

March 13, 2018

TO: Christopher Stone

FROM: Ken Zimmer
Postfire Drainage Needs Program
Stormwater Engineering Division



**CREEK FIRE
BURNED AREA BRIEF**

The Creek Fire started on December 5, 2017, and was contained on January 9, 2018. The fire burned 15,619 acres in the unincorporated County of Los Angeles area above Lake View Terrace and Sylmar between Pacoima Wash and Big Tujunga Wash. This brief discusses, in general, potential debris flow impacts to County flood control facilities and residences within or below the burned area.

Summary of Potential Sediment Impact

The Creek Fire burned area is located in Debris Production Area 1 and 7 (see Attachment A for the Burned Area Map). During a design storm event (a 50-year frequency rainfall), debris flow from the burned canyons may impact several debris basins, debris inlets, and flood control channels that are under the purview of the Los Angeles County Flood Control District (District) and are maintained by Stormwater Maintenance Division (SWMD). Several roads and debris retaining facilities, maintained by the City of Los Angeles, may be subject to flooding and debris flows.

Detailed descriptions of potential sediment impacts are contained in Attachment B.

Attachments

- A. Burned Area Maps – Attachment A
- B. Description of Burn and Potential Sediment Impact
- C. Mudflow Phase Maps:
 - Attachment C1 - Sheet 1: Pacoima Wash and Lopez Canyon Area
 - Attachment C2 - Sheet 2: Kagel Canyon Area
 - Attachment C3 - Sheet 3: Little Tujunga Canyon, Lake View Terrace, Eby Canyon, and Shadow Hills Area
- D. Fire History Map – Attachment D

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Debris Flow Phase Maps

The phase maps for the fire are divided into three different areas (Attachments C1 to C3). These phase maps (Phases 1 to 3) identify the critical locations of debris and mudflow below the burned area for varying storm magnitudes. These maps are prepared when debris and mudflow pose a major impact to homes, roadways, flood control facilities, or other public infrastructure. These maps and the Burned Area Brief can be accessed through the internet at <http://www.dpw.lacounty.gov/wrd/fire>. The phase maps have been provided to SWMD, Road Maintenance Division, and affected emergency response agencies. Stormwater Engineering Division (SWED) will post debris and debris flow potential forecasts on the internet at the aforementioned site for each forecasted significant storm event throughout this storm season and the four subsequent storm seasons.

Coordination

On December 13, 2017, SWED staff conducted a field reconnaissance of the burned area looking for residences and/or County facilities that could be potentially impacted by debris flow during storms. In coordination with staff from the Natural Resources Conservation Service, SWED staff identified additional protective measures on facilities below the burned canyons and watersheds. Within the unincorporated County of Los Angeles area and the City, SWED staff visited 250 properties and provided engineering advice to 80 residences that may be directly impacted by debris flows during storm events.

If you have any questions regarding this fire report, please contact Michael Miranda at Extension (626) 458-6164.

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Attach.

cc: Disaster Services (Ezell)

IN Road Maintenance Division (MD 5)

Stormwater Maintenance (Kumar)

Stormwater Engineering (Zimmer)

ATTACHMENT B

CREEK FIRE DESCRIPTION OF BURN AND POTENTIAL SEDIMENT IMPACT

Fire Name: Creek Fire
Date of Fire: December 5, 2017, to January 9, 2018
Burned Area: 15,619 acres
Location: Unincorporated area of the County of Los Angeles within the Angeles National Forest north of Sylmar including Lopez, Kagel, and Little Tujunga Canyon areas. Thomas Guide pages 482 and 4723. The burned area boundary is plotted on the map in Attachment A.

Vegetation Types before Burn

Heavy brush and tall grass.

Fire History

Stormwater Engineering Division's (SWED) fire history records indicate that there have been numerous significant fires that have previously occurred in the same area as the Creek Fire. The 2008 Marek Fire burned approximately, 4,635 acres and overlapped approximately, 26 percent of the Creek Fire burned area. The 2009 Station Fire burned approximately, 161,189 acres and overlapped approximately, 16 percent of the Creek Fire burned area. The 2016 Wheatland Fire burned approximately, 156 acres and overlapped approximately, one percent of the Creek Fire burned area (See Attachment D).

Summary of Potential Postfire Debris Flow Impacts

The Creek Fire (15,619 acres) is divided into four regions: Pacoima Wash Area, Kagel Canyon Area, Little Tujunga Canyon, and Shadow Hills Area, primarily Debris Production Area (DPA) 1. Each region of the Creek Fire is subdivided into subareas, which are subject to flooding and debris flow as shown in Attachments C1 to C3. SWED staff offered/provided engineering advice to all properties identified as potentially impacted by postfire debris flows in or below subareas of each regions. The debris volumes noted herein are those resulting from a moderate to severe storm event.

1. Pacoima Wash and Lopez Canyon Area

The burned area is located in DPA 1. During moderate to severe storms, mudflows from burned hillsides are anticipated to flow into the Pacoima Wash, Lopez Canyon, streets, and homes below the burned area. We recommend the City remove deposited sediment from the basin and associated underground drain between storm events. Public Works is planning to install a temporary debris structure made of concrete interlocking block to protect homes and public infrastructure downstream of

Lopez Canyon. Stormwater Maintenance Division's postfire routine includes monitoring its drains in postfire areas for sediment inflow during major storms and cleaning as necessary. Once the proposed debris barrier is installed, SWMD should follow the same routine. At the request of the City, the homes subject to potential impact below the subareas were offered and/or provided engineering advice. The City should maintain all their drainage infrastructure throughout the entire fire perimeter.

2. Kagel Canyon Area

The burned area is located in DPA 1. During moderate to severe storms, mudflows from the burned hillsides are anticipated to flow into downstream streets, businesses, and homes. Public Works' Road Maintenance Division should monitor the streets promptly after storms and remove any sediment deposited on the streets. The homes under potential impact below the subareas were offered and/or provided engineering advice.

3. Little Tujunga Canyon Area

The burned area is located in DPA 1. During moderate to severe storms, mudflows from these subareas are anticipated to flow into downstream streets and homes. The Public Works' Road Maintenance Division should monitor the roads promptly after storms and remove any sediment deposited on the streets. The homes under potential impact below the subareas were offered and/or provided engineering advice.

4. Shadow Hills Area

The burned area is located in DPA 7. During moderate to severe storms, mudflows from these subareas are anticipated to flow into streets and homes. At the request of the City, the homes subject to potential impact below the subareas were offered and/or provided engineering advice.

Public Works reviewed potential impacts to 250 residences below the burned canyons and hillsides. Engineering advice was offered and/or provided to 80 residents in the unincorporated County of Los Angeles and the City.

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