

National Weather Service Debris Flow Warning System



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NWS and USGS Debris Flow Warning System

- **USGS computes rainfall rate thresholds for post-burn areas** based on statistical occurrences of debris flows and associated rainfall rates (burn areas less 2 years old)
- **National Weather Service uses the thresholds as guidance** for watches and warnings of possible flash flooding and debris flows

Rainfall Rate Thresholds
Used to Determine
Likelihood of Debris Flows
In and Near Recent
Burn Areas

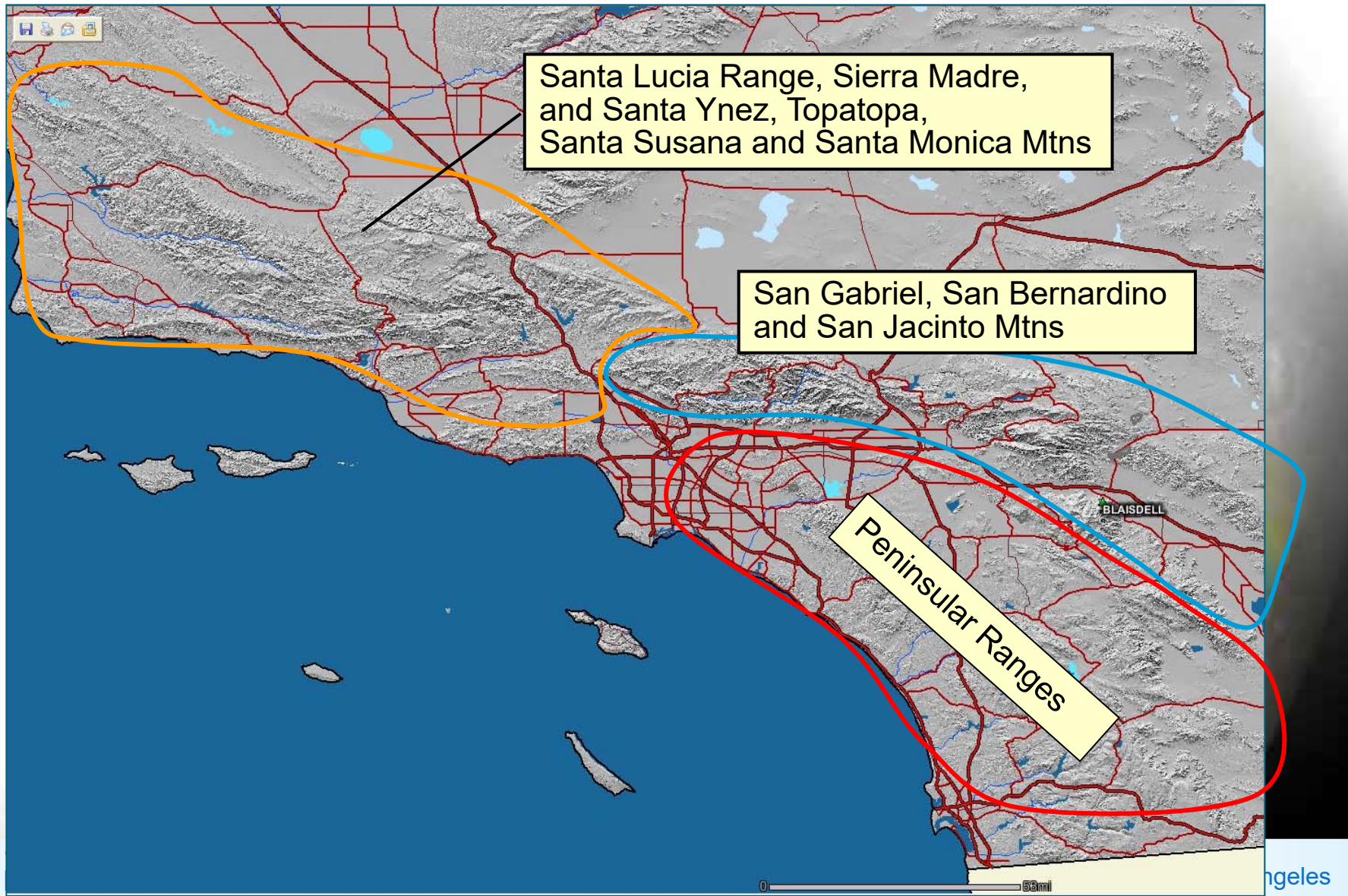
15 min	0.20 in
30 min	0.30 in
1 hr	0.50 in
3 hr	1.00 in
6 hr	1.40 in
12 hr	1.90 in

High intensity, short duration rainfall rates found to be primary cause of debris flows. Rates produced by ordinary thunderstorms.



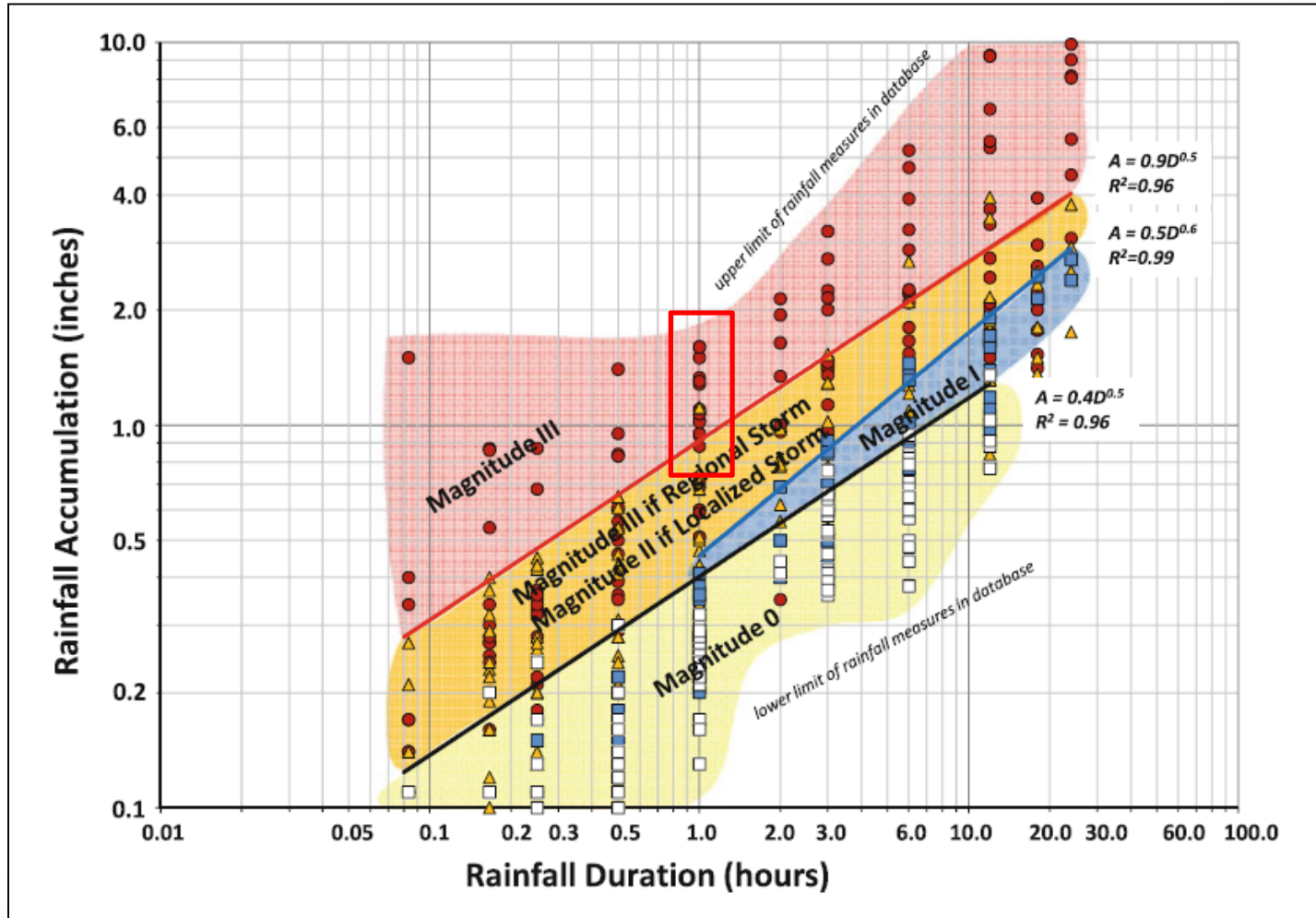


Development of Rainfall Thresholds for Burned Areas





Refining The Triggers



From Cannon et al (<http://landslides.usgs.gov/docs/kean/Cannonetal2011.pdf>)



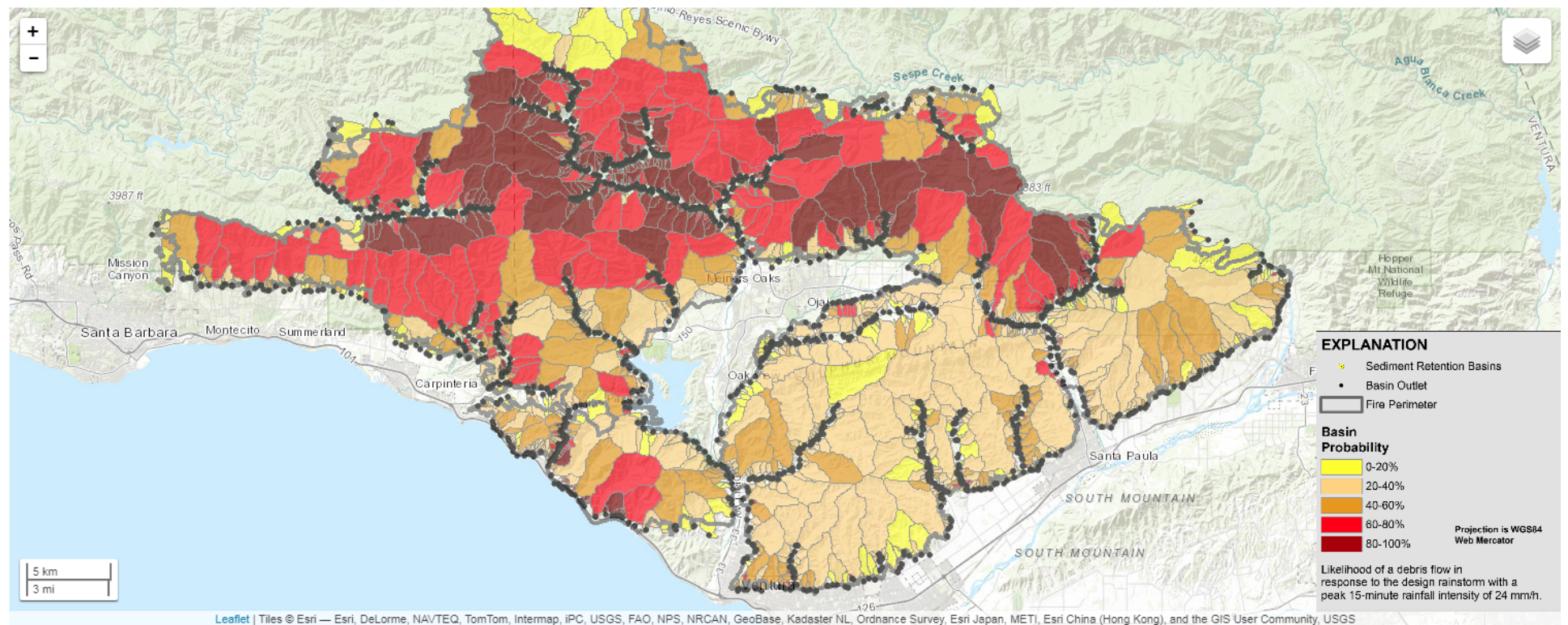


USGS Threat Maps

Thomas Burn Area Hazard Assessment from USGS

https://landslides.usgs.gov/hazards/postfire_debrisflow/index.php

Preliminary Hazard Assessment



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NWS Alert Messages for Flash Flooding & Debris Flows

Special Partner Notifications:

Up to 3-7 days in advance

Email briefings

NWS webinars

Weather Stories

NWS meteorologists are also available for offsite or onsite Support (e.g., EOCs)

Debris Flows Likely Across Recent Burn Areas

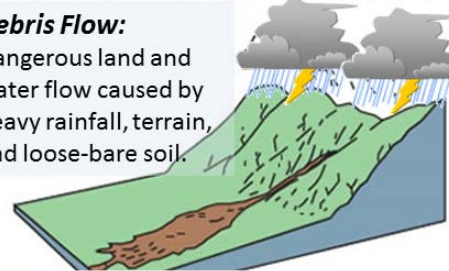


POTENTIALLY DANGEROUS SITUATION ACROSS THE RECENT BURN AREAS

If you live in the recent burn areas including the Thomas, Creek, and LaTuna burn areas, there is a high probability that debris flowS will occur next Monday through Wednesday. 2 to 4 inches of rain are expected in the foothills, with locally higher amounts possible in some locations. High rainfall rates are expected. Stay Alert to the forecast and listen to your local emergency managers .

Debris Flow:

Dangerous land and water flow caused by heavy rainfall, terrain, and loose-bare soil.



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Los Angeles/Oxnard, CA

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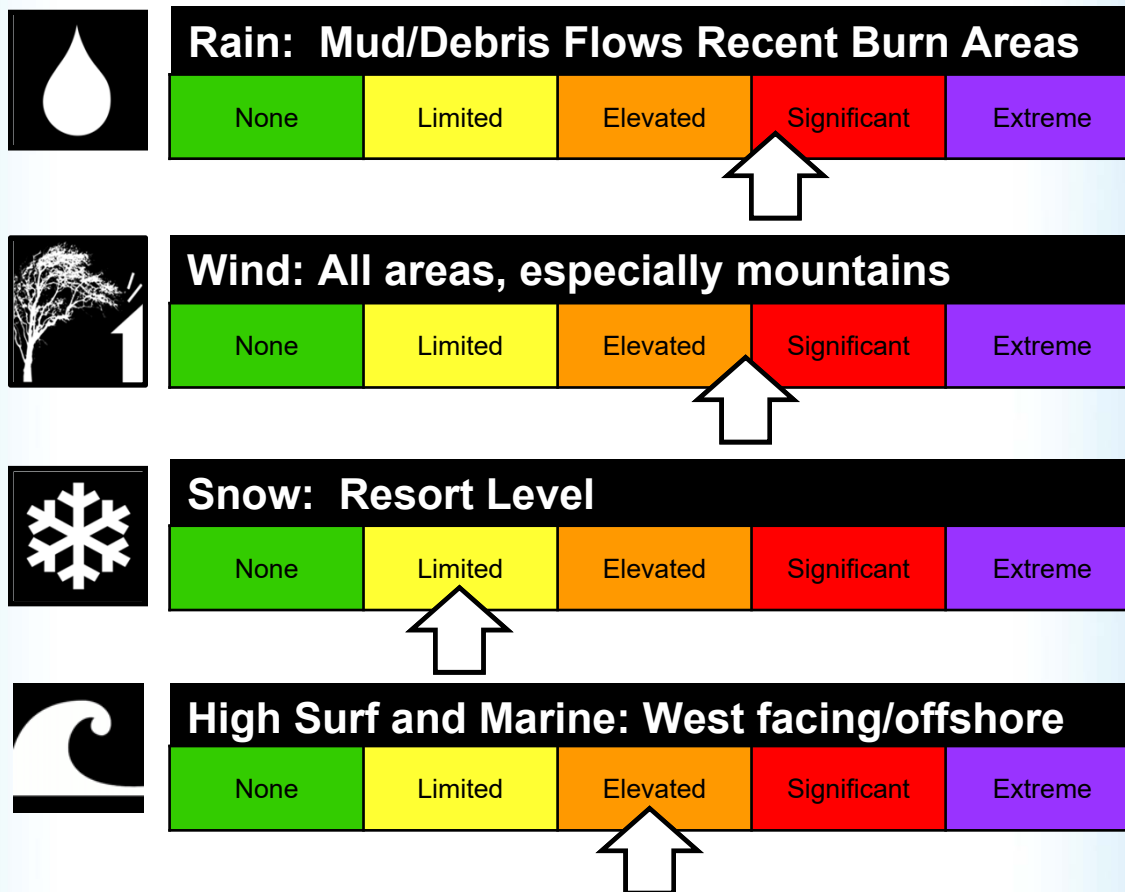
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Summary of Greatest Impacts

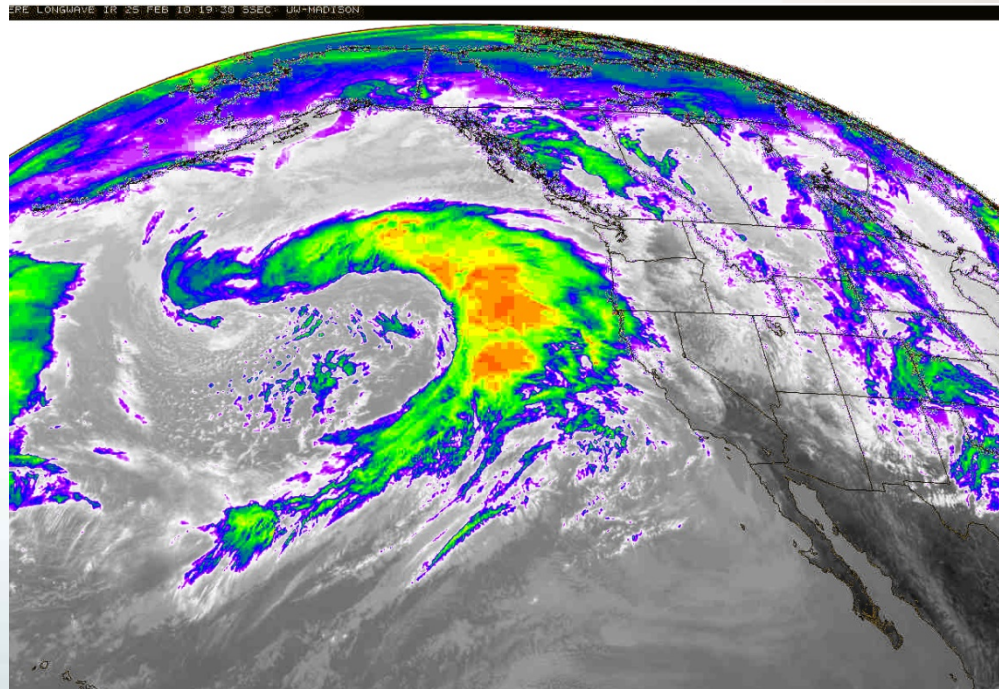




NWS Alert Messages for Flash Flooding & Debris Flows

Flash Flood Watch: *12-48 hours in advance*

- *Potential* for future flash flooding and debris flows from burn areas
- Finish preparations and stay alert to weather predictions.

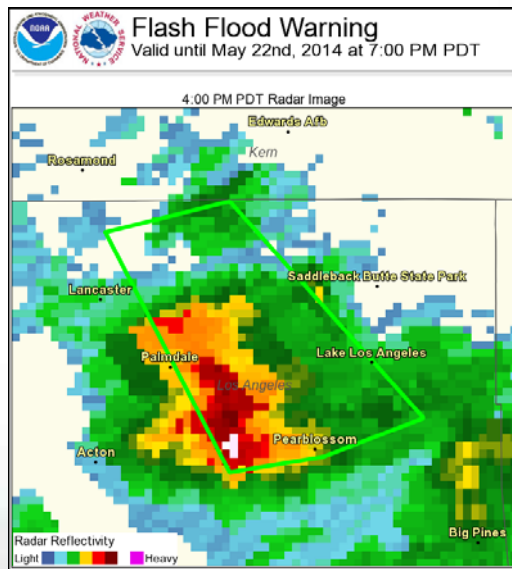




NWS Alert Messages for Flash Flooding & Debris Flows

Flash Flood Warning: *0-60 minutes in advance*

- Damaging and/or life-threatening flash flooding and debris flows are imminent or occurring!
- **Evacuations during a warning for a debris flow may not be safe!**
- Warnings are broadcast by media (EAS), NOAA Weather Radio (162.550 MHz), and Wireless Emergency Alerts (cell phones)





NWS Alert Messages for Flash Flooding & Debris Flows

Flood Advisory: *0-60 minutes in advance*

- Minor flooding and/or mud flows are imminent or occurring. Not considered a threat to life or property.





A One-stop Web Page for NWS Debris Flow Information:
<http://www.wrh.noaa.gov/wrh/postwildfire>

National Weather Service
**Post Wildfire Flash Flood
and Debris Flow** Guide



Created by National Weather Service Los Angeles/Oxnard
August 2015

www.weather.gov/losangeles



Weather-Ready Nation

<https://tinyurl.com/y9ojsvdr>



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Acting Quickly Following the Fire

Important to establish community response plans early and use partnerships

- Evacuation plans, community meetings, etc.

CITY OF GLENDORA

I WANT TO RESIDENTS BUSINESSES SERVICES DEPARTMENTS ABOUT US

Animal Control
Business Directory
City Meetings
City Mission, Vision and Values
City Operating Hours
- Colby Fire Information
Colby Fire FAQ
Colby Fire Impact Area Emergency Alert Sign-Up
Colby Fire Impact Area K-Rail Information
Colby Fire Media Center
Colby Fire Restoration/Preparedness After the Storm
+ Post Storm Assessment Reports
Community Preservation Division
Glendora Strategic Plan
Event Calendar
eServices
How To Videos
+ La Fetra Center
Living with Wildlife

Residents >

COLBY FIRE INFORMATION

Font Size: + - Share & Bookmark Feedback Print

Click here to view the NOAA El Niño Web Portal

Colby Fire Restoration/Preparedness

Current Alert Status is **GREEN**

(As of January 18th, 2017)

For the past 30 days, the City of Glendora rain gauges have recorded the following rainfall amounts:

- Loraine & Sierra Madre: 7.75"
- 700 N. Glendora Ave: 6.95"
- Foothill & Glendora: 8.07"
- East Side of the South Hills: 5.54"

Colby Fire Impact Area

2016/2017 Winter Weather Forecast | NOAA

Colby Fire debris flow in Glendora, CA – January 2017





Reaching Out to Your Local National Weather Service Office

Contact these Warning Coordination Meteorologists to Be Placed on their Notification Lists or For More Information

For communities in Los Angeles, Ventura, Santa Barbara, and San Luis Obispo Counties

*Eric.Boldt@noaa.gov
805-988-6615, ext. 223*

For San Diego, Orange, Riverside, and San Bernardino Counties

*Alex.Tardy@noaa.gov
858-675-8700, ext. 223*



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