March 19, 2018

TO: Christopher Stone

FROM: Ken Zimmer
Postfire Engineering and Drainage Needs Program
Stormwater Engineering Division

LA TUNA FIRE
BURNED AREA BRIEF

The La Tuna Fire started on September 1, 2017, and was contained on September 9, 2017. The fire burned 7,194 acres around the Verdugo Mountains in the Cities of Burbank, Los Angeles, and Glendale. This brief discusses potential debris flow impacts to County flood control facilities and residences within or below the burned area.

Summary of Potential Sediment Impact

The La Tuna Fire burned area, which includes Debris Production Areas (DPA) 1 and 2, is subdivided into 6 different regions (see Attachments A1 to A6 for the Burned Area Maps). During a design storm event (a 50-year frequency rainfall), debris flow from the burned canyons may impact several debris basins/debris retaining 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. Several roads and debris retaining facilities maintained by the Cities of Burbank and Los Angeles, or Caltrans may also 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 (Index Map):
   Attachment A1 - Sheet 1: Burbank East Area
   Attachment A2 - Sheet 2: Burbank West Area
   Attachment A3 - Sheet 3: Sun Valley Area
   Attachment A4 - Sheet 4: Shadow Hills Area
   Attachment A5 - Sheet 5: Sunland-Tujunga Area
   Attachment A6 - Sheet 6: La Tuna Canyon Area

B. Description of Burn and Potential Sediment Impact

C. Mudflow Phase Maps:
- Attachment C1 - Sheet 1: Burbank East Area
- Attachment C2 - Sheet 2: Burbank West Area
- Attachment C3 - Sheet 3: Sun Valley Area
- Attachment C4 - Sheet 4: Shadow Hills Area
- Attachment C5 - Sheet 5: Sunland-Tujunga Area
- Attachment C6 - Sheet 6: La Tuna Canyon Area

Debris Flow Phase Maps

The phase maps for the fire are included in Attachment C. The phase maps (Phases 1, 2, and 3) identify the critical locations of potential debris flow impacts below the burned area for varying storm magnitudes. These maps are prepared when potential debris flows pose a major impact to homes, roadways, flood control facilities, or other public infrastructures. 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 Stormwater 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 September 6, 2017, SWED staff conducted a field reconnaissance of the burned area investigating 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 four rail and timber structures under a purview of the City of Los Angeles below the burned canyons and watersheds. At the request of both the Cities of Burbank and Los Angeles, SWED staff visited 576 properties, which may be potentially impacted and provided engineering advice to 248 residences in the Cities of Burbank and Los Angeles.

If you have any questions regarding this fire report, please contact Michael Miranda at Extension 6164.

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Attach.

cc: Disaster Services (Eazell)
Stormwater Maintenance (Kumar)
Stormwater Engineering (Zimmer)

ATTACHMENT B

LA TUNA FIRE
DESCRIPTION OF BURN AND POTENTIAL SEDIMENT IMPACT

Fire Name:	La Tuna Fire
Date of Fire:	September 1, 2017, to September 9, 2017
Burned Area:	7,194 acres
Location:	Northern area of the Verdugo Mountains in the City of Los Angeles including La Tuna Canyon Area, Shadow Hills Area, Sunland-Tujunga Area, Sun Valley Area, and northern hillsides in the City of Burbank to a portion of hillside above the City of Glendale. Thomas Guide pages 503, 533, and 534. The burned area boundary is plotted on the map in Attachment A.

Vegetation Types before Burn

Chaparral Communities, Chamise and Mixed Chaparral, Sage and Desert Scrub, Coniferous Forest, and Oak and Riparian Woodlands

Fire History

The La Tuna Fire (7,194 acres) was the largest wildfire to break out in the City of Los Angeles limit in the past 50 years. Previously, the largest fire in the City was the Whiting Woods Fire at 6,950 acres. The Whiting Woods Fire occurred in 1964 and it was also burned across the Verdugo Mountains. The next largest fire was the Sunland Fire at 6,260 acres in 1980.

Summary of Potential Postfire Debris Flow Impacts

The La Tuna Fire is divided into six regions, Burbank East, Burbank West, Sun Valley, Shadow Hills, Sunland-Tujunga, and La Tuna Canyon Areas, primarily Debris Production Area (DPA) Zones 1 and 2. Each region of the La Tuna Fire is subdivided into subarea watersheds, which are subject to flooding and debris flow as shown in Attachments C1 to C6. Stormwater Engineering Division staff offered and/or provided engineering advice to all properties identified as directly impacted by postfire debris flows. The debris volumes noted herein are those resulting from a moderate to severe storm event.

1. Burbank East Area
   Subareas BE-1 to BE-9 total 1,055 acres in DPA 2 and are located in a tributary of Public Works' Stough Debris below the De Bell Golf course. The total of the above subareas are 73 percent burned yielding an estimated total adjusted debris production of 156,500 cubic yards during a design storm (using a 50-year frequency rainfall). This amount is approximately, 71 percent of the available postfire capacity

of the Stough Debris Basin, which is 181,000 cubic yards. During moderate to severe storms, a significant portion of the debris production from the burned hillsides will be captured in the City's upstream debris basin and rail and timber facilities. Flows conveyed into the De Bell Golf Course will be routed through the graded unlined channel within the golf course to a culvert passing under De Bell Drive and Harvard Road. The City should monitor this culvert and keep it clear of debris and sediment. Downstream of the culvert, the flows will continue through the golf course to Stough Debris Basin. Vegetation in excess of the channel's design capacity should be removed.

Subareas BE-10 through BE-13 total 685 acres in DPA 1 and are located in a tributary watershed of Public Works' Sunset Upper, Sunset Canyon Deer, and Sunset Lower Debris Basins. These subareas are 61 percent burned yielding an estimated total adjusted debris production of 148,300 cubic yards during a design storm (50-year frequency rainfall). During moderate to severe storms, the mudflow from the subarea BE-10 and in excess of the Sunset Upper and Sunset Canyon Deer Debris Basins will be expected to flow to and through Country Club Drive until they are deposited in Public Works' Sunset Lower Debris Basin. The Sunset Lower Debris Basin has a design storage capacity of 159,000 cubic yards, which is sufficient to capture the total adjusted debris potential from the subareas BE-10 to BE-13. Public Works is constructing 5-foot spillway extension on the Sunset Upper Debris Basin to increase capacity.

2. Burbank West Area

   The burned area, which is located in DPA 2 is subdivided into a total of 49 subareas. During moderate to severe storms, mudflows from these subareas are anticipated to flow into downstream streets, homes, Public Works' debris basins (Irving, Haven Way, Brace, and Bracemar Debris Basins), debris basins maintained by the City of Burbank, and privately maintained debris basins. Public Works' Stormwater Maintenance Division (SWMD), the City, and the private entities should monitor these debris basins and remove excess sediment deposited in these debris basins. At the request of the City, the homes under potential impact below the subareas were provided/offered engineering advice.

3. Sun Valley Area

   The burned area, which is located in DPA 2 is subdivided into a total of 48 subareas. During moderate to severe storms, mudflows from these subareas are anticipated to flow into downstream streets, homes, and Public Works' Chandler Debris Basin and one rail and timber structure maintained by the City of Los Angeles. Public Works' SWMD should monitor the debris basin and remove excess sediment deposited in the debris basin. At the request of the City of Los Angeles, the homes under potential impact below the subareas were provided/offered engineering advice.

4. Shadow Hills Area
   The burned area, which is located in DPA 2 is subdivided into a total of 47 subareas. During moderate to severe storms, mudflows from these subareas are anticipated to flow into downstream streets and homes. At the request of the City of Los Angeles, the homes under potential impact below the subareas were provided/offered engineering advice.

5. Sunland - Tujunga Area
   The burned area, which is located in DPA 2 is subdivided into a total of 33 subareas. During moderate to severe storms, mudflows from these subareas are anticipated to flow into downstream streets and homes. At the request of the City of Los Angeles, the homes under potential impact below the subareas were provided/offered engineering advice.

6. La Tuna Canyon Road Area
   The burned area, which is located in DPA 2 is subdivided into a total of 95 subareas. During moderate to severe storms, mudflows from these subareas are anticipated to flow into downstream streets, homes, Public Works' La Tuna Debris Basin, and three rail and timber structures maintained by the City of Los Angeles. Public Works' SWMD and the City should monitor these debris structures and remove excess sediment deposited in these debris basins. At the request of the City, the homes under potential impact below the subareas were provided/offered engineering advice.

Evacuations

Evacuations of potentially impacted properties are under the purview of the City of Los Angeles.

Engineering Advice

Public Works reviewed potential impacts to 576 residences below the burned canyons and hillsides. Engineering advice was offered to 248 residents in the City of Burbank and the communities of Sun Valley, Shadow Hills, Sunland-Tujunga, and La Tuna Canyon in the City of Los Angeles.

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