



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10**

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WATER
DIVISION

April 15, 2021

Mr. Gary Hess
Regulatory and Stewardship Program Manager
Forestry and Fire Division
Idaho Department of Lands
3284 W Industrial Loop
Coeur d'Alene, Idaho, 83815

RE: IDAPA 20.02.01 - Negotiate Rulemaking

Dear Mr. Hess:

The Idaho Department of Lands announced its intention to promulgate forest practice rules and is requesting public comment during a negotiated rulemaking period prior to initiating rulemaking procedures. The proposed rule revisions are based on language proposed by the Idaho Forest Practices Advisory Committee (FPAC). The FPAC recommended revisions to IDAPA 20.02.01 which are intended to update and simplify the rule to promote understanding and compliance while maintaining or enhancing water-quality protection.

EPA participated in several FPAC meetings when the final report, "The Effectiveness of Idaho's Class I Stream Shade Rule" (Effectiveness Study) was being reviewed and shade rule redesign language was being discussed. We shared our concerns and recommendations for the FPAC to consider in a March 2, 2020 letter to Chair Buckland. FPAC's proposed rule revisions go a long way to simplify rule language and implementation.

The FPAC revisions also address concerns that applying shade rule tree retention requirements to the inner and outer zones independently results in increased shade loss. Rather than maintaining independent tree retention targets for the inner, middle, and outer riparian protection zones, the proposed rule requires an average tree retention across the entire zone. This approach maintains more shade on sites that have an understocked inner zone pre-harvest by requiring more tree retention in the outer zones.

While the average tree retention approach limits shade loss from those sites with understocked inner zones pre-harvest, the resulting lower minimum stocking requirements for the inner zone can result in more significant shade loss at other sites. Therefore, we believe the current minimum stocking levels for the inner zone are still necessary to achieve shade targets and remain consistent with the scientific basis of the rule. The attached comments include a more detailed explanation.

We have also attached comments regarding changes to tree distribution, minimum threshold levels and Class II streams. We plan to participate in the negotiated rulemaking process and be available to discuss our comments with the IDL, FPAC and other stakeholders. We believe this negotiated rulemaking is a great opportunity to pursue use of the "Policy Recommendations from Idaho Governor Brad Little's Salmon Workgroup," December 2020. Proceeding with negotiated rulemaking appears consistent with

the policy recommendations and may result in actions that benefit salmon and steelhead consistent with those recommendations.

Thank you for the opportunity to provide comment and participate in the negotiated rulemaking. Please contact Dan Brown, Forest Sector Advisor, at (503) 326-6832 or by email at brown.dan@epa.gov if you need any additional information.

Sincerely,

Cami Grandinetti, Branch Manager
Standards, Assessment, and Watershed
Management Branch

Enclosure

cc: Mr. Jason Pappani, IDEQ

Mr. Paul Buckland, Chair FPAC

1) The proposed rule can significantly modify tree distribution in the Stream Protection Zone (SPZ)

As currently proposed, IDAPA 20.02.01 Paragraph 030.07.e.ii eliminates the distinct tree retention requirements for the inner 0-25ft (Relative Stocking (RS) 60), middle 25-50ft (RS60) and outer 50-75ft (RS10) Stream Protection Zones. In place of the three separate 25ft width SPZ tree retention requirements, the proposed rule requires the average RS43 tree retention across the entire 0-75ft SPZ and expresses the RS43 as a Weighted Tree Count (WTC) retention per 100ft of Class I stream¹.

Mathematically the proposed rule appears to retain the same number of trees in the SPZ, but it could significantly alter the distribution of those trees within the SPZ. The FPAC and IDL previously concluded the location of retained trees in the SPZ is of critical importance for maintaining shade (Teply, 2014) and, particularly, the need to maintain RS60 in the innermost 0-25ft RPZ (as discussed below). Significant shade loss will increase solar radiation reaching a stream and consequently increase stream temperature. Therefore, stream shade must be maintained to prevent increases in stream temperature that violate water quality standards established under the Clean Water Act.

We understand the intent of the proposed rule is to limit significant shade loss that occurs when the innermost 0-25ft SPZ is understocked (<RS60) and the outer 25-75ft SPZ is harvested to minimum tree retention requirements. The IDEQ/IDL shade effectiveness study found that this scenario can result in greater than 20% shade loss².

When the pre-harvest inner 0-25ft SPZ is under stocked (<RS60) shade loss can be mitigated to some extent by harvesting fewer trees from the outer 25-75ft SPZ. Modeling shows that applying an average RS43 can mitigate shade loss across the 75-ft SPZ only when the inner 0-25ft SPZ is above RS40³. Therefore, it's important for the rule to establish an appropriate minimum threshold of RS40 in the 0-25ft RPZ as discussed in the Minimum Threshold Value section below.

Compared to the existing rule, the proposed WTC approach was shown to mitigate excessive shade loss resulting from harvesting within the 25-75ft SPZ when the preharvest 0-25ft SPZ is understocked (<RS60) (R10EPA Memo, 11/23/2020). However, as currently written, the proposed WTC approach is likely to result in excessive shade loss when the preharvest 0-25ft SPZ is overstocked (>RS60) and allowed to be harvested below RS60.⁴

¹ Shade Rule Redesign Proposal December 2020 Narrative Revised 12-15-2020

² The Effectiveness of Idaho's Class I Stream Shade Rule: Analysis of Before - After, Control - Impact Effective Shade Data, T. Link, T. Johnson, R. Keefe, and R. Becker. Final Report: January 24, 2020 (e.g., Crystal Creek McCall site)

³ Draft Memorandum From: P. Leinenbach, R10 USEPA, To: H. Stone, Idaho DEQ, and D. Brown, R10 USEPA; Estimated shade loss associated with a RS 60/10 harvest when the preharvest inner riparian zone RS is below the target (i.e., RS60) and outer riparian zone (i.e., 50' to 75') is harvested to maintain a weighted average RS value of 43.3 for the entire riparian zone (i.e., 0 to 75'). November 23, 2020.

⁴ Memo to Garry Hess, IDL, from Mark Teply Consulting dated February 11, 2020, with attached email dated January 23, 2020

2) Need to Maintain RS60 in innermost RPZ (0-25-ft from stream)

During development of the 2013-2014 shade rule revisions, FPAC and IDL reviewed extensive riparian management modeling scenarios and concluded that trees immediately adjacent to the stream (0-25ft) are the most important for maintaining stream shade. They concluded that restricting thinning in the stream-adjacent zone to maintain RS60 could permit greater overall management flexibility in the outer 25-75ft zone while limiting overall shade loss to 10%. Applying these scientifically based conclusions, IDL and FPAC established the existing shade rule to maintain at least RS60 in the 0-25ft SPZ (Teply, 2014).

It is important for IDL and FPAC to maintain the scientific basis of the existing shade rule while addressing ongoing areas of concern. Teply and McGreer (2013) found that at least 50% of the shadow cast by the entire riparian management zone is provided by the inner 0-25ft zone and, therefore, ensuring the rule continues to retain more trees within the inner zone would result in less overall shade loss from the removal of trees in the outer SPZ. In addition, during a recent communication with IDL regarding review of the simplified rule language, Mark Teply noted it would be essential to assure minimum stocking in the 0-25ft SPZ to limit shade loss⁵

The IDEQ/IDL shade effectiveness study found sites with well-stocked (RS60) 0-25ft SPZ and harvested according to the existing shade rule experienced less than 10% shade loss on average. However, sites with an understocked (<RS60) 0-25ft SPZ harvested to the existing shade rule experienced shade loss above 10%. Thus, the shade study provides practical evidence of the importance of maintaining RS60 in the 0-25ft SPZ.

As noted above, we believe the proposed WTC rule has great potential for reducing shade loss in those instances when the preharvest 0-25ft SPZ is understocked (<RS60) and we commend the FPAC for addressing this deficiency of the current rule. We also believe the FPAC should continue to utilize the scientific underpinnings utilized during the 2013-14 shade rule development; specifically, the need to maintain minimum stocking levels in the 0-25ft SPZ. While the FPAC indicated there are practical reasons making it unlikely for the 0-25ft SPZ to be harvested below RS60, we believe the proposed rule must maintain a requirement for RS60 in the 0-25ft SPZ based on the scientific evidence.

Furthermore, we believe that FPAC and IDL can ensure the minimum stocking of RS60 in the 0-25ft SPZ within the context of the simplified rule language. Adhering to the FPACs desire to have a more easily implemented rule, we offer the following example of how this can be done by adding the underlined text to the proposed rule language inserted below:

- ii. During commercial harvest within Class I stream protection zones, retain the following weighted tree count per one hundred (100) linear feet of stream:
 - a. fifty-seven (**57**) north of the Clearwater/Lochsa Rivers
 - b. forty-nine (**49**) between the Clearwater/Lochsa and Salmon Rivers

⁵ Memo to Garry Hess, IDL, from Mark Teply Consulting dated February 11, 2020, with attached email dated January 23, 2020.

- c. forty-one (41) South of the Salmon River, and
- d. thirty-seven (37) in drier forests with Stream Protection Zones dominated by Douglas-fir and ponderosa pine.

At least four (4) of the above weighted tree count must be retained in the outer twenty-five feet (25') of the SPZ. **And at least half⁶ of the above weighted tree count must be retained in the inner twenty-five (0-25') feet of the SPZ.**

3) **Minimum Threshold Values**

The proposed rule includes the following minimum threshold values in Paragraph 030.07.e.iii:

iii. Prior to and during harvest, cutting in any part of a given one hundred foot SPZ segment is only allowed if the weighted tree count in the inner fifty feet (50') of that segment is above: thirty-three (33) north of the Clearwater/Lochsa Rivers, twenty-eight (28) between the Clearwater/Lochsa and Salmon Rivers, twenty-three (23) South of the Salmon River, and twenty-one (21) in drier forests with Stream Protection Zones dominated by Douglas-fir and ponderosa pine. Note that the combination of minimum values for the inner fifty feet (50') and outer twenty-five feet (25') do not meet the minimum for the SPZ segment; additional trees need to be left in one or both areas to meet the rule.

These minimum threshold values appear inconsistent with what the modeling shows is necessary (R10EPA Memo, 11/23/2020). As discussed above, modeling showed that applying an average RS43 across the 0-75ft RPZ is effective at mitigating shade loss only when the 0-50ft SPZ is at least RS40. It appears the threshold WTC was calculated based on a minimum stocking of approximately RS37. To be consistent with the modeling that serves as the basis for the proposed rule, the minimum WTC threshold must be based on RS40.

4) **Class II Streams**

The 2013-2014 rule revisions removed important protections for Class II streams. EPA is not aware of documentation of a scientific rationale supporting the removal of the Class II tree retention requirements in 2013 and recommends reinstating them. EPA's recommendation is echoed by the recently completed 2020 Forest Practices Water Quality Audit, which recommends FPAC work on establishing a minimum tree retention requirement for Class II streams. Additionally, research by McIntyre et.al. (2018) quantified the importance of Class II SPZs in protecting stream temperatures. The study found that 50-foot-wide riparian buffers on non-fish perennial streams lead to a decrease in effective shade and increase in water temperature.

EPA believes tree retention requirements in Class II SPZs are an important part of IDEQ's Water Quality Standard Rules Governing Nonpoint Source Activities. Eliminating the tree retention

⁶ half of the above WTC is simple language that maintains RS60 in the 0-25ft SPZ. The specific WTC equivalent to RS60 is 26 north of the Clearwater/Lochsa Rivers; 25 between the Clearwater/Lochsa and Salmon Rivers; 19 South of the Salmon River, and 17 in drier forests with Stream Protection Zones dominated by Douglas-fir and ponderosa pine.

requirement for Class II SPZs appears inconsistent with IDEQ’s Potential Natural Vegetation (PNV) TMDLs. Idaho’s PNV temperature TMDLs are dependent in part upon upstream conditions for achieving water quality standards and require all associated tributaries to be at natural heat loads. Therefore, reinstating Class II stream protections in Idaho (which are presented below) are necessary to protect water quality and should be included in the negotiated rulemaking.

The “Shade Rule Redesign Proposal Narrative” (revised 12-15-2020) includes a Comparison of the December 2020 Shade Rule Redesign Proposal to the Pre-2014 Class I Tree Retention Rule. It includes the following excerpt from the pre-2014 rule, which includes tree retention requirements for Class II streams that were removed during the 2013-2014 rule revisions:

vi. **Standing trees, including conifers, hardwoods and snags will be left within fifty (50) feet of the ordinary high water mark on each side of all Class I streams, and within thirty (30) feet on each side of all Class II streams, in the following minimum numbers per one thousand (1000) feet of stream:**

Minimum Standing Trees per One Thousand (1000) Feet Required (each side)

Tree Diameter (DBH)	Stream Width			Class II*
	Class I			
	Over 20'	10' - 20'	Under 10'	
3 - 7.9"	200	200	200	140
8 - 11.9"	42	42	42	---
12-19.9"	21	21	---	---
20"+	4	---	---	---

McIntyre, A.P., M.P. Hayes, W.J. Ehinger, S.M. Estrella, D. Schuett-Hames, and T. Quinn (technical coordinators). 2018. Effectiveness of Experimental Riparian Buffers on Perennial Non-fish-bearing Streams on Competent Lithologies in Western Washington. Cooperative Monitoring, Evaluation and Research Report CMER 18-100, Washington State Forest Practices Adaptive Management Program, Washington Department of Natural Resources, Olympia, WA.

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TEPLY, M., D. MCGREER, AND K. CEDER. 2014. Using Simulation Models to Develop Riparian Buffer Strip Prescriptions. *J. For.* 112(3): 302-311