From:	Christine Rowe
To:	MSFC-SSFL-EIS
Cc:	Elliott, Allen (MSFC-AS01); ZORBA, PETER D. (HQ-LP040); Fellows, Merrilee (HQ-LD000)
Subject:	Fwd: Topanga Fire 2005 Mudflow maps
Date:	Monday, September 09, 2013 5:26:55 AM
Attachments:	2005 Topanga Fire Debris Map topanga_attach_a.pdf 2005 topnga fire mudflow map 1_topanga_attach_c1.pdf 2005 topanga fire reporttopanga_bar_report.pdf

---

Dear Mr. Elliott,

This email bounced due to the sizes of the maps. I am going to try to send them in two emails.

Respectfully,

Christine L. Rowe

---------- Forwarded message ----------
From: **Christine Rowe** <crwhnc@gmail.com>
Date: Mon, Sep 9, 2013 at 3:08 AM
Subject: Fwd: Topanga Fire 2005 Mudflow maps
To: msfc-ssfl-eis@mail.nasa.gov
Cc: "James A. Elliott, (MSFC-AS10)" <allen.elliott@nasa.gov>, "peter.d.zorba@nasa.gov" <peter.d.zorba@nasa.gov>, "Merrilee Fellows, (HQ-NB000)" <mfellows@nasa.gov>

Dear Mr. Elliott,

Seems It Never Rains In Southern California Lyrics

Read more: Hammond Albert - Seems It Never Rains In Southern California Lyrics | MetroLyrics
"Seems it never rain in Southern California
Seems I've often heard that kind of talk before
It never rains in California
But girl, don't they warn ya
It pours man it pours."

On Table 2.5 - 1 reference is made to flooding at Santa Susana. While I do recognize that NASA's property is pretty much a mountain top area shaped with a bowl type of interior, if you remove the vegetation and two feet of soil at a minimum over 105 acres, if you remove all of the structures that are in place without the Best Management Practices in place, we could have major flooding and landslides if we were to have a major flood like a hundred year flood.

In fact, I believe that the original treatment train that was being designed for Santa Susana by the Boeing Expert Storm Water Panel was supposed to be able to mitigate the impacts of a major flood. I believe that NASA chose to do the ISRA removal action rather than put these more massive treatment systems into place.

Table 2.5 - 1 talks about the fact that FEMA has not created any flood insurance maps for the area.

I believe that if the DOE and NASA have to remove a great deal of vegetation as the result of their respective AOCs, parts of Santa Susana will be tremendously denuded. This would be similar in nature to the impacts of a brush fire.

Since a major brush fire did blow through about 70 % of the Santa Susana site, I have attached 2005 maps showing the direction of impacts of the various drainages - some of which could potentially impact my community of West Hills.

We also must consider that our local weather patterns nationwide are not the same as they were in the recent past. We have had prolonged periods of drought locally. Other areas of the United States have had tremendous flooding.

I don't believe that even NASA can predict future floods - when they will occur. Maybe NOAA can in the short term.

Please consider the potential impact of removing all of that soil and vegetation on the local communities. This should be a risk based cleanup - what are the potential dangers to my community if you remove this soil and vegetation to the AOC level?

Respectfully submitted,

Christine L. Rowe

QUADS:
CALABASAS 1-H1-25
OAT MOUNTAIN 1-H1-35
SANTA SUSANA 1-H1-34
THOUSAND OAKS 1-H1-24

T.G. PAGES:
499, 500, 529
530, 557, 558, 559

2500 0 2500 5000 7500 Feet

SANTA SUSANA CREEK INLET
CHATSWORTH PARK SOUTH
OAKWOOD MEMORIAL PARK (CEMETARY)
CHATSWORTH OAKS PARK
VENTURA WAY
CHATSWORTH NATURE PRESERVE
DAYTON CREEK INLET/CULVERT
BELL CREEK NORTH FORK (SOUTHERN INLET)
PD 716
PD 1684 LAS VIRGENES CREEK INLET
LONG VALLEY DRAIN INLET
PD 1684 DRI
PALO COMADO CREEK
CHESEBORO CANYON CREEK
SLOAN DRI
THOSAND OAKS DRI
PD 562 RISER W/ RAIL AND TIMBER
PD 1522 INLET
HORSE STABLES
DRIVER DRAIN INLET

LASSEN ST
PLUMMER ST
ROSCOE BLVD
VANOWEN ST
VENTURA (101) FREEWAY
LONG VALLEY RD
TOPANGA CANYON BLVD
VALLEY CIRCLE BLVD
LAS VIRGENES RD
CHESEBORO RD

LEGEND
- WATERSHED SUBAREA BOUNDARY
- FIRE BOUNDARY
- COUNTY BOUNDARY
- 1 SUBAREA NUMBER
- SUBAREA OUTLET
- MUDFLOW HAZARD AREA
- MUDFLOW ON STREET
- POTENTIAL MUDFLOW AREA
- DEBRIS RETAINING INLET
- STORM DRAIN INLET

N

ATTACHMENT C1

PREPARED BY: WS/SS	LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
DATE: 11-08-05	TOPANGA FIRE SEPTEMBER 28, 2005 BURNED AREA = 21,603 ACRES
SCALE: 1" = 2,500'	**POTENTIAL MUDFLOW IMPACT AREAS PHASE 1** (GREATER THAN .75 DESIGN DEBRIS EVENT)

November 14, 2005

PROCESSED
THANKS
Rod Kubomoto 11/14

TO: Rod H. Kubomoto

FROM: Patricia Wood PW
Facilities Section

TOPANGA FIRE
BURNED AREA REPORT
FILE NO. 2-11.40

The Topanga Fire occurred on September 28 to October 13, 2005, and burned a total of approximately 23,000 acres. The majority of the fire occurred within Ventura County with watersheds that flow into the Los Angeles County Flood Control District boundary.

Recommendations

1. Authorize us, by copy of this report, to provide confirmation to the following:

   a. Flood Maintenance Division (FMD) of the potential sediment impacts to all storm drains and debris control facilities maintained by Public Works within/below the burned area including Bell Canyon Debris Retaining Facility. It is recommended that FMD monitor these facilities for post fire sediment impacts during storms and clean out these facilities in accordance with established criteria. The monitoring should continue for the next four to five years until the watershed has significantly recovered from the burn.

   b. Road Maintenance Division (RMD) of the potential sediment impacts to all roads and culverts maintained by Public Works within/below the burned area. It is recommended that RMD monitor these facilities for post fire sediment impacts during storms and clean out these facilities in accordance with established 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:

   - Congressman Brad Sherman (27th District)
   - Congressman Elton Gallegly (24th District)
   - Congressman Henry Waxman (30th District)
   - Supervisor Michael D. Antonovich's Office
   - Supervisor Zev Yaroslavsky's Office
   - National Park Service
   - Natural Resources Conservation Service

- California Department of Transportation (Caltrans)
- Santa Monica Mountains Conservancy
- County of Los Angeles Fire Department
- Sanitation Districts of Los Angeles County
- Ventura County Watershed Protection Agency
- City of Agoura Hills
- City of Calabasas
- City of Hidden Hills
- City of Los Angeles

Attachments

A. Burned Area Map

B. Description of Burn and Potential Sediment Impact

C. Mudflow Phase Maps:
Attachment C-1, Phase 1 Map
Attachment C-2, Phase 2 Map
Attachment C-3, Phase 3 Map
Attachment C-4, Temporary Flood Control Facility Mitigation Measures

D. List of residents either offered or received mudflow engineering advice.

Summary of Potential Sediment Impact

The Topanga Fire, which started on September 28, 2005, burned approximately 23,000 acres in Ventura and Los Angeles Counties. The majority of the fire occurred in Ventura County with watersheds that flow into the Los Angeles County Flood Control District boundary. The burned area (see Attachment A) covers Debris Producing Areas 6 and 7. During storms, debris-laden flows from burned canyons may overwhelm drainage facilities adjacent to Las Virgenes Road, Alizia Canyon Drive, and Lake Manor Drive at Ventura Way, which are Public Works maintained roads (FMD - MD3). This may result in flooding and sediment deposition on roadways causing a potential hazard to motorists. Nuisance debris from burned hillsides could also deposit on nearby roads, including Kittridge Street and Randiwood Lane (Public Works maintained). These Public Works maintained roads should be monitored during and after storm events for sediment deposition for the next four to five years until the watershed has recovered. Valley Circle Boulevard, Long Valley Road, and Lassen Street are roadways likely to be impacted by burned area debris flows and are maintained by local cities.

Increased debris flow to Thousand Oaks Debris Retaining Inlet, PD 1684 Debris Retaining Inlet, Sloan Debris Retaining Inlet, and storm drain inlets including Driver Drain, PD 1522, PD 1684 (Las Virgenes Creek), PD 562, Long Valley Drain, Dayton Creek, and Santa Susana Creek is anticipated. Drainage facilities below the burned area should be monitored by FMD during storms and cleaned out as specified in Attachment C-4.

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 major threat to homes, roadways, flood control 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.

Coordination

WRD contacted FMD and RMD to assess the potential impact from the burn to Public Works' facilities. A storm response plan to mitigate the mudflow impacts was developed and includes the following:

- RMD to monitor areas of concern during storm events and be prepared to remove sediment from affected County roads and culverts.

- FMD to monitor drainage facilities as specified in Attachment C-4 and be prepared to clear storm drain inlets impacted by post burn debris.

From October 13, 2005, to October 18, 2005, Water Resources Division (WRD) staff contacted and/or provided mudflow engineering advice to 11 residences that may be impacted by potential flooding/debris flows during storms. Within the vicinity of the burn area, there are two residences in Knapp Ranch Area, one in the Lake Manor Area, one in the Calabasas Area, and seven in the Woosley Canyon Area. The list of these residences and their addresses are in Attachment D of this report.

If you require further information on this fire, please contact Sam Stevens at 458-6134 or William Saunders at 458-6187.

SS:yg
\\PW01\wrd\GENERAL\Facilities\Users\Sam\Topangal_Fire_Report-2.doc

Attach.

cc: B. T. Sasaki
Disaster Services (Dunn)
Flood Maintenance (Lee, Doudar)
Road Maintenance (Cadena, Lehman)
Watershed Management (Bapna, George)
Water Resources (Walden, Wood, Soriano, Saunders, Stevens, Files)

TOPANGA FIRE

ATTACHMENT A
BURNED AREA MAP
WITH DEBRIS PRODUCTION QUANTITIES

ATTACHMENT B

Topanga Fire
Description of Burn and Potential Sediment Impact

Fire Name: Topanga Fire
Date of Fire: September 28 to October 13, 2005
Burned Area: Approximately 23,000 acres
Location: Along the Ventura/Los Angeles County boundary line from the Chatsworth Area (Thomas Guide 500, A1) on the north to Oak Park/Agoura Hills Area to the south (Thomas Guide 558, E2). West of Valley Circle Boulevard. (Thomas Guide 529, B5) and east of Kanan Road. (Thomas Guide 558, E2). The fire was generally contained south of the Ronald Reagan (118) Freeway and north of the Ventura (101) Freeway. The burned area is delineated in Attachment A.

Vegetation Types Before Burn

Grass
Sage Scrub
Chamise
Oak Woodland

Improvements Damaged

Three residences, three commercial properties, and seven outbuildings were destroyed. One residence and two commercial properties were damaged.

Fire History

The Wright/Clampitt Fire, which started on September 25, 1970, is the most recent significant fire in the same area. The extent of the Wright/Clampitt Fire was from Malibu north to Newhall and burned 70,675 acres. The Topanga Fire burned area lies entirely within that for the Wright/Clampitt Fire.

Potential Sediment Impact Below/Within the Burned Area

The burned area, which is located in Debris Producing Areas 6 and 7, is subdivided into a total of 30 subarea watersheds (see Attachment A). Subareas 1 through 6, 19 through 21, and Subarea 25 are located within the Malibu Creek Watershed. Subareas 7 through 18 are located within the Los Angeles River Watershed. Subareas 26 through 30 are located within the Santa Clara River Watershed.

Subarea 1 and 2

Subarea 1 has an area of 0.32 square mile and is located near the Oak Park area of unincorporated Ventura County. The subarea was 8 percent burned creating an adjusted debris production potential of 5,500 cubic yards. Subarea 2 has an area of

0.40 square mile and is also located in unincorporated Ventura County. Subarea was 23 percent burned creating an adjusted debris production potential of 7,400 cubic yards. Debris and mudflow are anticipated to deposit at the mouth of the canyon in Ventura County. No adverse effects from debris flows are expected to County of Los Angeles residents or facilities from this subarea.

Subarea 3

Subarea 3 has an area of 1.83 square miles and is located near the Oak Park area of unincorporated Ventura County. The subarea was 46 percent burned creating an adjusted debris production potential of 30,100 cubic yards. Debris will flow down the canyon into a series of parks and ponds located in the Oak Park area. Mud and debris flows are anticipated to deposit on relatively flat terrain at the mouth of the canyon and have minimal or no impact to County of Los Angeles residents or facilities.

Subareas 4 and 5 – Palo Comado Canyon and Cheseboro Canyon

Subarea 4 (Palo Comado Canyon) has an area of 3.47 square miles and is located in unincorporated Ventura County and the City of Agoura Hills. The subarea was 92 percent burned creating an adjusted debris production potential of 69,100 cubic yards. Debris is anticipated to flow down the canyon and deposit along Palo Comado Creek.

Subarea 5 (Cheseboro Canyon) has an area of 2.96 square miles and is located in the Santa Monica Mountains National Recreation Area in unincorporated Ventura County and unincorporated County of Los Angeles. The subarea was 93 percent burned creating an adjusted debris production potential of 60,300 cubic yards. Debris is anticipated to flow down the canyon following Cheseboro Canyon Creek and deposit within low lying areas.

Palo Comado Creek and Cheseboro Canyon Creek outlet into Driver Drain which is maintained by Public Works, Flood Maintenance Division. It is recommended Flood Maintenance Division closely monitor and keep it clear of debris and sediment.

Subarea 6 – Las Virgenes Canyon

Subarea 6 has an area of 7.46 square miles and is located in Ventura County on property owned by the Santa Monica Mountains Conservancy (SMMC), and in the City of Calabasas. The subarea was 100 percent burned creating an adjusted debris production potential of 148,500 cubic yards. Debris will flow down the canyon to the accelerated debris inlet for PD 1684, which is located in Las Virgenes Creek. The PD 1684 facility is maintained by Public Works, Flood Maintenance Division.

The estimated design flow for PD 1684 inlet is 9,860 cfs. The burned and bulk flow rate for the area is 8,348 cfs. This indicates that the facility is adequate to handle capital storm bulked flows provided it is kept clear. The facility should be monitored for sediment flow and cleaned out as necessary. As added protection, it is recommended

Flood Maintenance Division implement the measures for this facility detailed within Attachment C-4 should be taken.

Sediment-laden flows from Subarea 6 are anticipated to make their way down Las Virgenes Creek. The creek reaches between Thousand Oaks and Parkmoor Boulevards are comprised of PD 1522, PD 1463, and PD 492, which are maintained by Public Works, Flood Maintenance Division. The burned and bulk flow for this reach is 9,486 cfs. The PD 1522 and PD 1463 facilities have a design capacity of 10,232 cfs, which is adequate capacity to handle capital storm bulked flows provided they are kept clear. The PD 492 facility has a design capacity of 8,500 cfs, but the available freeboard in the facility is anticipated to accommodate the capital storm bulked flows, provided it is kept clear. It is recommended Flood Maintenance Division monitor these reaches during major storms and keep them clear.

The reaches of Las Virgenes Creek south of Parkmoor Boulevard are maintained primarily by the City of Calabasas and a local business district. The burned and bulk flow for the reaches between Parkmoor Boulevard and Lost Hills Road ranges from 10,619 cfs to 14,935 cfs. The creek's culvert under the Ventura Freeway is maintained by Caltrans. The creek's culverts under Meadow Creek Lane (PD 2055, Line B) and Lost Hills Road (PD 2055, Line A) are maintained by Public Works, Flood Maintenance Division. Both culverts have a design capacity of 15,300 cfs, which is adequate to accommodate the capital storm bulked flows, provided they are kept clear. It is recommended Flood Maintenance Division monitor these culverts and keep them clear.

Subarea 7 – Bell Canyon

Subarea 7 has an area of 4.54 square miles and is located in unincorporated Ventura County. The subarea was 69 percent burned creating an adjusted debris production potential of 80,800 cubic yards. Debris will flow down the canyons and deposit into Bell Creek, a vegetated, natural streambed before reaching the County of Los Angeles. The mud and debris flows are not expected to impact County of Los Angeles residents or facilities.

Subarea 8 – Dayton Canyon

Subarea 8 has an area of 1.99 square miles and is located in unincorporated Ventura County, unincorporated County of Los Angeles, and the City of Los Angeles. The subarea was 95 percent burned creating an adjusted debris production potential of 43,800 cubic yards. Debris will flow down the canyon to the Public Works maintained Dayton Creek Storm Drain Inlet near the intersection of Roscoe Boulevard and Valley Circle Boulevard. During major storms, the inlet could plug causing post burn mudflow debris to deposit on Valley Circle Boulevard. Storm deposits could pose a hazard to the motoring public. It is recommended Flood Maintenance Division closely monitor the inlet and keep it clear of debris and sediment.

Subarea 9 – Woosley Canyon

Subarea 9 has a total area of 0.86 square mile and is located in unincorporated Ventura County, unincorporated County of Los Angeles, and the City of Los Angeles. The subarea was 94 percent burned creating an adjusted debris production potential of 20,900 cubic yards. Debris is expected to flow down Woosley Canyon and may deposit along Valley Circle Boulevard near its intersection with Woosley Canyon Road. Valley Circle Boulevard is maintained by the City of Los Angeles. Mudflow deposition on the road could become a hazard to motorists.

Public Works provided mudflow protection advice to seven residents in the Woosley Canyon area. Three residents were located in the Summit Mobile Home Park at 24425 Woosley Canyon Drive, Spaces 128, 133, and 174. Four residents were located in the Mountain View Estates Mobile Home Park at 24303 Woosley Canyon Road, Spaces 92, 93, 95, and 98.

Subarea 10 – Box Canyon

Subarea 10 has a total area of 1.28 square miles and is located in unincorporated Ventura County, unincorporated County of Los Angeles, and in the City of Los Angeles. The subarea was 86 percent burned creating an adjusted debris production potential of 34,100 cubic yards. Debris will flow down Box Canyon and deposit along Valley Circle Boulevard between Woosley Canyon Road and Box Canyon Road. Valley Circle Boulevard is maintained by the City of Los Angeles. Mudflow deposition on the road could be a hazard to motorists.

Subarea 11

Subarea 11 has an area of 0.34 square mile and is located in unincorporated Ventura County and in the unincorporated County of Los Angeles. The subarea was 63 percent burned creating an adjusted debris production potential of 8,900 cubic yards. Debris is anticipated to follow the natural watercourse and deposit near Lake Manor Drive and Ventura Way.

The subarea outlets into a culvert underneath Lake Manor Drive. If the culvert plugs, debris and sediment will back up north of Lake Manor Drive. Lake Manor Drive is maintained by Public Works, Road Maintenance Division. It is recommended Road Maintenance Division closely monitor the culvert underneath Lake Manor Drive and keep it clear of debris and sediment.

Public Works provided mudflow protection advice to a community church at 23449 Lake Manor Drive.

Subarea 12

Subarea 12 has an area of 0.45 square mile and is located in unincorporated Ventura County and the Chatsworth area of the City of Los Angeles. The subarea was 84 percent burned creating an adjusted debris production potential of 13,700 cubic

yards. Sediment flow is anticipated to spread and settle out where the hillside transitions to a flat area near Valley Circle Boulevard. No homes or structures are anticipated to be impacted by this nuisance flow.

Subarea 13

Subarea 13 has an area of 0.56 square mile and is located in unincorporated Ventura County and in the Chatsworth area of the City of Los Angeles. The subarea was 83 percent burned creating an adjusted debris production potential of 21,500 cubic yards. Debris flow is anticipated to follow the natural water course southwest of Oakwood Memorial Park Cemetery. Sediment and debris could potentially deposit along Lassen Street in the City of Los Angeles. No homes or structures appear to be threatened by this nuisance flow.

Subarea 14

Subarea 14 has an area of 0.69 square mile and is located in unincorporated Ventura County and in the Chatsworth area of the City of Los Angeles. The subarea was 90 percent burned creating an adjusted debris production potential of 25,600 cubic yards. Debris and sediment will likely deposit in Chatsworth Park South, where the canyon becomes wider and flattens out. No homes or structures appear to be threatened by this nuisance flow.

Subarea 15 – Santa Susana Creek

Subarea 15 has an area of 1.61 square miles and is located in unincorporated Ventura County, unincorporated County of Los Angeles, and in the City of Los Angeles. The subarea was 40 percent burned creating an adjusted debris production potential of 40,300 cubic yards. Debris flow will follow Santa Susana Wash and will likely deposit along the natural watercourse.

Santa Susana Wash flows into the Santa Susana Creek Inlet which is maintained by Public Works, Flood Maintenance Division. A significant amount of debris and sediment is expected to deposit behind a railroad culvert upstream of this inlet. It is recommended Flood Maintenance Division monitor this inlet during and after storms and keep it clear of debris.

Subarea 16

Subarea 16 has an area of 0.80 square mile and is located in unincorporated Ventura County and in the City of Los Angeles. The subarea was 84 percent burned creating an adjusted debris production potential of 19,300 cubic yards. Debris will flow down the canyon to a storm drain inlet (PD1653) which eventually drains into Bell Canyon Debris Retention facility.

Public Works and the City of Los Angeles jointly maintain PD1653 with the City maintaining the inlet portion of the drain. If the inlet becomes plugged, burned area

debris will back up and possibly overflow onto Sunset Ridge Court. A recommendation to prepare the facility for the upcoming storm season is outlined in Attachment C-4.

Subarea 17

Subarea 17 has an area of 0.10 square mile and is located in unincorporated County of Los Angeles and the City of Los Angeles. The subarea was 71 percent burned creating an adjusted debris production potential of 4,200 cubic yards. Debris is expected to flow down the canyon and deposit along Randiwood Lane and Kittridge Street. These streets are maintained by Public Works, Road Maintenance Division. It is recommended Road Maintenance Division monitor these streets for sediment flow during and after any significant rainfall events and clear debris as needed.

Public Works provided mudflow protection advice to the residents at 6652 Randiwood Lane and 6644 Randiwood Lane on October 13, 2005.

Subarea 18

Subarea 18 has an area of 0.40 square mile and is located in unincorporated Ventura County. The subarea was 87 percent burned creating an adjusted debris production potential of 11,200 cubic yards. Debris will flow down the canyon to a pair of storm drain inlets at the upstream end of Long Valley Storm Drain.

Long Valley Storm Drain's inlets are maintained by Public Works, Flood Maintenance Division. If the inlets plug, sediment flows will potentially follow the natural watercourse through residents' properties and along Long Valley Road in the City of Hidden Hills. As specified in Attachment C-4, it is recommended Flood Maintenance Division monitor and clean the facility for debris and sediment during and after any significant rainfall event.

Subarea 19

Subarea 19 has an area of 0.22 square mile and is located in unincorporated Ventura County and in unincorporated County of Los Angeles. The subarea was 77 percent burned creating an adjusted debris production potential of 7,000 cubic yards. Debris flow from the burned canyon will deposit in Sloan Debris Retaining Inlet, which is maintained by Public Works, Flood Maintenance Division. It is recommended Flood Maintenance Division monitor the inlet for sediment and debris build up during and after storms and clean it out as necessary.

Subarea 20

Subarea 20 is a canyon with an area of 0.22 square mile and is located in unincorporated Ventura County and in unincorporated County of Los Angeles. The subarea was 73 percent burned creating an adjusted debris production potential of 6,800 cubic yards. Debris is anticipated to flow down the hillsides and into the Thousand Oaks Debris Retaining Inlet at the mouth of the canyon.

The inlet is maintained by Public Works, Flood Maintenance Division. It is recommended Flood Maintenance Division monitor the inlet and clean it out as necessary during and after any significant storms.

Subarea 21

Subarea 21 is a small canyon with an area of 0.27 square mile and is located in unincorporated Ventura County. The subarea was 99 percent burned creating an adjusted debris production potential of 5,500 cubic yards. Debris is anticipated to flow down the hillsides and to PD562's inlet at the mouth of the canyon. The inlet is equipped with a riser and a rail and timber structure.

The inlet to PD 562 is maintained by Public Works, Flood Maintenance Division. It is recommended that Flood Maintenance Division monitor the inlet and clean it out as necessary during and after any significant storms.

Subarea 22

Subarea 22 is a small hillside with an area of 0.04 square mile and is located in the City of Calabasas and unincorporated County of Los Angeles. The subarea was 100 percent burned creating an adjusted debris production potential of 1,900 cubic yards. Debris is anticipated to flow down the hillsides and into the PD1684 Debris Retaining Inlet just West of Las Virgenes Road. If the inlet plugs, debris will overflow onto Las Virgenes Road, which is maintained by Public Works, Road Maintenance Division.

The PD 1684 Debris Retaining Inlet is maintained by Public Works, Flood Maintenance Division. It is recommended Flood Maintenance Division monitor the inlet for sediment flow and clean it out as necessary during and after significant storms.

Subarea 23

Subarea 23 has an area of 0.84 square mile and is located in unincorporated Ventura County, unincorporated County of Los Angeles, and the City of Calabasas. The subarea was 67 percent burned creating an adjusted debris production potential of 17,900 cubic yards. Debris is expected to flow down the canyon and into the inlet of PD 1522. If the inlet plugs, debris will overflow onto Las Virgenes Road causing a hazard to motorists. There are existing k-rails upstream of the inlet, and the inlet is equipped with debris posts.

The PD 1522 facility is maintained by Public Works, Flood Maintenance Division. Las Virgenes Road is maintained by Public Works, Road Maintenance Division. It is recommended Flood Maintenance Division and Road Maintenance Division monitor the inlet and road, respectively, for sediment deposition during and after major storm events and clean them as necessary.

Subarea 24

Subarea 24 has an area of 0.12 square mile and is located in unincorporated County of Los Angeles and in the City of Calabasas. The subarea was 73 percent burned creating an adjusted debris production potential of 4,600 cubic yards. Debris and sediment is anticipated to deposit at the mouth of the canyon just west of Las Virgenes Road.

The resident at 5607 Las Virgenes Canyon Road declined engineering advice. No other homes or structures appear to be threatened by debris flows.

Subareas 25-30

Subarea size, percent burned, and adjusted debris production potential for Subareas 25 to 30 can be found in the table below. The subareas are located in unincorporated Ventura County. Debris and sediment are likely to deposit at the mouths of their respective canyons.

Subarea	Area (Square Miles)	Percent Burned	Adjusted Debris Production (Cubic Yard)
25	1.69	56	31,600
26	0.80	76	17,800
27	4.53	90	102,900
28	2.00	53	34,500
29	1.19	69	24,200
30	1.38	46	34,500

SS:yg
\\PW01\wrd\GENERAL\Facilities\Users\Sam\Topanga fire ATTACHMENT B3.doc

TOPANGA FIRE

ATTACHMENT C-1
PHASE 1 POTENTIAL MUDFLOW IMPACT AREAS

TOPANGA FIRE

ATTACHMENT C-2
PHASE 2 POTENTIAL MUDFLOW IMPACT AREAS

TOPANGA FIRE

ATTACHMENT C-3
PHASE 3 POTENTIAL MUDFLOW IMPACT AREAS

ATTACHMENT C-4

Topanga Fire
Summary of Potential Sediment Impact to
Major Public Works Maintained Facilities
Below the Burn and Recommended Temporary Mitigation Measures

Fire Name: Topanga Fire
Date of Fire: September 28 through October 13, 2005
Burned Area: Approximately 23,000 acres
Location: Along the Ventura / LA County Boundary line from Chatsworth area (TG 500-A1) on the north to Oak Park/ Agoura Hills Area to the South (TG 558-E2). West of the Valley Circle Blvd. (529-B5) and East of Kanan Rd (TG 558-E2). The fire was generally contained between the Ronald Reagan (118) Freeway and the Ventura (101) Freeway.

Canyons Affected by the Burn

Bell Canyon	Las Virgenes Canyon
Box Canyon	Santa Susana Pass Canyon
Cheseboro Canyon	Palo Comado Canyon
Dayton Canyon	Woolsey Canyon

Flood Control Facilities Damaged

None

Fire History

The Wright/Clampitt Fire, which started on September 25, 1970, is the most recent significant fire in the same area. The extent of the Wright/Clampitt Fire was from Malibu north to Newhall and burned 70,675 acres. The Topanga Fire burned area lies entirely within that for the Wright/Clampitt Fire.

Potential Sediment Impact Below/Within the Burned Area

The Topanga Fire burned area is subdivided into a total of 30 subarea watersheds (see Attachment C-3). Potential sediment impact mitigation measures are discussed for the Las Virgenes Creek Inlet, the Long Valley Drain Inlets, the Bell Creek North Fork (Southern) Inlet, the Dayton Creek Inlet at Roscoe Boulevard, and the Santa Susana Creek Inlet. All other locations below the burned area called out on Attachment C-3 will need to be reassessed during and after any significant rainfall events.

Las Virgenes Canyon -Subarea 6

Las Virgenes Canyon-Subarea 6 has an area of 7.46 square miles, of which 99 percent is located in unincorporated Ventura County and property owned by the Santa Monica Mountains Conservancy (SMMC). The entire watershed flows down into the remaining 1percent of the watershed area located within the City of Calabasas. The subarea was 100 percent burned creating an estimated adjusted debris production potential of 148,500 cubic yards. Debris will flow down the canyon to the Las Virgines Creek Inlet (PD1684) which is maintained by the Department of Public Works.

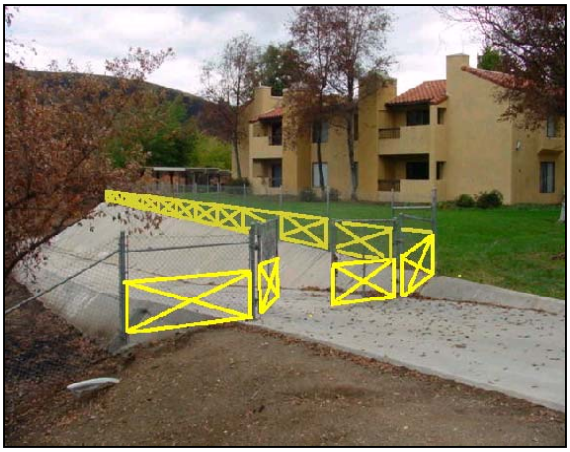

Figure 1

Design Division estimates the design capacity of the Las Virgenes Creek Inlet is 9,860 cfs. The burned and bulked flow calculated for the area in June 2002 (using Public Works' new Zone Method of hydrology) is 8,348 cfs. This indicates that the facility is adequate to handle Capital Storm bulked flows. To direct mud and debris flows to the Las Virgenes Creek Inlet and provide additional freeboard, it is recommended that plywood be attached to the existing right-of-way fence bordering the apartment complex and the inlet facility as shown in Figure 1.

From the base of the fence, the plywood should rise a minimum of 3 feet. The SMMC will be adviced to attach plywood along its fence, from the gate to Public Works' fencing, to aid in directing flows to the inlet facility. The SMMC will also be advised to cut down any dead trees immediately upstream of the inlet to prevent their dislodgement and blocking of the inlet facility during storms.

Long Valley Drain -Subarea 18

Long Valley Drain-Subarea 18 has an area of 0.40 square miles of which 95 percent is located in unincorporated Ventura County on property owned by the SMMC. The watershed flows down into the remaining 5 percent of the watershed area located within the City of Hidden Hills. The subarea was approximately 87 percent burned creating an estimated adjusted debris production potential of 11,200 cubic yards. Debris will flow down the canyon to a pair of storm drain inlets which initiate Long Valley Storm Drain. The inlets and drain are maintained by Public Works.

Figure 2

Design Division estimates that the total design capacity for the pair of inlets is 620 cfs. The burned and bulked flow calculated for the area in 1988 (using Public Works' old Depth Method of hydrology) is 930 cfs. This indicates that the facility could be potentially overwhelmed by capital storm bulked flows. As shown in Figure 2, the inlets have become overgrown with vegetation and should be cleared. Drawing No. 547-D4.4. indicates that LACFCD right of way exists around the inlets.

Bell Creek North Fork (Southern) Inlet -Subarea 16

Bell Creek North Fork (Southern) Inlet-Subarea 16 has an area of 0.80 square miles of which approximately 67 percent is located in unincorporated Ventura County territory. The watershed flows down into the remaining 33 percent of the watershed area located within the City of Los Angeles (El Escorpion Park). The subarea is approximately 84 percent burned creating an estimated adjusted debris production potential of 19,300 cubic yards. Debris will flow down the canyon to a storm drain inlet (PD1653) which eventually drains into Bell Canyon Debris Retention facility. The Department of Public Works and the City of Los Angeles maintain PD1653 jointly, with the City maintaining the inlet portion of the drain.

Figure 3

The facility's "As Built" plans indicate the design capacity to the inlet is 1,870 cfs. The burned and bulked flow calculated for the area in 1970 (using Public Works' old Depth Method hydrology) is 1,870 cfs. This indicates that the facility is adequate for Capital Storm bulked flows. As shown in Figure 3, the inlet has become overgrown with vegetation and should be cleared. As indicated within Drawing No. 134-F133.6, the City of Los Angeles should be advised to clean the inlet.

Dayton Creek Inlet -Subarea 8

Dayton Creek Inlet -Subarea 8 has an area of 1.99 square miles of which approximately 50 percent is located in unincorporated Ventura County territory. The watershed flows down into the remaining 50 percent of the watershed area located within the City of Los Angeles. The subarea is approximately 95 percent burned creating an estimated adjusted debris production potential of 43,800 cubic yards. Debris will flow down the canyon to the Public Works-maintained Dayton Creak Storm Drain Inlet located near the intersection of Roscoe and Valley Circle Boulevards. The County Assessors map for Parcel Number 2017-026-009 indicates that an LACFCD easement exists 54 feet upstream of the inlet.

Figure 4

Design Division estimates the inlet design capacity is 2,920 cfs. The burned and bulked flow calculated for the location in 1970 (using Public Works' old Depth Method hydrology) is 3,880 cfs, which is greater than the inlet's design capacity. As shown in Figure 3, the inlet has become overgrown with vegetation and should be cleared. Flows in excess of the inlet's capacity will likely deposit on Valley Circle and Roscoe Boulevards, which are maintained by the City of Los Angeles. The City will be advised of this potential impact to its streets.

Santa Susana Creek Inlet -Subarea 15

Santa Susana Creek Inlet -Subarea 15 has an area of 1.61 square miles of which approximately 5 percent is located in unincorporated Ventura County territory. The watershed flows down into the remaining 95 percent of the watershed area located within the City of Los Angeles. The subarea is approximately 40 percent burned creating an estimated adjusted debris production potential of 40,300 cubic yards. Debris will flow down the canyon to the Santa Susana Creek Channel Inlet which is maintained by the Department of Public Works.

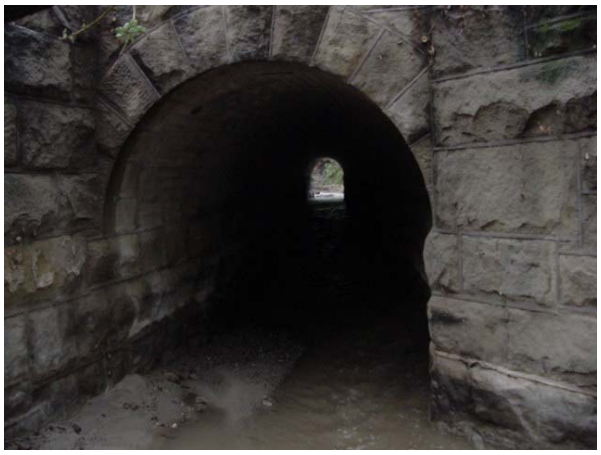

Figure 5

The facility's "As-Built" plans indicate that the design flow to the inlet is 3,460 cfs. The burned and bulked flow calculated for the area in 1970 (using Public Works' old Depth Method hydrology) is 4,800 cfs, which is greater than the inlet's design capacity. As shown in Figure 5, a railroad culvert restricts debris flows upstream of the facility inlet. Thus Capital Storm bulked flows are expected to be regulated below the calculated burned and bulked flows and large debris kept west of the railroad culvert.

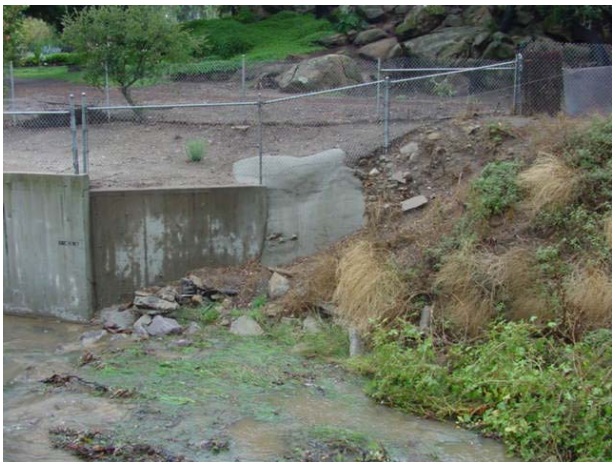

Figure 6

Similar to the recommendation given for the same location after the 1970 Wright/Clampitt Fire, the Santa Susana Creek Channel Inlet (Figure 6) should be kept clear of burned area debris. It is recommended that the area be subject to storm patrols to insure that the channel does not become obstructed.

SS:ws
C:Topanga fire attachment C4-2.doc

TOPANGA FIRE

September 28 to October 13, 2005

List of Homeowners Contacted or Received Mudflow Engineering Advice

Subarea	Name	Address	Mudflow Engineering Advice	Date	Engineer / Division
19	Rosenberg, Kate	2835 Shady Grove Place Calabasas, CA 91307	Provided Engineering Advice	10/18/05	Saunders/Stevens WRD
9	Resident	24303 Woosley Canyon Rd., #92 West Hills, CA 91304	Left Engineering Advice	10/13/05	Saunders/Stevens WRD
9	Smith, Trish	24303 Woosley Canyon Rd., #93 West Hills, CA 91304	Provided Engineering Advice	10/13/05	Saunders/Stevens WRD
9	Mr.& Mrs. Kramer	24303 Woosley Canyon Rd., #95 West Hills, CA 91304	Provided Engineering Advice	10/13/05	Saunders/Stevens WRD
9	Stine, Bill	24303 Woosley Canyon Rd., #98 West Hills, CA 91304	Provided Engineering Advice	10/13/05	Saunders/Stevens WRD
9	Resident	24426 Woosley Canyon Rd., #128 Canoga Park, CA 91304	Left Engineering Advice	10/13/05	Saunders/Stevens WRD
9	Mr. & Mrs. Terrusa	24425 Woosley Canyon Rd., #133 Canoga Park, CA 91304	Provided Engineering Advice	10/13/05	Saunders/Stevens WRD
9	Mr. & Mrs. Parks	24427 Woosley Canyon Rd., #174 Canoga Park, CA 91304	Provided Engineering Advice	10/13/05	Saunders/Stevens WRD
11	Stevens, Jesse	23449 Lake Manor Drive Chatsworth, CA 91311	Provided Engineering Advice	10/13/05	Saunders/Stevens WRD
17	Resident	6652 Randiwood Lane West Hills, CA 91307	Left Engineering Advice	10/13/05	Saunders/Stevens WRD
17	Resident	6644 Randiwood Lane West Hills, CA 91307	Left Engineering Advice	10/13/05	Saunders/Stevens WRD
24	Resident	5607 Las Virgenes Road Calabasas, CA 91302	Declined Engineering Advice	10/18/05	Saunders/Stevens WRD

ATTACHMENT D

QUADS:
CALABASAS 1-H1-25
OAT MOUNTAIN 1-H1-35
SANTA SUSANA 1-H1-34
THOUSAND OAKS 1-H1-24

T.G. PAGES:
499, 500, 529
530, 557, 558, 559

2500 0 2500 5000 7500 Feet

9321 VENTURA WAY

MOUNTAIN VIEW ESTATES
MOBILE HOME PARK
24303 WOOSLEY CANYON RD

SUMMIT MOBILE HOME PARK
24425 WOOSLEY CANYON RD.

6652 RANDIWOOD LANE

2835 SHADY GROVE PLACE

DEBRIS PRODUCTION TABLE

SUBAREA	AREA (SQ.MI.)	%BURNED	ADJ. DEBRIS PROD. (CY)
1	0.32	08	5,500
2	0.40	23	7,400
3	1.83	46	30,100
4	3.47	92	69,100
5	2.96	93	60,300
6	7.46	100	148,500
7	4.54	69	80,800
8	1.99	95	43,800
9	0.86	94	20,900
10	1.28	86	34,100
11	0.34	63	8,900
12	0.45	84	13,700
13	0.56	83	21,500
14	0.69	90	25,600
15	1.61	40	40,300
16	0.80	84	19,300
17	0.10	71	4,200
18	0.40	87	11,200
19	0.22	77	7,000
20	0.22	73	6,800
21	0.27	91	5,500
22	0.04	100	1,900
23	0.84	67	17,900
24	0.12	73	4,600
25	1.69	56	31,600
26	0.80	76	17,800
27	3.77	90	77,900
28	2.00	53	34,500
29	1.19	69	24,200
30	1.38	46	34,500

NOTE: FINAL FIRE BOUNDARY PROVIDED BY THE NATIONAL PARK SERVICE: U.S. DEPARTMENT OF INTERIOR, BURN SEVERITY MAP DATED OCT. 19, 2005. ADJUSTED DEBRIS PRODUCTION QUANTITIES ARE BASED ON PUBLIC WORKS' PRELIMINARY FIRE BOUNDARY DATED OCT. 13, 2005 AND ARE FULL DEBRIS PRODUCTION RATES FOR BURNED AREAS AND HALF OF THAT RATE FOR UNBURNED AREAS. THE BURNED AREA WITHIN CHATSWORTH RESERVOIR HAS BEEN OMITTED FOR CLARITY.

N

LEGEND
- WATERSHED SUBAREA BOUNDARY
- FIRE BOUNDARY
- COUNTY BOUNDARY
- 1 SUBAREA NUMBER
- SUBAREA OUTLET
- LOCATION OF BUILDINGS THAT MAY BE IMPACTED

ATTACHMENT A

PREPARED BY: WS/SS	LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
DATE: 11-8-05	TOPANGA FIRE
SCALE: 1" = 2,500'	BURNED AREA: 21,603 ACRES DATE OF FIRE: 9-28-05