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Mr. Gary Hess
Regulatory and Stewardship Program Manager
Forestry and Fire Division
Idaho Department of Lands
3284 W. Industrial Loop
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Electronically submitted: rulemaking@idl.idaho.gov

RE: Idaho Conservation League's Comments Regarding Negotiated Rulemaking for IDAPA 20.02.01

Dear Mr. Hess:

Please accept the Idaho Conservation League's comments regarding the Negotiated Rulemaking for IDAPA 20.02.01, commonly referred to as "The Shade Rule." The Idaho Conservation League (ICL) is Idaho's leading voice for conservation. Since 1973, ICL has worked to preserve Idaho's clean water, wilderness, and quality of life. As Idaho's largest state-based conservation organization, we represent over 30,000 supporters who have a deep personal interest in the science-based management of Idaho's waters which support a wide variety of fish and wildlife.

ICL has a long history of participating in the negotiated rulemaking process with the Idaho Department of Lands (IDL), and we are encouraged by the Idaho Forest Practices Advisory Committee (FPAC) work with IDL and the Idaho Department of Environmental Quality (IDEQ) to resolve issues in the existing rule regarding tree retention in meadowed areas and the creation of a tree retention calculation system that allows operators and private landowners to more easily determine the number and sizes of trees necessary for retention in order to meet shade standards that promote cool temperatures and stabilized bank conditions.

We appreciate the hard work IDL, IDEQ, and FPAC has invested in this process. However, we do have unaddressed concerns regarding the proposed rule, which center around the averaged tree retention approach and protections for Class II streams. We believe that while the averaging system certainly has the potential to maintain a higher tree retention rate in understocked inner zones and works to address the "open meadow" issue, by disregarding the independent calculation of the inner zone, IDL runs the risk of an excessive amount of trees being removed

from the inner 25-foot zone, which is more critical for shade retention and bank stabilization than the outer 50-feet. Our specific comments and recommendations addressing this issue, and the Class II stream protections are found in the following document.

Thank you for the opportunity to provide IDL with comments regarding this proposed rule change, and for hosting four negotiated rulemaking public sessions. If you have any questions regarding our comments and recommendations, please feel free to contact me.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Randy Fox", is centered within a light gray rectangular box.

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Idaho Conservation League's Comments Regarding Negotiated Rulemaking for IDAPA 20.02.01

Maintaining Inner Zone Stocking Rates

Recent research demonstrates that thinning throughout the Stream Protection Zone (SPZ), and particularly up to the streambank edge, has negative impacts on shade retention, which directly correlates to increased stream temperatures (Teply 2014). The current rule addresses this issue by independently evaluating the inner 25-foot zone, the middle 25-foot zone, and the outer 25-foot zone. However, operators and private landowners found the calculation method burdensome and difficult to implement, resulting in inappropriately harvested riparian areas. Further, the rule failed to address areas where inner zone stocking rates would not apply, such as marshy or meadowed areas.

Through the proposed rule, IDL hopes to limit shade loss when the inner 25 feet has an understocked (<RS60) value. IDL proposes to mitigate shade loss in stream sections with understocked inner zones by harvesting fewer trees in the outer 50 feet of the SPZ. In order to accomplish adequate shade retention without addressing each of the zones independently, IDL proposes to use an averaged RS43 for the entire 75-foot riparian zone along Class I streams. However, additional modeling by the Environmental Protection Agency (EPA) demonstrates that an averaged RS43 only retains adequate trees for shade when the inner 25-foot zone equals or exceeds RS40 (see EPA's comments for the proposed rule for specific calculations). The current base average value in the proposed rule is RS37.

While we appreciate the effort IDL and others have made to create a more readily understood and implementable calculation method, we do not believe that sacrificing the independent nature of the inner zone to satisfy the overall SPZ requirements represents the best solution. We recommend that IDL alter language in the proposed rule to establish a minimum Relative Stocking rate of 40 in the inner, pre-harvested 0-25 foot zone.

During the negotiated rulemaking session on April 22, 2021, Mr. Dan Brown of the EPA brought this oversight to the attention of IDL, both in the EPA's formal comments and in the discussion period. IDL indicated that the agency is concerned that if the calculation model was shifted to incorporate a RS40 minimum value for the inner zone that it would result in overall relative stocking rates that equal or exceed 60, citing Teply 2014 and the conclusion that, "relative stocking was >55% (the lower limit of competition-induced mortality," (p. 304). However, the same research calls for the retention of large woody debris that supplies critical stream and fisheries structure. Without natural mortality, the retention of large woody debris in and around Class I streams decreases, as does the health and function of the stream itself.

IDL has the responsibility to not only present a rule that addresses missed opportunities, but to provide standards that guarantee adequate tree retention rates within the SPZ, and particularly within the most critical inner 25 feet of Class I streams. Teply and McGreer (2013) determined that, "Of the total shadow cast by the entire IFP riparian management zone, the overlap of shadows cast by the inner and outer zones is less than 50%; most of the total shadow is cast solely by the stream-adjacent 25-ft no harvest zone," (p. 43). This research, which is based on

Idaho's forests and streams, clearly demonstrates that the inner 25 feet is the most critical for providing adequate shade structure. Further, the roots associated with live trees and understory vegetation combined with an adequate supply of large woody debris provides for bank stabilization and erosion prevention. We believe that IDL's two goals for the proposed rule are achievable by implementing a minimum Relative Stocking rate for the inner zone, which is achievable by using RS40 as the base averaging metric.

Applying Best Available Science

Recent comments submitted on the behalf of the Idaho Farm Bureau Forestry Committee make reference to an Oregon State University study (Brown and Krygier 1970) that indicates that riparian vegetation influences stream temperatures in clear cut areas. In essence, the Idaho Farm Bureau (IFB) argues that small trees and understory vegetation provide ample shade cover in the years following harvest, and that the retention of live trees does not accurately reflect the full capacity of streamside understory vegetation for cooling and lowering stream temperatures. We concur with Brown and Krygier's findings insofar as we recognize the value of streamside understory vegetation for positively affecting the temperature of Class I streams. However, Brown and Krygier (1970) do not reflect best available scientific evidence regarding the relationship between stream temperature and SPZ vegetation, as is demonstrated by Teply and McGreer (2013) and Teply (2014). In fact, more recent studies indicate that riparian shade plays a significant role in mitigating extreme warm temperature events and counteracts the effects of timber harvesting, however, "anticipated temperature increases by late century will likely be greater than can be addressed through maintaining – or even increasing – riparian shade alone....Although high-temperature events will likely increase even with attainment of SPV in riparian areas, achieving SPV will produce significantly better outcomes than scenarios under which riparian buffers are only partially protected," (Yonce et. al, 2020).

While topography and stream substrate can certainly affect stream temperature by casting shadows over waterways or holding stream temperatures to lower levels, IDL's own studies regarding the effectiveness of tree retention demonstrate that shade provided by trees, and particularly those within the inner 25-foot zone, have a greater effect on water temperature than other factors such as cooling via understory vegetation shade, topography, or stream substrate. Further, this rule is specifically focused on addressing the benefits of shade provided by retained trees as it relates to providing guidelines and protocols that directly determine the amount of harvestable materials within the SPZ.

Class II Stream Protections

We are concerned that the proposed rule fails to address minimum tree retention requirements for Class II streams, and we encourage IDL to reinstate the protections that were removed from the 2013-14 rule. Class II streams commonly source from seeps and springs, and provide the coldest and cleanest available water within a system. Class II streams that feed Class I waterways are critical to fisheries and aquatic ecosystem health. By establishing minimum tree retention requirements in this proposed rule, IDL will make significant strides toward lowering stream temperatures throughout numerous watersheds, effectively improving water quality and fisheries habitat conditions throughout the state, and in downstream sections of our larger rivers that flow to the Pacific Ocean. Yonce et al. (2020) clearly state that riparian SPZs reduce harvest effects on water temperatures; however, the researchers anticipate that the trend of warming

temperatures and climate changes will require additional strategies to help keep salmonid and trout habitats adequately supplied with cold water. Protecting contributing Class II streams *before* they merge with Class I streams goes a long way toward making this anticipated transition smoother while creating more resilient waterways.

We also note that the Idaho 2020 Interagency Forest Practices Water Quality Audit conducted by IDEQ and IDL recommends that FPAC work towards establishing a minimum tree retention requirement for Class II streams. Recently, McIntyre et al. (2018) conducted an extensive, long-term study in western Washington which determined that even a 50-foot-wide SPZ on Class II streams was insufficient to provide effective shade, resulting in increased water temperatures. With Idaho's SPZ on Class II streams being 30 feet wide on either side of the ordinary high water mark and with limited protections that focus on, "retain(ing) live trees or establish(ing) new trees within thirty (30) feet on each side of the streams' ordinary high water mark to comply with the minimum stocking standards expressed in Subsection 050.04," (Proposed Negotiated Rule IDAPA 20.02.01, Section 030.07.e.iv). The previously cited studies demonstrate that new saplings do not provide the same shade cover or benefits as the canopies associated with mature trees. Further, these studies clearly demonstrate the need for Class II stream protections that extend beyond those found in the proposed rule, and we recommend that IDL continue working with FPAC and IDEQ to establish minimum stocking standards for class II streams that provide meaningful protections against increasing stream temperatures and as bank stabilization and erosion control measures.

Additional Comments

Opening the rule to consider other shade sources that may influence water temperature is outside the scope of forest practices and would have a counterproductive effect on the rulemaking process. IDL, FPAC, and IDEQ worked in good faith and with due diligence to present a rule that is more easily understood and that addresses shortcomings in the original rule like the open meadow issue, and much of this was accomplished at the request of, and for the benefit of Non-Industrial Private Forest (NIPF) landowners. We concur that our forests contain a wide variety of diversity and complexity with numerous factors potentially contributing to stream temperature and health. However, we believe this rule should remain focused on the retention of live trees within the riparian SPZ.

References

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