

Oregon Plan Coastal Coho Project

DRAFT

PECE Analysis Part B

**“The Certainty that the Conservation
Effort Will Be Effective”**

February 25, 2005

Operating Premise

- **ESU Biologically Viable**
- **Harvest and hatcheries not a threat to viability**
 - Remaining hatchery through Con Plan
- **Habitat conditions adequate to maintain viability throughout a range of similar or slightly worse environmental conditions**
- **PECE analysis focuses on remaining threats to population viability or opportunities to improve viability**

The Certainty of Effectiveness is Established by Actions Based on Four

Principles:

1. Change historic management practices to eliminate or substantially reduce factors for decline;
2. Conserve existing conditions support viability of the ESU by addressing current and future threats to ESU viability;
3. Create future conditions that further strengthen ESU viability and support achievement of broad Oregon Plan objectives; and
4. Monitor to detect future trends and support adaptive management.

1. The Nature and Extent of Threats Addressed by the Conservation Effort are Described, and How the Conservation Effort Reduces Threats is Described

Focused on programs that influence stream complexity, water quality, and water quantity

regulatory & non-regulatory

Programs Assessed

Forest Management

Water Quality

Water Quantity

Restoration of Watershed Function

Forest Management

- **Current Forestland Protection (since mid-1980s):**
 - **Stopped the removal of LWD from channels and riparian areas**
 - **Require retention of trees to increase inputs of LWD over time as compared to historical buffers.**
 - **Large diameter trees increasing in upland and riparian areas.**

Reduced Threat to Viability on Federally Managed Lands

- **Northwest Forest Plan**
 - largely a reserve strategy
- **Aquatic Conservation Strategy**
 - designed to protect and restore fish habitat
- **NOAA Fisheries (June 2004) concluded “where standards are implemented, resulting conditions consistent with recovery”**

Reducing the Threat on State Managed Lands

- **Forest management largely based on multiple resource strategy**
- **Implemented through Forest Management Plans**
- **Biological & Ecological Objectives:**
 - **Maintain/restore ecological functions of aquatic and riparian areas & associated uplands**
 - **More closely emulate historic conditions under which native species evolved**
- **FMP addresses stream complexity, water quality, and water quantity risk factors**

Reducing the Threat on State Managed Lands

Desired Future Conditions

Support Habitat Requirements of Native Fish

- Attain mature forest condition in riparian areas**
- Basal area targets that mimic mature conditions**
- Riparian areas, once mature, are to provide 70-99% of potential LWD recruitment .**
- Accelerated riparian management an option to obtain mature conditions where needed**
- Includes Options for Active Habitat Restoration**
- Minimize impacts of roads and risk of landslides (LWD routing).**

Reducing the Threat on State Managed Lands

**Salmon Anchor Habitat Strategy
(17 watersheds with additional protection)**

State Forest Lands Bottom Lines

- No reduction in riparian shade on all fish and non-fish streams**
- Provide 70-99% of Potential Riparian LWD recruitment**
- Provide Upslope LWD recruitment from debris torrents in small channels**

Reducing the Threat on Privately Managed Forest Land

- **Primary management strategy - Wood Production and Residential Value**
- **Regulated by State Forest Practices Act**
- **Goal for large and medium fish-bearing streams is to attain mature forest conditions**

Private Forest Land Management is Likely to Restore Habitat in the Long-term Because:

- **Attaining mature forest condition in riparian areas likely to create and maintain large trees for recruitment**
- **Explicit basal area targets for mature condition (80 –100 years) and relates that to a typical number of large trees per acre (40-45 32-inch conifers)**
- **Rules for large and medium fish-bearing streams are likely to capture 70-99% LWD recruitment potential**

Private Forest Land Management is Likely to Restore Habitat in the Long-term Because:

- **Alternative mgmt of riparian areas permitted to reach mature conditions faster**
- **Ample options, incentives, and technical guidance for aquatic habitat restoration**
- **Upland management strategies establish connectivity between aquatic habitat and upslope practices (roads and drainage systems)**
- **Private Forest Landowners accept guidance from ODF and demonstrate high levels of compliance with FPA.**

Adaptive Management Under FPA

Monitoring of 1994 FPA indicates effectiveness at maintaining Shade and LWD Input in Large Streams

- But, uncertainty that goals for LWD recruitment and shade would always be met for small and medium streams**
- Currently considering rule changes to increase leave-tree requirements on small and medium streams (reviewing IMST recommendations)**
- The Private/Community Forestry Program at ODF continues to evaluate the effectiveness of riparian rules. Preliminary results will be available in 2005.**

Effectiveness of Forestry Programs

- **Based on existing regulatory programs**
 - **Unlikely that key habitat parameters will decline in foreseeable future**
 - **Likely that improvement in ecological function (wood, shade, sediment) will improve on all ownerships**

Oregon concludes - Forest Practices are not a significant threat to coho viability

Water Quality

Department of Environmental Quality Protection of Water Quality through Point Source Regulation and Non-Point Source Management

- **Compliance with WQ Stds Evaluated for Individual Watersheds**
- **TMDL program then allocates pollution loads among all sources to manage overall impact**

Water Quality

- **Four TMDL's are complete within the Coastal Coho ESU: Nestucca, Tillamook, Nehalem, and North Coast Basins**
- **Remainder by 2008**
- **Stream Temperature, Bacteria, and Sediment are the most common problems addressed by the TMDL's**
- **DEQ Assists TMDL Implementation through Grants and the Clean Water State Revolving Fund Loans**

Water Quality

Department of Agriculture

- **Partners, Develops, and Implements AWQMP**
- **Plans and Rules Adopted for the entire ESU
(2004)**

Water Quality

- **Rules prohibit discharge of waste into Waters of the State that Reduce Water Quality Standards**
- **Livestock wastes are managed by the Confined Animal Feeding Operation (CAFO) Laws**
- **Compliance with Streamside Riparian Area Management Rules designed to meet WQ standards**

Water Quality Bottom Lines

- **Many coho streams did not meet WQ stds, but no trend in WQ for last decade**
- **Current programs designed to meet WQ stds**
- **Early stages of implementation on Ag lands**
- **If implementation effective at meeting WQ stds, translates into real benefits to native fish**
- **Continued monitoring, review, and adaptive mgmt critical to long-term effectiveness**

Water Quantity

Oregon Department of Water Resources

Assessed likelihood of meeting summer low flow needs for Coastal Coho ESU

Low summer stream flow determined to be a minor risk factor to coho viability

Exception: Upper Umpqua were low flows are a primary risk factor

Water Quantity

Effectiveness of Streamflow Protection and Restoration Efforts

- **Regulatory process maintains instream flows when availability becomes limiting**
- **Flow restoration directed at areas of greatest need**
- **Consumptive use not substantially increased since 1999**

Habitat Restoration Programs

Activities that Address Limiting Factors and Promote Long Term Restoration

- Stream Complexity
- Riparian Condition
- Fish Passage
- Water Quality
- Water Quantity
- Energy and Nutrients (salmon carcasses)

Habitat Restoration Programs

Partnerships that Work – Funding to Make it Happen

- Watershed Councils
- Soil and Water Conservation Districts
- ODFW Stream Restoration Biologists
- Federal Lands Restoration (BLM & USFS)
- State Lands Restoration (ODF-OWEB-DSL)
- State Roads Fish Passage (ODOT)
- Private Landowners

Direct Funding and Match: OWEB, USFWS, NOAA, BLM, USFS, ODFW R&E, Private Landowners, NGO's, and many others

Habitat Restoration Programs

Restoration Effectiveness

- **ODFW Restoration Project Monitoring**
(measures implementation and impacts)
- **Population and ESU Trend Monitoring**
(requires long term monitoring to detect trends)
- **Monitoring Specific Practices**
(understanding successes and failures – adaptive responses)
- **Research and Monitoring**
NOAA Evaluations of LWD Projects - Increased complexity and juvenile coho densities
ODFW Reach and Watershed LWD Projects – Increased complexity and over winter coho survival

PECE Questions 2-4

- **Addressed in the individual technical reports that support the Assessment**

5. Monitor and Report on the Conservation Effort

- **Descriptions of monitoring and reporting are detailed in tech reports.**
- **Oregon Plan Monitoring programs have gained broad acceptance as the std in Region**
- **Investments in last decade provide strong baseline**
 - **ability to detect change will increase significantly in next 3-8 years for most WQ, habitat, and riparian variables**
 - **3 yr (7/10 < 10%), 8 yrs (8/10 < 5%)**

6. Incorporate Principles of Adaptive Management

- **Central premise of Oregon Plan**
 - **Most programs have stds., monitoring and periodic review to ensure effectiveness**
 - **Many programs have history of evolving to changing needs/info (ex., harvest, hatcheries, FPA, WQ)**
 - **This assessment may be best example of AM in action**
 - **OP partners will now use findings to improve decision making and target investments**

Summary

- **Current regulatory programs adequate to maintain current habitat conditions**
 - Likely improvements on forested lands (gradation)
 - Uncertainty in WQ programs due to infancy
- **Non-regulatory programs focused on risk factors (target investments)**
- **Monitoring**
 - Solid baseline, mods in progress
 - Significant gains in ability to detect change in near future
- **Commitment to Conservation Plan**
 - New actions as warranted

This is the End



Water Quantity

Maintain Streamflows by regulatory process – instream rights, water distribution priorities, protection during water right transfers, public interest review

Restores Streamflows by – voluntary instream lease agreements and transfers, allocations of conserved water

Strategic Framework – joint priority effort with ODFW to match flow needs with opportunities for restoration

PECE Part B: The Certainty that the Conservation Effort will be Effective

Key Elements

- 1. *The Nature and Extent of Threats Addressed by the Conservation Effort are Described, and How the Conservation Effort Reduces Threats is Described***
- 2. *Explicit Incremental Objectives for the Conservation Effort and Dates for Achieving Them***
- 3. *The Steps Necessary to Implement the Conservation Effort are Identified in Detail***

**PECE Part B: The Certainty that the
Conservation Effort will be Effective
Key Elements (continued)**

- 4. Identify the Quantifiable, Scientifically Valid Parameters that will Demonstrate Achievement of Objectives and Standards by which Progress will be Measured***
- 5. Monitor and Report on the Conservation Effort both to document Implementation and to evaluate Effectiveness (Based On Compliance with the Implementation Schedule and Evaluation of Quantifiable Parameters)***
- 6. Incorporate Principles of Adaptive Management***