

To: Oregon Board of Forestry

From: Scott Hayes  
OSWA Past President  
Oregon Tree Farm System Vice-chair

Date: July 23, 2015

**Subject: Testimony on Agenda Item 2, Water Quality Protection**

**Rule Benefits Must Be Proportional and Least Burdensome**

OSWA encourages the board to carefully consider ORS 527.714(5),<sup>1</sup> especially the thresholds described in subsections (e) and (f). Both require critical evaluations of proposed rules that are:

(e) ... the least burdensome to landowners and timber owners, *in the aggregate*, while still achieving the desired level of protection; and

(f) ... in proportion to the degree that existing practices of the landowners and timber owners, *in the aggregate*, are contributing to the overall resource concern that the proposed rule is intended to address.

**Existing Practices**

The challenge the board faces in addressing subsection (f) is how to determine, in the aggregate, what landowners are actually doing next to SSBT streams. The question is what existing practices are actually being applied on the ground in RMAs? Currently that data does not exist in the department's FACTS database.

Two ODF reports may provide the answer.

ODF's 2002 Monitoring Report<sup>2</sup> is a good source of what occurred during the first decade after the 1994 stream rules were adopted. One sentence is revealing: "The majority of RMAs surveyed were treated with a no-harvest buffer or a basal area prescription." Key findings:

|            | No-harvest<br>RMA | Standard Basal<br>Area Target | Site Specific<br>Plans |
|------------|-------------------|-------------------------------|------------------------|
| Industrial | 51%               | 39%                           | 4%                     |
| PNI        | 45%               | 41%                           | 5%                     |
| Other      | 61%               | 22%                           | 6%                     |

The second ODF report confirms OSWA's strong belief that forestland owners are choosing to place the statute-mandated two leave trees per acre in RMAs. ORS 527.676 requires landowners to leave two trees per acre, 11" diameter minimum, on clear-cuts over 25 acres.

Technical Report #20, *Compliance with Leave Tree and Downed Wood Forest Practices Act Regulations (April 2014)* lists several dramatic findings:

- 97% compliance
- when fish-bearing streams were present, leave trees most often in RMA
- leave tree density = average 7.6 trees per acre (range 3.5-12.5)
- leave tree mean d.b.h. = 18.6" (range 17"-20")
- Oregon Plan for Salmon & Watersheds recommends leave trees in RMA<sup>3</sup>
- ODF can require 25% of the leave trees be in RMA (ORS 527.676(c))

The basal area numbers shown below are possible if harvest operations conducted by landowners mirror the key findings in Technical Report #20:

|                           | 80 acres<br># leave trees | basal area<br>11" d.b.h. | basal area<br>mean 18.6" d.b.h. |
|---------------------------|---------------------------|--------------------------|---------------------------------|
| By Law: 2 trees per acre  | 160                       | 106 sq. ft.              | -                               |
| Low-range, 3.5 per acre   | 280                       | 185 sq. ft.              | 528 sq. ft.                     |
| Average, 7.6 per acre     | 608                       | 401 sq. ft.              | 1,147 sq. ft.                   |
| High-range, 12.5 per acre | 1,000                     | 660 sq. ft.              |                                 |

These two reports support OSWA's belief that the existing minimum RMA rules are greatly exceeded statewide, in the aggregate, and are contributing to the successful protection of stream temperature and fish habitat.

### Least Financial Burden

Once the board recognizes under subsection (f) that existing practices are solving the overall resource concern (temporary water temperature anomaly), it is relatively straight forward to establish rules which are the least burdensome to landowners, in the aggregate, as described in subsection (e).

Several thousand family woodland owners would suffer substantial economic losses under the proposed "packages" that address a questionable regulatory standard. The attached spreadsheet titled "Agenda Item 2, Attachment 1, page 5 of 6, Western Oregon: Amended" more clearly states the financial costs to family woodland owners. OSWA believes the department vastly underestimated the financial impacts:

|                              | ODF LTV Estimate<br>Family Owners | OSWA Direct Costs,<br>Family Owners <sup>4</sup> |
|------------------------------|-----------------------------------|--|
| Package 1: 90' no-cut buffer | \$104,100,000                     | \$309,600,000<br>\$585,600,000 (w/multiplier)    |
| +VR 275sqft                  | \$ 89,100,000                     | \$265,000,000                                    |
| (+ 1000' upstream buffer)    | ?                                 | \$ 12,200,000 <sup>5</sup>                       |

|                              | ODF LTV Estimate<br>Family Owners | OSWA Direct Costs,<br>Family Owners |
|------------------------------|-----------------------------------|-------------------------------------|
| Package 2: 70' no-cut buffer | \$ 62,600,000                     | \$186,200,000                       |
| +VR 225sqft                  | \$ 40,600,000                     | \$120,800,000                       |

### Water Quality, Fish and Wildlife

OSWA believes the board needs to review science that is not constrained by specific regulatory language. The purpose and goals in OAR 629-635-0100 support an inclusive review, clearly stating that the biological significance of streams must include water quality, *fish* and *wildlife habitat*.<sup>6</sup>

Surprisingly, the 2011 Ripstream report reached a similar conclusion. The authors understood the limitations of focusing only on the PCW<sup>7</sup>. Specifically in section 47 they wrote:

*"... Our analysis strictly evaluated a regulatory question... We therefore recommend that resulting policy discussions about the riparian standards occur after additional information is gathered from a data analysis not constrained by specific regulatory language."*

### OSWA's Recommendation

OSWA encourages the Board to reject the department's recommended packages, opting instead to use the practical solutions outlined by the Regional Forest Practices Committees. Their strategies are the least burdensome to landowners, while addressing the minor temperature anomalies that might occur in a minority of streams following harvest.

OSWA's recommendation reinforces the positive forest practices already happening on the ground – in the aggregate. When combined with landowner and operator educational outreach, this pathway will ensure to the maximum extent practicable that private forestlands continue to provide good water quality, fish habitat and wildlife habitat.

<sup>1</sup> ORS 527.714 [relevant sections only]

(5) If the board determines that a proposed rule is of the type described in subsection (1)(c) of this section, including a proposed amendment to an existing rule not qualifying under subsection (3) of this section, and the proposed rule would provide new or increased standards for forest practices, the board may adopt such a rule only after determining that the following facts exist and standards are met:

(e) The availability, effectiveness and feasibility of alternatives to the proposed rule, including nonregulatory alternatives, were considered, and the alternative chosen is the least burdensome to landowners and timber owners, in the aggregate, while still achieving the desired level of protection; and

(f) The benefits to the resource, or in the case of rules proposed under ORS 527.710 (Duties and powers of board) (10), the benefits in reduction of risk of serious bodily injury or death, that would be achieved by adopting the rule are in proportion to the degree that existing practices of the landowners and timber owners, in the aggregate, are contributing to the overall resource concern that the proposed rule is intended to address.

<sup>2</sup> Best Management Practices Compliance Monitoring Project: Final Report, April 2002 (Robbin, Dent), page 31 of 68: "The third level of Type F RMA vegetation retention requirements is for tree retention in the entire RMA and depend on the harvesting prescription applied. There is a variety of RMA prescription options available within the Forest Practice Rules depending on stand conditions and harvest type. The majority of RMAs surveyed were treated with a no-harvest buffer or a basal area prescription; some were treated with a conifer restoration alternative prescription or a site-specific prescription (Table 36). Compliance and tree retention levels for these four prescriptions are detailed below. The retention of down wood in the RMA is required for all prescriptions (640-100 (3)) and was compliant on 180 of the 182 RMAs surveyed (98.9%).

Table 36. Harvest Prescriptions for Type F RMAs Surveyed  
(RCR = Riparian Conifer Restoration.)

| RMA Prescription | Number of RMAs Surveyed | Total Length of RMA Surveyed (Feet) | Percent of Total Type F Length |
|------------------|-------------------------|-------------------------------------|--------------------------------|
| No-Harvest       | 93                      | 124,495                             | 60%                            |
| Basal Area       | 62                      | 69,630                              | 33%                            |
| Site-Specific    | 7                       | 7,475                               | 4%                             |
| RCR Conversion   | 8                       | 3,150                               | 2%                             |
| RCR Retention    | 6                       | 4,330                               | 2%                             |

For ownership class (industrial, non-industrial and other), the most common RMA prescription was a no-harvest buffer (51%, 45%, and 61%, respectively), followed by standard basal area target (39%, 41%, and 22%, respectively). Site-specific plans (4%, 5%, and 6%, respectively), riparian conifer restoration (RCR) conversion blocks (4%, 5%, and 11%, respectively), and RCR retention blocks (3%, 5%, and 6%, respectively) were used less often (Figure 6).

<sup>3</sup> Oregon Plan for Salmon and Watersheds Recommendations. The Oregon Plan for Salmon and Watersheds (ODF 1998a) recommends that leave trees be left in riparian areas to provide added benefit to fish. In support of the Oregon Plan for Salmon and Watersheds, ODF may require up to 25% of leave trees be retained near fish bearing or domestic use streams within the unit (ORS 527.676.3.c). The Oregon Plan for Salmon and Watersheds also has voluntary measures that recommends that leave trees be voluntarily located along streams (Type N, D, or F) and that the conifer component be increased from 50% to 75% (ODF 1998a).

<sup>4</sup> Schmidt testimony, Board of Forestry, July 23, 2015. A Direct, Indirect and Induced Cost Multiplier of 1.891 is applied to the \$309,600,000.

<sup>5</sup> Assumptions: 1785 SSBT small stream segments with 50' no-cut buffer; LTV at 20% of \$34,200 per mile (1000'/5280').

<sup>6</sup> 629-635-0100 Purpose and Goals

(1) The leading use on private forestland is the growing and harvesting of trees, consistent with sound management of soil, air, water, fish and wildlife resources. There is a unique concentration of public

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resource values in and near waters of the state because these areas are critical for the overall maintenance of fish and wildlife and for maintaining water quality. Consequently, the policies of the Forest Practices Act, including encouraging economically efficient forest practices, are best achieved by focusing protection measures in riparian management areas, where the emphasis is on providing water quality and fish and wildlife habitat.

(3) The purpose of the water protection rules is to protect, maintain and, where appropriate, improve the functions and values of streams, lakes, wetlands, and riparian management areas. Active management is encouraged where appropriate to meet this purpose. These functions and values include water quality, hydrologic functions, the growing and harvesting of trees, and fish and wildlife resources.

(7) The overall goal of the water protection rules is to provide resource protection during operations adjacent to and within streams, lakes, wetlands and riparian management areas so that, while continuing to grow and harvest trees, the protection goals for fish, wildlife, and water quality are met.

(a) The protection goal for water quality (as prescribed in ORS 527.765) is to ensure through the described forest practices that, to the maximum extent practicable, non-point source discharges of pollutants resulting from forest operations do not impair the achievement and maintenance of the water quality standards.

(b) The protection goal for fish is to establish and retain vegetation consistent with the vegetation retention objectives described in OAR 629-640-0000 (streams), 629-645-0000 (significant wetlands), and 629-650-0000 (lakes) that will maintain water quality and provide aquatic habitat components and functions such as shade, large wood, and nutrients.

(c) The protection goal for wildlife is to establish and retain vegetation consistent with the vegetation retention objectives described in OAR 629-640-0000 (streams), 629-645-0000 (significant wetlands), and 629-650-0000 (lakes) that will maintain water quality and habitat components such as live trees of various species and size classes, shade, snags, downed wood, and food within riparian management areas. For wildlife species not necessarily reliant upon riparian areas, habitat in riparian management areas is also emphasized in order to capitalize on the multiple benefits of vegetation retained along waters for a variety of purposes.

<sup>7</sup> Ripstream Report, 2011: "[47] This analysis completes an assessment of stream temperature PCW rule compliance for Oregon's state and private forests in the Oregon coast range. The study design was specifically developed to inform the Oregon Board of Forestry about the ability of FPA riparian management regulations and the state forest FMP to meet regulatory temperature requirements. This study's results will likely play a role in informing ODF rule assessment regarding the adequacy of current management practices at protecting stream temperatures. The board is ultimately responsible for policy decisions that alter the Oregon Forest Practices Act. We interpret the results to indicate that anti degradation compliance may be problematic for private lands in Oregon's Coast Range. Our analysis strictly evaluated a regulatory question; as a consequence, it provides limited insight into the severity of temperature increases or their cause. We additionally do not know the biological significance of the rises in temperature to aquatic life in these systems, the expected duration of expected warming, or the persistence of this warming downstream. We therefore recommend that resulting policy discussions about the riparian standards occur after additional information is gathered from a data analysis not constrained by specific regulatory language."



Agenda Item 2, Attachment 1, page 5 of 6,  
All Western Oregon LTV: Amended

All Western Oregon

|  | No Cut Buffer - Slope Distance (feet) |                |                |                |                |              |               |               |                |                |                |                  |        | Variable Retention (VR) |               |              |               |     |  | Alternate Prescriptions |  |                                     |  |                    |  |  |
|--|---------------------------------------|----------------|----------------|----------------|----------------|--------------|---------------|---------------|----------------|----------------|----------------|------------------|--------|-------------------------|---------------|--------------|---------------|-----|--|-------------------------|--|-------------------------------------|--|--------------------|--|--|
|  | 50                                    |                |                |                |                | 70           |               |               |                | 80             |                |                  |        | 90                      |               |              |               | 100 |  |                         |  | Staggered Harvest/ One-sided Buffer |  | South-sided Buffer |  |  |
|  | FPA                                   | OFIC-E         | AOL-B          | RFPC-A         | 70/200         | 80/250       | 170/275       | FMP           | RFPC-B         | AOL-A & OFIC-C | AOL-C          | OFIC-F           | RFPC-C |                         |               |              |               |     |  |                         |  |                                     |  |                    |  |  |
| LTV of Additional Acres SSBT - Industrial      | \$ 14,700,000                         | \$ 41,300,000  | \$ 54,600,000  | \$ 67,500,000  | \$ 80,500,000  | \$ 1,500,000 | \$ 4,800,000  | \$ 7,200,000  | \$ 18,400,000  | \$ 35,900,000  | \$ 58,100,000  | \$ 151,200,000   | \$     | \$                      | <\$4,800,000  | <\$1,500,000 | <\$7,200,000  |     |  |                         |  |                                     |  |                    |  |  |
| LTV of Additional Acres SSBT - Family          | \$ 21,000,000                         | \$ 62,600,000  | \$ 83,300,000  | \$ 104,100,000 | \$ 124,700,000 | \$ 2,700,000 | \$ 7,500,000  | \$ 11,900,000 | \$ 26,800,000  | \$ 54,400,000  | \$ 89,100,000  | \$ 235,400,000   | \$     | \$                      | <\$7,500,000  | <\$2,700,000 | <\$11,900,000 |     |  |                         |  |                                     |  |                    |  |  |
| total LTV, SSBT                                | \$ 35,700,000                         | \$ 103,900,000 | \$ 137,900,000 | \$ 171,600,000 | \$ 205,200,000 | \$ 4,200,000 | \$ 12,300,000 | \$ 19,100,000 | \$ 45,200,000  | \$ 90,300,000  | \$ 147,200,000 | \$ 386,600,000   | \$     | \$                      | \$13,300,000  | \$4,200,000  | \$20,100,000  |     |  |                         |  |                                     |  |                    |  |  |
| LTV of Additional Acres, All Fish - Industrial | \$ 68,000,000                         | \$ 156,900,000 | \$ 200,200,000 | \$ 244,400,000 | \$ 287,300,000 | \$ 3,700,000 | \$ 14,100,000 | \$ 22,700,000 | \$ 80,400,000  | \$ 138,800,000 | \$ 212,700,000 | \$ 523,400,000   | \$     | \$                      | <\$14,100,000 | <\$3,700,000 | <\$22,700,000 |     |  |                         |  |                                     |  |                    |  |  |
| LTV of Additional Acres, All Fish - Family     | \$ 105,300,000                        | \$ 237,200,000 | \$ 301,900,000 | \$ 367,900,000 | \$ 431,400,000 | \$ 5,100,000 | \$ 20,600,000 | \$ 33,600,000 | \$ 123,900,000 | \$ 210,700,000 | \$ 320,300,000 | \$ 782,300,000   | \$     | \$                      | <\$20,600,000 | <\$5,100,000 | <\$33,600,000 |     |  |                         |  |                                     |  |                    |  |  |
| total LTV, Fish                                | \$ 173,300,000                        | \$ 394,100,000 | \$ 502,100,000 | \$ 612,300,000 | \$ 718,700,000 | \$ 8,800,000 | \$ 34,700,000 | \$ 56,300,000 | \$ 204,300,000 | \$ 349,500,000 | \$ 533,000,000 | \$ 1,305,700,000 | \$     | \$                      | \$34,700,000  | \$8,800,000  | \$56,300,000  |     |  |                         |  |                                     |  |                    |  |  |

OSWA believes the costs for the various prescriptions should be corrected to reflect slope distance assumptions on family woodland owner streams (PNI), the use of an "average" land and timber value across all private ownerships (see Dave Schmidt testimony), incorrect stumpsage and land values for PNI (Schmidt), outdated growth and yield tables (from 1949), and the uncertain data on the actual miles of streams. Correcting these errors may effectively triple the costs of the various prescriptions in the Matrix. Costs to family woodland owners are highlighted:

|   |                |                |                |                  |                  |               |               |               |                |                |                |                  |    |    |               |               |               |
|---|----------------|----------------|----------------|------------------|------------------|---------------|---------------|---------------|----------------|----------------|----------------|------------------|----|----|---------------|---------------|---------------|
| LTV of Additional Acres SSBT - Family, Corrected      | \$ 62,370,000  | \$ 185,922,000 | \$ 247,401,000 | \$ 309,177,000   | \$ 370,359,000   | \$ 8,019,000  | \$ 22,275,000 | \$ 35,343,000 | \$ 79,596,000  | \$ 161,568,000 | \$ 264,627,000 | \$ 699,138,000   | \$ | \$ | <\$22,500,000 | <\$8,100,000  | <\$35,000,000 |
| LTV of Additional Acres, All Fish - Family, Corrected | \$ 312,741,000 | \$ 704,484,000 | \$ 896,643,000 | \$ 1,092,663,000 | \$ 1,281,258,000 | \$ 15,147,000 | \$ 61,182,000 | \$ 99,792,000 | \$ 367,983,000 | \$ 625,779,000 | \$ 951,291,000 | \$ 2,323,431,000 | \$ | \$ | \$ 61,182,000 | \$ 15,147,000 | \$ 99,792,000 |

Testimony S. Hayes  
Board of Forestry Meeting  
July 23, 2015

