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MEMORANDUM

December 28, 2021

TO: TFW Policy Committee

FROM: Saboor Jawad, Adaptive Management Program Administrator *asj*

SUBJECT: Findings Report of the Soft Rock Study

This memo transmits to TFW Policy Committee (Policy) the findings report of the study on the Effectiveness of Forest Practices Buffer Prescription on Perennial Non-fish-bearing Streams on Marine Lithologies in Western Washing (Soft Rock Study).

The Cooperative Monitoring, Evaluation and Research Committee (CMER) approved all seven chapters of the final report between July and August 2021, the executive summary in September 2021 and the answers to six questions document in December 2021. The findings report package is complete and ready for Policy's review. The study's final report and the answers to the six questions are both are delivered to Policy with this memo.

The Soft Rock Study evaluated riparian functions and processes up to three years post-harvest. The study followed CMER's scientific protocols including review and approval of study design and the findings report by the Riparian Scientific Association Group (RSAG), the Independent Scientific Peer Review (ISPR) and CMER.

Soft Rock is a companion study to the Hard Rock Study delivered to Policy in 2018 and 2021. The Soft Rock Study also used a Before-After Control-Impact (BACI) design to examine the responses of riparian functions and processes to riparian buffer treatments along non-fish bearing perennial streams (Type Np) on incompetent or easily eroded marine sedimentary lithology.

Two experimental buffer treatments were evaluated on 10 Type N stream sites in western Washington. These included three unharvested reference sites, and seven treatment sites with two-sided 50-ft riparian buffer along at least half the length of the Riparian Management Zone (RMZ)

consistent with current Forest Practices buffer prescriptions for Type N streams. The Forest Practices Treatments included buffers prescribed for sensitive sites and unstable slopes. The study refers to these treatments as REF, and TRT treatments respectively. All treatments were implemented between in 2013 to 2015.

The study reports significant treatment effects – consistent with findings from the Hard Rock Study – on stand structure, tree mortality, wood recruitment and wood loading. The study, moreover, concludes that the riparian buffer treatments were ineffective at preventing increases in summer stream temperature. Analysis also shows that difference in temperature response between the Soft Rock Study and the Hard Rock Study wasn't evident. The Soft Rock Study, however, couldn't discern treatment effectiveness on discharge and suspended sediment export and couldn't attribute changes in nutrient export to treatments alone. No major reductions in benthic macroinvertebrates metrics associated with buffer treatments were detected by the Soft Rock Study.

Soft Rock Study tested the effectiveness of existing Type N riparian prescriptions in maintaining key aquatic conditions and processes. The results have policy implications on whether existing buffer prescriptions on Type N water meet the overall Performance Goals or meet water quality standards. Policy should take action on these findings and prepare recommendations to the Forest Practices Board. Policy recommendation should consider revising some of the Type Np Performance Targets.

The completion of the Soft Rock Study is a major milestone for the Adaptive Management Program. This study provides a substantial gain in understanding of the degree to which Type Np Forest Practices rules meet the Resource Objectives and Performance Targets outlined in Schedule L-1 of the Forest Practices Habitat Conservation Plan.

Attachments:

1. CMER Answers to Six Questions
2. Final Report of the Soft Rock Study