



Loomis Forest Watershed Analysis

Sinlahekin and South Fork Toats Coulee Watershed Analysis

The Washington State DNR retained R2 to perform a Level 2 Watershed Assessment in accordance with the Standard Methodology for Conducting Watershed Analysis, Chapter 222-22 WAC (Washington Forest Practices Board, 1997), Version 4.0 in two Watershed Administrative Units (WAUs) in the Loomis State Forest; Sinlahekin and South Fork Toats Coulee Watershed Analysis Numbers 46 & 47 (WAU #s 49-01-025; 49-01-030).

A team of resource analysts was assembled to address hillslope hazards (mass wasting, soil erosion, hydrologic, and riparian conditions), response segments (stream channels) and vulnerabilities of public resources (fisheries habitat, water supplies, public works, and water quality). Following the resource assessment phase, a field manager's team was assembled to address causal mechanisms of resource effects and to prepare management-based prescriptive measures that avoid or minimize management actions potentially triggering failures of sensitive areas on the hillslopes.



R2 documented the watershed assessment and identified hillslope hazards with the potential to adversely affect public resources in both WAUs. Forest land management practices resulting in delivery of significant quantities of fine sediment, coarse sediment, water, wood, and heat energy to public resources of concern were addressed. The prescription team's objective was to generate management prescription options that addressed the issues and watershed processes identified in causal mechanism reports (CMRs) and meet the management response calls dictated by the rule matrix under Chapter 222-22 WAC.

The two WAUs consisted of approximately 91,000 acres of land joined together near the top of the respective watersheds. Remote sensing assessments were performed over the landscape and field validated using extensive stream reach inventories of habitat and channel conditions.

Project Elements:

- WFPB Watershed Assessment Protocols
- Mass Wasting/Surface and Road Erosion
- Hydrology and Sediment Transport
- Riparian Stand Conditions
- Fish Habitat Conditions
- Water Quality/Public Works
- Synthesis/Causal Mechanisms/Management Prescriptions
- Resource Assessment Report
- Monitoring and Restoration Plan
- GIS Mapping