

September 23, 2013

Approved *Christopher Stone*  
Christopher Stone

TO: Christopher Stone  
FROM: Patricia Wood *P.W.*  
Facilities Section  
Water Resources Division

**MADISON FIRE  
BURNED AREA REPORT**

The Madison Fire started on April 20, 2013, and was contained on April 24, 2013. The fire burned approximately 82 acres entirely within the City of Monrovia. This report focuses on potential impacts to County-owned/maintained facilities and health and safety of residences below the burned areas.

Recommendations

Authorize us to:

1. Send a copy of the burned area report to Flood Maintenance Division (FMD) as confirmation of the potential sediment impacts to Bond Issue Project Nos. 5601 and 554 and the temporary rail and timber structure and k-rails on the City of Monrovia property at the terminus of Highland Place. It is FMD's established postfire routine to monitor its drains in postfire areas for sediment inflow during storms and clean out as necessary. The monitoring will likely continue for the next four to five years until the burned area has significantly recovered from the burn.
2. Send a copy of the burned area report to the City of Monrovia to provide confirmation of the potential impacts to its roads and residents.

Attachments

- Attachment A: Burned Area Map  
Attachment B: Description of Burn and Potential Sediment Impacts  
Attachment C: Mudflow Phase Map  
Attachment D: List of Residents Offered Mudflow Engineering Advice

### Summary of Potential Sediment Impact

On April 30, 2013, Water Resources Division (WRD) staff conducted a field reconnaissance of the burned area to determine if residences and/or County-owned/maintained facilities could potentially be impacted by the flooding/debris flows during significant storm events. The Madison Fire burned approximately 82 acres entirely within the City of Monrovia and is divided into eleven subarea watersheds across a single Debris Production Area (DPA 1). During moderate to severe storm events, debris flows from the burned areas may impact:

- Inlets and catch basins of Storm Drain Bond Issue Project 5601 (Lines A and B), which drains into Project 554. Both drains are maintained by FMD.
- A privately owned and maintained debris retaining basin (current capacity of approximately 1,350 cubic yards) located north of Crescent Drive and Avocado Place.
- Storm drain inlets and catch basins downstream maintained by the City of Monrovia.
- Residential properties along streets downstream of the burned hillsides along Highland Place, McKinney Place, Hillcrest Boulevard, Heather Heights Court, Lotone Street, and Crescent Drive.

The Burned Area Map for the Madison Fire is in Attachment A and a more detailed discussion of the potential postfire mudflow impacts is in Attachment B.

### Mudflow Phase Map and Mudflow Forecasts

The Mudflow Phase Map for the Madison Fire area is found in Attachment C. The Phase Map (for Phases 1, 2, and 3) identifies the critical locations of potential mudflow hazards below the burned area for varying storm magnitudes. These maps are prepared when potential mudflow pose a severe threat to residences, roadways, flood control facilities, or other public infrastructure. WRD will post Debris and Mudflow Potential Forecasts on the Internet at the County of Los Angeles Department of Public Works (County Public Works) website for each forecasted significant storm event throughout the storm season. The approved Burned Area Report, Burned Area Map, Phase Map, and all future mudflow forecasts will be posted on the Internet at <http://www.dpw.lacounty.gov/wrd/fire>.

Coordination

*City of Monrovia*

On May 13, 2013, WRD staff attended a meeting at the City of Monrovia Department of Public Works with City Manager Laurie Lile, City Director of Public Works Ron Bow, Interim City Director Mark Carney, Fire Chief Chris Donovan, as well as other Monrovia Public Works and Fire Department personnel. The following items were discussed:

- WRD's preliminary Burned Area Map showed potential impacts to properties along Highland Place, Hillcrest Boulevard, and other residential streets. In addition WRD provided City staff with a copy of the 2008 Santa Anita Fire Burned Area Report as an example of what to expect from a postfire analysis.
- The potential postfire sediment volume indicates the need for rail and timber structure(s) on the City's property at the terminus of Highland Place. WRD staff provided information about Federal funding from the Natural Resources Conservation Service (NRCS) and that the Los Angeles County Flood Control District (administered by County Public Works) would be the local sponsor for the rail and timber project.
- WRD explained the procedure for how mudflow advice would be provided to residents. City staff informed WRD that the City will send out an informational letter to residents prior to WRD approaching the residents with offers of advice. (The City mailed the letter to residents on July 8, 2013.) WRD also provided City staff with a copy of the Mudflow Engineering advice form and packet.
- City staff agreed City forces would clear debris material from the streets as it is deposited and dispose of it. The City will provide its residents with sandbags depending on individual needs and in accordance with the number of sandbags listed on the mudflow engineering advice forms.

During a subsequent meeting, the City expressed interest in providing k-rails along the streets to protect properties by containing the debris flows within the public streets. WRD provided the City's Public Works Department with recommendations regarding potential k-rail placement.

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### *Natural Resources Conservation Service*

WRD met with staff from NRCS and the City at the City's property near the terminus of Highland Place on June 25, 2013, to discuss the potential project of constructing a rail and timber structure and installing a set of k-rails nearby to serve as temporary debris barriers while the burned hillsides recover. WRD sent the official request for assistance letter to the NRCS on June 27, 2013. County Public Works finalized plans for the debris barriers. The NRCS completed the corresponding Damage Survey Report (DSR) and WRD signed it on August 1, 2013. The NRCS determined the project was not eligible for exigency funding. We are awaiting funding from Congress. Nevertheless, County Public Works is proceeding with the construction of the debris barriers in order to provide protection to the community in time for the onset of the upcoming storm season.


### *City Permits*

The City issued a permit for constructing the Highland Place debris barriers to County Public Works on August 15, 2013. The City will issue permits to County Public Works for removing storm sediment captured by the debris barriers on an as-needed basis. The City will issue a separate permit to County Public Works for removal of the debris barriers, which is anticipated to occur in summer 2018, when the burned watershed will likely have sufficiently recovered.

### *Local Property Owners/Managers*

The City mailed its letter about the County's provision of advice to residents on July 8, 2013. Between July 18, 2013 and August 15, 2013, WRD staff went into the potentially affected neighborhoods and offered advice to fifty-five properties. WRD visited each property and discussed protective measures with those who were home. At properties where no one was present, WRD left a mudflow information packet with a contact number in clear view at their door. A list of residences visited and a summary of all advice given is provided in Attachment D.

If you have any questions regarding this report, please contact Kenneth Rickard at Extension 6154.

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cc: Flood Maintenance (Sheridan)

**ATTACHMENT A**

**BURNED AREA MAP**

# **ATTACHMENT B**

## **DESCRIPTION OF BURN AND POTENTIAL SEDIMENT IMPACTS**

## ATTACHMENT B

### Madison Fire Description of Burn and Potential Sediment Impact

Fire Name: Madison Fire  
Date of Fire: April 20 - 24, 2013  
Burned Area: 82 Acres  
Location: Above Hillcrest Boulevard in the City of Monrovia. The burned area boundary is delineated in Attachment A. (Thomas Guide Page 567 E2).

#### Vegetation Type Before Burn

Vegetation in and around the watershed subareas prior to the fire consisted of grasses, coastal sage scrub, and oak vegetation.

#### Improvements Damaged

The Monrovia Fire Department reports no structures were damaged or destroyed.

#### Fire History

The 1953 Crescent Drive Fire burned approximately 99 acres and overlapped approximately 75 percent of the 2013 Madison Fire burned area. The 1965 Crescent Drive Fire burned approximately 20 acres and approximately overlapped 17 percent of the Madison Fire burned area. The 1969 Big M Fire burned approximately 11 acres and overlapped 13 percent of the Madison Fire burned area.

#### Potential Sediment Impact Below/Within the Burned Area

The burned area, which is located in Debris Producing Area (DPA) 1, is subdivided into a total of 11 subarea watersheds, all of which are in the City of Monrovia (see Attachment A). Water Resources Division (WRD) staff offered mudflow engineering advice to all properties, which may be potentially impacted by mudflows in Subareas 1 through 10.

#### Subarea 1

Subarea 1 comprises the watershed above Crescent Drive at Avocado Place. The subarea has an area of 14.9 acres and was 85 percent burned creating an adjusted debris production potential of 5,170 cubic yards (cy). During a major storm, it is anticipated that the initial 1,350 cy from the recent burned hillsides will deposit directly into a privately owned and maintained debris retaining basin. The remaining quantity is expected to overflow the basin and impact homes below. It is recommended that the property owner remove deposited sediment from the basin and associated underground

drain between storm events, and increase the capacity of the basin by raising the dam height with temporary posts and boards.

#### Subarea 2

Subarea 2 has an area of 9.8 acres. The subarea was 54 percent burned creating an adjusted debris production potential of 2,840 cy. During storms, mud and debris may flow down the canyon and deposit onto vacant land at the mouth of the burned canyon. During larger storms, the debris may eventually flow onto Crescent Drive causing sediment deposition and impact homes along the south side of the street down to El Nido Avenue.

#### Subarea 3

Subarea 3 has an area of 2.1 acres. The subarea was 40 percent burned creating an adjusted debris production potential of 560 cy. During storms, mud and debris may flow down the burned canyon to a swimming pool at the rear of a residence. During larger storms, the debris may eventually flow onto a private driveway and down to the homes below.

#### Subarea 4

Subarea 4 has an area of 23.8 acres. The subarea was 73 percent burned creating an adjusted debris production potential of 7,730 cy. During storms, mud and debris may flow toward a residence at the mouth of the canyon, and eventually flow onto Highland Place and impact residences along the street. During larger rain events, debris may be deposited and impact homes along Hillcrest Boulevard and down to Mauna Loa Drive.

#### Subarea 5

Subarea 5 has an area of 2.5 acres. The subarea was 55 percent burned creating an adjusted debris production potential of 740 cy. During storms, mud and debris may flow toward a residential structure at the mouth of the canyon. During larger storms, debris flow may continue beyond the residence, and impact homes along Highland Place to approximately 500 feet (ft) south of West Scenic Drive. There is a storm drain, Bond Issue Project No. 5601, that is maintained by Flood Maintenance Division (FMD). It is FMD's established postfire routine to monitor its drains in postfire areas for sediment inflow during storms and clean out as necessary.

#### Subarea 6

Subarea 6 has an area of 4 acres. The subarea was 68 percent burned creating an adjusted debris production potential of 1,420 cy. During storms, mud and debris may flow toward a residential structure at the mouth of the canyon. During larger storms, debris flow may continue beyond the residence, and impact homes along Highland Place to approximately 500 ft south of West Scenic Drive. There is a storm drain, Bond



Issue Project No. 5601, that is maintained by FMD. It is FMD's established postfire routine to monitor its drains in postfire areas for sediment inflow during storms and clean out as necessary.

#### Subarea 7

Subarea 7 has an area of 43.2 acres. The subarea was 85 percent burned creating an adjusted debris production potential of 15,020 cy. During storms, mud and debris from the canyon would spread onto the flat area at the mouth of the canyon, which is located at the terminus of Highland Place. The land is owned by the City of Monrovia. At this location there is a storm drain inlet that connects to Bond Issue Project No. 5601 and is maintained by FMD. The capacity of the inlet is much less than the subarea's potential postfire debris volume. Mud and debris may thus potentially plug the inlet. Debris not captured by the inlet will flow down Highland Place to approximately 500 ft south of West Scenic Drive. Almost a dozen residences along the street may be impacted. It is recommended that County Public Works install a rail and timber structure and a set of k-rails on the City of Monrovia's property to capture over 90 percent of the potential debris volume. It is FMD's established postfire routine to monitor its drains in postfire areas for sediment inflow during major storms and clean as necessary. Once the proposed debris barriers are installed, it is recommended that FMD follow the same routine.

#### Subarea 8

Subarea 8 has an area of 0.4 acres. The subarea was 59 percent burned creating an adjusted debris production potential of 120 cy. During storms, mud and debris may deposit at the rear of a residence on Highland Place. It is recommended that the property owner deflect the mud and debris around the residence and onto Highland Place.

#### Subarea 9

Subarea 9 has an area of 5.6 acres. The subarea was 20 percent burned creating an adjusted debris production potential of 1,260 cy. During storms, mud and debris from the burned canyon may flow toward a residential property at the mouth of the canyon. During larger storm events, debris may be deposited and impact homes along Lotone Street and Heather Heights Court down to West Scenic Drive.

#### Subarea 10

Subarea 10 has an area of 4.5 acres. The subarea was 27 percent burned creating an adjusted debris production potential of 1,080 cy. During storms, mud and debris flow from the watershed may flow toward several small terraced depressions throughout the canyon and possibly reach residences at the mouth of the canyon. These terraces and residences are on land owned by a single property owner. It is recommended that the

property owner monitor sediment inflow throughout the property during storms and remove debris when needed.

### Subarea 11

Subarea 11 has an area of 29.7 acres. The subarea was 4 percent burned creating an adjusted debris production potential of 5,790 cy. During storms, mud and debris flow from the burned area may deposit along the upper portion of the access road for the City's water reservoir, potentially blocking access to the reservoir.

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# **ATTACHMENT C**

## **MUDFLOW PHASE MAP**

# **ATTACHMENT D**

**LIST OF RESIDENTS OFFERED  
MUDFLOW ENGINEERING ADVICE**