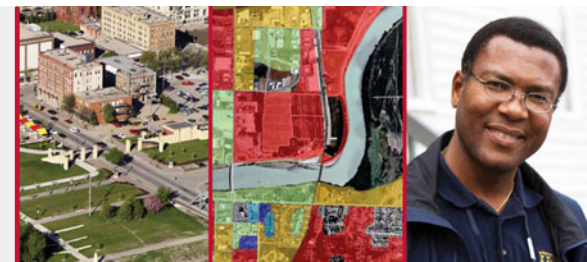




FEMA

# Recovery Mapping Santa Barbara County

July 11, 2018



# Our Partner Agencies



**Cal OES**  
GOVERNOR'S OFFICE  
OF EMERGENCY SERVICES

**CA Office of  
Emergency Services**



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# Introducing the Recovery Map

## Background:

- The Thomas Fire scorched land and eliminated vegetation causing increases in runoff during storm events
- January 2018 debris flows significantly changed ground conditions
- Recovery Map reflects the updated risk associated with changed watershed and landscape



*Photo by David McNew/Getty Images*



***What does the Recovery Map mean for you?***

# Clarifications

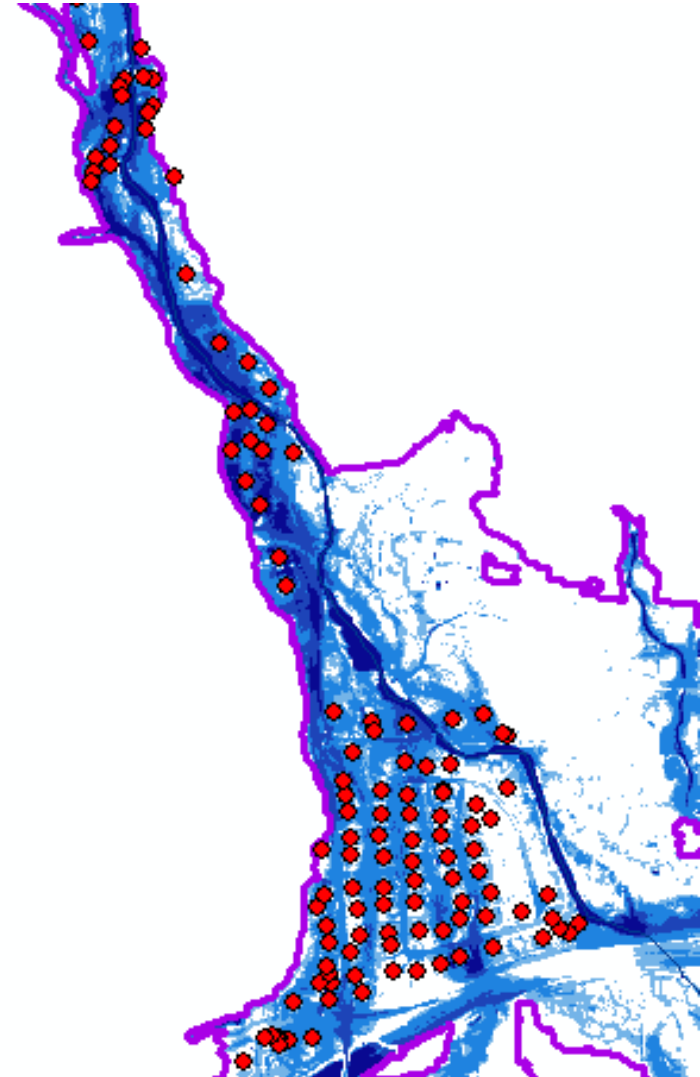
- **The Recovery Map is not intended to replicate the January 9<sup>th</sup> debris flow event**
- **The changed ground conditions due to mud on the ground, clogged waterways, and scoured waterways caused the need to map the new existing conditions hazard**
- **Due to the small amount of regrowth and watershed recovery, there is still a risk that flooding and debris flows will occur during the next rainy season**

# Clarifications

- **The Recovery Map is based on clearwater flow with water flow rates increased to reflect post-burn watershed conditions and bulking to account for high concentrations of sediment and debris**
  - This is standard practice utilized by the BEAR and WERT teams, USGS, USACE, and other agencies
- **The Recovery Map utilized the best available data in order to complete the project in a very short time frame so that safer rebuilding could be initiated**

# Technical Approach

- **Develop post-burn hydrologic models based on 1% chance rainfall**
- **Develop 2-dimensional (2D) hydraulic models utilizing post-burn flows**
  - Small grid sizes, generally 10-ft or less in the wetted areas
  - Define hazard boundaries (purple line), which represent the areas that get wet
  - Produce water surface elevation grids that inform rebuilding
  - Produce depth grids
    - Note that these represent the depths on top of the post-debris flow landscape and do not necessarily capture total risk



# Hydraulic Model Observations

- **Some damaged structures are not within the hazard area due to the changed topography**
  - There are locations where the debris flow damaged structures and at the same time scoured/lowered the channel. The lower channel elevations result in higher channel capacity and flow does not reach the damaged structures in these areas.
  - There are locations where the debris/mud deposits raised the ground elevations such that water cannot reach the structures in these areas.

# How to use the Recovery Map

- **Water surface elevations for the post-burn 1% annual chance hazard will be used to inform rebuilding**
- **The Recovery Map will generally have higher water surface elevations than the current effective Flood Insurance Rate Map (FIRM)**
- **Recovery Map does not impact flood insurance nor replace the current effective FIRM**
- **Updated FIRMs will be developed in the next several years. Some of the base data from the Recovery Map project will be used as building blocks in the development of updated mapping.**



# Flood Insurance Connections

- **The Recovery Maps do not impact mandatory flood insurance purchase requirements or NFIP flood insurance premiums**
- **Lenders can require flood insurance on their own as a condition of your loan**
- **Flood insurance is highly recommended**
- **NFIP flood insurance is available for a lower cost in areas outside of currently-identified Special Flood Hazard Areas**

# Contacts

| Topic                                   | Email/Phone   |
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| <b>FEMA Map Information eXchange</b>    | FEMAMapSpecialist@riskmapcds.com<br>877 FEMA MAP (1-877-336-2627)<br>Also available via Live Chat Service |
| <b>CA Department of Insurance</b>       | 1-800-927-4357<br>1-800-482-4833 TTY  |