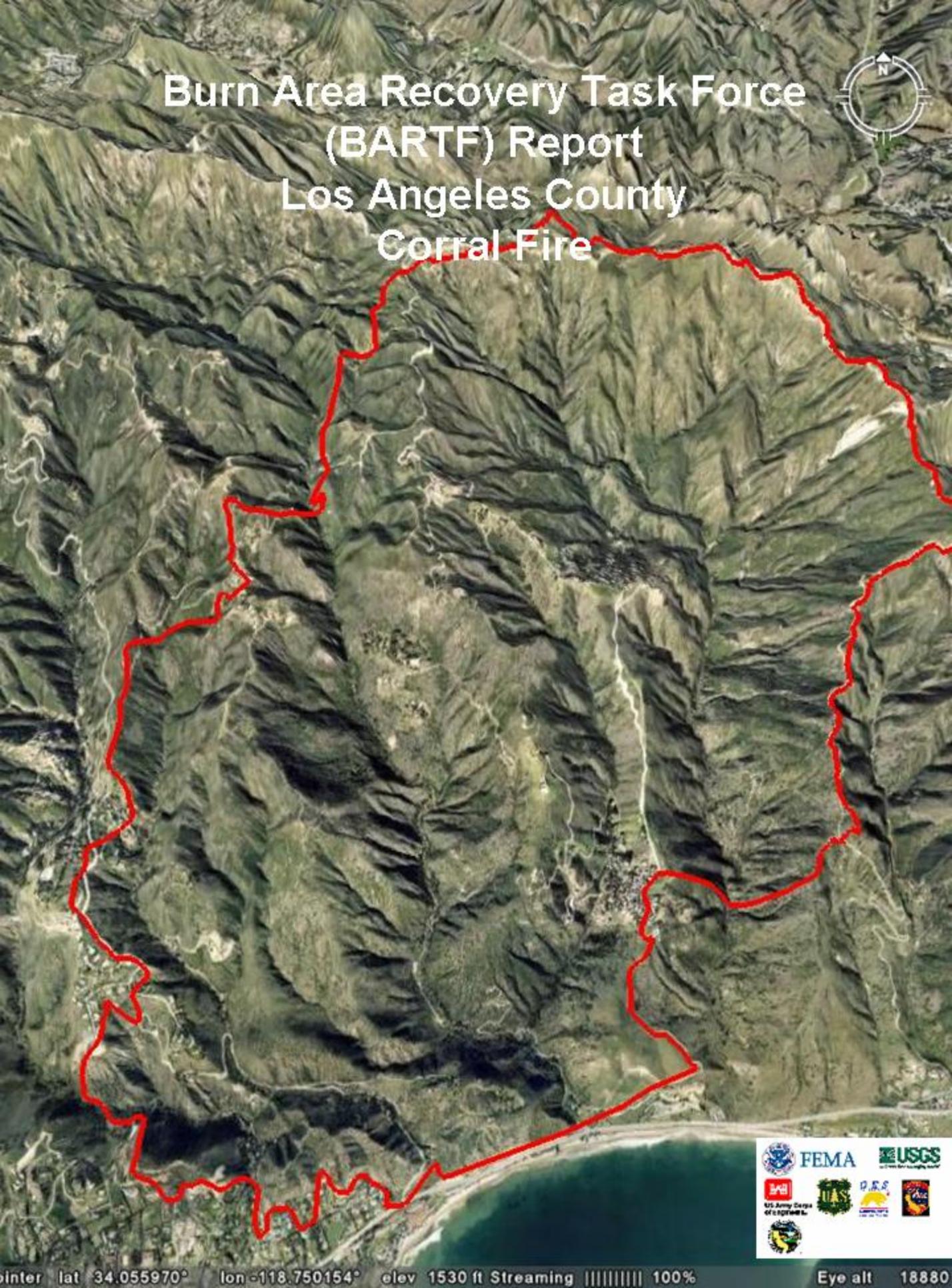


Burn Area Recovery Task Force (BARTF) Report Los Angeles County Corral Fire



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Executive Summary

The Corral Fire burned approximately 4,700 acres within the Malibu Hills and encompassed portions of the city of Malibu, as well as unincorporated Los Angeles County lands, State lands, and National Park lands: Santa Monica Mountains National Recreation Area. The significant issues identified within this report are summarized as follows:

- The denuded slopes within the burn area represent a direct threat from mud flows to the communities of Malibu Bowl (100 homes), Malibu Hills (85 homes), and Malibu Vista (110 homes).
- At the present time this area does not have an early warning system or a reverse-911 system in place.
- A direct threat from post-fire debris flows and flooding occur along the coast at the outflows of Latigo Canyon Creek (6 homes and a condo complex), Solstice Canyon Creek (8 homes), and Corral Creek (3 Commercial Structures).
- Increased threat from large-scale landslides may present a threat to approximately 15 homes on a mapped landslide near the end of Barrymore Drive.
- A group of homes located at the southern end of Escondido Canyon, directly below the burned hillsides, may be at increased risk for mudflows (25 homes).
- Removal of debris, cleaning of culverts, and erosion control measures may reduce the risk to the public and to private property.

Purpose

This BARTF report presents a brief description and assessment of the Corral Fire, one of numerous Southern California wildfires included in the Presidential Disaster Declaration DR-1731-CA. This report is intended to facilitate the effective use of available resources to address threats to public safety, public and private property, and infrastructure that may arise during the 2007 – 2008 winter rainy season due to denuded slopes, and the affiliated potential for flooding and debris flows.

The information was gathered for this report by state and federal Burned Area Emergency Response (BAER) report, Post-Fire Hazard Awareness Maps, and meetings with various local, state, and federal officials.

Introduction

The Corral Fire burned approximately 4,700 acres on the south flank of the Santa Monica Mountains. The major canyons (listed below) drain to the south and transmit storm water flows under Pacific Coast Highway (PCH) into the ocean. The affected watersheds include portions of the Escondido Canyon, Latigo Canyon, Solstice Canyon, and Corral Canyon watersheds. Burn intensities ranged from low to severe with a majority of the area characterized as moderate to high. Endangered species identified within the vicinity of the burn area include three plant species, Malibu baccharis (*Baccharis Malibuensis*), Lyon's pentachaeta (*Pentachaeta lyonii*), and Santa susanna tarplant (*Hemizonia minthorn*). Many of these proposed projects can be completed under emergency conditions or under the waiver process identified in State Executive Order (S-13-07). Projects that do not fall under these classifications would need to follow the regular permit process (see Environmental Permitting Requirements Appendix).

Values at risk include approximately 300 homes within the upland residential communities of Malibu Bowl, Malibu Hills, and Malibu Vista, which may have an increased risk from mudslides and erosion. An additional group of homes near the end of Escondido Canyon may also have an increased risk for mudflows. Numerous residences at risk from flooding and mudflow hazards are located near the canyon bottoms along Solstice and Latigo Canyons. The culvert crossing at PCH and the Latigo Canyon drainage has been identified at risk due to potential increased flood/debris flow risk. The Canyon outwash areas at the outlets to Latigo, Solstice and Corral Canyons present a potential increased flooding/debris flow risk to numerous homes and commercial buildings.

For any cultural resource concerns refer to the Archaeological Appendix.

The identified risks and related post-fire issues have been identified and listed according to watershed boundaries as follows:

Latigo Canyon

Background

The fire burned a large portion of this watershed which includes city of Malibu lands to the south, and unincorporated LA County lands on the north.

Analysis

The burn area encompasses a large portion of relatively undeveloped land with scattered rural residences, as well as a community of homes located within the upland portions of the canyons. The potential for increased risk for mudflows exists in the homes located

within the upland areas. Homes located in the lower portions of the canyons may have an increased risk for flooding and debris flows.

- 100 homes and related infrastructure in the upland community of Malibu Vista appear to be at an increased risk for mudflows.
- Up to 10 homes near the bottom of Latigo Canyon have an increased risk for flooding and debris flows.
- The culvert crossing at PCH and Latigo Canyon is currently damaged and may present an increased risk for flooding and debris flows across PCH.
- Up to 56 beachfront residences located near the outlet of Latigo Canyon may be at a higher risk for flooding and debris flows.

Potential Protective Measures

- Install an early warning system to alert residents of impending high flows.
- Implement erosion control measures, such as jute mesh, straw bales, and/or hydromulching on the slopes adjacent to homes in the upper portions of the canyon.
- Evaluate the feasibility of installing temporary diversion structures to reduce the threat from debris flows.
- Remove silt from catchment basins, drop inlets, storm drains and culverts.

Solstice Canyon

Background

The burn area includes the middle and lower portions of this watershed and includes city of Malibu lands on the south, as well as unincorporated County lands, and the Santa Monica Mountains National Recreation Area to the north.

Analysis

The fire burned primarily within the lower portion of this watershed which contains a large cluster of homes within the community of Malibu Hills, as well as scattered homes located primarily within the lower portions of the canyons. The burn area presents an increased risk for mudflows, debris flows, and flooding to numerous homes located throughout the canyon areas. The primary access for homes along Corral Canyon Road is temporarily reduced to one lane due to an ongoing construction project. This limits emergency access, as well as evacuation capability for canyon residents.

- Up to 85 homes and related infrastructure in the upland community of Malibu Hills appear to be at an increased risk for mudflows.
- Up to 15 homes are located on a large landslide complex located near the end of Barrymore Drive.

- The culvert crossing at Corral Canyon Road and Solstice Creek is currently undergoing construction. This has reduced the road to one lane and restricts evacuation efforts and emergency access to numerous homes higher up in the canyon.
- Should the culvert crossing at PCH and Solstice Creek become clogged from debris flows, it will increase the risk of flooding and debris flows damaging a gas station and eight ocean front homes will occur.

Potential Protective Measures

- Install an early warning system to alert residents of impending high flows.
- Evaluate the feasibility of installing temporary diversion structures to reduce the threat from debris flows.
- Evaluate how much additional advance notice is necessary to give residents time to safely evacuate through the construction zone at the outlet of the canyon (at PCH and Corral Canyon Rd). Approximately 300 homes use this road as their sole access/evacuation route. There may also be homes in side canyons within Latigo Canyon Watershed and Corral Canyon Watershed that may also be trapped behind this choke point if a flood/debris flow event occurs before the construction is completed.
- Remove silt from catchment basins, drop inlets, storm drains and culverts.

Corral Canyon

Background

The fire burned within the northern half of the Corral Canyon Watershed and included State lands on the south, as well as unincorporated County lands, State Park lands, and National Park lands (Santa Monica Mountains National Recreation Area) to the north.

Analysis

The fire burned primarily within the upper portion of this watershed which contains a large cluster of homes within the community of Malibu Bowl. Scattered homes are also located along Corral Canyon Road. This road is the primary travel route and passes through both Corral Canyon and Solstice Canyon watersheds. An increased risk for mudflows, debris flows, and flooding, may exist for the homes located near the burned area. An additional increased risk for flooding and debris flow may affect a group of commercial structures adjacent to the Corral Canyon culvert crossing at PCH. The primary access and evacuation route for homes within this area is currently reduced to one lane along Corral Canyon Road due to a construction project. This is the same choke point described under Solstice Canyon. The two watersheds merge at the same outlet, which is where the construction project is underway.

- Up to 100 homes and related infrastructure in the upland community of Malibu Bowl appear to be at an increased risk for mudflows.
- Should the culvert crossing at PCH and Corral Canyon become clogged from debris flows, it will increase the risk of flooding and debris flow damage to three commercial structures.

Potential Protective Measures

- Install an early warning system to alert residents of impending high flows.
- Remove silt from catchment basins, drop inlets, storm drains and culverts.
- Evaluate how much additional advance notice is necessary to give residents time to safely evacuate through the construction zone at the outlet of the canyon (at PCH and Corral Canyon Rd. An estimated 100 homes may be at risk until the construction project is completed.

Escondido Canyon

Background

Within this watershed, the burn area was primarily limited to a small area in the hills above a residential development located within the city of Malibu.

The burn area presents an increased risk for mudflows to several homes located near the base of the slopes south of the burn area.

Analysis

- Approximately 25 homes below the burn area in the southern portion of Escondido Canyon may have an increased risk for mudflows.

Potential Protective Measures

- Install erosion control measures, such as jute mesh, straw bales, and/or hydromulching on the slopes adjacent to homes below the burn area.

Table 1 – Possible Funding Sources

Yes	No	Funding Source
X		Local Government
X		California Disaster Assistance Act
X		FEMA Public Assistance (PA) Program
X		Natural Resource Conservation Service (NRCS)
X		Federal Highway Works Administration (FHWA)
	X	Department of Interior (DOI)
	X	U.S. Army Corps of Engineers
	X	Other funding

Appendices

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