

Burn Area Recovery Task Force (BARTF) Report San Bernardino County Slide Fire



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Burn Area Recovery Task Force Assessment (BARTF) San Bernardino County Slide Fire

Executive Summary

The Slide Fire perimeter encompasses 12,759 acres in the mountains of San Bernardino County. Property owners within the fire perimeter include the USDA Forest Service (USFS), San Bernardino County (County), and private landowners. The Burn Area Emergency Response (BAER) report identifies values at risk and emergency determinations. As a result of the Slide Fire, the BAER Assessment team identified threats to public safety. An emergency determination was made based on increased potential for sediment and debris laden flooding, debris flows, rock fall, and hazard trees within the Slide Fire Area. A summary of the proposed treatments by California Department of Transportation (Caltrans), San Bernardino County, and USFS include:

- Denuded slopes within the burn area present a direct threat to several communities and associated infrastructure from mudflows, flooding, washouts or injury from hazardous trees. The greatest risks to lives and property are in the Running Springs, Green Valley, and Frenalda communities;
- Infrastructure including roads and bridges maintained by Caltrans (State Highway 330 and 18) and the County, are at high risk for debris flow and flooding, or washing out;
- Removal of debris, cleaning culverts, hazardous trees, and erosion control measures may reduce the risk to public and private property;
- USFS has several facilities and infrastructure within the fire perimeter at risk from flooding, debris flow, and/or washouts;
- Funding for debris removal and erosion control measures may fall under the purview of the NRCS; and
- Environmental permits may be required for many of the proposed projects identified in subsequent reports. Many of these proposed projects can be completed under emergency conditions or under the waiver process identified in the State Executive Order.

Purpose

This BARTF report briefly identifies proposed emergency protective measures associated with the Slide Fire. The Slide Fire is one of numerous Southern California wildfires included in the Presidential Disaster Declaration DR-1731-CA. The purpose of this report is to address post-fire flooding, erosion, and debris flow hazards within and downstream of the fire perimeter. This report will also identify gaps in funding, potential funding sources for all projects, and potential conflicts that may slow or interfere with the proposed emergency protective measures.

The information was gathered for this report by the BAER report, Post-Fire Hazard Awareness Maps, and meetings with various local, state, and federal officials.

Introduction

The Slide Fire perimeter encompasses 12,759 acres and burned approximately 250 homes in the unincorporated San Bernardino County mountain communities of Running Springs, Frebalda, and Green Valley Lake. Because of the topography, the mountain communities are at high risk for sediment and debris flows due to storm runoff. The Flood and Transportation District of San Bernardino County prepared post-fire drainage studies and based upon the fire history you can expect the Slide Fire would generate between 52,000 cubic yards (2-year storm event) and 1.2 million cubic yards (100-year storm event) of material in this storm season.

No sensitive species were identified at risk within the fire perimeter. However, environmental permits may be required for many of the proposed projects identified in the BARTF report. Many of these proposed projects can be completed under emergency conditions or under the waiver process identified in the State Executive Order (S-13-07). Projects that do not fall under these classifications would need to follow the regular permit process. See attached Appendix A – Environmental Permitting Requirements for an explanation of the required permits and the waiver process.

This report summarizes the major issues identified by the BAER reports in addition to issues identified from other sources. The report is organized by the Hydrologic Unit Code (HUC-6) watersheds. Three Hydrologic Unit Codes (HUC-6) watersheds, Holcomb Creek Watershed, Plunge Creek, and Upper Deep Creek were impacted by the fire. Threats to life, safety, and infrastructure will be discussed under each HUC-6 watershed identified within the fire perimeter and areas covered in the Post-Fire Hazard Awareness Maps. Proposed emergency protective measures identified will be evaluated along with any issues that may impede the progress of these measures. Potential funding sources will be discussed and gaps in funding will be identified.

Holcomb Creek

Background

There is a high risk from sediment and debris laden flooding, debris flows, rock fall, and hazard trees in Running Springs. Threats exist to public safety on State Highway 330 and 18, county roads and local roads within and downstream from the burned area. There is a high risk of potential contamination of the municipal water supply from hazardous materials and debris in communities within burned areas and downstream of burned residences. There is a high risk from potential damage to Southern California Edison Company's power lines from hazard trees.

Analysis

- High risk to properties in the communities and public safety at various locations in Running Springs from potential flooding, hazard trees and debris flows.
- High risk to public safety on State Highway 330 and 18, county roads, USFS roads and local roads within and downstream from the burned area.
- Potential for sediment and debris laden flooding to impact residences in burned area.

Potential Emergency Protective Measures

- Erosion control is recommended in down slope of burned structures, placing debris retention structures.
- Notification to wetland permitting agencies for in stream work should occur prior to conducting emergency work for all projects within streams.

Projects Identified by San Bernardino County Public Works

- Remove hazardous trees from various locations in Running Springs.
- Place erosion control measures at various locations in Running Springs.
- Replace damaged road signage at various locations in Running Springs.
- Remove debris from various locations in Running Springs.

Plunge Creek

Background

There is a high risk from the potential sediment and debris laden flooding, debris flows, rock fall, and hazard trees within the burned area. There is a high risk to public safety on State Highway 330 and 18, county roads and local roads within and downstream from the burned area. Large volumes of debris are located on slopes and above drainages within Valley Creek and Running Springs residential areas. The debris from homes consumed by the fire pose a threat to water quality, aquatic and terrestrial resources. A high risk occurs from potential damage to Southern California Edison Company's electrical transmission and distribution lines from falling burned or dead tree.

Analysis

- Extreme risk to public safety at various locations in Running Springs from potential flooding, hazardous trees, and debris flows.
- An increased risk to public safety on State Highway 330 and 18, County roads, USFS roads and local roads within and downstream from the burned area.
- Threat to electrical transmission and distribution lines from falling hazardous trees.

Potential Emergency Protective Measures

- Erosion control should be installed down slope of burned structures.
- Notification to wetland permitting agencies for in-stream work should occur prior to conducting emergency work for all projects within streams.

Projects Identified by San Bernardino County Public Works

- Remove debris from culvert at Greenspot Road.
- Remove hazardous trees from various locations in Running Springs.
- Place erosion control measures at various locations in Running Springs.
- Replace damaged road signage at various locations in Running Springs.
- Remove debris from various locations in Running Springs.
- Install jute netting on slopes at Nob Hill water tank to protect from flooding and debris flow and loss of slope stability.

Projects Identified by USFS

- Remove rockslide from milepost 40.38 on Caltrans State Highway 18 by interagency coordination.
- Remove plugging debris from culvert and sediment on the roadway from various turns near milepost 13 on State Highway 18 by interagency coordination.
- Place erosion control measures and prevent debris flow and flooding on Frenalda Road Area on Caltrans State Highway 330 by interagency coordination.
- Protect East Highland area from potential debris flow and flooding.
- Install warning signs for potential flooding near Plunge Creek Crossing 1N09 and Frenalda Creek Crossing 1N09.

Projects Identified by NRCS

- Install K-rails, and sand bags to protect Running Spring from potential debris laden flow and contamination.

Projects Identified by Caltrans District 8

- Install debris racks to protect public on Route 18 and 38 in or near camp Angelus 0.3 miles north of Valley of the Falls Drive, 0.4 miles south of Spruce Ave on Highway 38.
- Remove debris and replace MBGR and warning signs on Highway 18 and 330 for rock and debris slide.
- Remove hazardous trees from Highway 18 and 330.

Upper Deep Creek

Background

There is a high risk of the potential sediment and debris laden flooding, debris flows, rock fall, and hazard trees within the burned area. There is a high risk to public safety on State Highway 330 and 18, county roads and local roads within and downstream of the burned area. Large volumes of burned residential remains are located on slopes and drainages tributary to Deep Creek Valley Creek residential areas. The debris from homes consumed by the fire pose a threat to water quality, aquatic and terrestrial resources. A high risk occurs from potential damage to Southern California Edison Company's electrical transmission and distribution lines from falling burned or dead tree.

Analysis

- Increased risk to public safety on State Highway 330 and 18, County roads, USFS roads and local roads within and downstream from the burned area.
- Ash and debris from residential structures consumed by wild fires may contain concentrated amounts of heavy metals, including asbestos. The remains of residential structures pose a threat to water quality, aquatic, and terrestrial wildlife to the Lake and downstream of the burned homes.
- Potential off-site migration of burned structure debris into adjacent drainages to Deep Creek.
- Potential sediment and debris laden flooding to impact residences in burned area. There is a very high risk in the community of Green Valley Lake, in the southeast corner of the community.
- High risk in drainage within Green Valley Campground from sediment and debris laden flood flow.
- Threats to power distribution systems from trees that could fall across power lines.

Potential Emergency Protective Measures

- Erosion control should be done down slope of burned structures, placing debris retention structures.
- Notification to wetland permitting agencies for in stream work should occur prior to conducting emergency work for all projects within streams.

Projects Identified by San Bernardino County Public Works

- Remove debris from culvert at Greenspot Road.
- Place erosion control measures at various locations in Running Springs.
- Replace damaged road signage at various locations in Running Springs.
- Remove debris from various locations in Running Springs.

Projects identified by USFS

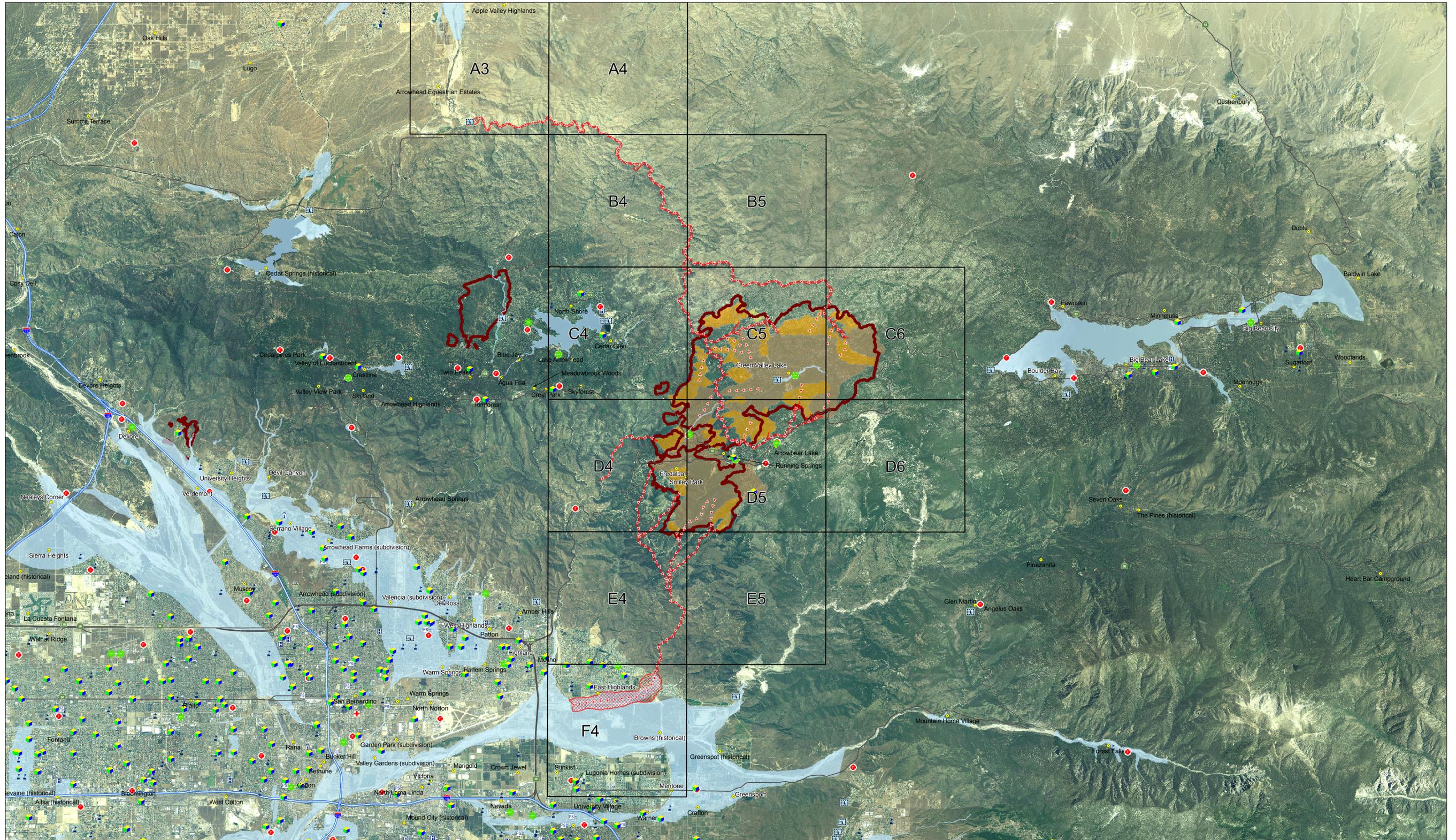
- Hill slope and channels in Green Valley Lake area, including Green Valley Lake Campground should be protected from potential flooding.
- Set up seasonal closures of permitted areas for Rim Valley Nordic Ski Area because of the potential debris flows across 2N13 permitted area.
- By interagency coordination wells in Green Valley Lake must be protected from the potential contamination by the damaged well box.
- Hill slope and channels in Green Valley Lake Road and Terminus of Green Valley Lane should be protected from potential flooding.
- Provide hill-slope and channel treatment to protect Green Valley Lake Road from potential flooding.
- Protect Fisherman’s Campground from potential debris flow and flooding.

Table 1 – Possible Funding Sources

Yes	No	Funding Sources
X		FEMA/OES Public Assistance Emergency Work (Cat A & B)
	X	FEMA/OES Public Assistance Permanent Work (Cat C-G)
	X	406 Hazard Mitigation
	X	404 Hazard Mitigation
X		Natural Resource Conservation Service (NRCS)
	X	U.S. Fish & Wildlife Service
	X	U.S. Army Corps of Engineers
	X	National Marine Fisheries Service (NMFS)
X		California Disaster Assistance Act
X		Federal Highway Administration (FHWA)
	X	Other funding

Appendices

- Appendix A – Environmental Permitting Requirements
- Appendix B – Archaeological
- Appendix C – Descriptions of State and Federal Program Funding
- Appendix E – Preliminary Suggested Projects



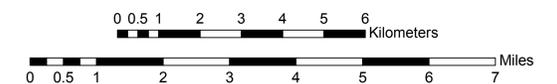
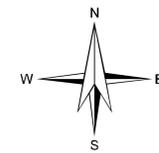
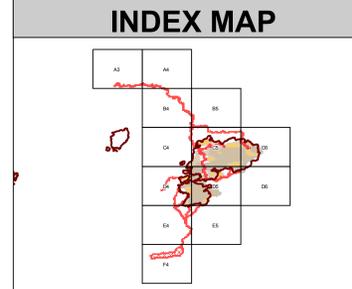
LEGEND

- Populated Places
- Bus Stations
- Colleges/Universities
- Convention Centers
- Dams
- Daycare Facilities
- EMS
- Fire Stations
- Hospitals
- Local Police
- FEMA Flood Hazard Areas
- Fire Perimeters
- FEMA Potential Debris Flow Areas
- Slide Debris Flow Lines
- USGS Potential Debris Volume**
- 0 to 1,000 cubic meters
- 1,001 to 10,000 cubic meters
- 10,001 to 100,000 cubic meters

LOCATION MAP



INDEX MAP



Department of Homeland Security
Federal Emergency Management Agency
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MAPS FOR ADVISORY PURPOSES ONLY. NOT FOR INSURANCE RATING PURPOSES. For insurance rating purposes, please refer to the Flood Insurance Rate Map currently in effect. Debris flow information is PRELIMINARY. Debris flow volumes calculated in response to a 10 year recurrence based on 3 hour duration storm producing 3.5 inches of rainfall. Volumes based on a model currently being tested. Debris flow behavior is highly unpredictable and this map shows the best available information at the time of printing. Populations estimated using 2000 Census data and are calculated for those areas only within the grid index.