Colville National Forest

Burned Area Emergency Response (BAER)

Post-Fire BAER Assessment

BAER Information: (415) 881-1871

RENNER POST-FIRE BAER ASSESSMENT REPORT SUMMARY

FS-2500-8 Burned-Area Report: Watershed Analysis, Condition, and Response

The Renner Fire was 1 of 3 lightning-caused wildfires comprised within the Kettle Complex, and burned about 13,800 acres 10 miles north of Kettle Falls and just west of Highway 395. Hot, windy conditions combined with very dry fuels caused the fire to grow extremely fast. Approximately 11,500 acres burned on the Coleville National Forest (NF). The remaining acres burned were private lands. The Renner Fire burned within three sub-watersheds: Deadman Creek, Hodgson Creek-Kettle River, North Fork Boulder Creek-Boulder Creek, and South Fork Boulder Creek.

A Forest Service (FS) Burned-Area Report, which included the BAER assessment team's analysis of the burned areas within the Renner Fire and recommended emergency treatments, was submitted to the Pacific Northwest Region by the Forest Supervisor for the Colville NF:

- ✓There are 40 miles of intermittent streams and 20 miles of perennial streams within the burned areas.
- ✓There are 30 miles of NF roads; 5 miles of NF motorized trails; and 2 miles of snowmobile trails within the burned area.
- ✓There are 1,925 acres of water repellent soil.
- ✓There are 193 acres of high soil burn severity (<1%), 1,500 acres of moderate soil burn severity (13%), and 9,800 acres of low/unburned soil burn severity (87%) on National Forest System lands.

The different BAER soil burn severity categories are areas and classes of impaired soil functions and are the key element BAER specialists use to determine if threats exist , whether fire-caused changes in soil characteristics exist that affect the soil hydrologic function, and at what level. The identified soil burn severity levels in the burned areas of a wildfire become a baseline for resource specialists to monitor changes in soil hydrologic function and vegetative productivity as the burned watersheds recover.

High and moderate soil burn severity classes have evidence of severe soil heating. Across wildfire burned areas, these generally occur in a patchy distribution, with some concentrated zones of high burn severity. Soil seedbank and water infiltration characteristics are impacted in areas that have burned at high or moderate severity, especially where there were extended or multiple burning periods. Natural recovery is slower where little or no vegetative ground cover remains, and increased surface water runoff will result in increased soil erosion at these sites. The low to very low soil burn severity areas still have good surface soil structure, intact fine roots and organic matter, and should recover more quickly once revegetation begins and the soil cover is re-established.

Identified Values-at-Risk, Threats, and Emergency Conditions

Threats to the values-at-risk identified below result from the potential for increased water flows, loss of water control, increased sediment delivery, increased debris flows, the establishment of invasive weeds, falling hazard trees, and rock-fall. Emergency post-fire conditions for these identified values-at-risk were assessed by the BAER team.

Human Life and Safety – There are varying degrees of increased risk to forest visitors, cooperators, and NF workers within and adjacent to the burned areas along forest roads, Thompson Ridge ATV Trail #107, snowmobile trails, and near dispersed

recreation sites due to the increased threat of falling trees, rock-fall, avalanche potential, increased run-off, flooding, erosion, sedimentation, and debris flows.

Property: Trails – An increased risk is expected to NF trail infrastructure located on steep slopes and in high to moderate soil burn severity on Thompson Ridge ATV Trail #107 within the fire perimeter. Trails located within and downslope of moderate and high soil burn severity areas increase the risk from debris flows, increased run-off, and erosion from steep slopes during rain storm events resulting in deterioration of trail conditions. There is an increased risk to forest visitors from hazard trees along trails within the fire perimeter.

Property: Roads –All ownership roads and associated infrastructure that are downslope of high and moderate soil burned severity areas is at an increased risk from hazard trees, debris flows, water run-off, and erosion during rain storm events. These events can plug culverts, erode the roadbed, and block traffic behind the storm-damaged areas.

Natural Resources: Soil Productivity – There is an increased risk to soil productivity from increased soil erosion, debris flow potential, mud flows, and landslides within the fire perimeter that burned at moderate to high soil burn severity due to the unique type of soils that burned in those areas such as glacial till covered with Mount St. Helen's ash. Disturbance of the new deposited litter on the burned soils will result in additional soil erosions. Additional intrusions such as OHV use and other disturbances need to be eliminated until natural recovery occurs.

Natural Resources: Ecosystem Stability and Vegetation Recovery – A low risk is expected to native and naturalized plant communities along roads, hand lines and dozer lines used during fire suppression activities since these use areas are fairly small and isolated across the burned area. The slower natural regeneration following moderate to high soil burn severity also leaves some burned areas at risk. Natural recovery is recommended.

Cultural Resources – No critical cultural resources were identified to be at an increased risk of post-fire changed conditions.

Emergency Stabilization Treatments

Treatment Objectives

The BAER assessment team's emergency stabilization objectives for the Renner burned area are to:

- Implement temporary trail closures to reduce threats to human life and safety of forest visitors using motorized OHV trail and install trail stabilization treatments to protect the trail infrastructure downslope of high and moderate soil burn severity areas from debris flows, increased runoff, and erosion from steep slopes during rain storm events.
- Reduce threats to human life and safety by installing warning signs and conducting road storm patrols.

In addition to on-Forest efforts to reduce the threats to National Forest values and resources, the BAER team and the Forest will warn users of FS roads and trails of hazards present in the burned area, and communicate and coordinate with other agencies such as the National Resources Conservation Service (NRCS) to assist private entities and communities including private residents, domestic water suppliers and public utilities to achieve post-fire recovery and protection objectives.

The following post-fire emergency stabilizations measures and treatments have been approved:

- Stabilize the OHV trail to prevent damage resulting from soil erosion and storm water run-off, and other public safety hazards, and improve the safety of forest visitors and NF workers.
- Consider portions of trails for temporary closures to the public as warranted until properly stabilized.
- Mitigate imminent hazard trees at BAER treatment locations to provide for worker safety.
- Install burned area warning signs on trails and roads to caution forest visitors entering and recreating within the burned area.
- Consider temporary forest closures to protect public users of NF lands.
- Continue to communicate risks to the public, community groups, and cooperating agencies.
- Continue to work and coordinate with interagency cooperators, partners, and affected parties and stakeholders.
- Assist cooperators, including local, state, and federal agencies with the interpretation of BAER assessment findings to identify potential post-fire impacts to communities and other private lands.

SPECIAL NOTE: *Everyone near and downstream from the **Renner Fire** burned area should remain alert and stay updated on weather conditions that may result in heavy rains over the burn scar. Flash flooding may occur quickly during heavy rain events. Current weather and emergency notifications can be found at the **National Weather Service, Spokane Office** (www.wrh.noaa.gov/otx/) website.*

Colville NF Post-Fire BAER Assessment & Implementation information is available at http://inciweb.nwcg.gov/incident/4646/.