

Information for Package #1: Minimize Temperature Concern

Background

This document is designed to facilitate discussion, at the Board Subcommittee meeting, of potential riparian rules. It was developed at the request of, and in collaboration with, the Subcommittee. We used information from previous Board material and the following principles that emerged from July 23, 2015 Board Discussion:

- Temperature must be the lens used for evaluation due to Ballot Measure 49 concerns;
- Role of monitoring to evaluate implementation action;
- Must consider regulatory and voluntary approaches;
- Notion of equity and relief for non-industrial landowners;
- Goal of developing one or two proposals to bring to full Board for decision; and
- Developing a discussion guideline for the Board.

For more information on how this document was developed, see the Staff Report.

Summary of elements of Package #1 (See Attachment 1 for more information)

Prescription:

Option A: (Regulatory) 90-foot no-cut buffer with flexibility for operational constraints;

Option B: (Regulatory) variable retention with 100-foot Riparian Management Area (RMA) and 275 ft.² / 1,000 feet with distributional requirement (e.g., trees distributed throughout RMA); requirements that thinning increases average basal area and retains a subset of largest trees; has flexibility for operational constraints.

Geographic Extent:

Both options apply equally to both Small and Medium SSBT Streams, extending upstream 1,000' upstream from end of main stem SSBT. The prescription package is regulatory and applies to all five western Oregon Geographic Regions (Coast Range, South Coast, Interior, Western Cascade, and Siskiyou).

Package #1 Support notes

<u>Outcome/Concern</u>	<u>Expectation / Solutions</u>		
Likelihood of meeting PCW	<u>Supporter:</u> High; average temperature responses: +0.29 °C (90' No-cut), ~+0.33 °C (100/275 VR); high likelihood of temperature improvement. Consistent with Ballot Measure 49 since it is a requirement to meet federal Clean Water Act related rule.	<u>Other:</u> These prescription results comes from a model, not sure really need 90 feet to get to 0.3 deg. C	<u>Supporter:</u> Acknowledge uncertainty with model; however, model is in line with data from systematic review and Watershed Research Cooperative (WRC) studies (see pp. 12-13 of July Attachment 2)

Is Rx feasible?	Supporter: Yes, Washington has similar level of restrictions and companies are able to implement these type of prescriptions. The no-cut buffer widths for Washington’s leave trees closest to stream option are 80 and 100 horizontal feet.	
Is Rx feasible?	Other: No, no-cut buffer is operationally inflexible.	Supporter: Could do average buffer width of 90 feet, with a range of 70-110 feet to allow operational flexibility in harvest unit. Could also do analogous approach for variable retention Rx, with average RMA of 100 feet and a range of 80 to 120 feet. While this approach would increase complexity with compliance audit and enforcement, the RFPCs could work with the department to develop rule language and implementation guidance.
Is Rx feasible?	Other: No, discourages active management to reach Desired Future Conditions.	Supporter: Active management is allowed under the variable retention Rx. In addition landowners could do plan for alternate practice to address site-specific conditions, e.g., dense, overstocked young stands where those conditions exist. This challenge exists under current rules, at least from RipStream data and anecdotal stories, appears few landowners thin in RMAs, rather they leave a variable width/hard-edged buffer.
Unintended consequence	Concern: Will have a big economic impact; it’s too expensive.	Response: Currently done in Washington. For SSBT streams, a 90-foot buffers encumbers 15,200 acres or 0.4 % of Private Industrial (PI) land in western OR. If we think of 50-year rotations for PI (as assumed in economic calculations) that works out to about 300 acres/year removed from harvest. For private non-industrial (PNI), it’s 15,800 acres or 0.6% of PNI land, if applied to SSBT streams; that works out to about 230 acres/year using a 70 year rotation. PNI could be even less with measures to address equity [see below])
Unintended Consequences	Concern: No active wood placement	Response: Could do alternate Rx that provides incentive for large wood placement, e.g., average buffer width 80 feet, with same range of 70-110 feet for flexibility, if, for example, half of additional volume removed placed as large wood in streams (i.e., similar to existing incentives for LW placement in medium and large streams). We would probably want requirements by size and species for wood removed and placed in stream. We might want criteria for when this Rx would be appropriate, developed with ODFW (or reviewed by ODFW).

		<p>Question: how widespread is practice of LW placement? The Oregon Watershed Restoration Inventory indicates that 729 wood placement projects have been reported since 1995. Reported voluntary projects overall have dropped by 56% (~by half) since the peak in 2002, of which wood placement is only a subset. Do we really have sufficient data to tell us how often wood placement projects are occurring?</p> <p>Also, over the long-term, would have greater wood recruitment (about 90% of non-harvested, vs. 44-66% for that of current FPA)</p>
Equity concern	<p>Concern: Disproportionate impact on some small woodland owners</p>	<p>Response: We should create an exception for ownership under certain size, and the fallback would be to, for example, 50 and 70 foot no cut buffers for small and medium streams, respectively. There is precedent for this type of approach with Scenic highways exemption for ownership less than 5 acres. The exemption could also be based on some threshold of additional encumbrance, for either total ownership or parcel size and ownership.</p> <p>For all of Oregon: Total FFL owners = 141,000 Total FFL acres = 4.26 million acres # of FFL owners < 50 acres: 131,000 # of FFL owners < 100 acres: 135,000 Total acreage of FFL with < 50 acres: 1.39 million acres Total acreage of FFL with < 100 acres: 1.64 million acres</p>
Marginal returns for temperature and large wood	<p>Other: Zone 3- low to very low marginal return</p>	<p>Supporter: Actually, the package is more on the boundary between zone 2 and 3. We need to have a reasonable expectation of meeting the PCW. While the last increment has a low marginal return, it is worth the increased certainty of meeting PCW.</p>
Restrictions on practices directly relate to, and substantially advance, the objective.	<p>Supporter: The restrictions directly relate to the rule objective. They substantially advance the objective and do not go too far. The rule does not require that every operation meets the PCW, but rather, the prescriptions would meet PCW standard on average and across the landscape.</p>	

<p>Least burdensome alternative</p>	<p>Supporter: Options A & B are least burdensome prescriptions in their respective categories that have their mean temperature response less than, or very close to, PCW limit</p> <p>SSBT clearly less burdensome than all Fish. Upstream 1,000' is a reasonable balance given equivocal science; this distance was selected since RipStream indicated the average temperature decrease over this distance would be half their harvest-related temperature increase</p>	<p>Other: but MEP allows us to have narrower buffer requirements.</p>	<p>Supporter: While MEP might allow smaller buffers, there is no evidence that 90' are not technically, administratively, or economically practicable (except perhaps for certain small landowners).</p>
<p>Resource benefits achieved proportional to the harm caused by the forest practices</p>	<p>Supporter: In this case, we are addressing direct impacts caused by forest practices, i.e., impacts at the end of a harvest unit. The harm in this case is the increase in temperature, which violates the water quality standards, the resource being protected is water quality. The Board has adopted a goal to meet the water quality standards as a primary goal for riparian protection. The benefit is the reduction in temperature caused by forest practices, so benefits are proportional to harm caused.</p>		
<p>Associated range of wood recruitment rates relative to unharvested stands for small and medium streams (Range)</p>	<p>Supporter: about 90% on small and medium streams</p>	<p>Other: Since small streams less likely to move recruited wood (assumption built into 1994 rules), how do we know they need such high recruitment?</p>	<p>Supporter: The Desired Future Condition for large wood in the riparian area is to function as habitat for terrestrial animals and nutrient cycling too, not just stream geomorphology functions.</p>
<p>Risk of large areas with unaddressed temperature and wood recruitment concerns</p>	<p>Supporter: There is a high chance that with all five geographic regions, sufficient geographic areas are covered to address temperature and large wood concerns.</p> <p>Also, is it good policy to fund multi-million dollar RipStream-type studies in each geographic region?</p>		
<p>Risk of extrapolating RipStream results (Statistical perspective)</p>	<p>Supporter: While there is a high chance of inappropriately extrapolating results from a statistical perspective, it makes intuitive sense that the other geographic regions would have similar-enough vegetation that there would be similar temperature responses to harvest. No clear evidence from Systematic Review or other staff work that temperature responses to buffers differ in different regions.</p> <p>Acknowledge that Siskiyou region might be an outlier based on limited understanding of it being drier there. We could recommend monitoring of rule implementation in the Siskiyou region to see if the rule needs to be modified for that region.</p>		

<p>Risk of unaddressed CZARA temperature concerns</p>	<p><u>Supporter:</u> There is a lower risk of not meeting CZARA-related concerns</p>	<p><u>Other:</u> But CZARA isn't part of rule analysis</p>	<p><u>Supporter:</u> True, but want to avoid having blinders on and missing the opportunity for positive effect for progress on CZARA</p>
<p>Risk of significant length of stream reaches with unaddressed temperature and wood recruitment concerns</p>	<p><u>Supporter:</u> Moderate for temperature and wood; however, could increase this with voluntary implementation on Fish streams upstream of 1,000 above end of SSBT and Fish streams that are tributaries to SSBT</p>		
<p>Risk of incorrect and/or complex and layered assumptions, modeling, and difficult field implementation</p>	<p><u>Supporter:</u> Main stem – Moderate. Tributaries - High</p>		