

STAFF REPORT

Agenda Item No.:	5
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IBI # & Title:	IBI 1 – Oregonians’ Understanding, Acceptance, and Support for Sustainable Forest Management
Presentation Title:	Update on Private Forests Riparian Function and Stream Temperature (RipStream) Project
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SUMMARY

This report provides an update on and presents initial findings from the ongoing long-term Riparian Function and Stream Temperature (RipStream) monitoring project. This monitoring project supports the Forest Practices Act’s (FPA) purpose of ensuring that forest operations meet state water quality standards adopted under the federal Clean Water Act. This status report summarizes the initial analysis of post-harvest stream temperature compliance rates.

Due to the nature of the statistics involved in this analysis, the results speak to all sites taken together, not the performance of individual sites. This report presents these initial findings for informational purposes only. The Department needs to conduct additional analysis before developing any recommendations. No Board action is requested.

CONTEXT

The Board’s 2003 *Forestry Program for Oregon* states that the Board will continue to support an effective, science-based, and adaptive Oregon Forest Practices Act and a strong but flexible Land Use Planning Program as the cornerstones of forest resource protection on private lands in Oregon (Key Action A.1). The background for Strategy A recognizes that a key purpose of enacting the FPA was to ensure that forest operations are conducted to meet state water quality standards adopted under the federal Clean Water Act and implemented by the Department of Environmental Quality (DEQ). The Board’s vision includes a commitment to continuous learning, evaluating and appropriately adjusting forest management policies and programs based upon ongoing monitoring, assessment, and research (Vision Statement 9).

With the adoption of the 1994 Water Protection Rules (OAR Chapter 629, Divisions 635 through 660), the Board of Forestry and the Department of Forestry adopted a formal commitment to resource monitoring (OAR 629-635-0110). Monitoring and evaluation of the water protection rules are necessary because of the innovative approach taken in the

rules. Monitoring and evaluation are needed to increase the level of confidence of all concerned that the rules will maintain and improve the condition of the riparian vegetation and waters of the state over time (OAR 629-635-0110(1)). Pursuant to OAR 629-635-0110(3)(d), the Department makes annual reports to the Board about current monitoring efforts, and, if applicable, presents findings and recommendations for changes to forest practices.

The Department presented the last annual forest practices monitoring report to the Board of Forestry in April 2007 and covered monitoring activity occurring over calendar years 2005 and 2006. This report partially summarizes Private Forests monitoring projects for calendar years 2007 and 2008. During this period, the Department implemented the following forest practices monitoring activities:

- Riparian Function and Stream Temperature (RipStream) Effectiveness Monitoring
- Wildlife Leave Tree and Downed Wood Compliance Monitoring
- Long-Term Stream Temperature Status and Trend Monitoring

The Department will present an update on the latter two projects to the Board at a later time.

BACKGROUND AND ANALYSIS

Riparian Function and Stream Temperature (RipStream) Effectiveness Monitoring Project

The RipStream project is a joint monitoring effort designed to measure the effectiveness of stream protection rules as prescribed for State Forests and private forestlands. RipStream study sites are located throughout the Coast Range geographic region on small and medium sized fish-bearing (type F) streams. The study design called for sites to have two years of pre-harvest data followed by five years of post-harvest data collection, though some sites have deviated from this framework due to delayed timber harvests. Currently, all 33 sites (18 Private and 15 State) have at least two years of post-harvest data. This project was initiated in 2002 and the final year of data collection is scheduled to be 2011.

The analysis addresses the question: within the first two years post-harvest, did RipStream sites meet DEQ stream temperature standards on State and private forests? The analysis evaluated two relevant DEQ temperature standards, the Biologically-Based Numeric Criteria and the Protecting Cold Water Standard (PCW). The analysis indicates a low level of risk that timber harvests are non-compliant with the Numeric Criteria. Timber harvests designed to the minimum FPA riparian protection standards for Medium and Small Type F streams exceed the PCW at a greater frequency than would be expected by chance. Timber harvests on State lands do not exceed the PCW more frequently than expected under natural background conditions.

The Department limited the current analysis to consideration of the regulatory perspectives of stream temperature. While designed to rigorously address regulatory

questions and adhere to regulation specifications, the results do not address non-regulatory questions regarding hydrological function or fish habitat alteration.

RECOMMENDATION

This report presents initial findings for informational purposes only. The Department makes no recommendation.

NEXT STEPS

An alternate, less regulation-constrained analysis, is necessary to explore stand management effects on stream temperature. Next analytical steps include:

- Determining the magnitude of stream warming or cooling attributable to timber harvest according to a less restrictive, more powerful analysis
- Exploring the behavior of stream temperature in the downstream control reaches
- Expanding the analysis to address differences in stream temperature responses among sites
- Examining stream temperature behavior in relation to treatment reach length, changes in shading, stream gradient, and other factors

The Department anticipates presenting results of the second RipStream post-harvest analysis to the Board in September 2010. These results will encompass stream temperature regulation compliance findings along with an explanatory analysis of factors contributing to observed temperature changes. The explanatory analysis will provide insight into timber harvest features that contribute to changes in stream temperature, an ability the current regulation compliance analysis lacks.

Current budgetary challenges in the Private and State Forests Programs may limit progress on the RipStream project. The Department suspended riparian vegetation data collection this year, but continued temperature data collection. Budget reductions resulted in the elimination of all Private Forests effectiveness monitoring staff. The Department is examining the opportunity to continue data analysis off site, using special payments funds dedicated to monitoring efforts. In addition, the Department will submit a USDA Forest Service, State and Private Forestry competitive grant to provide additional funding.

ATTACHMENT

- (1) Riparian Function and Stream Temperature (RipStream) Project: Background, Analysis Approach, Initial Findings, and Future Analysis