

Eastside Forest Health Strategy

Background

At the May 2021 Forest and Fish Policy Committee meeting, members expressed a desire to meet with interested CMER members to discuss concerns about the health of eastside Washington forests in S/F and Np Riparian Management Zones (RMZs) and attempt to develop a research and monitoring strategy to inform future refinement by CMER/SAGE. An Eastside Forest Health Strategy workgroup was formed and after meeting from June 2021 to February 2022 the following guidance was developed, which includes questions based on stakeholder concerns for eastside forest health.

Strategy Overview

The Eastside Forest Health Strategy workgroup recommends the development of a research and monitoring strategy investigating active RMZ management approaches that are designed to balance disturbance resiliency and resource protection objectives outlined in the FP HCP (Schedule L-1 functional objectives and performance targets, Appendix N). Current riparian buffer prescriptions may be appropriate where RMZs are not fire dependent but may not be successful in achieving functional objectives and performance targets across the entire landscape subject to the Forest Practices Rules (FPRs). Determining the if, where, when, and how of additional management, is the responsibility of the Adaptive Management Program (AMP). Given diverse ownership, management objectives and limited AMP funding to test alternative prescriptions, the strategy will likely require a multi-scale approach (site, watershed, landscape) and close coordination with other landowners. Significant public and private funded efforts have been invested in forest health and fuels treatments in eastern Washington, but this emphasis has been primarily on upslope stands and not in regulatory RMZs.

It is generally agreed that the maximum extent of thinning allowed in current eastside RMZ rules are rarely implemented making it difficult to find enough examples to study their effectiveness related to fire and forest health. What we do know based on feedback from a non-random tally of stakeholders and analysis of existing condition with the results of the Eastside Modeling Effectiveness Project (EMEP), is that overstocked, suppressed and stagnant riparian stands are likely to remain in this condition for several decades. Absent of active management, these stands may eventually suffer from insects/disease and fire, which could possibly lead to a catastrophic stand-replacing fire significantly impacting both ecological and monetary values of the RMZ.

The questions discussed by the subgroup fall into one or both of the following categories:

- Research to investigate alternative pre-fire riparian management strategies designed to reduce wildfire potential and improve forest health/fire resiliency and,
- Post-fire actions that could help restore riparian function through active management.

Questions

The following questions should be considered by CMER/SAGE for guidance when scoping upcoming research:

1. Are forest health and fire resiliency adequately addressed in the current rule objectives and performance targets (see Appendix B)?

2. What are the primary factors contributing to the lack of management allowed within current RMZ prescriptions?
 - a. Are Wetland Management Zone (WMZ) prescriptions applied more often than RMZ prescriptions? If so, why?
3. What variable/variables contribute to wildfires entering the RMZ and how do these factors affect fire behavior within the RMZs
4. Based on what we have learned from the above questions what, if any, alternative RMZ management approaches should be evaluated to improve forest health and fire resiliency.

Appendix A

Questions With Potential Technical Sub-Questions

1. Are forest health and fire resiliency adequately addressed in the current rule objectives and performance targets (see Appendix B)?
2. What are the primary factors contributing to the lack of management allowed within current RMZ prescriptions?
 - i. What percentage of the time are landowners applying current RMZ Rules?
 - ii. What are the operational and forest stand limitations for applying current RMZ Rules?
 - iii. Are the current RMZ Rules the limiting factor for whether the prescriptions are applied to the RMZ?
 - iv. When and under what conditions are RMZs being managed under current Rules.
 - v. Is the primary consideration for entry based on revenue or enhanced riparian function?
- b. Are Wetland Management Zone (WMZ) prescriptions applied more often than RMZ prescriptions?
 - i. If so, are there layout and/or operational benefits associated with the WMZ Rules?
 - ii. If (a) is true, could these be used to modify the RMZ Rules to make them easier to apply on the ground while still maintaining similar stream functions/protections?
3. What variable/variables contribute to wildfires entering the RMZ and how do these factors affect fire behavior within the RMZs
 - i. Does post-harvest slash management impact the risk of wildfire entering an RMZ?
 - ii. How do the fires behave once it enters the RMZ?
 - iii. What percentage of landowners are applying PCT to the RMZ?
 - iv. Does PCT application in RMZs vary by landowner class?
 - v. How does hydrology and geophysical characteristics (e.g., stream size, valley confinement, soil wetness, topographic position) influence susceptibility/risk to wildfire?
 - vi. How do PCT, commercial thinning, hydrology and geophysical characteristics (e.g., stream size, valley confinement, soil wetness, topographic position) influence susceptibility/risk to wildfire?
4. Based on what we have learned from the above questions what, if any, alternative RMZ management approaches should be evaluated to improve forest health and fire resiliency.

Appendix B

Functional Objectives

Heat/Water Temperature

Functional objective: Provide cool water by maintaining shade, groundwater temperature, flow, and other watershed processes controlling stream temperature.²

Measures	Performance targets	Time-Frame
Stream temperature	Water quality standards—current and anticipated in next triennial review (e.g., for bull trout ³).	<i>(Note--need to be completed by scientific advisory groups)</i>
Groundwater temperature	To be developed.	
Shade	<ul style="list-style-type: none"> • Type F & S streams, except Eastside bull trout habitat: that produced by shade model or, if model not used, 85-90% of all effective shade. • Westside and eastside high elevation, Type N streams: shade available within 50' for at least 50% of stream length. • Eastside: all available shade within 75' of designated bull trout habitat per predictive model. 	

LWD/Organic Inputs

Functional objective: Develop riparian conditions that provide complex habitats for recruiting large woody debris and litter⁴.

Measures	Performance targets	Time-Frame
Riparian condition	<ul style="list-style-type: none"> • Westside and high elevation Eastside habitats: riparian stands are on pathways to meet Desired Future Condition (DFC) targets (species, basal area, trees per acre, growth, mortality). • Eastside (except high elevation): DFC; current stands on pathways to achieve Eastside condition ranges for each habitat series. 	
Litter fall	<ul style="list-style-type: none"> • Westside Type N⁵: at least 50% of recruitment available from within 50'. 	

² Stream temperature is affected by the interaction of a complex set of factors, including shade, air temperature, pool depth and frequency, flow, and groundwater influences. These factors are addressed in resource objectives for other conditions or processes (e.g., hydrology, sediment, LWD) in addition to the targets selected for stream temperature.

³ Bull trout temperature standards are expected to be an outcome of DOE's triennial review of water quality standards.

⁴ Litter is defined to include leaves, needles, twigs, branches, and other organic debris that is recruited to aquatic systems and riparian forest floor