

September 20, 2010

Approved 
Christopher Stone

TO: Christopher Stone
FROM: Patricia Wood *PMW*
Facilities Section
Water Resources Division

**CRYSTAL FIRE
BURNED AREA REPORT**

Recommendations

1. Authorize us to send a copy of the burned area report to the City of West Covina as confirmation of the potential impacts to its facility.
2. Authorize us to provide confirmation to Road Maintenance Division (RMD) of the potential sediment impacts to Grand Avenue (maintained by Public Works) below the burned area. It is our understanding that RMD's standard routines call for monitoring this facility for postfire sediment impacts during storms and cleaning this facility in accordance with its established criteria. The monitoring should continue for the next four to five years until the watershed has significantly recovered from the burn.
3. No further action by Public Works is necessary.

Background

Fire Name: Crystal Fire
Date of Fire: July 13, 2010
Burned Area: 8 Acres
Location: Along the corporate boundary between the Cities of West Covina and Walnut in the vicinity of Crystal Peak Circle and Skyline Drive. Refer to Thomas Guide Page 639-E3. The burned area boundary is plotted on Attachment A.

Summary of Potential Sediment Impact

On July 19, 2010, Water Resources Division (WRD) staff conducted a field reconnaissance of the burned area to determine if residential properties or Public Works facilities could potentially be impacted by flooding/debris flows during storms. The burned area, which is located in Debris Production Area (DPA) 6, is subdivided into a total of five subarea watersheds. Vegetation of the watersheds prior to the burn was coastal sage scrub and scattered oak trees.

Subarea 1 was 11 percent burned creating an adjusted debris production potential (50-year frequency rainfall) of 980 cubic yards (cy). During moderate to severe storm events, loose sediments and debris material from the burned area will flow down toward the debris retaining inlet (small debris basin) at the terminus of Highlight Drive where an outlet tower collects and funnels runoff toward the storm drainage system (MTD 940), which is maintained by the City of West Covina. If the tower inlet plugs, the mudflow debris produced by the storm is anticipated to remain within the basin which appears to have sufficient capacity to retain the estimated sediment production.

Subarea 2 was 42 percent burned creating an adjusted debris production potential (50-year frequency rainfall) of 100 cy. During moderate to severe storm events, loose sediments and debris material from the burned area will flow down toward residential properties located below the burned hillsides. Residents should implement measures to protect their homes from possible flooding/debris flow impacts.

Subarea 3 was 66 percent burned creating an adjusted debris production potential (50-year frequency rainfall) of 300 cy. During moderate to severe storm events, loose sediments and debris material from the burned area will flow down terrace drains toward a storm drain inlet (MTD 940) at the rear corner of the property located at the base of the subarea. The drain inlet is a 36-inch RCP, which has a trash rack and a concrete swale approach. If the inlet plugs, mud and debris may potentially overtop the headwall causing sediment deposition and potential impact to two residential properties along Highlight Drive. Residents should implement measures to protect their homes from possible flooding/debris flow impacts.

Subarea 4 was 61 percent burned creating an adjusted debris production potential (50-year frequency rainfall) of 45 cy. During moderate to severe storm events, loose sediments and debris material from the burned area will flow down toward homes located at the terminus of Holiday Drive. Terrace drains above these properties may offer some protection. Residents should implement measures to protect their homes from possible flooding/debris flow impacts.

Subarea 5 was 9 percent burned creating an adjusted debris production potential (50-year frequency rainfall) of 430 cy. During moderate to severe storm events, loose sediments and debris material from the burned area will flow down toward a storm drain inlet adjacent to Grand Avenue (RDD 58). The storm drain is a 42-inch RCP protected by a trash rack, which is maintained by RMD. Debris flow from the burned hillside is anticipated to be contained within the basin formed by the Grand Avenue embankment should the storm drain inlet plug. The basin area has a sufficient capacity to retain estimated sediment production.

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There are no other County maintained facilities that could be impacted by storm produced debris flows. There are several residences below the burned slopes that may be impacted by mudflow debris.

WRD staff offered engineering advice to ten residents in West Covina whose homes are below the burned hillsides (Attachment B). None of the residents accepted the offer of engineering advice, however they did accept flooding/debris flow information packets.

If you have any questions regarding this report, please contact Hans Riedel at Extension 6300 or Mike Miranda at Extension 6164.

 CHR:vt

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Attach.

cc: Road Maintenance (Diotalevi)