Eldorado National Forest

Burned Area Emergency Response (BAER)

King Post-Fire BAER
September-October 2014

Three Phases of Wildfire Rehab

There are three phases of rehabilitation following wildfires on federal lands:

- Fire Suppression Repair

- Emergency Stabilization-Burned Area Emergency Response (BAER)

- Long-Term Recovery and Restoration

What is BAER?

A program to identify <u>imminent</u> post-wildfire threats to human life and safety, property and critical natural or cultural resources on federal land and take immediate actions to <u>manage unacceptable risks</u>.

What BAER is <u>not</u>:

- Fire suppression damage repair

- Repair of fire damages

- Long-term fire recovery

BAER Assessment Team

BAER teams are staffed by specially trained professionals who rapidly assess the burned area and prescribe emergency stabilization treatments:

- **Hydrologists**
- **Soil scientists**
- **Engineers**
- **Geologists**
- **Biologists (wildlife/aquatic)**
- **Botanists**
- **Archeologists**
- **Geographic Information Specialists (GIS)**
- **Rec & Trails Specialists**

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Agency/Stakeholder Coordination

BAER assessment and implementation are often cooperative efforts with federal, state and local agencies – especially important in urban interface situations:

- Natural Resources Conservation Service (NRCS)
- El Dorado County
- U.S. Fish and Wildlife Service
- State Water Quality Control Boards
- National Weather Service (NWS)
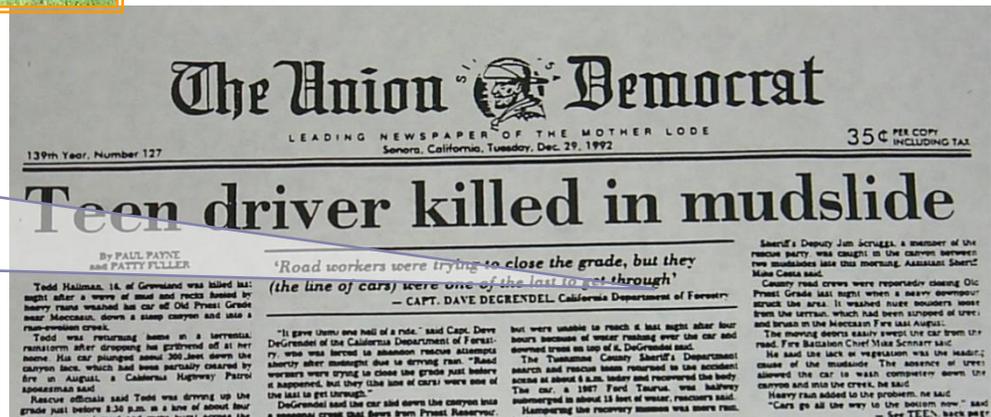- United States Geological Service (USGS)

Why is BAER Necessary?

Skalkaho Complex Fire
Bitterroot NF

7. 18. 2001

Manage Unacceptable Post-Fire Risks to Human Life or Safety

"…because the whole Priest Grade area was burned this summer…the danger level of storm and rescue work intensified."

Moccasin Fire
BLM, Tuolumne Co., CA

The Union Democrat

LEADING NEWSPAPER OF THE MOTHER LODE
Sonora, California, Tuesday, Dec. 29, 1992

139th Year, Number 127   35¢ PER COPY INCLUDING TAX

Teen driver killed in mudslide

BY PAUL PAYNE
and PATTY FULLER

'Road workers were trying to close the grade, but they (the line of cars) were one of the last to get through'
— CAPT. DAVE DEGRENDEL, California Department of Forestry

Why is BAER Necessary?

Manage Unacceptable Post-Fire Risks to Property

- **Roads/Trails**
- **Structures**
- **Facilities**

Rubicon River

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Road Drainage

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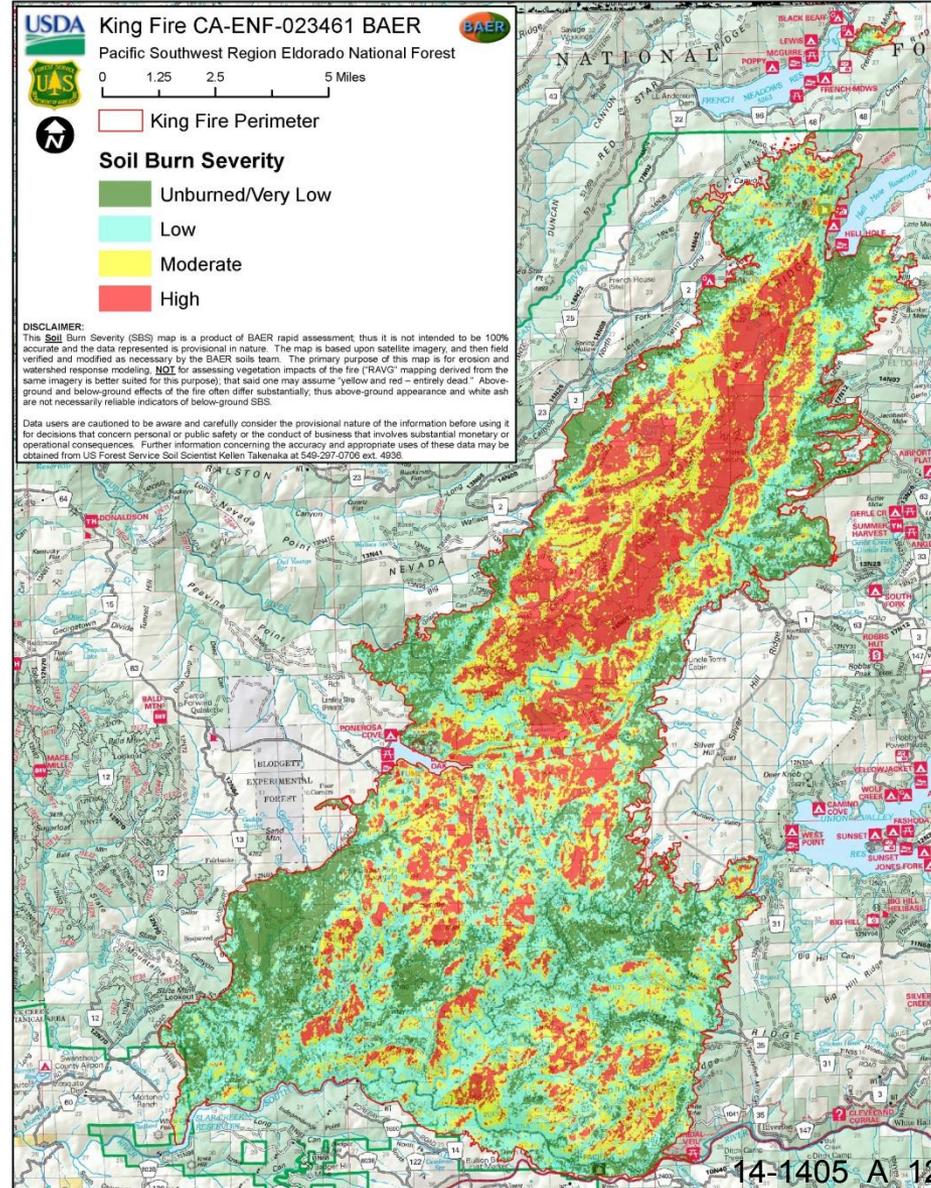# Mosaic Burn

King Fire
Soil Burn Severity

Unburned/Very Low: 22,404 acres (23%)

Low: 30,527 acres (31%)

Moderate: 22,699 acres (23%)

High: 22,087 (23%)

Total Acres Burned: 97,717

King Fire CA-ENF-023461 BAER
Pacific Southwest Region Eldorado National Forest

0   1.25   2.5   5 Miles

King Fire Perimeter

Soil Burn Severity

Unburned/Very Low

Low

Moderate

High

DISCLAIMER:
This Soil Burn Severity (SBS) map is a product of BAER rapid assessment; thus it is not intended to be 100% accurate and the data represented is provisional in nature. The map is based upon satellite imagery, and then field verified and modified as necessary by the BAER soils team. The primary purpose of this map is for erosion and watershed response modeling, NOT for assessing vegetation impacts of the fire ("RAVG" mapping derived from the same imagery is better suited for this purpose); that said one may assume "yellow and red – entirely dead." Above-ground and below-ground effects of the fire often differ substantially; thus above-ground appearance and white ash are not necessarily reliable indicators of below-ground SBS.

Data users are cautioned to be aware and carefully consider the provisional nature of the information before using it for decisions that concern personal or public safety or the conduct of business that involves substantial monetary or operational consequences. Further information concerning the accuracy and appropriate uses of these data may be obtained from US Forest Service Soil Scientist Kellen Takenaka at 549-297-0706 ext. 4936.

Emergency Stabilization Actions

Propsed Land Treatments

- Apply aerial mulching (woodshred and/or agricultural straw) on upland slopes above to reduce potential soil erosion/sediment yield and runoff flows onto moderate to steep slopes directly above critical infrastructure and natural resources

- Implement early detection and rapid response (EDRR) treatment to prevent the spread of noxious weeds into native plant communities and apply an herbicide treatment where needed

- Install log erosion barriers along contour of 50-60% slopes

Emergency Stabilization Actions

Propsed Channel Treatments

- Remove large woody debris from dry and running creeks, stream, bridge crossings
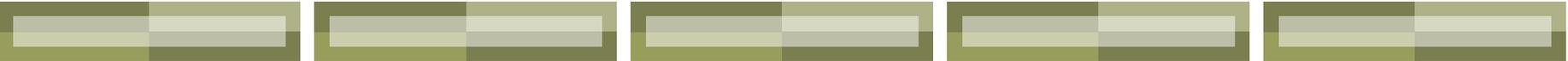
Emergency Stabilization Actions

Propsed Road Treatments

- Clean-out culvert inlet basins, roadside ditches, roadside berms, cut-bank sloughs

- Install riprap at culvert/lead-off outlets

- Install "Falling Rock" and "Warning Debris Flow" signs

- Install road closure gates

- Install, and/or replace inlets, lids, rolling dips, culverts, tees, risers, grates, trash racks, K-rails

- Plan and implement storm patrol, inspection and response

Emergency Stabilization Actions

Proposed Protection/Safety Treatments

- Install warning signs and gates along Forest Service trails, road intersections and recreation areas and close roads in key locations to protect the traveling public during potential flood events, or from the danger of hazard trees and rocks falling from burned slopes

- Remove hazard trees along roads and trails, and within the recreation sites

Emergency Stabilization Actions

Proposed Protection/Safety Treatments (cont'd)

- Remove hazardous trees and rocks/soil from roads within the fire area

- Road and trail closures before and after predicted rain events

- Continue burn area access closures for safety and protection measures

Emergency Stabilization Actions

Monitoring

- Monitor emergency stabilization treatment effectiveness