

Agenda Item No.:	5
Work Plan:	Private Forests
Topic:	Water Quality
Presentation Title:	Siskiyou Streamside Protections Review – A Systematic Review on Stream Temperature, Shade, and Desired Future Condition.
Date of Presentation:	June 5, 2019
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## **SUMMARY**

This agenda item presents information (contextual information and a systematic review (SR) of the existing science) to help the Board to determine the effectiveness of streamside protections in the Siskiyou geographic region<sup>1</sup> (or region). This determination is focused on rules to protect stream temperature and the stand structure and shade components of desired future condition of small and medium fish streams in the Siskiyou region. The department developed a decision-support document that describes the legal and policy framework, and organizes the evidence and options for the Board's decisions.

## **CONTEXT**

The Board's 2011 *Forestry Program for Oregon* supports an effective, science-based, and adaptive Oregon Forest Practices Act (FPA) as a cornerstone of forest resource protection on private lands in Oregon (Objective A.2). The discussion of Goal A recognizes that the FPA includes a set of best management practices designed to ensure that forest operations would meet state water quality standards adopted under the federal Clean Water Act. Similarly, the discussion of Goal D recognizes that the FPA is designed to protect soil and water resources, including aquatic and wildlife habitat (Objective D.6). The Board's guiding principles and philosophies includes a commitment to continuous learning, evaluating and appropriately adjusting forest management policies and programs based upon ongoing monitoring, assessment, and research (Value Statement 11; OAR 629-635-0110).

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<sup>1</sup> Forest Practices Act geographic regions (regions) are described in OAR 629-635-0220.

## **BACKGROUND**

The Board and the Department of Forestry are committed to using adaptive management in reviewing (and revising, if necessary) the FPA using available science, monitoring and research. In November 2015, the Board of Forestry increased streamside protection standards in most of western Oregon. The Siskiyou and eastern Oregon regions were not included because of concerns about extrapolating results of the ODF Riparian Function and Stream Temperature (RipStream) study, which had no sites in the Siskiyou and eastern Oregon regions.

In March 2018, staff presented the results of stakeholder and tribal input on proposed additional monitoring questions, a tally of science potentially relevant to monitoring questions, GIS data on stream miles, acres of ownership by landowner type, voluntary measures, and harvest types, and estimates of cost and time for various approaches to each question. The Board voted in favor of the department's recommendation of conducting a systematic review (SR) on stream temperature and streamside forest goals (desired future condition or DFC) for small and medium fish streams in the Siskiyou region, and discuss associated contextual info (e.g., fish status and trend, water quality evaluations).

In September 2018, staff presented an update to the Board on this review. In January 2019, staff presented input on the SR protocol received from stakeholders and tribes, and the next steps in the review process. Partner agencies presented contextual information on fish status and trends (Oregon Department of Fish and Wildlife; ODFW), and water quality status and Total Maximum Daily Load (TMDL) analyses (Oregon Department of Environmental Quality; DEQ).

## **ANALYSIS**

The purpose of the Siskiyou Streamside Protections Review is to support the Board in making a decision on the sufficiency of FPA rules to achieve goals for:

1. Water quality standards for stream temperature
2. The stand structure and shade components of DFC

For each of these sufficiency decisions, the Board has four options:

- FPA or rules meet the stated objectives
- FPA or rules do not meet the stated objectives
- Not enough information for sufficiency decision: Additional study prioritized
- Not enough information for sufficiency decision: Other work prioritized at this time

The department and partners have developed a suite of information regarding the Siskiyou Streamside Protections Review to aid the Board's decision-making process (Attachments 1-4).

### Decision Support (Attachment 1)

In Attachment 1, the streamside rules, requirements for testing their effectiveness, and the basis for determining their sufficiency are placed in their legal context. We describe the legal foundation of these rules, along with some challenges with assessing their effectiveness in achieving their goals. A suite of contextual information is summarized:

- GIS data (e.g., miles of streams by size and ownership; acres of harvest types)
- Fish status and trend data
- Water quality evaluations

The evidence and associated reasoning are presented for each of the aforementioned four Board options regarding sufficiency of meeting goals for each decision of water quality and DFC. We then describe potential outcomes for each option, and examine the tradeoffs to consider when allocating the Monitoring Unit's staff resources. Finally, the department's recommendation for Board decisions is presented.

#### Stakeholder and Tribal Input (Attachment 2)

We received 12 sets of comments on the SR report. Major comment themes along with the associated responses from staff, are summarized in Attachment 2.

#### Contextual information (Attachments 3 and 4)

Synopses of contextual information are presented in Attachments 3 (fish status and trend) and Attachment 4 (water quality evaluations).

#### SR Results (Attachment 5)

The purpose of the SR is to provide scientific evidence to the Board on the effectiveness of the FPA rules in protecting stream temperature and achieving desired future condition of streamside stands for small- and medium-sized fish-bearing streams in the Siskiyou region (water protection rules, OAR 629-635-0100; sufficiency per ORS 527.710 (2b) and ORS 527.765(1)).

The department selected the SR method because it:

- Provides rigor in conducting the review.
- Minimizes author bias regarding what literature to choose and how to synthesize it.
- Is documented for transparency and feedback.
- Is structured to incorporate feedback from stakeholders and tribes.

A total of 13 papers (9 studies) were found to meet the inclusion criteria for the SR. The included papers provided some findings to support the Board's determination on sufficiency of rules, some findings to support degradation, and some evidence that not enough information was found for a sufficiency decision. These findings are summarized in Attachment 1.

### **RECOMMENDATION**

The department recommends the Board:

1. Determine that for FPA rules on small and medium fish streams for clearcut and thinning harvest types<sup>2</sup> in the Siskiyou region using the general vegetation prescriptions, there is inadequate evidence to decide on sufficiency of these rules in meeting water quality temperature standards and DFC as it relates to stand structure and shade.
2. Direct the department to formulate a range of approaches to conducting studies to test sufficiency of these rules for Board consideration.

### **NEXT STEPS**

The department will implement the Board's direction and report back to the Board at the regular September Monitoring Unit update, and a subsequent date to be determined.

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<sup>2</sup> Clearcut (Harvest Type 2, 3) and thin (Harvest Type 1) as per OAR 629-600-0100(31), (32), (33).

## **ATTACHMENTS**

- 1) Decision support document
- 2) Input from stakeholders and tribes
- 3) ODFW Siskiyou presentation synopsis
- 4) DEQ Siskiyou presentation synopsis
- 5) Siskiyou Streamside Protections Review – Systematic Review Report