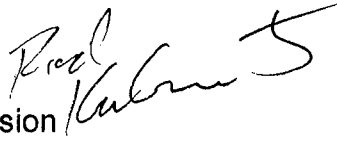


July 9, 2007

TO: Rod H. Kubomoto
Water Resources Division



FROM: Patricia Wood
Facilities Section



**ISLAND FIRE
BURNED AREA REPORT
FILE NO. 2-11.40**

The Island Fire occurred from May 10 to May 15, 2007, and burned a total of approximately 4,700 acres. The fire was generally contained to the area northwest of the City of Avalon and east of Middle Canyon on the island of Santa Catalina. The island is located outside the boundaries of the Los Angeles County Flood Control District.

Recommendations

1. Authorize us, by copy of this report, to provide confirmation to Building and Safety Division (BSD) of the potential sediment impacts to all buildings and structures within their jurisdiction within/below the burned area. It is recommended that BSD monitor these facilities and/or structures for postfire sediment impacts after major storms and determine building habitability in accordance with established County criteria. The monitoring should continue for the next four to five years until the watershed has significantly recovered from the burn.
2. Authorize us to send copies of this report to the following agencies apprising them of the potential impacts of the burn:
 - City of Avalon
 - California Assembly Member Betty Karnette (54th District)
 - California State Department of Forestry and Fire Protection
 - California State Senator Alan Lowenthal (27th District)
 - Catalina Island Conservancy
 - Los Angeles County Fire Department
 - Los Angeles County Sheriff
 - Natural Resources Conservation Service (NRCS)
 - Santa Catalina Island Company
 - Southern California Edison Company
 - Supervisor Don Knabe's Office
 - U.S. Congressman Dana Rohrabacher (46th District)

Attachments

- A. [Burned Area Map](#)
- B. [Description of Burn and Potential Sediment Impact](#)
- C. [Mudflow Phase Maps:](#)
 - [Attachment C-1, Avalon Phase 1 Map](#)
 - [Attachment C-2, Avalon Phase 2 Map](#)
 - [Attachment C-3, Avalon Phase 3 Map](#)
 - [Attachment C-4, Coastal Phase1 Map](#)
 - [Attachment C-5, Coastal Phase 2 Map](#)
 - [Attachment C-6, Coastal Phase 3 Map](#)
- D. [Temporary Debris Flow Mitigation Measures](#)
- E. [List of residents/locations where mudflow engineering advice written.](#)

Summary of Potential Sediment Impact

The Island Fire, which started on May 10, 2007, burned approximately 4,700 acres on the island of Santa Catalina within the County of Los Angeles. The fire was generally contained to the area northwest of Avalon and east of Middle Canyon with watersheds that flow into the City of Avalon, and the unincorporated communities of Gallagher Beach, Toyon Bay, and Whites Landing. Santa Catalina Island is located outside the boundaries of the Los Angeles County Flood Control District, so there are no Debris Producing Area (DPA) Zones assigned for the island. A DPA Zone 6 used for the Palos Verdes watershed is thus being used in this report's debris production calculations as the closest approximation of the debris potential from Santa Catalina Island's burned watersheds.

During storms, debris-laden flows from the burned canyons could potentially impact structures and dwellings located at the mouth of the canyons, including those at the bottom of Avalon Canyon in the City of Avalon. It is not the intent of this report to determine the jurisdictional responsibilities of different stakeholders involved, but rather to determine the magnitude of poststorm debris flow potential the region can reasonably anticipate during the next several years while the region's watersheds recover and recommend basic emergency mudflow protection measures. Further engineering

studies are recommended for permanent protection measures. The information contained in this report is based on limited field inspection and basic engineering calculations. The information should be used to help lessen the potential for damage to property and not for design purposes.

Impacts in City of Avalon

During storms, the magnitude of debris-laden flows from burned canyons above and within the City of Avalon may exceed the capacities of the City's drainage systems. This may result in flooding and/or mudflow and sediment deposition on roadways and nearby dwellings along the channel systems. Baker Dam, a facility owned by Southern California Edison and located in the Subarea 4 watershed above the City's downtown area, is anticipated to experience significant sediment flow during storms. Since the reservoir behind the dam is currently almost filled to its capacity, spillway overflow at the dam could occur and result in sediment deposition in the channel downstream. The channel may thus overflow potentially causing flooding and/or mudflow impacts to the buildings along the channel. The golf course, also located in the City above the City's downtown area, could also be subject to significant sediment flow and deposition from Subareas 1 through 3. Additionally, sediment flow may reach the City's downtown area and exceed the capacity of the area's drainage channel, causing potential inundation of the City's streets and flood damage to buildings.

Impacts in Unincorporated Areas

In Gallagher Canyon-Gallagher Beach (Campus by the Sea, Subarea 7 watershed) and in Swains Canyon-Toyon Bay (Catalina Island Marine Institute [CIMI], Subarea 8 watershed), the magnitude of sediment flow during storms may exceed the capacities of the channels that run through the camp sites and result in inundation of the sites and flood damage to the buildings.

BSD investigated "White Cove Canyon"-White Cove (Subarea 9) and determined the area to have a relatively insignificant potential for postfire mudflow impacts. The canyon bottom is relatively wide and flat. A basin with an earthen berm dam structure exists above the campsite area and appears to have considerable sediment storage capacity.

Details of potential sediment impacts are provided in Attachment B.

Mudflow Phase Maps

The phase maps for the fire are found in Attachment C. These maps are prepared when potential mudflows pose a significant threat to homes, roadways, drainage facilities, or other public infrastructure. These maps were given to emergency response agencies, and mudflow forecast phase level alerts will be given to those agencies prior to each significant storm event throughout the storm season. The maps can be accessed through the Internet at <http://www.ladpw.org/WRD/FIRE/>. The phase maps identify the critical locations and magnitudes of potential mudflow impacts below the burned areas.

Summary of Mitigation Measures

The roads and all drainage facilities below the burned areas should be monitored during storms and cleaned out as necessary. In unincorporated areas, BSD will after major storm events inspect facilities and/or structures for postfire sediment impacts and determine building habitability in accordance with established County criteria.

A number of measures are recommended to mitigate potentially hazardous postfire debris flows. These measures include the construction of three (3) emergency rail and timber structures in the City of Avalon (in Subareas 3 and 4 [the "Bird Park Canyon" and "Bakers Canyon" areas, respectively]); the cleanout of the reservoir behind Baker Dam located in the City of Avalon; the construction of four (4) emergency rail and timber structures in the affected unincorporated areas (in Subareas 7 and 8 [Gallagher Canyon-Gallagher Beach and Swains Canyon-Toyon Bay, respectively]); placement of K-rails on top of the existing earthen berm at the unincorporated community of Gallagher Canyon-Gallagher Beach (Subarea 7); the clearing and poststorm monitoring of all existing drainage facilities in the City and unincorporated areas. Details of these and other emergency mitigation measures are contained in Attachment D. Attachment E shows the list of residences/locations for which mudflow engineering advice has been written.

Coordination

Public Works' Water Resources Division (WRD) personnel met with representatives from the State Department of Forestry and Fire Protection, the City of Avalon, the Catalina Island Conservancy, and the Santa Catalina Island Company on three occasions: May 17, 2007, June 5, 2007, and June 14, 2007. At these meetings, Public

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Works provided these entities with copies of preliminary burned area maps, the associated debris quantity calculations and pamphlets entitled: "Homeowner's Guide for Mudflow Protection." At these meetings Public Works addressed stakeholder concerns and noted points of interest in the field reconnaissance conducted with these entities.

WRD contacted BSD to assess the potential impact to dwellings in the unincorporated communities of Gallagher Canyon-Gallagher Beach, Swains Canyon-Toyon Bay and "White Cove Canyon"-White Cove. A storm response plan to address the mudflow impacts on the unincorporated region of the island was developed.

From May 17, 2007, to June 14, 2007, WRD staff wrote mudflow engineering advice for 19 residences and/or locations that may be impacted by potential flooding/debris flows during storms in the Avalon area. Within the vicinity of the unincorporated communities of Gallagher Canyon-Gallagher Beach (Subarea 7) and Swains Canyon-Toyon Bay (Subarea 8), there are a total of 10 advice sheets identifying locations for which mudflow engineering advice has been written (see Attachment E). BSD investigated those two communities and also unincorporated community of "White Cove Canyon"-White Cove (Subarea 9). BSD recommends increasing the capacity of the existing basin in the Gallagher Canyon-Gallagher Beach area (Subarea 7) by installing K-rails along the top of the basin's earthen berm (see Attachment D).

Public Works will provide the City of Avalon with copies of the written postburn mudflow protection advice forms along with the postfire customer satisfaction survey forms. It is Public Works' understanding that the City wishes to distribute the advice and survey forms as it believes is needed to the corresponding affected residents/property owners in the City and handle the return posting of any surveys completed by those residents/property owners. It is also Public Works' understanding the City will distribute on the County's behalf the advice and survey forms and stamped return envelopes to the property owners of the affected unincorporated areas.

On July 5, 2007, WRD met with the NRCS to discuss the findings from the recent field trips to the burned area and the impacts of the burn in regards to opportunities for financial assistance from the NRCS for the recommended mudflow protection measures. On July 10, 2007, WRD and NRCS will conduct another field trip to the potentially impacted areas to determine specific measures' eligibility for NRCS assistance and whether any adjustments to the scope of those measures are needed.

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If you require further information on this fire, please contact Loreto Soriano at 458-6145 or William Saunders at 458-6186.

WS/LPS:yg

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Attach.

cc: Diego Cadena
Tom Hoagland
Disaster Services (Bui)
Building and Safety (Patel, Sancho, Miller)
Programs Development (Ariki)
Water Resources (Wood, Soriano, Saunders, Sankhe, Files)