# THE HILL & WOOLSEY FIRES EMERGENCY RESPONSE AFTER-ACTION REVIEW

— JANUARY 2020 —

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# Executive Summary

The Hill & Woolsey Fires After-Action Review process began informally during the incidents, allowing critical areas to be corrected in a timely manner. The Ventura County Board of Supervisors approved an after-action review methodology that established the formal process, which began in August of 2019. The objective of this after-action review is to measure strengths, identify challenges and to recommend potential areas for improvement observed during the response phase of the incident. The process included representation from over forty organizations from all levels of government, as well as non-governmental, community and non-profit organizations.

This after-action review focuses on key functional areas that will serve as a framework to enhance future emergency response efforts. The functional areas include: Operational Area Coordination; Incident Management; Public Information and Emergency Notifications; Mass Care and Shelter; and Mutual Aid. Although this process focuses on the Hill and Woolsey Fires, it is designed to strengthen the Operational Area's overall effectiveness in response to future emergency situations. The strengths, challenges and recommendations impact the Operational Area's ability to respond to incidents and are not specific to any one organization. All Operational Area stakeholders share the responsibility to reinforce standards and implement solutions.

Lastly, the Ventura County Board of Supervisors provided a list of thirteen questions to be addressed through this after-action review process. These questions were derived from concerns and questions raised by impacted community members during town hall meetings and through the Ventura County Emergency Operations Center hotline.
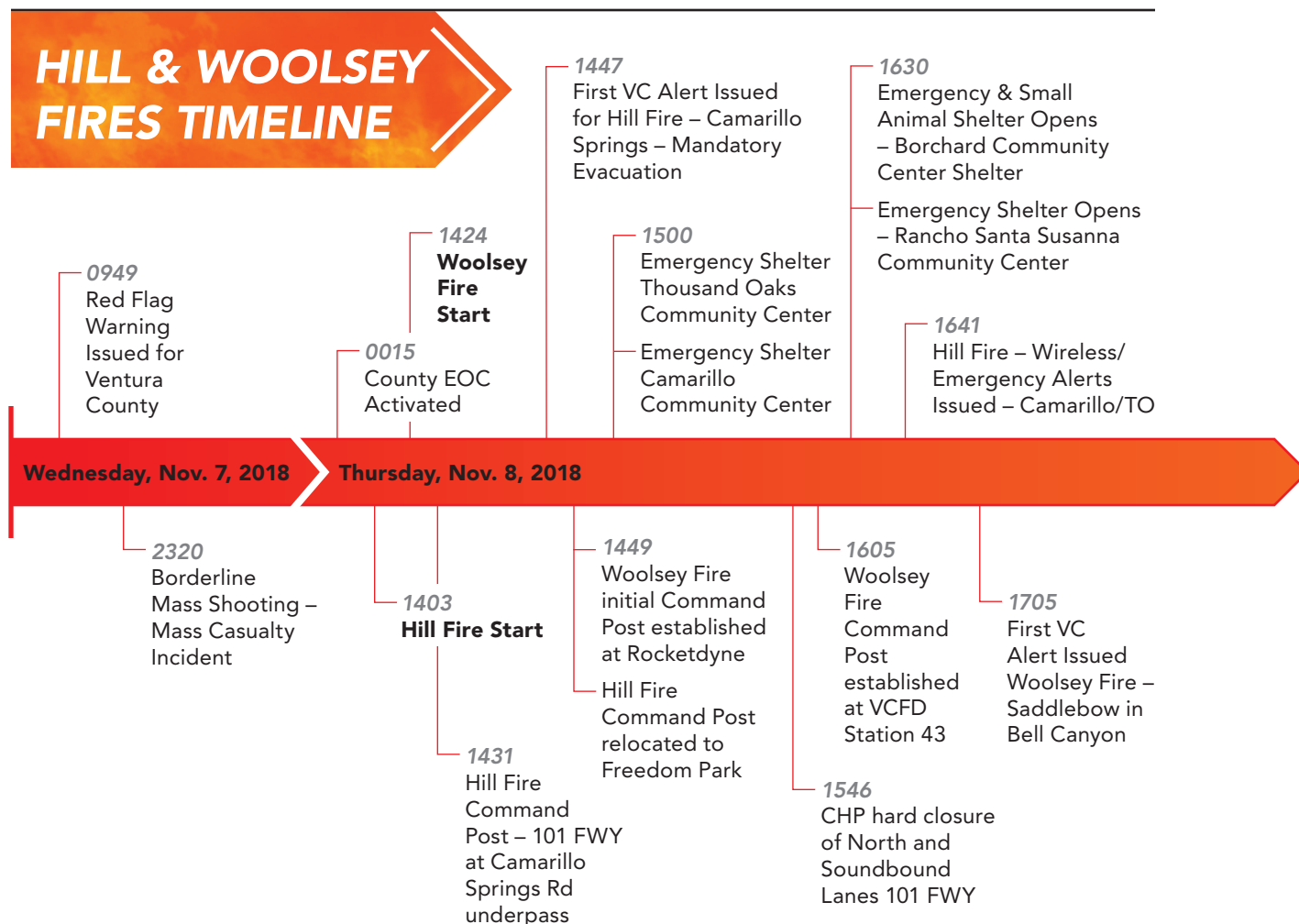
# Hill & Woolsey Fires Brief

In the eleven months between December 2017 and November 2018, Ventura County faced three unique catastrophes that would test the county's emergency planning and response efforts. All three incidents demonstrated the extraordinary preparedness of the county, our local government partners, community-based organizations and the resiliency of Ventura County residents. In December of 2017, the Thomas Fire swept through Ventura County, scorching over 280,000 acres and leaving extensive damage in its path. Not quite a year later, on November 7, 2018, at 11:20 p.m., a mass shooter entered the Borderline Bar and Grill in Thousand Oaks, and claimed the lives of twelve individuals, injuring twenty-one others. Among the victims was Ventura County Sheriff's Sergeant Ron Helus, who confronted the attacker and was fatally wounded during his heroic response. The Ventura County Emergency Operations Center and the City of Thousand Oaks EOC activated in response to the Borderline Incident and provided support to the Incident Command Post, Operational Area coordination, information management, and family assistance center activities.

The next day, Ventura County experienced predicted Red Flag conditions where humidity levels fell into the single digits and peak winds reached between 60-70 miles per hour. Ventura County public safety officials prepared and upstaffed in anticipation of critical fire weather conditions; however, Ventura County's response to the Borderline Incident had already put great demand on law enforcement, fire and medical resources.

## HILL & WOOLSEY FIRES TIMELINE

**0949**
Red Flag Warning Issued for Ventura County

**2320**
Borderline Mass Shooting – Mass Casualty Incident

**Wednesday, Nov. 7, 2018**

**0015**
County EOC Activated

**1403**
Hill Fire Start

**1424**
Woolsey Fire Start

**1431**
Hill Fire Command Post – 101 FWY at Camarillo Springs Rd underpass

**Thursday, Nov. 8, 2018**

**1447**
First VC Alert Issued for Hill Fire – Camarillo Springs – Mandatory Evacuation

**1449**
Woolsey Fire initial Command Post established at Rocketdyne

Hill Fire Command Post relocated to Freedom Park

**1500**
Emergency Shelter Thousand Oaks Community Center

Emergency Shelter Camarillo Community Center

**1546**
CHP hard closure of North and Soundbound Lanes 101 FWY

**1605**
Woolsey Fire Command Post established at VCFD Station 43

**1630**
Emergency & Small Animal Shelter Opens – Borchard Community Center Shelter

Emergency Shelter Opens – Rancho Santa Susanna Community Center

**1641**
Hill Fire – Wireless/ Emergency Alerts Issued – Camarillo/TO

**1705**
First VC Alert Issued Woolsey Fire – Saddlebow in Bell Canyon

During the critical fire weather event, the Hill Fire ignited at 2:03 p.m. in the Hill Canyon area of Santa Rosa Valley, east of Camarillo. Pushed by 30 mph winds, the Hill Fire quickly threatened lives and infrastructure, prompting evacuations in Camarillo Springs, Dos Vientos, California State University at Channel Islands, and areas along the Pacific Coast Highway. In total, the Hill Fire burned 4,531 acres and damaged or destroyed six structures.

Within minutes of the Hill Fire ignition, at 2:24 p.m., the Woolsey Fire started at the Santa Susana Field Laboratory, south of Simi Valley at the top of Woolsey Canyon Road. Evacuations were ordered for Thousand Oaks, Oak Park, Westlake Village, Bell Canyon, unincorporated areas of Malibu and into Los Angeles County. The ignition's proximity to Los Angeles County meant the potential for impacts across jurisdictional lines to communities in Ventura County, Los Angeles County and Los Angeles City. Threats to this shared area activated the Mutual Threat Zone Plan, a mutual-aid response agreement between the Ventura County, Los Angeles County and Los Angeles City Fire Departments.

## HILL & WOOLSEY FIRES STATS

**185** *Structures Destroyed*

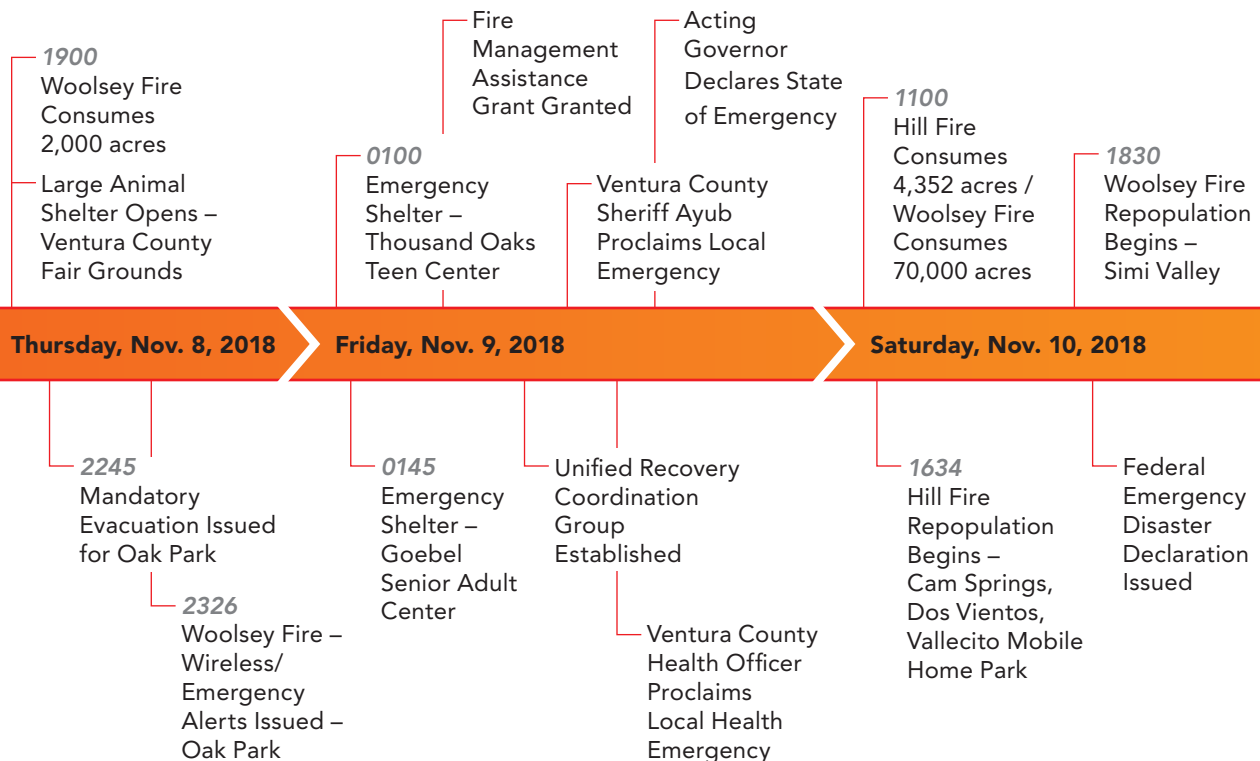**116** *Structures Damaged*

**101,480** *Total Acres Burned*

**6** *Emergency Shelters*

*Over* **9,000** *Meals/Snacks Served*

**5** *Large & Small Animal Shelters*

**356** *Animals Evacuated*

## HILL & WOOLSEY FIRES TIMELINE

**Thursday, Nov. 8, 2018**

*1900*
Woolsey Fire Consumes 2,000 acres

Large Animal Shelter Opens – Ventura County Fair Grounds

*2245*
Mandatory Evacuation Issued for Oak Park

*2326*
Woolsey Fire – Wireless/ Emergency Alerts Issued – Oak Park

**Friday, Nov. 9, 2018**

Fire Management Assistance Grant Granted

*0100*
Emergency Shelter – Thousand Oaks Teen Center

*0145*
Emergency Shelter – Goebel Senior Adult Center

Acting Governor Declares State of Emergency

Ventura County Sheriff Ayub Proclaims Local Emergency

Unified Recovery Coordination Group Established

Ventura County Health Officer Proclaims Local Health Emergency

**Saturday, Nov. 10, 2018**

*1100*
Hill Fire Consumes 4,352 acres / Woolsey Fire Consumes 70,000 acres

*1830*
Woolsey Fire Repopulation Begins – Simi Valley

*1634*
Hill Fire Repopulation Begins – Cam Springs, Dos Vientos, Vallecito Mobile Home Park

Federal Emergency Disaster Declaration Issued

## HILL & WOOLSEY FIRES STATS

### Ventura County Emergency Operations Center Hotline Calls
**43,049**

### VCEmergency.com Page Views
**Over 2 million**

**3,929** Emergency Response Personnel

**577** Fire Engines

**22** Aircraft

At the time, the Ventura County Fire Protection District was fully engaged in battling the Hill Fire, which was initially perceived to be the greater threat. As the Hill Fire advanced into the burn scar left by the 2013 Springs Fire, diminished fuel density allowed firefighters to move quickly toward containment, freeing additional resources to contend with the Woolsey Fire.

A California Department of Forestry and Fire Protection (Cal Fire) Incident Management Team was initially ordered to manage the Hill Fire. Due to statewide concurrent incidents demanding significant fire resources, the same Incident Management Team would be called upon to manage both the Hill and Woolsey Fires as a Complex Incident. During peak firefighting operations, Ventura County Fire, supplemented by the fire mutual aid system, brought nearly 4,000 emergency response personnel, 577 fire engines and 22 aircraft to combat the fires. The Woolsey Fire burned a total of 96,949 acres, 34,535 of those acres in Ventura County. A total of 295 structures were either damaged or destroyed in Ventura County.

## HILL & WOOLSEY FIRES TIMELINE

*1000*
Woolsey Fire Consumes 83,275 acres

Town Hall in Thousand Oaks

Local Assistance Center opens Thousand Oaks

| **Sunday, Nov. 11, 2018** | **Monday, Nov. 12, 2018** | **Wednesday, Nov. 14, 2018** | **Thursday, Nov. 15, 2018** |

Presidential Major Disaster Declaration Issued

Town Hall in Oak Park

During the Woolsey Fire, the Ventura County Sheriff's Office issued evacuation orders to more than 80,000 Ventura County residents, using combination of door-to-door notifications, VC Alert notifications, Wireless Emergency Alerts, the Emergency Alert System, news outlets, websites, social media and community liaisons. Six emergency shelters served over 9,000 meals and snacks, while five animal shelters cared for 356 displaced animals. The VC Emergency website had more than two million unique page views, while the emergency hotline received over 43,000 calls for incident information. Even though evacuation and sheltering operations were deemed successful, two Ventura County residents lost their lives due to a medical event and a heavy equipment accident that were determined to be indirectly related to the Woolsey Fire.

## HILL & WOOLSEY FIRES STATS

**Area Specific VC Alerts**
*40 Notifications Issued to 80,000 people*
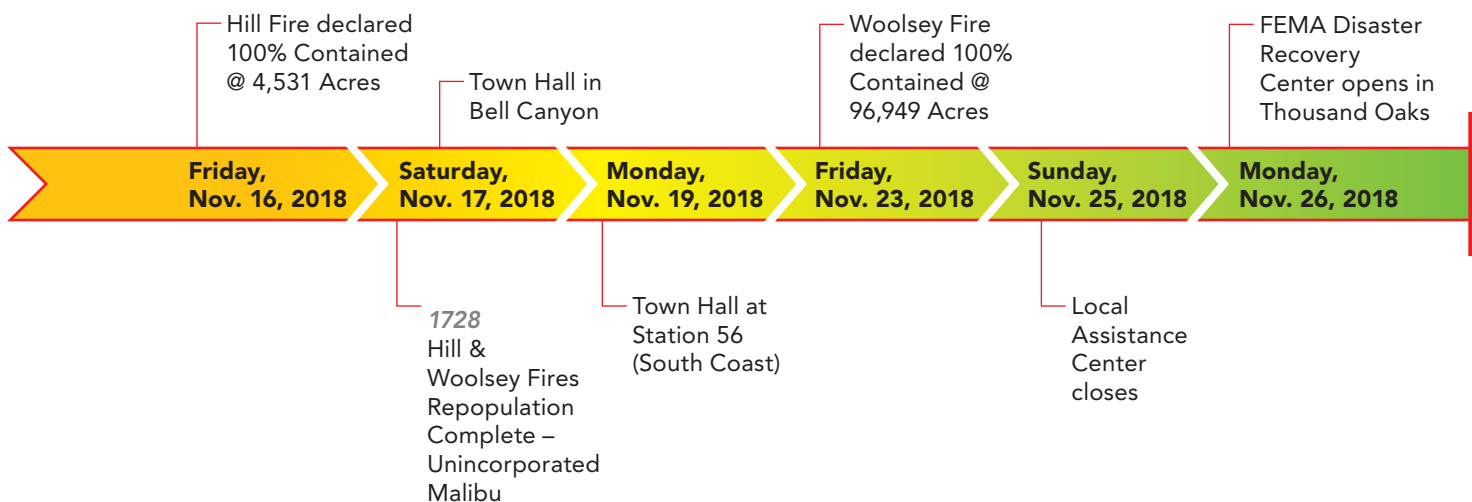
**Wireless Emergency Alert**
*3 Notifications*

**Emergency Alert System**
*3 Countywide Notifications*

City and county proclamations, a California Governor's proclamation and a Federal Major Disaster Declaration allowed the recovery effort in Ventura County to begin almost immediately. A Unified Recovery Coordination Group was established on November 9, 2018, to address debris management, health care, human services, housing, finance and watershed management.

## HILL & WOOLSEY FIRES TIMELINE

Hill Fire declared 100% Contained @ 4,531 Acres

Town Hall in Bell Canyon

Woolsey Fire declared 100% Contained @ 96,949 Acres

FEMA Disaster Recovery Center opens in Thousand Oaks

| Friday, Nov. 16, 2018 | Saturday, Nov. 17, 2018 | Monday, Nov. 19, 2018 | Friday, Nov. 23, 2018 | Sunday, Nov. 25, 2018 | Monday, Nov. 26, 2018 |

*1728* Hill & Woolsey Fires Repopulation Complete – Unincorporated Malibu

Town Hall at Station 56 (South Coast)

Local Assistance Center closes

# Focus Areas

## OPERATIONAL AREA COORDINATION

### STRENGTHS

☑ The Ventura County Emergency Operations Center was activated and staffed in response to the Borderline Incident, allowing for a seamless transition to the Hill and Woolsey Incidents.

### CHALLENGES

- Diminished communication between county and city emergency operations centers during the onset of the incident. In some areas, this was exacerbated by internet outages.
- Ongoing difficulty experienced with communication platforms, including satellite phones and radio systems.
- The weight of three significant, emotionally charged events impacted staff stress and fatigue levels.

### RECOMMENDATIONS

◈ Increase training opportunities for the DisasterLAN electronic incident management system. Explore options for establishing satellite internet service at critical locations.
◈ Ensure all staff have communications training for satellite phones and countywide interoperable radio system radios.
◈ Ensure Critical Incident Stress Management resources are made available to all emergency personnel in a timely manner.

## INCIDENT MANAGEMENT

### STRENGTHS

☑ Initial incident assessment by first responders and rapid deployment of resources to protect life and property were successful.
☑ Effective and efficient evacuation coordination processes were in place between cooperating agencies.
☑ Successful in-briefing with the Incident Management Team ensured law enforcement concerns and authorities regarding evacuation and repopulation were coordinated in advance.
☑ Coordination efforts between the Incident Command Post and the Ventura County Emergency Operations Center were exceptional.
☑ Damage assessment reports were available quickly once fire danger subsided.

### CHALLENGES

- Mandatory evacuation areas limited access for utility companies to assess and repair infrastructure.
- Ongoing issues experienced with the timely repopulation of evacuated areas.

## RECOMMENDATIONS

◈ Continue to develop an Incident Management Team in-briefing document to include access to evacuated areas for non-governmental and utility organizations.

◈ Redesign, as needed, the repopulation process, including establishing the final authority regarding repopulation determination. This will be addressed as part of the All Hazards Evacuation Plan being written by the Sheriff's Office of Emergency Services.

## PUBLIC INFORMATION AND EMERGENCY NOTIFICATIONS

### STRENGTHS

☑ Emergency notifications and messages were issued in English and Spanish throughout the duration of the incidents.

☑ The Ventura County Emergency Operations Center was used as the single issuing point for emergency notifications.

☑ Public information points included dispatch centers, an incident hotline, VC Emergency website, press conferences, community meetings, bulletin boards, news outlets and social media platforms.

☑ Information coordination was successfully maintained between the Incident Command Post and the Ventura County Emergency Operations Center.

### CHALLENGES

● Collateral fire and sheriff public information officer resources were strained due to concurrent incidents.

● When multiple county departments or agencies respond to a major incident, they must implement a joint information system strategy for the incident and adhere to the Operational Area Emergency Public Information annex. A lack of an integrated social media platform impacted consistent messaging capabilities across county agencies.

● There was no single, all-encompassing method to communicate with all residents. Varying social media platforms and critical infrastructure damage created obstacles for public notification/information.

● Public repopulation expectations were not managed with existing educational materials.

● Cal Fire Incident Management Team retained public information responsibilities which led to difficulties in maintaining Ventura County's commitment to providing timely bilingual incident information and press releases.

### RECOMMENDATIONS

◈ Recruit, train and staff an Operational Area Joint Information Center Team to support public information collection and dissemination.

◈ Ensure county departments are included within the Emergency Operations Center Joint Information Center. Provide training to partner agencies on an ongoing basis.

◈ Procure a social media software program that can update incident information simultaneously across multiple social media accounts and platforms.

◈ Conduct a public repopulation education campaign commensurate with evacuation training to manage expectations. Additional information to educate residents on repopulation considerations should be added to the Ventura County Fire Department's Ready, Set, Go preparedness campaign.

◈ Update the Incident Management Team in-briefing document to establish authority and concerns regarding public information and dissemination.

## MASS CARE AND SHELTER

### STRENGTHS

- ☑ Emergency and animal shelters were activated immediately and successfully sheltered those displaced.
- ☑ Emergency shelters were not co-located with the Incident Command Post.
- ☑ Improved shelter security and access procedures were successful.
- ☑ The City of Thousand Oaks and the Conejo Parks & Recreation District successfully opened and staffed multiple emergency shelters despite a delay in American Red Cross response resources.

### CHALLENGES

- • Due to limited resources, local agencies were required to operate evacuation shelters.
- • Multiple shelters were being operated in Thousand Oaks by both the American Red Cross and City of Thousand Oaks officials. This resulted in inconsistences in shelter management strategy.

### RECOMMENDATIONS

- ◈ Partner with the Ventura County Human Services Agency and the American Red Cross to train cities on sheltering operations.
- ◈ Adopt and implement shelter deployment/management strategies set forth in the Mass Care & Shelter annex of the Ventura County Emergency Operations Plan.

## MUTUAL AID

### STRENGTHS

- ☑ Activation of the Mutual Threat Zone plan in response to the Woolsey Fire was effective.
- ☑ Available fire resources were attained for immediate and sustained needs through established inter-agency relationships and the California Mutual Aid System.
- ☑ Additional law enforcement resources were obtained through the established mutual aid system.
- ☑ Utilization of the Regional Medical and Health mutual aid system was successful.

### CHALLENGES

- • Limited training and planning for local law enforcement on effective deployment and management of mutual aid resources led to challenges in conducting evacuations, road closures and establishing an interoperable communication system.

### RECOMMENDATIONS

- ◈ Encourage local law enforcement agencies to establish plans and train on the management of mutual aid resources.  Ensure full integration of all law enforcement resources into the Incident Action Plan.

# Board of Supervisors –
# Community Questions & Responses

**1. Was there a lack of fire suppression resources that impacted the ability to respond?**

The culmination of severe fire weather conditions, a mass fatality incident and multiple brush fires within a 24-hour period resulted in a lack of local fire suppression resources. The effect of this resource shortage was compounded by other significant incidents occurring throughout California, including the Camp Fire, which burned 153,336 acres, killed 85 individuals and destroyed nearly 19,000 structures. Although firefighting resources from Southern California were not sent directly to the Camp Fire on November 8th, it did impact the statewide pool of available firefighting resources to assist Ventura County.

**2. What was the process to determine evacuation areas and when evacuation orders would be issued?**

Ventura County public safety officials utilize the Incident Command System, the Standard Emergency Management System and the National Incident Management System to manage significant incidents. Ventura County relies upon an evacuation coordination process that has been tested, refined and ultimately proven to be a best practice.

When a new incident occurs, an Incident Command Post is established in a location where decision making and response coordination become centralized. When more than one agency has jurisdictional responsibility for the impacted area, a Unified Command is established, and joint decision making is applied to all critical issues. In most situations, Unified Command is comprised of both firefighting personnel focused on suppressing the fire and law enforcement personnel focused on issuing evacuation orders and managing impacts to the roadway.

**3. How were emergency notifications made?**

Ventura County public safety officials recognize the need to provide timely and actionable, information to residents in an emergency. One of the fundamental roles of government during an emergency is to provide potentially life-saving information to residents on how to stay out of harm's way.

During the Hill and Woolsey Fires, a multi-layered approach was used to disseminate emergency alerts to residents. This approach starts with an initial alert from the VC Alert Emergency Notification System. This system leverages both listed and unlisted telephone numbers, as well as contact information provided by residents to quickly disseminate information using voice telephone calls, text messages and email with pinpoint accuracy. In addition to VC Alert, notifications were sent out using the Wireless Emergency Alert System and the Emergency Alert System, both of which reach all cellular telephones in the region, as well as interrupt television and radio broadcasts. Although the geographic specificity of these systems is limited, both methods enhance our ability to quickly notify large areas.

In addition to leveraging the power of the alerting systems, law enforcement personnel attempt to make a personal notification to every individual within a mandatory evacuation area. Although this process is time consuming and sometimes difficult, this is the best method to ensure all individuals within an evacuation area are made aware of the potential danger.

Lastly, all emergency information was posted on vcemergency.com, various social media platforms, provided during press conferences and shared in person by community liaisons.

### 4. Were there any issues with water infrastructure or operations that adversely impacted fire suppression efforts?

The Ventura County Fire Protection District and the water purveyors within the burn area confirm there were no reports of issues related to the water systems that hampered firefighting efforts.

Ventura County Public Works Agency Water & Sanitation Department owns and operates Ventura County Waterworks District Number 17 for the Bell Canyon area. Numerous other purveyors own and operate water systems within the fire burn area. Due to high fire danger and the potential for Public Safety Power Shutoffs to be administered by Southern California Edison, purveyor staff ensured that tanks were filled to maximum capacity at all times. Although several minor leaks were identified by personnel, none of them adversely impacted the water capacity needed for firefighting operations.

### 5. Did the fire burn into contaminated locations within the Santa Susana Field Lab? What was done to address public health risks associated with fire impacts to the location?

During the response phase of the Woolsey Fire, Incident Commanders quickly identified the need to assess facilities at the Santa Susana Field Laboratory for damage and determine what, if any, pollutants were released into nearby communities. From November 8 through 30, 2019, the California Department of Toxic Substances Control and a team of federal, state and local agencies with expertise in analyzing radiation levels and the presence of hazardous compounds screened the Santa Susana Field Lab site and surrounding communities for potential contamination. Using a combination of field inspections, computer simulations, soil sampling and air monitoring, it was ultimately determined that no radiation or hazardous materials from the Santa Susana Field Laboratory site had impacted neighboring communities.

### 6. What was the process for repopulating evacuation areas?

Ensuring residents and businesses can repopulate evacuated areas is an important part of recovering from an incident. The Unified Command Group responsible for managing the Woolsey Fire established a Repopulation Coordination Group (RCG) to manage and facilitate all repopulation efforts.

The Repopulation Coordination Group, led by Cal Fire Incident Management Team 5, included representatives from Ventura County, Los Angeles County, the City of Los Angeles and utility companies that were directly impacted by the incident. While timely repopulation of evacuated areas is a priority, it is important to ensure all stakeholders agree that the area is safe for repopulation. The process for repopulating evacuated areas included dialog with impacted stakeholders to ensure all known hazards within the evacuation perimeter had been mitigated. Once concurrence was received from all agencies, a press release was distributed, social media platforms were updated, and a VC Alert Emergency Notification was sent out in English and in Spanish advising residents the evacuation order had been lifted.
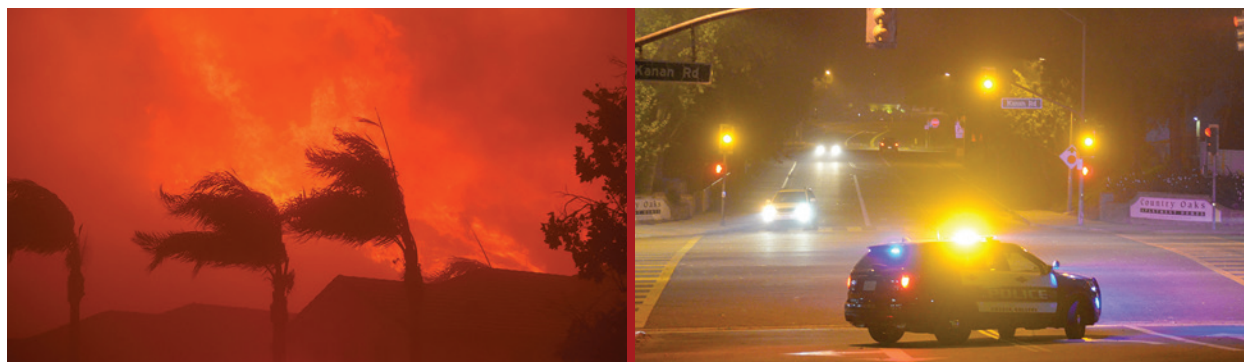
### 7.  What triggered the fire?

While the official cause of the Hill Fire is still under investigation, the Woolsey Fire was determined to be caused by equipment owned by Southern California Edison. The official reports for both fires have not been released as of the publishing date of this report.

In large-scale events such as the Thomas, Hill and Woolsey Fires, Ventura County Fire, Ventura County Sheriff and Cal Fire investigators work as a team to process the scene and complete the investigation. Once the origin is located, investigators conduct a thorough search for potential causes of the fire. Investigators look for evidence of natural, mechanical or human causes. Based on analysis, investigators will classify the cause of a fire as natural, accidental, incendiary (arson), or undetermined.

The Hill fire remains an active and open investigation. To date, investigators have been able to rule out all potential causes except for human activity. Due to the status of the investigation, no other information may be released at this time.

### 8.  What ability does Ventura County have to conduct air monitoring, specifically in the area of the Santa Susana Field Lab?

The Ventura County Air Pollution Control District does not have the equipment or training required to perform the type of hazardous materials monitoring required at the Santa Susana Field Lab during the Woolsey fire. The Ventura County Air Pollution Control District team has not been trained as a first responder agency and is not equipped to enter hazardous areas.

The Ventura County Air Pollution Control District has five stationary ambient air monitoring stations that sample ozone and particulates across Ventura County. When a wildfire occurs, Ventura County Air Pollution Control District can deploy portable particulate monitors in locations generally considered safe for the public and outside evacuation areas.

The Ventura County Environmental Health Department and the California Department of Toxic Substances Control both have the capability to perform air monitoring in hazardous environments; however, due to the jurisdiction of the Santa Susana Field Laboratory cleanup operations, the California Department of Toxic Substances Control took the lead for air monitoring near the location.

### 9.  Was the mutual aid system sufficient and effective?

Due to the predicted, Santa Ana wind event and Red Flag warning fire agencies throughout the state increased staffing above normal staffing levels.  However, the demand for fire resources created by the Hill, Woolsey, and Camp fires was so high the California Mutual Aid System did not have adequate resources to fulfill all the immediate needs.  The current resource ordering system used to order mutual aid resources is too slow to meet the needs of a wind-driven brushfire.  To adjust for this, known delay; local Fire Chiefs place phone calls to each other requesting immediate assistance, bypassing the lag time created by the ordering system.

### 10. Could evacuation warnings have been issued sooner in some areas?
Ensuring evacuation orders are issued as quickly as possible is essential to the primary mission to protect life during a wildfire. Prior to issuing evacuation orders, the Unified Command Group responsible for managing the incident must determine the potential future impact of an incident as time progresses. Due to changing weather conditions, optimal fuel conditions and poor situational awareness of fast-moving incidents, accurately forecasting the time and location of areas potentially impacted can be difficult.

Upon conducting an internal review of evacuation orders issued at the request of the Unified Command Group, the Ventura County Sheriff's Office of Emergency Services identified a slight delay in issuing evacuation orders in the Oak Park area, as compared to other areas. The cause of this delay is attributed to the unanticipated speed in which the fire progressed toward the community. All other evacuation areas reviewed appeared to receive timely notifications.

## 11. Did we learn anything about the advisability of sheltering-in-place?

The shelter-in-place option is a protective action used sparingly when there is limited time to act and limited resources to execute an evacuation order. The execution of a shelter-in-place order requires personnel and equipment to be stationed to protect residents and property from fire. At times, a shelter-in-place order may require fewer resources to safeguard locations such as hospitals, skilled nursing facilities, schools and universities. Ultimately, Unified Command will evaluate whether it is safer to evacuate or shelter-in-place

Increasingly, citizens have proposed a "Stay and Defend" philosophy where homeowners ignore evacuation orders in order to battle a fire to protect their own property. The Ventura County Fire Protection District's official position encourages residents to prepare for wildfire using the "Ready-Set-Go" program, which includes following evacuation orders when issued by local law enforcement agencies.

## 12. How did Ventura County incorporate lessons learned from the Los Angeles County After-Action Report?

Numerous Ventura County agencies actively participated in the listening sessions and taskforce workgroup meetings conducted as part of the Los Angeles County After-Action Review of the Woolsey Fire. Several lessons learned and subsequent corrective actions identified by Los Angeles County are still being evaluated by Ventura County personnel for potential implementation. Every major incident provides a unique opportunity to review preparedness, response and recovery processes, to evaluate capabilities and to make improvements. Ventura County is a county of continuous improvement where we are critical of our shortfalls and work diligently to effect change and improve future responses.

## 13. What is the process for ensuring safe evacuation routes are available?

Determining evacuation routes in advance of an incident can be a difficult task without the knowledge of many variables, including road conditions. At the start of a major incident, an evacuation coordination group is convened by the Unified Command to determine which evacuations are required due to unsafe conditions. Part of this analysis includes real-time consideration for areas with limited ingress/egress due to road closures and other hazardous conditions. When emergency alerts are issued, additional directions may be provided to residents in areas with limited ingress/egress routes.

Beyond real-time planning during an incident, residents are regularly reminded to identify several evacuation routes from their neighborhoods should an incident impact their area. Personal preparedness and accountability are key to knowing and understanding safe evacuation routes.

# Improvement Plan Performance Matrix

| ISSUE | LA COUNTY RECOMMENDATION | RECOMMENDED SOLUTION | LEAD COORDINATION AGENCY(IES) | ESTIMATED COMPLETION TIMELINE | PERFORMANCE STATUS |
|---|---|---|---|---|---|
| **Operational Area Coordination** | | | | | |
| Diminished communication between County and City EOCs during the onset of the incident. In some areas, this was exacerbated by Internet outages. | | Increase training opportunities for the DLAN system. Explore options for establishing satellite internet service at critical locations. | VC OES | Ongoing | In Progress |
| Ongoing difficulty experienced with communication platforms, including satellite phones and radio systems. | #6 | Ensure all staff have communications training for satellite phones and countywide interoperable radio system radios. | VC OES | Ongoing | In Progress |
| The weight of three significant, emotionally charged events impacted staff stress and fatigue levels. | | Ensure Critical Incident Stress Management (CISM) resources are made available to all emergency personnel in a timely manner. | All | Ongoing | Acknowledged |

# Improvement Plan Performance Matrix (cont.)

| ISSUE | LA COUNTY RECOMMENDATION | RECOMMENDED SOLUTION | LEAD COORDINATION AGENCY(IES) | ESTIMATED COMPLETION TIMELINE | PERFORMANCE STATUS |
|---|---|---|---|---|---|
| **Incident Management** | | | | | |
| Mandatory evacuation areas limited access for utility companies to assess and repair infrastructure. | | Continue to develop an IMT in-briefing document to include access to evacuated areas for non-governmental and utility companies. | VCFPD VC OES | 6/1/2020 | In Progress |
| Ongoing issues experienced with the timely repopulation of evacuated areas. | #62 | Redesign, as needed, the repopulation process, including establishing the final authority regarding repopulation determination. This will be addressed as part of the All Hazards Evacuation Plan being written by the Sheriff's Office of Emergency Services. | All | 12/31/2020 | Acknowledged |
| **Public Information and Emergency Notifications** | | | | | |
| Collateral fire and sheriff public information officer resources were strained due to concurrent incidents | | Recruit, train and staff an OA Joint Information Center (JIC) Team to support public information collection and dissemination. | OES VCFPD | 4/1/2020 | In Progress |
| When multiple county departments or agencies respond to a major incident, they must implement a joint information system strategy for the incident and adhere to the Operational Area Emergency Public Information annex. | #39 | Ensure county departments are included within the Emergency Operations Center Joint Information Center. Provide training to partner agencies on an ongoing basis. | OES | Ongoing | In Progress |

| ISSUE | LA COUNTY RECOMMENDATION | RECOMMENDED SOLUTION | LEAD COORDINATION AGENCY(IES) | ESTIMATED COMPLETION TIMELINE | PERFORMANCE STATUS |
|---|---|---|---|---|---|
| There was no single, all-encompassing method to communicate with all residents. Varying social media platforms and critical infrastructure damage created obstacles for public notification/information. | #19 | Procure a social media software program that can update incident information simultaneously across multiple social media accounts and platforms. | OES VCFPD CEO | Completed | Completed |
| Public education campaign lacks information on water conservation prior to a fire to ensure key water supplies are available for firefighting purposes. | | Enhance existing Ready, Set, Go preparedness program to include information on water conservation prior to fires. | VCOES VCFPD | 6/1/2020 | Acknowledged |
| Public repopulation expectations were not managed with existing educational materials. | #64 | Conduct a public repopulation education campaign commensurate with evacuation training to manage expectations. | VCOES VCFPD | 6/1/2020 | Acknowledged |
| Cal Fire IMT retained public information responsibilities which led to difficulties in maintaining Ventura County's commitment to providing timely bilingual incident information and press releases. | | Update the IMT in-briefing document to establish authority and concerns regarding public information and dissemination. | VCFPD | 6/1/2020 | In Progress |

# Improvement Plan Performance Matrix (cont.)

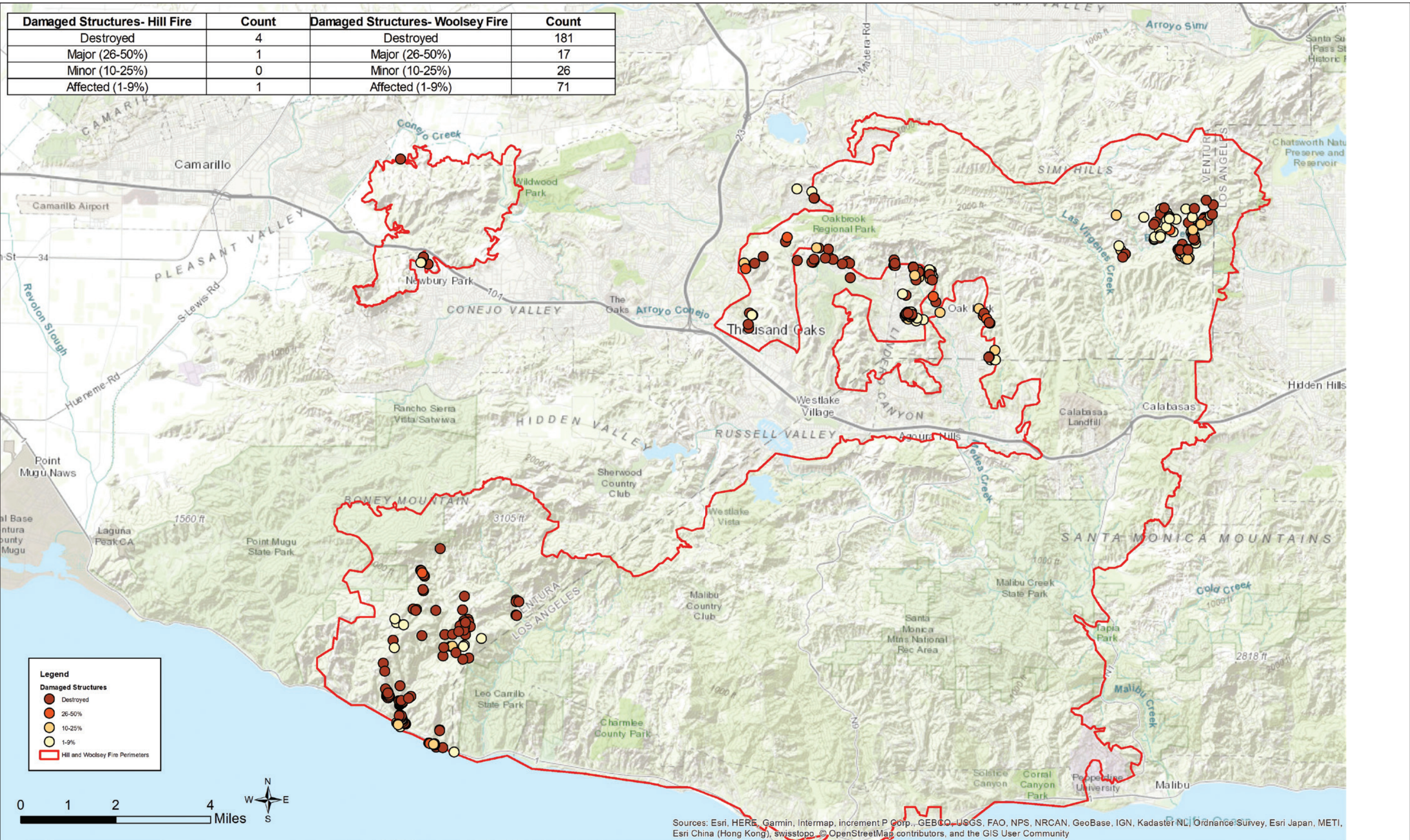| ISSUE | LA COUNTY RECOMMENDATION | RECOMMENDED SOLUTION | LEAD COORDINATION AGENCY(IES) | ESTIMATED COMPLETION TIMELINE | PERFORMANCE STATUS |
|---|---|---|---|---|---|
| **Mass Care and Shelter** | | | | | |
| Due to limited resources, cities were required to operate evacuation shelters. | | Partner with the American Red Cross to train cities on sheltering operations. | HSA Red Cross Cities | Ongoing | In Progress |
| Multiple shelters were being operated in Thousand Oaks by both the Red Cross and City of Thousand Oaks officials. This resulted in inconsistences in shelter management strategy. | | Adopt and implement shelter deployment/ management strategies set forth in the Mass Care & Shelter annex of the Ventura County Emergency Operations Plan. | HSA Red Cross Cities | Mar-20 | In Progress |
| **Mutual Aid** | | | | | |
| Limited training and planning for local law enforcement on effective deployment and management of mutual aid resources led to challenges in conducting evacuations, road closures and establishing an interoperable communication system | | Encourage local law enforcement agencies to establish plans and train on the management of mutual aid resources. Ensure full integration of all law enforcement resources into the Incident Action Plan. | VCSO | | |

| ISSUE | LA COUNTY RECOMMENDATION | RECOMMENDED SOLUTION | LEAD COORDINATION AGENCY(IES) | ESTIMATED COMPLETION TIMELINE | PERFORMANCE STATUS |
|---|---|---|---|---|---|
| **Mitigation & Recovery** | | | | | |
| Fuel moisture readings indicated volatile fuels in the region—at or near critical levels. Explore methods to enhance the soil's ability, through carbon and moisture retention, to increase fuel moisture in defensible landscaping plants. | #83 | Ensure agencies with permitting purview continue to explore new options for improving fire fuel resiliency. | All | Ongoing | Acknowledged |
| Increase requirements for development/ construction codes and public education programs to gain more hardening of structures. Discourage development in High Fire Hazard Severity Zones | #84 | Ensure agencies with permitting purview continue to explore new options for the hardening of structures including screening vents, sealing buildings, fire resilient building materials, etc. | All | Ongoing | Acknowledged |
| Identify critical infrastructure that is dependent on electrical power including water wells, major traffic signals, train crossings, cellular communication facilities and healthcare facilities without backup power. | | Conduct Operational Area critical infrastructure assessment to better catalog assets in a GIS format. | VC OES | 6/1/2020 | In Progress |

| FIRE | Location | Type | Date Issued | Time Issued | Date Lifted | Time Lifted | Days |
|------|----------|------|-------------|-------------|-------------|-------------|------|
| Hill | Camarillo Springs | Mandatory | 11/8/2018 | 14:55 | 11/10/2018 | 16:34 | 2 |
| Hill | Vallecito Mobile Home Park | Mandatory | 11/8/2018 | 23:37 | 11/10/2018 | 16:34 | 2 |
| Hill | Dos Vientos | Mandatory | 11/8/2018 | 15:32 | 11/10/2018 | 16:34 | 2 |
| Woolsey | Bridal Path - Simi Valley | Voluntary | 11/9/2018 | 0:23 | 11/10/2018 | 18:30 | 1 |
| Woolsey | Rudolph Area- Simi Valley | Voluntary | 11/9/2018 | 1:58 | 11/10/2018 | 18:30 | 1 |
| Woolsey | Wood Ranch- Simi Valley | Voluntary | 11/9/2018 | 3:40 | 11/10/2018 | 18:30 | 1 |
| Woolsey | Long Canyon Mandatory | Mandatory | 11/9/2018 | 14:00 | 11/10/2018 | 18:30 | 2 |
| Woolsey | Newbury Park (Lynn Road) / Hwy 23 to Erbes | Mandatory | 11/9/2018 | 2:32 | 11/10/2018 | 19:16 | 1 |
| Woolsey | Newbury Park to Westlake Blvd | Mandatory | 11/9/2018 | 2:32 | 11/11/2018 | 20:00 | 2 |
| Woolsey | Thousand Oaks - East of Erbes to Westlake Blvd & Sunset Hills | Mandatory | 11/8/2018 | 23:19 | 11/11/2018 | 21:30 | 3 |
| Woolsey | Oak Park (All Areas) / North Ranch | Mandatory | 11/8/2018 | 22:45 | 11/11/2018 | 21:30 | 3 |
| Woolsey | Westlake | Mandatory | 11/9/2018 | 1:48 | 11/12/2018 | 18:00 | 3 |
| Woolsey | Bell Canyon (All areas) | Mandatory | 11/9/2018 | 11:13 | 11/12/2018 | 19:59 | 3 |
| Woolsey | Lake Sherwood/ Hidden Valley / South of Potrero | Mandatory | 11/9/2018 | 2:57 | 11/15/2018 | 9:31 | 6 |
| Woolsey | PCH - Las Posas to County Line | Mandatory | 11/8/2018 | 19:57 | 11/15/2018 | 18:47 | 7 |
| Woolsey | Carlisle Canyon Road | Mandatory | 11/8/2018 | 19:57 | 11/16/2018 | 9:48 | 8 |
| Hill/Woolsey | South Coast - Deer Creek Road | Mandatory | 11/8/2018 | 19:57 | 11/16/2018 | 17:02 | 8 |
| Hill/Woolsey | South Coast | Mandatory | 11/8/2018 | 19:57 | 11/17/2018 | 17:28 | 9 |

**Legend**

Voluntary Evacuation

Mandatory Evacuation

0  1  2  4 Miles

| Damaged Structures- Hill Fire | Count | Damaged Structures- Woolsey Fire | Count |
|---|---|---|---|
| Destroyed | 4 | Destroyed | 181 |
| Major (26-50%) | 1 | Major (26-50%) | 17 |
| Minor (10-25%) | 0 | Minor (10-25%) | 26 |
| Affected (1-9%) | 1 | Affected (1-9%) | 71 |

**Legend**

**Damaged Structures**
- Destroyed
- 26-50%
- 10-25%
- 1-9%
- Hill and Woolsey Fire Perimeters

0 1 2 4 Miles

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, ©OpenStreetMap contributors, and the GIS User Community

# Participating Agencies

*IN GRATITUDE FOR CONTRIBUTING AGENCIES:*

American Red Cross

Association of Water Agencies Ventura County

AT&T Corporation

California Conservation Corps

California Department of Corrections and Rehabilitation

California Department of Fish and Wildlife

California Department of Forestry and Fire Protection

California Department of Toxic Substances Control

California Environmental Protection Agency

California Governor's Office of Emergency Services

California Governor's Office of Emergency Services – Fire and Rescue

California Governor's Office of Emergency Services – Law Enforcement

California Highway Patrol

California State Parks

California State University Channel Islands

Calleguas Municipal Water District

Caltrans

Camrosa Water District

City of Camarillo

City of Moorpark

City of Simi Valley

City of Thousand Oaks

City of Thousand Oaks Public Works

Conejo Recreation and Park District

Conejo Valley Unified School District

Frontier Communications

Los Angeles County Animal Care & Control

Los Angeles County Fire Department

Los Angeles County Office of Emergency Management

Los Angeles County Sheriff's Department

Los Angeles Fire Department

Los Angeles Police Department

National Park Service

Naval Base Ventura County

Simi Valley Police Department

Southern California Edison

Southern California Gas Company

Spectrum

Triunfo Water & Sanitation District/Oak Park Water Service

Ventura County Air Pollution Control District

Ventura County Animal Services

Ventura County Board of Supervisors

Ventura County Emergency Medical Services

Ventura County Executive Office

Ventura County Fire Department

Ventura County Health Care Agency

Ventura County Human Services Agency

Ventura County Information Technology Services Department

Ventura County Office of Education

Ventura County Public Health

Ventura County Public Works

Ventura County Sheriff's Office

Ventura County Sheriff's Office of Emergency Services

Ventura County Volunteers Active in Disaster

Verizon Communications, Inc.