effectiveness monitoring related to the large wood objectives of the Oregon Plan for Salmon and Watersheds and water quality standards, as well as continued best management practices compliance monitoring. Coordination with other agencies on monitoring projects is essential. *(See Option #30 under Riparian Functions for more information)*

Recommendation U: The State of Oregon should develop a clearer and more comprehensive policy on riparian management that addresses all land uses. The committee did not discuss whether such a policy should require uniform protection on all land uses. However, the policy should, at a minimum, establish a baseline standard for resource protection and both clarify and explicitly describe Oregon's expectations for different land uses if some land uses will be required to meet a higher protection standard than others. *(See Option #41 under Riparian Functions for more information)*

Recommendation V: The following list of changes are recommended to increase the protection and restoration of riparian functions. Further clarification and/or guidance on a number of these points will be needed to further develop these concepts.

1. Harvesting Cap 40%
   In western Oregon, manage any harvesting within the RMA so that the retained conifer basal area exceeds the basal area standard target, or 60 percent of the pre-harvest basal area, whichever is greater.

2. No Touch area ½ of RMA
   The no-touch width will be equal to one-half the width of the entire RMA.

3. Largest Trees 10 out of 20 largest
   Retain 10 of the 20 largest trees per 1,000' outside of the no-touch width that will best achieve aquatic riparian functions. Subject to FPF approval, the landowner would identify tree locations in a written plan demonstrating how this objective will be met. There would be discretion to also consider operational issues and the value of the trees, as long as best achieving aquatic riparian functions remains the primary objective.

4. Type N Streams FPF discretion
   a. Small Type NT streams are: 1. Perennial Small Type N (temperature) streams that are tributary and contribute at least 30% of the flow to small and medium Type F streams and that have a drainage area larger than X acres (basin size to be set by georegion, 40 acres for the coast range). Initial classification will be based on basin size, but landowners may delist streams or stream segments verified as non-perennial. 2. Small Type N (torrent) streams with drainage basins greater than 30 acres, in which more than 75% of the basin has been mapped as "high" or

50% "extreme" debris flow hazard (by the State Forester) and which have a high probability of wood delivery to Type F streams.

b. Small NT stream protection: 1. Up to the first 500 feet of Type NT (temperature) stream above the confluence with a Type F will have a 50-foot search zone, each side. Within the search zone, retain 4 square feet of trees per each 100 feet of perennial flow (up to 500') and all non-merchantable conifer on each side of the stream. Trees left along these streams to satisfy the basal area requirement can be counted as in-unit leave trees. 2. "Torrent" type NT streams will be protected as follows - FPF, working with the landowner, has discretion to direct retention of in-unit trees to 50 x 500' search zone (each side).

5. In-growth 25% adjustment for small streams
The standard target will be recalculated for small Type F streams using the same per-acre basal area as large streams, minus 25 percent for in-growth. The standard target will also be recalculated for medium Type F streams, using the same per-acre basal area as large streams.

6. Riparian Specialist
The Oregon Department of Forestry will designate a riparian specialist in each administrative area who will be available to inventory and prepare riparian prescriptions for landowners, at their request. These specialists will be new positions funded by funds other than the harvest tax.

7. Similar Prescriptions for All Large and Medium Streams
Large and medium Type N stream prescriptions will be the same as the equivalent size Type F.

8. Monitoring
The effectiveness of the small Type N stream prescription will be a monitoring priority.

9. Alternative Vegetation Retention Prescriptions
The existing alternative vegetation retention prescriptions (e.g., hardwood conversions) may be applied to all riparian management areas (RMAs).

10. Preventing Sediment Delivery
The purpose statement for harvesting rules will be modified to better describe the objective of preventing sediment delivery to channels. The current requirement not to locate skid trails within 35 feet of Type F or D streams will be extended to all streams. Skid trails will be defined as an excavated trail used to yard logs with more than one turn.

11. Measurement of Riparian Management Area/Channel Migration Zone
The riparian management area (RMA) will be measured from the current points of measurement except for areas designated by the State Forester as a channel migration zone (CMZ). A CMZ is an unconstrained reach of stream that, in the judgment of the forester, is likely to have channel movement that can go outside the RMA widths within the period of a rotation (50-100 years). Within the CMZ, the no-touch area will be

measured from the high-water mark of the channel (same as current rules). The outer edge of the CMZ will be based upon guidance to be developed by a technical committee. Retained trees in the CMZ shall be no less than the basal area standard target.

12. Type N and Small Type F Streams: Landowners would get credit for in-unit leave trees.

13. Conceptual agreement about the use of "stratification."
In recognizing that riparian stands are not homogenous and that applying a single target for the RMA can prevent appropriate management in patches with conifer "over" stocking, agreement was reached on the concept of stratification. The details of how to do it in the field are to be developed. Stratification could allow an RMA to be divided into segments with a different management approach applied to each segment based on the specific conditions in the segment.

14. "Provide for placement of large wood" is supported as a concept.
(See "Subcommittee" Riparian Option under Riparian Functions for more information)

Landscapes

Recommendation W: The Board of Forestry should ask the Governor to:

- Convene a collaborative process for landscape-scale approaches to protect and recover salmonids and provide and protect clean water across land uses and ownerships:

  1. Identifying and evaluating current policy frameworks and scientific findings related to landscape management;
  2. Developing common protocols for watershed assessment and monitoring;
  3. Review existing and proposed watershed assessment protocols and recommend a means to achieve an effective assessment;
  4. Identifying research needs, regulatory and non-regulatory policies, and technical methods to support landscape-scale approaches; and
  5. Improving cooperative approaches and partnerships among local, state, and federal governments and private landowners.

- Strengthen "Oregon Plan for Salmon and Watersheds" support for basin and watershed-scale assessment, collaboration, and restoration by:

  1. Linking funding support for OWEB projects to basin and watershed priorities and those projects that are supportive of the goals of the Oregon Plan;
  2. Increasing long-term financial support for watershed councils and coordinators;
  3. Boosting funding to state agencies to enhance technical support to watershed councils and restoration activities of watersheds;
  4. Setting priorities, where possible, according to the identification of limiting factors on fish runs;

5. Assembling a local/state/federal team to solve watershed and landscape-level problems that involve multiple governmental agencies. The team would recommend positive changes to reduce/eliminate duplication, do away with actions that are counter to the Oregon Plan, and improve communications. Where appropriate, non-governmental representatives should be included; and
6. Ensuring the long-term viability of the Oregon Plan by implementing Executive Order EO99-01.

- Support increased funding for scientific research and the establishment of a natural resource research institute to address landscape/watershed scientific questions and Oregon Plan policy issues using a multi-disciplinary approach; and

- Strengthen policies to encourage maintenance of the forestland base and increase it through afforestation of suitable lands since forests provide the best and most essential habitat components for salmonids.

Recommendation X: The Board of Forestry should:

- Include the policy objectives of the Oregon Plan for Salmon and Watersheds as part of its next revision of the Board's strategic plan, *The Forestry Program for Oregon*;

- Investigate, develop, and promote incentives--such as expanding the federal Conservation Reserve Enhancement Program, providing financial assistance, using forest stewardship plans, and easing anti-trust restrictions—so as to encourage forest landowners to encompass broader landscape goals in their management plans; and

- Continue to investigate and analyze forest conditions across the landscape through:

  1. The Department of Forestry's Forest Assessment Project which has forged partnerships with Oregon State University and the Pacific Northwest Research Station; and
  2. Data and models developed in other projects such as the Umpqua Land Exchange and the Sierra Nevada Project.

ODF

527.724 Forest operations to comply with air and water pollution control rules and standards; effect of violation. Subject to ORS 527.765 and 527.770, any forest operations on forestlands within this state shall be conducted in full compliance with the rules and standards of the Environmental Quality Commission relating to air and water pollution control. In addition to all other remedies provided by law, any violation of those rules or standards shall be subject to all remedies and sanctions available under statute or rule to the Department of Environmental Quality or the Environmental Quality Commission. [1979 c.400 s.3; 1991 c.919 s.19]

ORS 527.765 Best management practices to maintain water quality. (1) The State Board of Forestry shall establish best management practices and other rules applying to forest practices as necessary to insure that to the maximum extent practicable nonpoint source discharges of pollutants resulting from forest operations on forestlands do not impair the achievement and maintenance of water quality standards established by the Environmental Quality Commission for the waters of the state. Such best management practices shall consist of forest practices rules adopted to prevent or reduce pollution of waters of the state. Factors to be considered by the board in establishing best management practices shall include, where applicable, but not be limited to:

(a) Beneficial uses of waters potentially impacted; (b) The effects of past forest practices on beneficial uses of water; (c) Appropriate practices employed by other forest managers; (d) Technical, economic and institutional feasibility; and (e) Natural variations in geomorphology and hydrology.

(2) The board shall consult with the Environmental Quality Commission in adoption and review of best management practices and other rules to address nonpoint source discharges of pollutants resulting from forest operations on forestlands.

ORS 527.770 Good faith compliance with best management practices not violation of water quality standards; subsequent enforcement of standards. A forest operator conducting, or in good faith proposing to conduct, operations in accordance with best management practices currently in effect shall not be considered in violation of any water quality standards. When the State Board of Forestry adopts new best management practices and other rules applying to forest operations, such rules shall apply to all current or proposed forest operations upon their effective dates. However, nothing in this section prevents enforcement of water quality standards against a forest operator conducting operations after the time provided in ORS 527.765 (3)(f) for adoption of revised best management practices if the board either has not adopted revised management practices or has not made a finding that such revised best management practices are not required. [1991 c.919 s.21]

BOARD OF FORESTRY AND ENVIRONMENTAL QUALITY CCOMMISSION TOUR

West Oregon District
24533 Alsea Hwy, Philomath
Ph: (541) 929-3266

October 19, 2000 Tour Itinerary

Transportation will be provided by vans which will depart from Building 1, Department of Forestry, 2600 State Street, Salem, at 8:00 a.m. on October 19 and return approximately 5:00 p.m. If you prefer, you may drive southwest of Philomath and meet the tour participants at the West Oregon District Office at 24533 Alsea Highway at 9:00 (1 mile southwest of Philomath on Highway 34). Lunches will be provided for the Board and Commission members, invited guests and staff. FPAC members, ODF and DEQ staff who plan to attend are requested to **RSVP by October 16 to Kathleen Gomez at (503) 945-7488 or kgomez@odf.state.or.us** so that sufficient transportation and lunches can be provided.

This is an "all-weather" tour, thus participants should bring rain gear. Several stops will require walking down moderately steep slopes and through forest vegetation. Thus, participants should also wear sturdy boots and clothing that will protect against briars and nettles.

A map showing the location of the West Oregon District office is attached.

***Tour Objectives*:**

- **Present information within a field context about the key issues that were addressed by the ad hoc Forest Practices Advisory Committee Report. [See attached detailed information about each stop].**
- **Illustrate the implementation of the Oregon Plan voluntary measures by highlighting in-stream restoration and road improvement activities.**
- **Have discussion about the policy issues related to implementing the recommendations of the FPAC Report.**

8:00 a.m. **Depart ODF Salem Office Compound via vans**

8:00 - 9:00 Travel to Philomath ODF office

9:15 - 9:35 **(1) West Oregon District Orientation**
Philomath Office – Bill Lafferty, Ted Lorensen, and Lydia Taylor

- Introductions
- Overview of District
- Review tour package and tour objectives
- Review charge of the FPAC
- Review of key statutory elements related to forest practices, the EQC and BOF

9:35 - 10:05 Travel to Seeley Creek

10:05 - 10:50 **(2) Seeley Creek - Stream/Road Restoration - Willamette Industries**
Phil Penttila, Gene Stevens
- Stream restoration/enhancement

10:50 - 11:05 Travel to Zahn Creek

11:05 - 11:30 **(3) Zahn Creek Landslide**
John Seward
- Role of debris torrents in maintaining habitat
- Impacts of roads and harvesting

11:30 - 11:45 Travel to Philomath office

11:45 - 12:05 Box Lunch

12:05 - 12:30 Travel to Devitt Creek

12:30 - 1:10 **(4) Devitt Creek - Riparian Protection - Starker Forests**
Randy Hereford, Ted Lorensen, Liz Dent and Tom Rosetta
- Water classification
- RMA's-stream protection issues
- Riparian and temperature monitoring results

1:10 - 1:40 Travel to County Line Road

1:40 - 2:15 **(5) County Line Road - Road Restoration Priorities - Starker Forests**
Jennifer Noonan and John Seward
- Roads monitoring results
- Road improvement and culvert replacement, setting priorities
- Technical issues in achieving compliance

2:15 - 2:45 Travel to Johnson Creek - Springer Family Forest

2:45 - 3:15 **(6) Springer Family Property**
Thad Springer and Ted Lorensen
- Family forest landowner issues and perspectives

3:15 - 3:45 Travel to Philomath

3:45 - 5:00 Travel to Salem

BOARD OF FORESTRY AND
ENVIRONMENTAL QUALITY CCOMMISSION
TOUR

October 19, 2000 Tour Itinerary

STOP 1 – WEST OREGON DISTRICT OFFICE

Overview of West Oregon District. Review tour objectives. BOF and EQC statutory relationship.

Key Points:

- Charge given to the FPAC.
- Statutory relationships between BOF and EQC.
- Protection and rule requirements of the FPA.

STOP 2 – SEELEY CREEK – STREAM RESTORATION AND ENHANCEMENT

This stop on Willamette Industries ownership illustrates activities undertaken as part of the Oregon Plan. Efforts include restoration of instream large wood. Enhancement includes creation of off-channel habitat.

Key Points:

- Past management has reduced instream large wood, modified riparian vegetation, and increased fish passage barriers.
- Restoration opportunities exist that can be pursued through regulatory or non-regulatory methods.
- There are federal regulatory barriers to restoration actions due to recent application of federal fill and removal law to large wood placement by Army Corps of Engineers.
- Restoration actions can have some short-term risks or impacts. Perceptions about these risks vary considerably.
- Opportunity for restoration often only occurs at the time of harvest or other management activity.
- Very few "hardwood conversions" are occurring.

Policy Questions:

- How do we provide an appropriate balance among the various conflicting concerns (risks versus benefits; incentives versus regulation) related to restoration?
- How do we encourage management on those sites where it is desirable?
- How do we deal with the complexity of "protection requirements."

STOP 3 – ZAHN CREEK LANDSLIDE

Large debris torrent resulting from massive rainfall surge that overwhelmed an outdated road stream crossing structure.

Key Points:

- Debris torrents provide large wood and sediment that can enhance habitat over the long-term.
- Roads can increase the number of debris torrents. Current road construction practices have reduced such impacts substantially. However, many roads were built prior to current standards. Road restoration practices are underway through the Oregon Plan.
- Stream crossing structures can prevent (desirable) movement of large wood and sediment downstream.
- New engineering designs and professional "paradigms" are needed.
- It is uncertain if timber harvesting impacts (under current rules) debris torrent rates over the long-term.
- IMST agrees that current practices related to harvesting are appropriate (with monitoring,) but raises concerns that current retention practices are not maintaining the large wood component of torrents.

Policy Questions:

- How do we provide an appropriate balance among the various conflicting concerns (short-term risks versus long-term benefits, public safety versus habitat, protecting infrastructure versus delivery of wood and sediment) related to landslides?
- How do we choose a protection strategy given the levels of scientific uncertainty related to movement and delivery of wood and sediment?

STOP 4 – DEVITT CREEK RIPARIAN PROTECTION

Recent clearcut harvest on Starker Forests showing "higher" riparian protection standards than current rules

Key Points:

- ODF with assistance from DEQ has conducted riparian monitoring to validate the assumptions related to and evaluate the effectiveness of 1994 rules.
- Data indicates that with regard to stream temperatures there is some indication that shade changes that may occur for small streams may not be adequate to meet water quality standards. For medium streams shade changes are less significant, but may not always be adequate to meet standards. For large streams shade changes are not significant.
- The assumption that the first 20 feet of an RMA is hardwood dominated was not validated for small and medium streams.
- Large wood functional level is a policy call.
- Forest lands currently have much higher levels of protection than other land uses. [Note: throughout the day we will see examples of "protection" on other land uses.]
- Forest lands go through a natural disturbance and succession cycle.

Policy Questions:

- Should forest lands be burdened with higher riparian protection standards than other land uses? If so, should there be "recognition of the differences?
- How do we recognize "natural disturbance" in setting protection objectives or standards?
- How do we deal with the complexity of "protection requirements."

STOP 5 – COUNTY LINE ROAD- SETTING ROAD RESTORATION PRIORITIES

Replacement of stream crossing culvert on Starker Forests ownership. Road evaluation and project prioritization. Results of roads monitoring.

Key Points:

- Many roads were built in good faith following past standards.
- Many landowners have voluntarily surveyed their road systems and are undertaking a process to upgrade roads.
- Magnitude of the road restoration work is significant. Many culverts do not pass fish and many roads do not have adequate cross drainage.
- Resources are limited. Family forest landowners have overall less resources to address these issues.

Policy Questions:

- Should restoration priorities be set by regulation?
- Should landowners be "required" through regulation or "encouraged" through voluntary programs to upgrade roads and stream crossings?
- How do we provide resources to assist landowners that have limited resources?

STOP 6 – JOHNSON CREEK - SPRINGER FAMILY FOREST

Multi-generation family forest. Active forest management within large fish stream riparian zone. Small family forest perspective of regulation consequences. FPA compliance monitoring site.

Key Points:

- Such landowners manage for a diversity of reasons.
- Landowner behaviors are often different than expected. Most landowners do not "enter" riparian areas even when they can.
- Such landowners are more likely to have individually greater impacts from regulation.
- Expertise and economic resources of family forest landowners often very limited.
- Maintaining forest land base is an important policy objective. Family forests can be converted to a less restrictive land use.

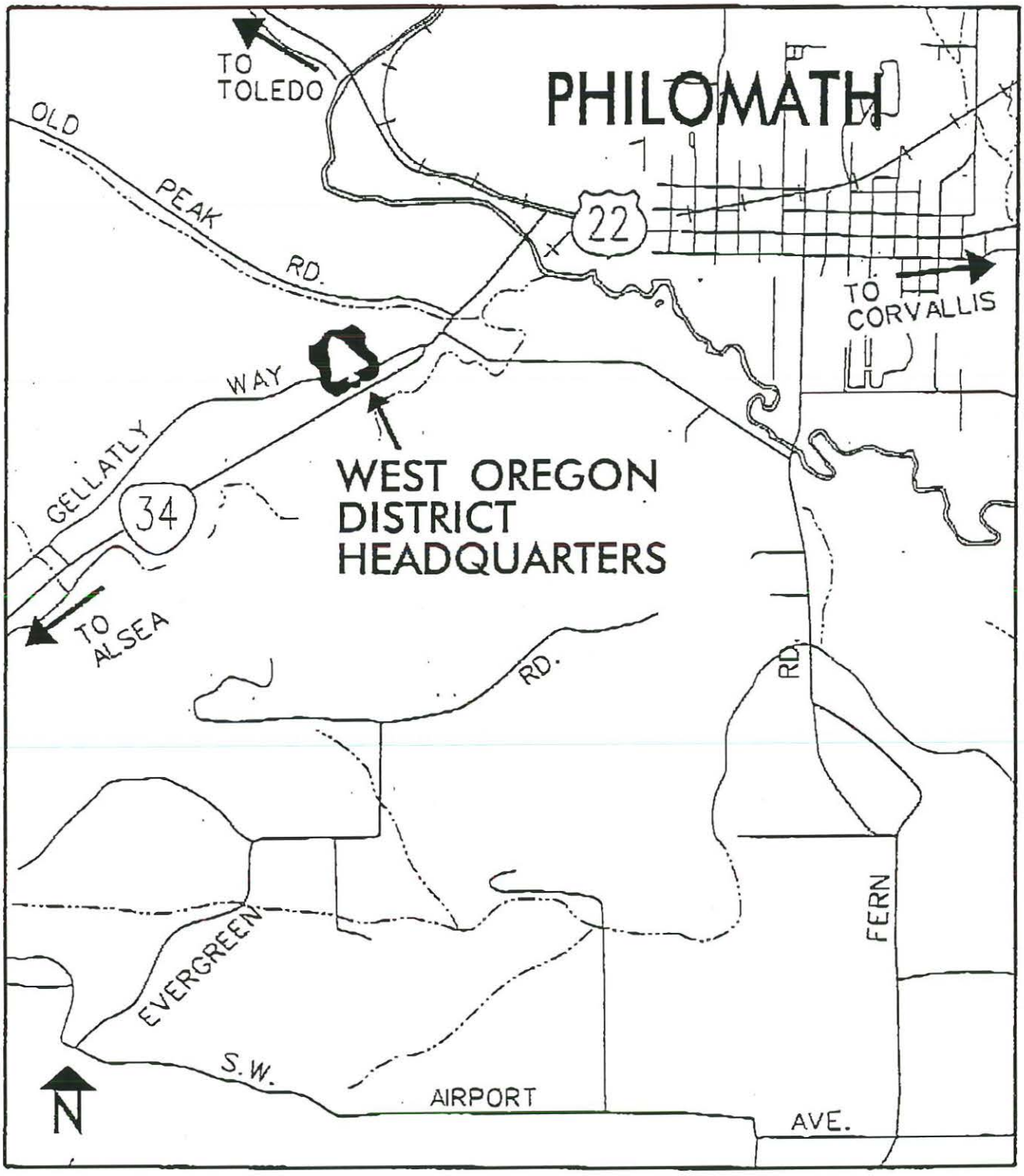
Policy Questions:

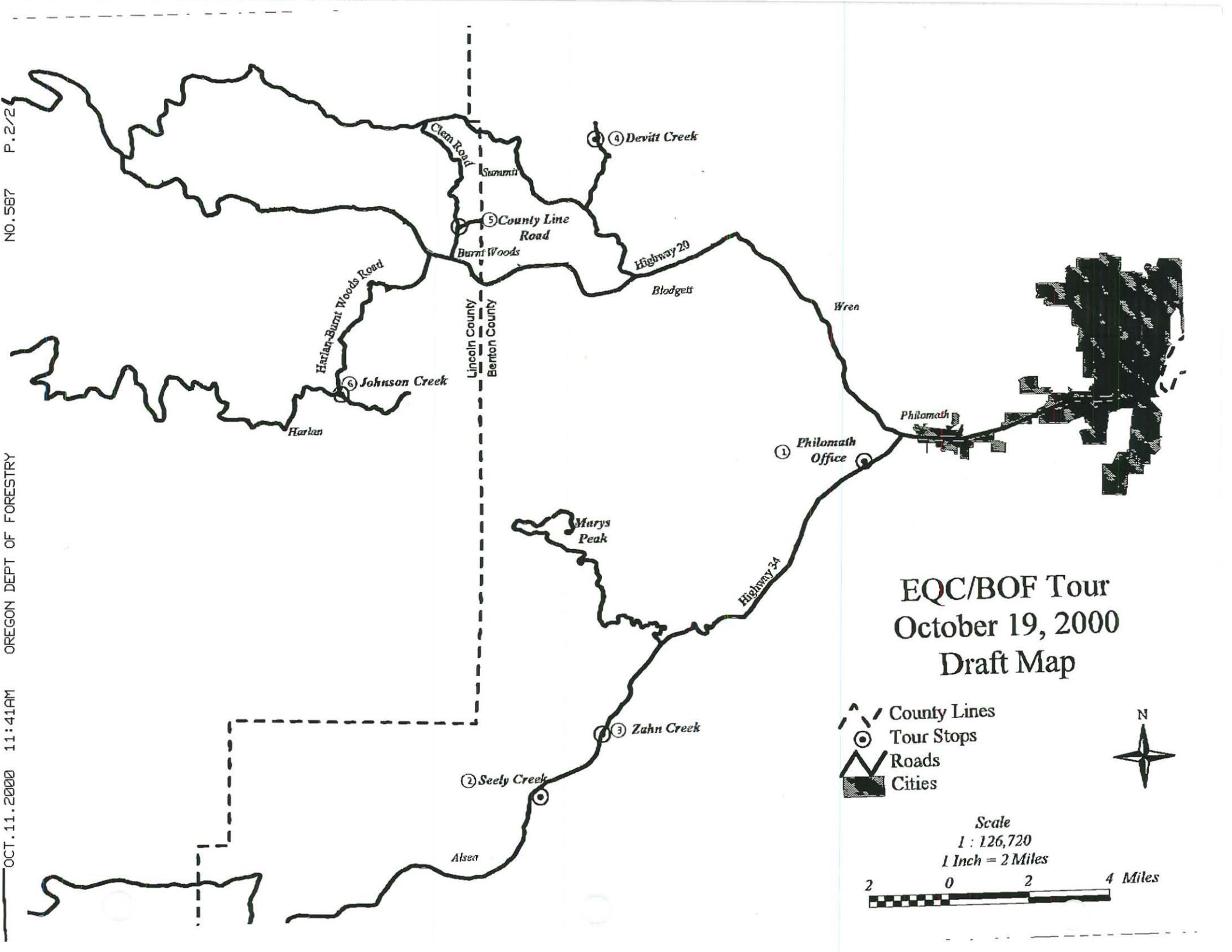
- How do we deal with the complexity of "protection requirements."
- Should family forest landowners be treated differently than industrial landowners?
- How do we anticipate and avoid negative consequences, since behaviors are often different than expected?

WEST OREGON DISTRICT

24533 Hwy. 34

1 mile southwest of Philomath on Hwy. 34




OCT.11.2000 11:41AM OREGON DEPT OF FORESTRY NO.587 P.2/2
Clem Road
Summit
④ Devitt Creek
⑤ County Line Road
Burnt Woods
Highway 20
Blodgett
Wren
Harlan-Burnt Woods Road
Lincoln County
Benton County
⑥ Johnson Creek
Harlan
Philomath
① Philomath Office
Marys Peak
Highway 34
③ Zahn Creek
② Seely Creek
Alsea
EQC/BOF Tour
October 19, 2000
Draft Map
County Lines
Tour Stops
Roads
Cities
N
Scale
1 : 126,720
1 Inch = 2 Miles
2 0 2 4 Miles