Clarification of Negotiated Rulemaking Summary Docket # 20-0201-2101

Overall, the responses of Idaho Department of Lands (IDL) in the Negotiated Rulemaking Summary were intended to describe the limitations of model-dependent decision making and the difficulty of crafting rules to accommodate every situation across the natural resource and ownership landscape, especially for streams narrower than the 10 foot width simulated to establish the current rule. The proposed rule not only addresses concerns regarding limited pre-harvest stocking in the inner 25-foot of the Stream Protection Zone (SPZ), but the proposed rule is also simpler and provides much more flexibility in implementation where predominant SPZ harvest activity occurs.

In response #11 of the summary (pg. 7), IDL described an example of how an often observed no harvest 60-foot buffer implemented by landowners under the current rule (Option 2, RS 60/10) might be implemented under the proposed rule. Unfortunately, an incomplete statement identified in an early draft was not corrected prior to publication. The example should have read if a landowner wanted to cut the outer 25-foot of a 100-foot segment north of Clearwater River to a weighted tree count (WTC) of 4, they would need to have a pre-harvest WTC equal to or greater than 53 in the inner 50 feet. Operational considerations (see pg. 309 Teply et.al.[1]) would very likely result in more trees being left in the inner 25 feet which might resemble a WTC of 33 in the inner 25 feet and a WTC of 20 in the middle 25 feet.

In response #16 of the summary (pg. 9), for the sake of brevity, IDL inadvertently mis-characterized some aspects of the simulations reported by Teply et.al.[2] (pgs. 305 and 306). The simulations were not based on a vegetation simulator that overpredicts shade removal from thinning. The authors adapted the model used to develop target shade levels for Idaho's Total Maximum Daily Load (TMDL) regulatory process[3] (pg. 38). They used the Forest Vegetation Simulator COVER extension to provide input to the SHADE model from which the simulation output was obtained. Comparing this output to on-the-ground riparian harvest data for 75-foot riparian buffers, they found the shade models underpredicted effective shade on average by 3.7%. Thus, shade loss from thinning could be overpredicted in some circumstances and underpredicted in others. The authors made adjustments to shade loss estimates to compensate for this.

Also, in response #16 IDL stated that analyses "indicated that for narrow streams, branch overhang rather than canopy cover is the dominant shade component from trees." This statement more precisely should read the Cramer Fish Sciences report[4] (pg. 24) states, "Along narrower streams, riparian stands—

[1] Using Simulation Models to Develop Riparian Buffer Strip Prescriptions
https://academic.oup.com/jof/article/112/3/302/4599045

[2] Ibid.

[3] Simulating the Effects of Forest Management on Stream Shade in Central Idaho
https://academic.oup.com/wjaf/article/28/1/37/4683600

[4] *Using Stream Shade and Large Wood Recruitment Simulation Models to Inform Forest Practices Regulations in Idaho*. https://www.idl.idaho.gov/wp-content/uploads/sites/2/2021/06/Cramer-Fish-Sciences-Technical-Report-2012.pdf

even when managed—tend to cast shadows across the entire stream. Furthermore, according to the Shade.xls model, nearly the entire stream width is shaded by branch overhang. Branch overhang has greater weight in Shade.xls and tends to compensate for canopy cover loss."

This is a critically important point for narrow streams. Often these streams are already well shaded by topography, stream banks and low understory vegetation not included in the modeling. In addition, the DEQ Shade Effectiveness Study report[5] states on page 15, "The modeling exercise upon which the Rule was based used a stream width of 10 feet, whereas the majority of treated reaches were much narrower and hence effective shade changes may have been less sensitive to overstorey canopy removal..."

Knowing that a larger share of timber harvested in Idaho comes from the NIGF regional forest type, Forest Practices Advisory Committee members expressed concern when the current rule was developed regarding narrow streams; most SPZ harvests occur along streams narrower than those simulated. The effectiveness monitoring effort validated concerns for both the comparatively lower shade removal and the narrower stream widths where predominant harvest activity occurs.

[5] *The Effectiveness of Idaho's Class I Stream Shade Rule: Analysis of Before – After, Control – Impact Effective Shade Data*. https://www.idl.idaho.gov/wp-content/uploads/sites/2/2021/06/Class-I-Shade-Effectiveness-Study-Final-Report.pdf