

**File Code:** 1950

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**Subject:** Northwest Forest Plan Aquatic Conservation Strategy

In order for a project to proceed, “a decision maker must find that the proposed management activity is consistent with the Aquatic Conservation Strategy objectives” (ROD B-10). The nine objectives are listed on page B-11 of the ROD. The effects analysis above has focused on key parameters or indicators that make up elements of the nine Aquatic Conservation Strategy objectives, to determine if the project would restore, maintain, or degrade these indicators. Once this determination is made, the indicators are be examined together to ascertain whether the project is consistent with the objectives. The following table displays the individual indicators and the effect the action alternatives have on those indicators at the 5<sup>th</sup> and 6<sup>th</sup> field watershed scale. Fifth field watersheds are generally large in size (40,000 acres to 250,000 acres), while 6<sup>th</sup> field watersheds are smaller (5,000 acres to 40,000 acres).

Individual Indicator Table	Effects of the Actions Existing Condition			Effects of the Actions The Proposed Action		
	Restore <sup>1</sup>	Maintain <sup>2</sup>	Degrade <sup>3</sup>	Restore	Maintain	Degrade
<u>Water Quality:</u> Temperature		X			X	
Sediment		X			X	
Chem. Contam.		X			X	
<u>Habitat Access:</u> Physical Barriers		X			X	
<u>Habitat Elements:</u> Substrate		X			X	
Large Woody Debris		X		X		
Pool Frequency		X			X	
Pool Quality		X			X	
Off-channel Habitat		X			X	
Refugia		X			X	
<u>Channel Cond. &amp; Dynam:</u> Width/Depth ratio		X			X	
Streambank Cond.		X			X	
Floodplain Connectivity		X			X	
<u>Flow/Hydrology:</u> Peak/base flows		X		X		



Individual Indicator Table	Effects of the Actions Existing Condition			Effects of the Actions The Proposed Action		
	Restore <sup>1</sup>	Maintain <sup>2</sup>	Degrade <sup>3</sup>	Restore	Maintain	Degrade
INDICATORS						
Drainage Network Increase		X			X	
Watershed Conditions: Riparian Reserves		X		X		

<sup>1</sup> “Restore” means the action(s) would result in acceleration of the recovery rate of that indicator.

<sup>2</sup> “Maintain” means that the function of an indicator does not change by implementing the action(s) or recovery would continue at its current rate.

<sup>3</sup> “Degrade” means to change the function of an indicator for the worse.

The following summarizes the Individual Indicator Table:

- The proposed project would treat vegetation in Riparian Reserves to restore them to a more natural vegetation state. This would result in more natural function of the riparian area and acceleration of development of potential large woody material adjacent to streams. In addition, thinning would accelerate tree growth rates which would speed up hydrologic recovery of the treated watersheds.
- Indicators other than those described in the proceeding paragraph would be maintained as outlined in the effects analysis above.

The following table displays specific Aquatic Conservation Strategy objectives and the indicators from the previous table that comprise each objective. All of the indicators that are checked for a particular objective should be evaluated together to determine whether the action maintains or enhances the specific Aquatic Conservation Strategy objective.

Indicators	Aquatic Conservation Strategy Objectives								
	#1	#2	#3	#4	#5	#6	#7	#8	#9
Temperature		X		X				X	X
Sediment				X	X	X		X	X
Chem. Contam.				X				X	X
Physical Barriers	X	X						X	X
Substrate			X		X	X			X
Large Woody Debris			X					X	X
Pool Frequency			X						X
Pool Quality			X						X

Indicators	Aquatic Conservation Strategy Objectives								
	#1	#2	#3	#4	#5	#6	#7	#8	#9
Off-Channel Habitat	X	X	X						X
Refugia	X	X						X	X
Width/Depth Ratio			X					X	X
Streambank Condition			X			X		X	X
Floodplain Connectivity	X	X	X				X	X	X
Peak/base Flows					X	X	X		
Drainage Network Increase					X	X	X		
Riparian Reserves	X	X	X	X	X	X		X	X

The following is a summary the Aquatic Conservation Strategy objectives (ROD B-10) and how the action alternative would influence them:

- 1. Maintain The Distribution, Diversity And Complexity Of Watershed And Landscape-Scale Features:** This project would meet this objective because of the protection that the Riparian Reserves provide. Specific prescriptions for Riparian Reserves have been developed for this project and those prescriptions are intended to maintain or enhance the development of a diverse, healthy riparian area while protecting it with a variety of mitigation and project design criteria. No new road crossings of perennial streams or wetlands are proposed, which would maintain the current level of aquatic habitat fragmentation.
- 2. Maintain Spatial And Temporal Connectivity Within And Between Watersheds:** The project would maintain spatial and temporal connectivity within and between watersheds. Nothing proposed with this project would reduce the spatial and temporal connectivity.
- 3. Maintain the Physical Integrity of the Aquatic System, Including Streambanks, Side channels (Refugia), and Channel Bottom Configurations:** This project would meet this objective through mitigation measures, project design criteria and the protection provided by Riparian Reserves. Mitigation measures and project design criteria that include establishment of undisturbed vegetative areas next to perennial and intermittent streams, prescriptions for Riparian Reserves that are intended to maintain or enhance the development of a diverse, healthy riparian area and the lack of any new crossings on perennial streams would greatly reduce risks of sedimentation, increased peak flow, and

resulting bank erosion and channel bed scour.

4. **Maintain Water Quality Necessary To Support Healthy Ecosystems:** This project would meet this objective through mitigation, project design criteria and protection provided by Riparian Reserves which would maintain stream temperature. Mitigation measures and project design criteria aimed at maintaining existing water quality and reducing erosion would maintain the overall sediment levels in the long term. These measures are discussed in detail in the soil, water and fisheries analysis above.
5. **Maintain Sediment Regimes:** This project would meet this objective through mitigation measures and project design criteria such as establishment of undisturbed vegetative areas next to perennial and intermittent streams and protection provided by Riparian Reserves.
6. **Maintain In-Stream Flows That Are Closer To Natural Regimes:** This project would meet this objective through mitigation measures, project design criteria and protection provided by Riparian Reserves. As described in the watershed section of this report, thinning would increase tree growth rates and accelerate hydrologic recovery.
7. **Maintain The Timing, Variability, And Duration Of Floodplain Inundation:** This project would meet this objective through mitigation measures, project design criteria and protection provided by Riparian Reserves. Mitigation measures and project design criteria such as establishment of undisturbed vegetative areas next to perennial and intermittent streams and thinning that would increase tree growth rates and accelerate hydrologic recovery would protect the integrity of the floodplains while minimizing the potential for increased peak flows.
8. **Maintain The Species Composition And Structural Diversity Of Plant Communities In Riparian Areas And Wetlands:** This project would meet this objective through protection provided by Riparian Reserves. Treatments within the Riparian Reserves are aimed at producing a more natural vegetative composition and density that has been lost through many decades of fire suppression.
9. **Maintain And Restore Habitat To Support Well-Distributed Populations Of Native Plant And Riparian Dependent Species:** The project would meet this objective with mitigation measures, protection provided by Riparian Reserves and vegetative treatments that are designed to simulate a more natural disturbance regime within the area.