



**BEFORE THE OREGON BOARD OF FORESTRY**  
Statement of Mary Scurlock, Oregon Stream Protection Coalition  
Re: Riparian Rule Analysis  
4 March 2015

My name is Mary Scurlock and I speak today on behalf of the twenty-one fishing and conservation groups comprising the Oregon Stream Protection Coalition. My intent is to bring your attention to three issues related to the decisions you will be making in April and June:

- The relevance of valuing a wide range of ecological benefits in your decision-making.
- The importance of technically sound stream classification methods and fish habitat distribution maps to achievement of your intended conservation outcomes.
- The need for clarity about the overlapping relationship between the Board’s duty to limit harvest-related stream warming on stream segments to which the Protecting Coldwater Criterion applies and the Board’s duty to limit stream warming in watersheds with EPA-approved Total Maximum Daily Loads (i.e. load allocations on “TMDL streams”).

**1. We urge the Board to consider the broad range of ecological and economic benefits that will accrue to the public from more robust riparian conservation**

This rule change is spurred by the legal need to protect public natural resources, a need that is based on the societal decision not to subsidize private timber harvest with water quality degradation and species extinctions that harm the public at large. In this respect, the public benefit of meeting water quality and species protection is already self-evident to you and to the interested public. However, we still are concerned that in weighing options for policy change later this spring, the Board will focus primarily on quantifying the costs that can be attributed to the regulated community. While it is necessary and proper that these costs should be quantified, in evaluating the costs and benefits of increasing the size of protected riparian areas we urge you ensure that the wide range of ecological and economic benefits flowing from the new policies also are recognized and valued in your determinations. This is particularly important to the recreational and commercial fishing industry organizations participating in the Oregon Stream Protection Coalition.

We believe that there are practicable ways for the Department and the Board to ensure a balanced portrayal of the economic impacts of regulatory change. A fair accounting must begin by acknowledging that ecosystem services<sup>1</sup> have significant economic value, even if functioning markets don’t exist for these services and precise valuation in dollars is not possible or practicable. These services include, but go beyond, the ways in which stronger riparian protection measures to prevent stream heating also will meet the need for greater inputs of mature trees both to stream channels and the riparian forest floor.

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<sup>1</sup> Ecosystem services could be broadly defined as the ways in which ecosystems are used to produce human well-being. See also <http://esvaluation.org/ecosystem-services>.



Drawing from cases where the valuation of ecological services and benefits has been accomplished in relation to restorative actions for water quality, aquatic habitats, and fish we have several observations we would like to share:

- Frameworks and methodologies exist for identifying and valuing ecosystem services.<sup>2</sup> EPA, the World Bank, The Nature Conservancy, European countries and others routinely assess these values.
- The list of ecosystem services associated with improved aquatic habitat conditions is long, and it includes among many others: flood protection and stormwater regulation, drinking water production and filtration for sediment and pathogens, nutrient retention, erosion control/soil retention, sediment reduction, biodiversity conservation, increased fish production, increased sport and recreational fishing, prevention of future ESA listings and associated regulatory costs, climate change mitigation, and others.
- The estimated value of these ecosystem services is generally very large, even when underestimated.<sup>3</sup> Values vastly increase if the benefits to future as well as current generations are considered.
- The value of maintaining and restoring ecosystem health increases over time with human population.

We are not demanding an exhaustive quantitative study of ecosystem services that will be enhanced by increased riparian protection. We are simply asking you to ensure that they are given meaningful consideration in your deliberations. At a minimum this means identifying the most significant of the known ecological benefits of increased riparian protection and attributing some economic value to these very real benefits.

## **2. Ensure Implementation Methods and Tools are Technically Sound and Reasonable Presumptions are made to account for information gaps**

The Department is on a course to present the Board with rule alternatives that could apply, in some or all basins, only to streams where Salmon Steelhead and Bull Trout habitat (SSBT) is deemed to exist. As I will discuss in my next point, OSPC does not believe that this is an adequate approach. We recommend that PCW protections be applied to all streams, including “TMDL streams,” all Fish habitat streams and nonfish perennial streams. Nonetheless, I wish to point out some concerns we have with the SSBT approach, as we understand it.

ODFW fish distribution maps are currently the best available statewide information, and we have

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<sup>2</sup> See e.g. Daily, G. C. 1997. Nature's services: societal dependence on natural ecosystems. (Washington, DC, Island Press); Batker, D., E. Barclay, R. Boumans, and T. Hathaway. 2005. Ecosystem Services Enhanced by Salmon Habitat Conservation in the Green/Duwamish and Central Puget Sound Watershed (Prepared for WRIA 9 Watershed Forum of Local Governments through the King Conservation District); Green/Duwamish and Central Puget Sound Watershed Water Resource Inventory Area 9 (WRIA 9) Steering Committee. 2005. Salmon Habitat Plan – Making Our Watershed Fit for a King.

<sup>3</sup> For example, ecosystem services provided by forestlands in a single Washington subbasin in one year was estimated at between \$1 and \$5 billion dollars annually. Green/Duwamish and Central Puget Sound Salmon Habitat Plan at 6-5.



supported using these as a starting point for making reach level implementation decisions where riparian rule prescriptions are vary based on the presence of fish habitat or habitat for particular species. However, given the maps' limitations in a number of key respects, it will be critically important to clarify how landowners and by the Department will use them, and how they will be updated.

Our concern is simple: uncritical reliance on the ODFW maps in laying out riparian prescriptions cannot be justified as they stand, a fact that should not be surprising given that they were not developed to serve this kind of regulatory purpose. If used as they stand, the maps will drastically under-represent and therefore under-protect the actual extent of salmon, steelhead and bull trout habitat. This adds to the existing problem that ODF stream maps have not "classified" as fishbearing or nonfishbearing an estimated 40-50% of streams statewide.<sup>4</sup>

We are currently developing several recommendations about how to address this issue, a key one being that field verification should occur as to the location of the first permanent natural barrier to SSBT use. Unless and until a permanent natural barrier is documented, SSBT habitat should be presumed to exist the full length of a classified F streams and on unclassified streams. We also favor establishment of a clear and adequately staffed process for updating the maps, and urge improvements to ODF's 2007 guidance on the physical criteria and survey protocols it uses to determine barriers to fish use.

### **3. The Board needs more clarity on which water quality standards apply to which streams**

In order for the Board to fully understand scope of its duties in this rulemaking process, you must have a clear and full understanding of the applicable water quality standards that limit human-caused stream warming. As of now, this process lacks a common understanding by all parties of the relationship between the limit on human warming set by the Protecting Coldwater Criterion (PCW) -- which was the basis for the Board's degradation finding -- and limits set by water quality standards established under EPA-approved "Total Maximum Daily Loads."

At this point in time, we are extremely concerned that the Board is laboring under a mistaken belief that your finding of degradation under the PCW on the basis of RipStream requires the Board to limit the scope of new riparian protections to streams meeting the numeric criteria (i.e. "non-impaired streams" or "non 303(d)" streams). This is not correct, and would have the odd result of providing less protection on streams in worse condition. Likewise, the Department is reticent about extending protections to waters upstream of reaches with threatened and endangered species claiming lack of proof that these streams require protection, yet protection of these streams is essential to meeting the PCW by the terms of the standard itself. In order for the rules under consideration to meet water quality standards these two issues going to the scope of the rules must be addressed

*A brief explanation.* There are two general types of limits in Oregon's temperature standards: overall stream temperatures (numeric criteria) and caps on human-caused stream warming (the Protecting Coldwater criterion or "PCW"). The Department has repeatedly invoked the PCW because the

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<sup>4</sup> Stream condition above natural fish barriers obviously has a bearing on downstream conditions but this is a subject we do not address here.



RipStream study demonstrated that logging practices in excess of the PCW limit of  $.3^{\circ}\text{C}$ .<sup>5</sup> Under Oregon law, in the basins where temperature TMDLs have been approved by EPA<sup>6</sup>, the TMDLs operate to change the applicable water quality standard. First, the cap on allowable warming moves from being established by the PCW to that established by any applicable TMDLs. Second, the geographic scope of that cap extends beyond the non-impaired reaches to the entire perennial network in a given basin or watershed. This includes impaired streams not covered by the PCW. And it includes streams that are not habitat for salmon, steelhead and bull trout. In a few instances, the cap even extends to intermittent stream reaches with fish use. Finally, the allowable increase in warming from all human activities cumulatively is capped at  $.3^{\circ}\text{C}$ , leaving nonpoint sources with less than that total, depending on the individual TMDL. This reading of the water quality standards in Oregon law is not novel and it is not ours alone; DEQ has clearly stated this interpretation of its standards in its guidance on the PCW issued in 2011. Oregon DEQ, Internal Management Directive: Nonpoint Source Compliance with the Protecting Coldwater Criterion of the Temperature Standard (November 2011).

Two memoranda from Northwest Environmental Advocates to ODF and the Governor's office explain our concerns in more detail and are attached.

We urge the Board to seek clarity on these issues from its legal advisers and its colleagues at DEQ so that it can formulate a plan for addressing the inadequacy of current prescriptions to meet stream warming limits set by both the PCW and TMDLs.

Respectfully submitted,

A handwritten signature in dark ink, consisting of a long horizontal line with a large loop underneath and a small flourish at the end.

Mary Scurlock

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<sup>5</sup> RipStream average warming was  $.7^{\circ}\text{C}$ , but sample site did not always manage to the minimum allowed by rule. ODF modeling demonstrates that harvests to the minimum buffer allowed by rule would have caused warming on the order of  $1.22^{\circ}\text{C}$  on average.

<sup>6</sup> Basins with approved TMDLs are: North Coast, South Coast, Upper South Fork Coquille, Umpqua, Rogue Basin except Bear Creek, Bear Creek watershed, Applegate, Lobster Creek, Lower Sucker Creek (Illinois of the Rogue), Willamette, Sandy, Miles Creek watershed (Mid Columbia).

# NORTHWEST ENVIRONMENTAL ADVOCATES



## MEMORANDUM

February 10, 2015

To: Peter Daugherty, ODF  
From: Nina Bell, NWEA  
CC: Richard Whitman, GNRO

Re: **Why the ODF Ripstream rulemaking must apply the TMDL load allocations in lieu of the Protecting Cold Water criterion**

Dating to the first meetings in January 2012 on the Ripstream rulemaking, NWEA has raised the concern that ODF was disregarding the role of the Total Maximum Daily Loads (TMDLs) in its interpretation of the applicable water quality standards. If I may summarize your position, combining what was said then and most recently the other day, it is that: (1) the Ripstream study demonstrated there are no problems with current logging practices' attaining the numeric criteria; (2) there is an existing plan for addressing TMDLs (presumably a reference to the plan to not address TMDLs); (3) that if ODF were to address TMDLs it would want to reopen them to change the allocations; (4) the current rulemaking is based on the Protecting Cold Water (PCW) criterion; and (5) the load allocations must be in heat, not temperature, to be useable by ODF (notwithstanding that the load allocations are a fraction of the 0.3°C that ODF seems to have no trouble in using in its analysis).

The intent of this memo is to demonstrate that ODF is reading the water quality standards incorrectly when it insists that it can rely solely on the PCW criterion because the completion of the TMDLs, and EPA's approval of them, fundamentally changes the water quality standards that apply to the streams ODF is charged with protecting. Put another way, you are simply incorrect in believing that the TMDLs are a "different discussion." They are not a different discussion because they affect the applicable water quality standards the prescriptions must meet.

As we know, the mean increase of the (larger-than-FPA) buffers in the Ripstream study was 0.7°C. Because these streams were not impaired,<sup>1</sup> the PCW criterion appears to apply. The PCW criterion includes a human use allowance (HUA) of 0.3°C,<sup>2</sup> and it is this HUA that the

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<sup>1</sup> I am assuming that all the Ripstream sites were located in non-impaired streams.

<sup>2</sup> "Except as described in subsection (c) of this rule, waters of the State that have summer seven-day-average maximum ambient temperatures that are colder than the biologically based criteria in section (4) of this rule, *may not be warmed by more than 0.3 degrees Celsius (0.5 degrees Fahrenheit) above the colder water ambient temperature.* This provision applies to all sources taken together at the point of maximum impact where salmon, steelhead or bull trout are present." OAR 340-041-0028(11)(a).

Ripstream models and the current rulemaking are set to meet, to reduce the impact from 0.7°C to 0.3°C.

ODF has considered this the end of the discussion about what water quality standards apply, ignoring the TMDL load allocations that *divide* the post-TMDL HUA of 0.3°C established by OAR 340-041-0028(12)(b)(B). The rationale for using the PCW and ignoring the TMDL load allocations is, presumably, that the Ripstream sites were in non-impaired streams and so the TMDLs do not apply. This, however, is false. The TMDLs establish quite clearly that they apply to all the perennial streams in the basins and, in addition, some include all fish-bearing streams or intermittent streams in the basin or watershed.<sup>3</sup>

Oregon’s water quality standards contemplate that once a TMDL has been completed, its provisions supersede the other human use limitations on temperature impacts that are set out in the water quality standards. Specifically, the temperature standards specify that “[i]n no case may a source cause more warming than that allowed by the human use allowance provided in subsection (b) of this rule.” OAR 340-041-0028(12)(a). Subsection (b) of this rule, pertaining to use of the HUA following completion of a TMDL, provides that:

Insignificant additions of heat are authorized in waters that exceed the applicable temperature criteria as follows:

\* \* \*

Following a temperature TMDL or other cumulative effects analysis, waste load and load allocations will restrict all NPDES point sources *and nonpoint sources* to a cumulative increase of no greater than 0.3 degrees Celsius (0.5 Fahrenheit) above the applicable criteria after complete mixing in the water body, and at the point of maximum impact.

OAR 340-041-0028(12)(b)(B) (emphasis added). In other words, the point of developing a TMDL is to divide the HUA amongst the sources of temperature pollution, both point and nonpoint, in all the streams to which the TMDL applies.

Therefore, after a TMDL is completed, the wasteload allocations in the TMDL supersede the HUA of 0.3°C that previously applied to individual point sources, pursuant to OAR 340-041-0028(12)(b)(A), and the TMDL’s load allocations restrict the nonpoint sources to their allocation of the HUA.

In the TMDLs that pertain to the geographic boundaries being considered for the rule, the load allocations are as follows:

<b>North Coast</b>	0.0°C
<b>South Coast</b>	0.0°C Upper South Fork Coquille watershed
<b>Umpqua</b>	0.1°C (for landscapes not likely to achieve a natural condition)
<b>Rogue</b>	0.04°C <i>entire basin except</i>

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<sup>3</sup> The following TMDLs in the boundary area to which the Ripstream rulemaking may apply include all perennial streams unless indicated to the contrary: North Coast (all perennial or fish bearing); South Coast; Upper South Fork Coquille watershed; Umpqua (all perennial and fish bearing); Rogue except Bear Creek watershed; Bear Creek watershed (all perennial and intermittent fish bearing); Applegate, Lobster Creek and Lower Sucker Creek watersheds; Willamette (perennial and/or fish bearing); Sandy; Mid Columbia Miles Creek watershed (all perennial and intermittent).

	0.05° in the Bear Creek watershed (applicable to altered landscapes and existing structures)
	0.0°C in the Applegate, Lobster Creek and Lower Sucker Creek watersheds
<b>Willamette</b>	0.05°C <i>except</i>
	0.035°C at the Willamette River point of maximum impact (Marys River-Santiam River);
	0.025°C on lower Coast Fork Willamette and lower McKenzie Rivers;
	0.025°C on the Clackamas River below PGE Clackamas Project;
	0.025° on the lower Willamette River below Willamette Falls
<b>Sandy</b>	0.05°C of HUA (but not incorporated into LAs so essentially 0.0)
<b>Mid Columbia</b>	0.05°C Miles Creek watershed (for landscapes not likely to achieve a natural condition)

It is these load allocations that the ODF rules must meet where there are TMDLs in place, not the 0.3°C PCW criterion.

It is worth pointing out that DEQ concurs with NWEA's interpretation of the Oregon water quality standards, explaining in its guidance that:

Total Maximum Daily Loads (TMDLs) include a human use allowance. . . . This heat load is allocated among all sources in the TMDL. An individual source or type of source (such as forestry) will typically get a load allocation that is a portion of the human use allowance (e.g. 0.1°C). If modeling or temperature monitoring shows that an activity or activities would fail to comply with the PCW criterion, then the activity would necessarily not comply with the TMDL human use allowance or load allocation. Appropriate action should be taken by DEQ and Designated Management Agencies to bring activities into compliance with the TMDL.

Upper watershed streams (headwaters streams), particularly small, non-fish-bearing, or intermittent streams, may or may not be subject to TMDL load allocations and surrogate measures. This can vary by TMDL. If TMDL load allocations apply to headwater streams and are more stringent than the PCW criterion, then the load allocations and their surrogate measures should be used. If the TMDL does not apply to all streams, then the PCW criterion applies to any streams not covered by the TMDL and an evaluation is necessary to determine if cold water from those streams is needed to meet the downstream TMDL load allocation (i.e. evaluate whether Exception C of the PCW criterion is met; see Section 2.1). *In any case, the more stringent of PCW criterion or TMDL load allocations applies.*

Oregon DEQ, Internal Management Directive: Nonpoint Source Compliance With the Protecting Cold Water Criterion of the Temperature Standard (Nov. 2011) at 11 (emphasis added).

# NORTHWEST ENVIRONMENTAL ADVOCATES



## MEMORANDUM

February 10, 2015

To: Peter Daugherty, ODF  
From: Nina Bell, NWEA  
CC: Richard Whitman, GNRO

Re: **Rationale for including so-called non-fish-bearing streams in the Ripstream rulemaking**

For the last two years, and memorialized in the Findings of the Board of Forestry, ODF has taken the position that the Ripstream data and analysis cannot be applied to so-called non-fish-bearing streams because there were no such streams included in the study. ODF has never explained why the physics of water temperature are altered by the presence of salmon, steelhead, and bull trout (SSBT). ODF has not explained why appropriate prescriptions for non-SSBT streams cannot be extrapolated from the Ripstream results. And ODF has not explained how its finding that the Protecting Cold Water (PCW) criterion has been violated does not extend to all waters covered by the PCW standard.

Now that the federal agencies have disapproved Oregon's Coastal Nonpoint Pollution Control Program— and over three years have passed since the rule process formally began—ODF may want to reconsider the scope of the Ripstream rulemaking. One element of this disapproval is the federal agencies' finding that Oregon fails to provide sufficient protection of water quality from logging of non-fish-bearing streams, the very streams excluded from the current rulemaking. Since the rationale for this is obvious, I won't belabor it here. However, there are several additional reasons why the scope of the rule should have been broader, as we requested at the outset of the process, and should now be expanded.

First, the burden is on those who would remove riparian vegetation from any stream reach that is not exceeding the numeric criteria to demonstrate that the PCW criterion does *not* apply. The literal language of the rule — “[e]xcept as described in subsection (c) of this rule,” and “[t]he cold water protection narrative criteria in subsection (a) *do not apply if*” — makes clear that the PCW applies to waters that are colder than numeric criteria *unless* it is demonstrated that there are no SSBT currently using the water, it is not designated as critical habitat, and “[t]he colder water is not necessary to ensure that downstream temperatures achieve and maintain compliance with the applicable temperature criteria.” In other words, the PCW applies to these non-SSBT streams *unless* it has been demonstrated that the cold water from these streams is not necessary. There is currently no such finding that the cold water from these streams is not necessary to meet the PCW in the SSBT streams to which the rulemaking applies.

In fact, there are several credible findings to the contrary, which could provide an adequate basis for the Board to include non-fish-bearing streams in the current rule change. For example, EPA and NOAA cite Oregon's own Independent Multidisciplinary Science Team (IMST) for the

proposition that:

Because nongame fish and other aquatic organisms play a role in a functioning stream system, and the distribution of salmonids will change over time, *non-fishbearing streams should be treated no differently than fish-bearing streams when determining the buffer width protections*; 2) there should be an increase in the basal area and requirements for riparian management areas for both small and medium-sized streams, *regardless of the presence of fish*; and 3) there should be an increase in the number of trees within the riparian management area for *both fish- and non-fish-bearing* small and medium-sized streams.

EPA/NOAA Finding that Oregon Has Not Submitted a Fully Approvable Coastal Nonpoint Program (Jan. 30, 2015) at 6 (footnotes omitted) (emphasis added). And, as EPA and NOAA also point out, Oregon’s 2002 Sufficiency Analysis concluded that “FPA standards for some small Type N streams may result in short-term temperature increases at the site level that may be transferred downstream (this may impact water temperature and cold-water refugia) to fish-bearing streams.” *Id.* at 5.

Second, the completed TMDLs’ applicability to all perennial or “perennial and/or fish-bearing” or “intermittent fish-bearing streams”<sup>1</sup> is a DEQ finding that the temperatures of those streams—including non-fish-bearing streams—are key to attainment of temperature standards in water bodies of the basin.<sup>2</sup> In order to fully comprehend its duties, it would behoove the Board to recognize that attainment of water quality standards requires application of the load allocations in these TMDLs to the waters to which they are assigned. The inadequacy of current stream protection rules to ensure attainment of these load allocations on non-PCW (i.e., impaired) streams and non-fish-bearing streams cannot be ignored simply because the current, inadequate rules are enshrined in TMDL implementation plans that rubber-stamped the status quo and that have no legal relevance to water quality standards or TMDLs.

Third, as set out in NWEA’s October 5, 2012 letter to the federal agencies regarding protection of amphibians in Type N streams, Oregon’s water quality standards require protection for such species as designated uses and existing uses, under Tier I of the antidegradation policy, which is a part of Oregon’s water quality standards. Some amphibians are in a state of decline and likely to be designated as threatened or endangered in the future if protections from logging are not adopted. This letter catalogued a plethora of recent studies that demonstrate the importance of riparian buffers on headwater-dependent species.

Finally, as stated at the outset, ODF has never satisfactorily explained why the physics of water temperature are altered by the presence of salmon, steelhead, and bull trout and why appropriate prescriptions for these fish-bearing streams cannot be extrapolated from the Ripstream results.

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<sup>1</sup> The following TMDLs in the boundary area to which the Ripstream rulemaking may apply include all perennial streams unless indicated to the contrary: North Coast (all perennial or fish bearing); South Coast; Upper South Fork Coquille watershed; Umpqua (all perennial and fish bearing); Rogue except Bear Creek watershed; Bear Creek watershed (all perennial and intermittent fish bearing); Applegate, Lobster Creek and Lower Sucker Creek watersheds; Willamette (perennial and/or fish bearing); Sandy; Mid Columbia Miles Creek watershed (all perennial and intermittent).

<sup>2</sup> The use of the word “fish” in the context of the TMDLs includes “resident fish and aquatic life,” along with salmonids. *See, e.g.,* Willamette Basin TMDL: Middle Fork Willamette Subbasin (Sept. 2006) at 12-10.