



2018 CAMP FIRE AFTER ACTION REPORT



Burnt sign of Paradise Community Village. Photo Credit: ABC7 San Francisco

Gavin Newsom
Governor

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FOREWORD

Per the *Emergency Services Act, Article 9.5, Government Code Section 8607, subdivision(f)*, the California Governor's Office of Emergency Services (Cal OES), in cooperation with involved state and local agencies, shall complete an After Action Report (AAR) after each gubernatorial-proclaimed disaster. This report shall provide a review of public safety response and disaster recovery activities and conclusions and recommendations based on the findings. Cal OES shall make the report available to all interested public safety and emergency management organizations.

An After Action Report serves the following essential functions:

- Provides a source for documenting response and early recovery activities
- Identifies successes and areas needing improvement during emergencies
- Analyzes the effectiveness of the different components of the Standardized Emergency Management System (SEMS)
- Describes and defines a plan of corrective action for implementing recommended improvements to existing emergency response efforts

Representatives of public safety or emergency management organizations can obtain a copy of this report by submitting a request to:

SharedMail.CalAAR@CalOES.ca.gov.

EXECUTIVE SUMMARY

The 2018 Camp Fire was one of California's deadliest and most destructive wildfires. It started on November 8, 2018, near Poe Dam in Butte County. The community of Pulga received the first evacuation notice at 7:13 a.m. By 8:00 a.m., the community of Concow and the Town of Paradise also received evacuation notices. Weather agencies were unable to forecast the fire's direction due to unpredictable weather conditions. Strong wind gusts rapidly spread the fire, which affected evacuation routes, blocked exit routes, and eventually closed cities.

The Camp Fire scorched 153,336 acres, destroyed more than 18,000 structures, and caused 85 confirmed fatalities before full containment on November 25, 2018. Most of the destruction occurred within the first four hours of the wildfire.



Flames consume building as the Camp Fire burns through Paradise, California. Photo Credit: Noah Berger, AP

Five northern California Operational Areas (OA)—Butte, Glenn, Plumas, Sutter, and Yuba proclaimed a local State of Emergency.

California's Governor Elect, Gavin Newsom, proclaimed a State of Emergency on November 8, 2018, due to the fire's threat to life, property, and the environment. On November 9, 2018, President Donald Trump granted California's request for a

Presidential Emergency Declaration; and on November 12, 2018, President Donald Trump approved California's request for a Presidential Major Disaster Declaration.

California Governor's Office of Emergency Services (Cal OES) activated the Inland Region Emergency Operations Center (REOC) and State Operations Center (SOC) on November 8, 2018, in support of local Emergency Operations Centers (EOCs). The SOC deployed hundreds of emergency managers, subject matter experts (SMEs), and representatives from dozens of state and federal agencies to support relief efforts in the affected communities. These supporting efforts included fire and law enforcement mutual aid, shelter operations, school assistance, disaster assistance, debris removal, and recovery. Camp Fire was the

first time law enforcement, search and rescue, fire, coroner's office, and the California National Guard (CNG) responded in a unified command.

California received support from Oregon, Alaska, New Jersey, South Carolina, Kentucky, Oklahoma, Nevada, New Mexico, Washington, Idaho, Montana, Texas, New York, and Indiana through the Emergency Management Assistance Compact (EMAC). The EMAC resources included a mass care coordinator, Individual Assistance (IA) experts, volunteer management experts, search and rescue staff, forensic teams, and fire strike teams.

In 2018, Camp Fire was considered the deadliest and most destructive wildfire in California due to insured losses and its economic and environmental impact, as reported by the California Department of Forestry and Fire Protection (CAL FIRE). This AAR documents lessons learned through the operational successes, areas needing improvement, and recommended corrective actions.

SUMMARY OF SUCCESSES

- State agencies responded to impacts caused by the fire and supported response operations.
 - State mutual aid systems were robustly used for a broad use of law enforcement, fire applications, and emergency management personnel needs.
 - CNG provided ground support for search and rescue operations and decontamination operations, heavy equipment for structure demolition, logistics and commodity support, Global Positioning System (GPS) tracking capability to teams in the field, as well as military police for traffic control points. CNG also successfully integrated into the animal care and control operation at the county's request.
 - The California Department of Transportation (Caltrans) liaised with local government allowing effective resource coordination, such as mobilizing crews to repair guardrails and restore signage rapidly.
 - CAL FIRE provided funding to local law enforcement for the first time. The funding helped sustain volunteer and search and rescue operations and support necessary resources to manage three large incident base camps.

- The California Department of Human Resources (CalHR) authorized Administrative Time Off (ATO) for up to 5,000 permanent state employees who wished to volunteer.
- The California Department of Social Services (CDSS) created new roles and added positions in the Mass Care and Shelter Task Force (MCSTF) to facilitate direct communication with leadership and field staff.
- Local governments leveraged their experience with prior large-scale disasters to meet shelters' needs by providing the necessary services, supplies, and equipment. In addition to essential resources such as food, water, cots, etc., EOC resource requests included often overlooked resources, such as Americans with Disabilities Act (ADA) compliant showers and portable toilets, canes, wheelchairs, and Continuous Positive Airway Pressure (CPAP) machines. A sign language interpreter was present daily to relay public information updates.
- An Animal Care Task Force (ACTF) was established for the first time to provide animal care response support.
- Local governments demonstrated adaptability during infrastructure, network, and system failures.
 - Butte County transferred its mass notification function to the police department for continuity when their notification network stopped functioning normally.
 - Butte County EOC recruited two retired fire officers as EOC and Unified Command Post (UCP) liaisons to address staffing shortages resulting from impacted team members that could not perform their normal duties.
- Established relationships between Cal OES Law Enforcement Mutual Aid (LEMA) Inland Region V and regional law enforcement agencies provided seamless coordination.
- Urban and traditional search and rescue teams throughout California assisted in the response and were supported by highly trained search and rescue volunteers. A total of fifty-four local governments provided search and rescue resources in this effort.
- Local law enforcement developed a tracking system and utilized various methods for receiving missing persons' data, such as a missing persons call center and an email address for the public.

- Integrating Rapid DNA (Deoxyribonucleic Acid) technology was a significant asset in the timely identification of remains, due to the destruction of medical and dental records in the fire.
- Pre-established repopulation processes worked effectively for this large-scale incident. Mapping was used in tandem with a coding system to indicate the status of each area. Redundant repopulation information was disseminated to the public via the county mass notification system, social media, and the county Geographic Information System (GIS) website.
- An Emergency Pass Policy was successfully validated, which provided a process for law enforcement to grant access to restricted areas to those with a valid operational purpose and restrict access to individuals without proper credentials.
- Multiple platforms were utilized to facilitate reunification, including publishing names of missing persons on the county's website. Tablets were available for evacuees to register on the American Red Cross (ARC) Safe and Well website. A shelter registration log was established that provided an easy, accessible log of residents that was shared with the EOC and the missing persons center.

SUMMARY OF AREAS NEEDING IMPROVEMENT

- Information sharing between the state and the local government was deficient during the event.
 - Communication from the field to the EOC needs improvement to ensure proper information flow.
 - Information flow from the local school districts to the state did not occur automatically. Mass evacuation plans for California State University (CSU) and other higher educational institutions did not exist or lacked all-hazard threat assessments.
- Multiple disciplines reported a lack of training to adequately support the event.
 - Stakeholders need training on the mission request process, including considerations when renting versus buying resources during an emergency.

- Inadequate emergency management training prior to field deployment likely contributed to miscommunication between incident management and the ACTF.
 - Trained staff impacted by the fires were unavailable for duty which led to mass notification management issues, increased workloads, and situational awareness difficulties.
 - Untrained and uncredentialed volunteer groups complicated the animal care and control mission.
 - The lack of training in search and recovery caused issues with morgue operations.
- Local government plans did not have procedures for county shelters to operate independently of ARC agreements and resources. Shelter policies were also not well defined and resulted in unmet needs for residents and their animals.
 - Local government lacked an adequate system for receiving, storing, and matching donations with identified needs across the community.
 - Public messaging on evacuations confused residents and did not include animal-specific information and guidance.
 - Contraflow plans were not publicly shared during pre-disaster and exercises were not sufficiently conducted.
 - Various non-evacuated communities faced fuel and resource shortages due to isolation when surrounding communities were evacuated.

DESCRIPTION OF EVENTS

INCIDENT PERIOD

November 8, 2018 – November 25, 2018

DECLARATIONS AND PROCLAMATIONS

LOCAL

Butte County	November 8, 2018
Glenn County	November 9, 2018
Plumas County	November 10, 2018
Sutter County	November 15, 2018
Yuba County	November 15, 2018

STATE OF EMERGENCY

Butte County	November 8, 2018
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FEDERAL

Fire Management Assistance Grant – FM-5278	November 8, 2018
Emergency Declaration – EM-3409	November 9, 2018
Major Disaster Declaration – DR-4407	November 12, 2018

STATISTICAL SUMMARY

ACRES BURNED

153,336

STRUCTURES DESTROYED

18,804

STRUCTURES DAMAGED

754

FATALITIES

85

TOTAL ESTIMATED SHELTER POPULATION (ACROSS FOUR COUNTIES)

32,000

INCIDENT BACKGROUND

On November 6, 2018, two days before Camp Fire started, Pacific Gas & Electric Company (PG&E) notified customers of an intended power shut down due to a high risk for wildfire development caused by increasingly high winds and low humidity. The National Weather Service issued a red-flag warning for the Northern California region for November 7 and 8.

PG&E again notified residents on November 7 of the potential for power shutoffs. However, PG&E never shut off power, and a power transmission line issue was reported near the community of Pulga on November 8. At 6:33 a.m., the first reports of a fire in a wooded area by the Poe Creek Dam came in. When first responders arrived, the small brushfire had grown to ten acres.



*Smoke rises from Camp Fire on November 12, in Butte Valley, Calif.
Photo Credit: Wkrp dv#Kdz wkrughZVD#Nrgd|#Qhwz run*

Initially, the fire area was only accessible by a narrow dirt road, making it dangerous for fire engines to respond. Due to high winds and daylight limitations, the decision to call for air resources was delayed. By the time resources arrived, the fire had spread 19 miles across the local mountain range.

The community of Pulga received the first evacuation notice at 7:13 a.m., and by 8:00 a.m., the community of Concow and the Town of Paradise also received evacuation notices. Due to unpredictable weather conditions, weather agencies could not forecast fire direction. Strong wind gusts spread embers and exacerbated spot fires, spreading them to multiple locations. This rapid spread affected evacuation routes, gridlocked roads, and blocked-off exits.

As early as 8:00 a.m., dark skies, flaring embers, and thick, smoke-filled air encompassed the county. These conditions eventually worsened, leading to resounding alarms for hesitant residents to urgently comply with evacuation orders being issued. Traffic became so congested that many residents began to flee on foot. Residents who could leave in their vehicles stopped to pick up others whose cars were ignited and left without transportation.



Firemen walk through a dark forest with headlamps looking for hot spots during Camp Fire on Nov. 12, in Butte Valley, Calif. Photo Credit: Thomas Hawthorne/USA Today Network

Less than 40 percent of residents in the fire-affected areas had signed up to receive emergency alerts prior to Camp Fire, and of the 52,000 residents who evacuated the foothills, only 7,000 had received an emergency notification through the county's CodeRed system.

Nevertheless, the mass evacuation effort was effective because of the additional use of emergency

vehicle sirens, bull horns, and word of mouth. Family and neighbors alerted one another of the imminent danger and assisted each other to safety. Many senior citizens and residents with disabilities were also aided by fellow community members who drove them to safety.

Schools, hospitals, and other large centers were evacuated mainly by their faculty and staff. First responders quickly switched response priorities from fire suppression to evacuation due to the rapid spread of the fire, while resources to contain it were blocked by evacuation gridlock. Evacuation and rescue efforts focused on saving as many lives as possible, including situations where first responders pulled evacuated residents into areas of protection such as gas stations, parking lots, and local churches.

Butte County submitted a Local Emergency Proclamation on November 8 requesting California Disaster Assistance Act assistance, U.S. Small Business Administration (SBA) funding, and any federal funding available to support response and recovery efforts. The State of California submitted a Fire Management Assistance Grant (FMAG) request to the Federal Emergency

Management Agency (FEMA) for Camp Fire. FEMA approved the state's request on November 8, 2018. The approval authorized federal funds to assist the state in combatting the fire, which threatened to become a major disaster. Eligible costs covered by the FMAG included expenses for field camps, equipment use, materials, supplies, mobilization, and demobilization activities.

On the same day, Governor Elect Gavin Newsom declared a State of Emergency in Butte County due to the magnitude of Camp Fire. The declaration provided the Governor powers authorized by the Emergency Service Act to order all state agencies to utilize and employ personnel, equipment, and facilities for the performance of activities under the direction of Cal OES to assist local governments as necessary.

Subsequently, Governor Elect Gavin Newsom sent President Donald Trump and FEMA a letter requesting a Presidential Emergency Declaration for direct federal assistance to support communities in Butte County. President Donald Trump declared a Presidential Emergency Declaration on November 9. The federal assistance supplemented state and local emergency response, including air assets, shelter supplies, and water. It also supported mass care, ambulatory transport, and evacuating individuals with access and functional needs.

On November 11, 2018, Governor Edmund G. Brown Jr. requested a Presidential Major Disaster Declaration to bolster the emergency response and help residents with disaster recovery. The White House approved the governor's request and issued a Presidential Major Disaster Declaration on

November 12, 2018. The Presidential Major Disaster Declaration helped impacted counties through eligibility for crisis counseling support, housing assistance, unemployment assistance, and legal services. The declaration also provided public assistance to help state, tribal, and local governments with ongoing emergency response, recovery, and hazard mitigation, which helps state and local governments reduce the risks and impacts of future disasters.



Remnants of a telephone pole hang from their lines after they burned in Camp Fire on Thursday, Nov. 8, 2018. Photo Credit: Jim Schultz

Thousands of firefighters worked diligently to contain the fire; however, adverse weather conditions and high fuel loads prevented containment for 17 days. The fire resulted in 153,336 acres burned and the destruction of 13,972 residences, 528 commercial buildings, and 4,293 other minor structures before full containment on November 25, 2018. CAL FIRE confirmed injuries to three fire personnel, numerous civilians and 85 fatalities.

Resources from all over the western United States were deployed by November 10 to support the response efforts of Camp Fire. Resources included 5,596 firefighters, 622 engines, 75 water tenders, 101 fire crews, 103 bulldozers, and 24 helicopters. The simultaneous event of the Woolsey Fire in Southern California required additional resource assistance from 17 other states.



Fire rages through neighborhoods as Camp Fire burns out of control through Paradise, fueled by high winds in Butte County, California, USA, 08 November 2018. Photo Credit: Peter DaSilva/EPA-EFE

Camp Fire left over 27,000 residents searching for temporary and short-term housing. Cal OES partnered with FEMA to form a Housing Task Force (HTF) to identify longer-term housing solutions for the thousands left homeless. The HTF identified the cities of Chico, Oroville, and other surrounding communities as potential options to lease commercial

housing and build temporary group housing sites. Inspections at the prospective sites evaluated zoning and permit requirements and distances from the burn scar areas. Various agencies, including the Department of General Services (DGS), the California Department of Food and Agriculture (CDFA), and the Department of Housing and Community Development (HCD), collected land and property availability data. Other possible housing solutions included using FEMA-purchased recreational vehicles and manufactured housing units. The HTF also contacted the public to widen its search for potential housing sites, asking the public who owned commercial trailer sites or RV pads to contact FEMA for feasible sites.

In Chico, a large gathering of evacuees took temporary residence in the Walmart parking lot and its adjacent field and became known as the Walmart Camp. The camp grew in size and population, with hundreds of vehicles and tents. Individuals and entities looking to support community members affected by the fire were drawn to the area. The Walmart Camp was established on private property and was not operating under the county. Consequently, the City of Chico had to request county assistance and intervention for many public health and safety issues it could not address.

On November 25, 2018, CAL FIRE reported 100 percent fire containment, but residual community impacts continued.

Butte County reported a severe housing crisis that continues to impact the county. The population in Chico, Oroville, and Gridley grew by approximately 20 percent, with an influx of more than 20,000 people from the previous year. Many evacuees stayed in shelters



Photo from the Chico Walmart Camp where Camp Fire evacuees stayed. Photo Credit: LA Times

until the last shelter closed in February 2019. Others waited for temporary housing units from FEMA, which took more than six months to secure and many residents moved out of the county and out of California.

Search and rescue efforts resulting from Camp Fire were the most extensive search and rescue operations in California state history. Forensic recovery operations were one of the largest in the United States since the 9/11 terrorist attacks. Butte County implemented a process that facilitated the successful discovery, collection, and identification of remains despite the scale and severity of the search and rescue of human remains and recovery operations. Support provided through mutual aid partners was critical in accomplishing mission objectives. Camp Fire was the first time law enforcement, fire, coroner's office, the CNG, and search and rescue responded together in a unified command. Through the seasoned mutual aid personnel, best practices from other recent fires were extrapolated to Camp Fire's response.

Smoke from the fire led to widespread air pollution throughout Butte County, the San Francisco Bay Area, and the Central Valley. The smoke prompted the closing of public schools in and around Butte County. Cal OES activated the Schools Task Force in coordination with the California Department of Education (CDE), the Butte County Office of Education, and Paradise Unified School District to determine student needs and alternate school locations in the neighboring Chico and Oroville areas.



Search and rescue teams on Tuesday, Nov. 13, 2018 comb through rubble looking for the remains of victims killed in Camp Fire in Paradise, Calif. Photo Credit: Sam Gross/USA Today Network

Camp Fire's destruction of homes and infrastructure compromised the integrity of potable drinking water. Cal OES established the Water Task Force to support Paradise Irrigation District's critical activities associated with contamination and water system repairs.

Burnt vegetation and charred soil from the fire increased the risk of soil erosion, debris flow, and mudslides.

The Watershed Emergency

Response Team evaluated areas impacted by the fire and identified areas prone to flooding, debris flow, and mudslides. Cal OES, FEMA, and local officials coordinated with the state's Debris Task Force and Debris Management Team to conduct fire-related debris and hazardous waste removal.

SUCCESSSES

STATE AGENCIES

Report contributors highlighted the following successes:

Response

1. Cal OES Fire and CAL FIRE collaborated with federal firefighters and tactical teams, who brought in the field experience, capability, and professionalism needed for an all hazard response.
2. The Cal OES Law Enforcement Branch (LEB) and Fire and Rescue Branch successfully coordinated search and rescue efforts: LEB coordinated teams to search surrounding property and terrain, while the California FEMA Urban Search and Rescue (US&R) Task Force and California Regional US&R Task Force searched impacted structures.
3. Cal OES LEB coordinated both the use of the Coroner's Mutual Aid System to provide personnel from throughout the state to assist with the identification of remains and LEMA to fill the need for over 100 officers daily from over 40 counties to provide security, set roadblocks, and conduct evacuations.
4. Cal OES Inland Region and the Town of Paradise coordinated with CAL FIRE to establish an EOC.
5. Cal OES Inland Region resolved a staffing gap between Butte County and the Town of Paradise. The county assigned an agency representative to sit in the Paradise Department Operations Center (DOC) to ensure clear coordination and communication.
6. CAL FIRE operated within the established ICS structure to direct a complex, multi-agency all hazard response, directing thousands of personnel including firefighters, aerial support, and inmate hand crews.
7. The California Department of Justice (DOJ) Missing and Unidentified Persons Section (MUPS) and Northern California Dental Society assisted in gathering medical records, slides, and blocks. Their ability to support examinations of victim records expedited the results when secondary identifications were required.
8. Caltrans embedded a liaison in the Butte County EOC, expediting resource coordination. Crews were quickly mobilized to restore guardrails and signs once fire and law enforcement allowed access to evacuated areas.

9. Caltrans helped clear roads for reverse-flow traffic movements, provided signage to facilitate traffic flow, placed solar-powered rapid-flashing beacons, speed-feedback signs, and adjusted signal timings.
10. CNG's integration into the response effort assisted in accessing resources, providing ground support for search and rescue operations, leading decontamination efforts following search and rescue shifts, providing heavy equipment for structure demolition, supporting logistics, and managing the issuance of supplies. CNG also provided GPS tracking capability to teams in the field, in addition to military police for traffic control points.

Mutual Aid and Resource Management

11. The state's fire mutual aid system worked successfully despite strains on fire and rescue resources from the Camp and Woolsey fires burning simultaneously. In addition to firefighting resources, 9 US&R Task Forces, 18 Anthropologists and K-9 Dogs, and 124 CA-Wilderness Search and Rescue personnel were brought in to search for remains and clear buildings.
12. CAL FIRE 20 Incident Management Team personnel were split off to co-locate with Law Enforcement to coordinate secondary search operations for incinerated human remains.
13. Cal OES Inland Region provided emergency services coordinators to the Town of Paradise and used Emergency Management Mutual Aid (EMMA) for multiple Incident Command System (ICS) positions.
14. This incident tested EMMA's ability to fulfill multiple position requests simultaneously.
15. Local, state, and federal resources were accessed and deployed to meet the 74 EMMA requests received.
16. Cal OES LEB also used the state's LEMA process to bring in SMEs from all over the state with experience coordinating large search incidents.
17. Cal OES Inland Region V LEMA had an established relationship with the law enforcement regions, making it easier to coordinate timely requests.
18. At the request of Butte County, LEMA provided over 100 officers for daily security, setting roadblocks, and conducting evacuations. Personnel from

over 40 counties were used to accomplish this mission. The mutual aid arrived quickly, and personnel were flexible in their assigned roles and responsibilities, responding to the leadership of local law enforcement.

Mass Care and Shelter

19. Cal OES supported Butte County's mass care and shelter needs by identifying county shelter sites and providing life-sustaining commodities. In addition to the county shelters, the Cal OES Inland Region supported several spontaneous shelters established by residents, churches, and other independent groups.



Top officials from the California Highway Patrol and the California Department of Forestry and Fire Protection embark on a tour of Camp Fire's devastated areas. Photo Credit: CHP Valley Division

20. CDSS initiated the Shelter Assessment Project, which works with OAs to identify each OA's five largest-capacity shelters and assess for needed resources and structural improvements or additions.

21. CDSS created new roles in the MCSTF to facilitate direct communication with internal CDSS leadership and their field staff.

22. CDSS improved their feeding plan for sheltering operations by identifying and building partnerships with non-profit entities for immediate, short-term, and long-term feeding.

23. CAL FIRE provided a Public Information Officer (PIO) to provide daily updates to shelter residents.

24. The Salvation Army, CDSS Volunteer Emergency Services Team, Xfinity, and AT&T provided essential support and services to the shelter team and evacuees.

25. Representatives from the ARC and CDSS Childcare and Development Division were assigned to the Care and Shelter Branch, providing critical support with shelter-related issues, including resource coordination, assisting with situational awareness, communicating across agencies, relocating populations at improvised shelters, and sharing the rotation of field duties versus EOC duties. These liaisons were used at county and ARC-operated

shelters to regularly update the Care and Shelter Branch and provide timely information from shelters to the EOC and SOC.

Animal Care

26. Butte County was overwhelmed in handling animal care issues. Cal OES Inland Region was able to help the county establish a battle rhythm and assess resource needs.

27. This incident was the first time an ACTF was established for animal care response. As a result of the challenges presented during this response, CDFA has since added three positions for the California Animal Response Emergency System (CARES) program to support the statewide response to animal care.

Public Health and Medical

28. The California Department of Public Health (CDPH) developed new systems and procedures for tracking and sorting incoming information to the Medical Health Coordination Center (MHCC). These systems are currently still in use.

Education

29. CDE coordinated with the Butte County Office of Education (COE) and Paradise Unified School District to address immediate facility needs and found temporary space in the nearby towns of Chico, Durham, and Oroville. CDE solicited pro-bono services from school facilities professionals to place portable classrooms on existing campuses in Durham and Oroville. The Governor's Office also issued executive orders allowing Paradise to use buildings not authorized for school purposes. Through cooperative effort, the additional facilities were ready for students before their return from Christmas break.

30. The State Superintendent of Public Instruction led a team of ten interdisciplinary SMEs to provide technical assistance to Butte County schools at their Education Summit on November 14, 2018. CDE guided school officials on nutrition, mental health, charter schools, facilities, early education, expanded learning, and fiscal services. CDE staff answered immediate questions and established direct lines of communication for ongoing support.

Volunteer and Donations Management

31. CalHR granted the authorization of ATO for up to 5,000 permanent state employees who wished to volunteer. A webpage accessible only to state

employees was created, containing links to available volunteer opportunities.

Communication

32. The Joint Information Center (JIC) established relationships with key partners, who provided personnel resources quickly and efficiently.
33. Cal OES Inland Region assisted Butte County's Chief Information Officer and the Town of Paradise city manager in forecasting considerations, decisions, and consequences. The discussions also covered recovery operations, including debris and hazardous waste removal.

Search and Rescue / Fatality Management

34. US&R Mission Ready Package-Canine Human Remains Detection (HRD) was employed to augment the number of US&R canines.
35. A concept of operations was developed to integrate HRD canines with forensic anthropologists and other elements and tools. The use of these resources was orchestrated based on the specific conditions of the search area.
36. Cal OES LEB worked with CAL FIRE to establish a first-of-its-kind law enforcement base camp, similar to a fire camp, to support SAR, law enforcement, and coroner's mutual aid personnel.

Recovery

37. Cal OES and Department of Resources Recycling and Recovery (CalRecycle) assisted with the clean-up of 11,000 parcels out of 14,000 properties, with more than 3.66 million tons of ash, debris, metal, and contaminated soil under the Debris Removal Program.
38. Camp Fire was the first incident when all six recovery support functions were activated, serving as a foundation for several recovery programs' success and coordination with the local government.
39. Most evacuees used transitional sheltering assistance during the incident as a temporary housing solution until the sites were ready for occupancy, resulting in all 684 households successfully transitioning out of direct housing with permanent housing solutions.
40. Philanthropic dollars quickly filled a gap in the economic recovery needs of the community during the first year, with the United States Economic Development Administration (USEDA) funding the following two years. The

money ultimately contributed to repairing a community building dedicated to residents to access state and local resources for rebuilding permits, licenses, and floor plans, including ways to expedite the process.

41. Peer-to-peer support, soliciting community feedback, and involving locals in the decision-making process of recovery helped unify the community and is considered best practice.
42. Caltrans conducted rapid damage assessments and provided a cost analysis for \$3 million in debris removal repairs to Neal Road.

OPERATIONAL AREAS

Response

1. Butte County's Emergency Pass Policy, developed during the 2008 fires, was validated during the Camp Fire, providing a process for law enforcement to grant restricted-area access to only those with a valid operational purpose and proper credentials, such as utility workers.

Public Information and Warning

2. Butte County staff demonstrated adaptability during system and network failures. The fire impacted local communications infrastructure and destroyed power lines, phone lines, and cell towers. The county moved the mass notification function to the Chico Police Department for continuity when the county's notification network went down on November 8.
3. Butte County JIC disseminated timely and accurate information to the public and the media. Nightly press conferences were coordinated with key county officials and community stakeholders. Efforts were made to ensure critical information reached the whole community, including providing a sign language interpreter.
4. Public information was effectively relayed through media and social media channels. The social media feed on the Glenn County website ensured the website relayed current public information.



Jack in the Box was destroyed after Camp Fire swept through Paradise on Nov. 8. Photo Credit: Thomas Hawthorne/USA Today Network

EOC Operations

5. Butte County staff had extensive experience in EOC operations from previous disasters, contributing to the speed and efficiency with which the EOC was activated during Camp Fire. They continued to refine processes, showing continuous improvement, and adapting to meet the needs of the disaster as it evolved.

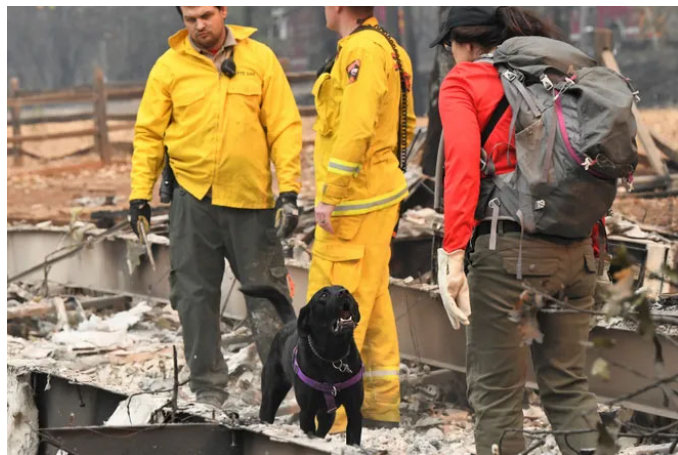
6. With a shortage of locally knowledgeable support personnel, Butte County enlisted qualified former county employees as auxiliary EOC staff. The EOC also recruited two retired firefighters with both EOC and field experience to serve as EOC liaisons - one in the EOC and one at the UCP. The action ensured communication flowed seamlessly between the EOC and the UCP.
7. Early coordination between Butte County Office of Emergency Management (OEM) and Glenn County Office of Emergency Services (OES) improved operations and enhanced financial recovery.
8. Butte County's Logistics' collective focus on overarching objectives remained consistent amid a constantly changing situation. The team's operational focus resulted from preparedness efforts accomplished through monthly Logistics meetings.

Mutual Aid and Resource Management

9. The county staging area established at Butte College provided the needed infrastructure to effectively manage resources, including large numbers of law enforcement mutual aid personnel. The staging area was central for reporting, resource staging, and overall incident management, as the UCP was co-located at Butte College.
10. Butte County Sheriff's Office (BCSO) dispatchers were embedded in the staging area and proved invaluable during evacuations by taking 9-1-1 calls, coordinating incoming resources, and providing administrative support to the response. Dispatch continued to operate beyond its capacity for weeks into the incident by fielding requests for information, rescues and welfare checks, media inquiries, and calls from agencies offering support.
11. The county's Response Incident Management System (RIMS) dispatch system supports incident dispatch needs. A regional tactical dispatch team of 22 RIMS-trained dispatchers provided mutual aid for supporting patrol operations, coroner's investigations, and missing person details. BCSO noted the RIMS system as one of the greatest strengths regarding dispatch operations during Camp Fire.
12. Butte County coordinated through the SOC to acquire additional resources, such as portable toilets, ADA-compliant showers, and respirators.
13. Sutter County probation officers and the California Highway Patrol assigned to on-site security were highly influential in deterring criminal activity and should be used in future incidents.

14. Local healthcare facilities provided mutual aid to Glenn County by accepting patients and long-term residents displaced from their facilities. The Hospital Preparedness Program, Health Care Coalition, the Medical Health Operations Area Coordination, and the Regional Disaster Medical Health Specialist programs have significantly improved the coordination of medical operations within the county.
15. Butte County leveraged the mutual aid process to access critical resources that were locally depleted, including Incident Management Team staffing, to augment and fill key EOC positions.
16. Search and rescue teams throughout California assisted in the response and were supported by trained volunteers. Fifty-four counties sent search and rescue resources.

17. Alameda County Sheriff coordinated with a private drone company to provide footage and photography posted on the buttecountyrecover.org website. The information gave residents situational awareness of their homes and property status without entering restricted areas and reduced the call volume to BCSO. Insurance agencies could also use this tool to substantiate insurance claims.



Search and rescue teams were in Paradise, California on Monday, Nov. 12, 2018 to comb through rubble in search of victims of Camp Fire. Photo Credit: Sam Gross/RGJ

18. The Glenn County Health and Human Services Agency (HHS) executive staff were redirected to a PIO role to support the shelter due to a shortage of PIO staff in the county.

Evacuation and Repopulation

19. First responders, adapting to the evolving fire event, deviated from their traditional firefighting role to life-saving measures for residents in the affected area. For example, bulldozers were used to clear evacuation routes with abandoned vehicles, fallen trees, telephone lines, and debris, allowing gridlocked residents to evacuate.

20. When residents could not evacuate, first responders assisted shelter-in-place operations by gathering individuals in open spaces, such as parking lots and predesigned town gathering points, which served as impromptu survival areas. Evacuees gathered in safe buildings and moved improvised shelters at the direction of first responders, depending on the movement of flames. These operations saved the lives of many who could not have evacuated in time due to the speed of the fire.

21. Security in the evacuated zones was organized and well-managed, keeping incidents of theft at a minimum.

22. Numerous assisted living facilities, senior homes, and elderly residents were evacuated without fatalities or cases of abandoned patients. Despite the need to evacuate themselves, nurses assisted patients, and younger residents aided elderly neighbors. When the city para-transport, usually responsible for assisting elderly resident evacuation, could not drive into evacuation areas, law enforcement evacuated elderly residents in the back of their patrol vehicles.



Burned-out vehicles litter roads leading into Paradise in the aftermath of Camp Fire. Photo Credit: Hung T. Vu

23. Repopulation was prioritized, and the county showed continued commitment to repopulating evacuated areas. The county convened an interagency planning team, including private sector partners, which worked collaboratively to provide status updates and safely strategize repopulation efforts. The team held its first meeting on November 9, one day after the start of Camp Fire, with two meetings subsequently held each day until all areas were repopulated.

24. The pre-established process for repopulation worked effectively for this large-scale incident. This process had only been used during incidents of a much smaller scale and severity, but it proved its relevance in successfully coordinating repopulation during Camp Fire. Mapping was used in tandem with a coding system to indicate the status of each area. Before an area was repopulated, agencies involved (i.e., BCSO, Environmental Health, Public

Works, utility companies, etc.) would determine if there were any risks to repopulation and then all parties would sign an agreement. This process ensured consensus by all participating agencies.

25. Redundant information platforms provided the public with sufficient access to repopulation information. Nightly press conferences were held throughout the response and recovery phases. Information was disseminated via social media, the county mass notification system, and the GIS website. CodeRED was used to target areas that had been repopulated geographically. The county contacted hotels within a 100-mile radius to post recovery and repopulation information, shared in multiple languages, to ensure comprehension by populations with limited English proficiency.
26. Only residents were permitted access to restricted zones for the first 24 hours of repopulation. Those entering these zones were required to provide proof of residency. The access allowed residents to sift through the ashes and mourn losses privately. Butte County Environmental Health disseminated “re-entry bags,” which contained Personal Protective Equipment (PPE), and the county’s public health office and other agencies shared critical information regarding safe re-entry of burn areas. The Butte County Department of Behavioral Health provided mental health support on-site.

Mass Care and Shelter

27. Butte County, neighboring jurisdictions, and Non-Governmental Organizations (NGOs) collaborated to activate shelters swiftly. Shelter selection was based on venue availability, proximity to the fire, and the availability of support staff. County staff supported shelter activities until the ARC could be transitioned. An estimated 32,000 people were sheltered across four counties during this incident.
28. Services, supplies, and equipment available at the shelters substantially met the needs of the shelter population. The county’s experience with previous large-scale disasters was leveraged for response to Camp Fire, as the staff was familiar with essential resources that needed to be ordered immediately. In addition to food, water, and cots, EOC resource requests included often overlooked and delayed resources such as ADA-compliant showers, portable toilets, canes, wheelchairs, and CPAP machines.
29. Emergency Action Plan records indicate the Butte County Care and Shelter Branch was consistently staffed. Shelter capacity and resource reporting assisted the EOC in determining shelters and resource needs.

30. Butte County shelter's sign-language interpreter relayed daily public information updates.
31. Multiple avenues were leveraged to facilitate reunification efforts, including publishing the names of missing persons on the county webpage and the ARC's Safe and Well website.
32. The Glenn County Fairgrounds site functioned well for the number of evacuees. The Memorandums of Understanding (MOU) with the fairgrounds allowed quick site activation with all known costs.
33. Glenn County's shelter registration process provided an easy, accessible log of its residents, which was shared with the EOC and missing persons center. Tablets were available for evacuees to register on the ARC Safe and Well website.
34. The Yuba-Sutter Fairgrounds was used as a centralized shelter location.
35. Sutter County Victim Witness and Behavioral Health Services provided resources in the shelter, which aided in diffusing anxiety and potentially hostile situations. These services included therapy dogs.
36. Public health operations within the Yuba-Sutter shelter effectively minimized the spread of an illness believed to be Norovirus. Due to isolation and sanitation, only 11 out of 380 evacuees became ill at the shelter.
37. The Far-Northern Regional Center provided services for evacuees with access and functional needs (AFN).
38. Critical incident stress debriefing was provided for first responders, shelter workers, and EOC staff.
39. The city and county embraced a collaborative approach to address the public health and safety challenges present at the Walmart Camp. An interdisciplinary team comprised of the Butte County Department of Employment and Social Services (DESS), CDSS, and the ARC worked with other Butte County departments, the Chico Police Department, Walmart's store-level and corporate leadership personnel, and a Walmart Camp representative to properly assess the challenges and identify solutions. The team worked with evacuees to check them into the appropriate county-supported shelters.
40. Glenn County executed the shelter and DOC/EOC demobilization plan. Unit leads were assigned to ensure the completion of demobilization tasks. The

equipment return process to partners was streamlined and well-documented using the ICS 213 form in triplicate.

Animal Care

41. The success of the animal care and control mission was attributed to the collaboration and support received from other jurisdictions, outside agencies, and previously established response partners. Camp Fire affected many of Butte County's animal control staff and trained volunteers personally, rendering them unable to respond. Through mutual aid, over 50 agencies provided staffing support, commodity resources, volunteer coordination, and veterinary care to assist with animal care efforts. The International Fund for Animal Welfare, the California Veterinary Medical Reserve Corps, and the North Valley Animal Disaster Group (NVADG) were among the many agencies that provided support. Approximately 4,000 animals were separated from their owners during the fire, and through multi-agency collaboration, 3,675 animals were reunited with their owners. Animals not reunited with their owners were placed with no-kill rescue groups and adoption clinics.
42. The county's request to integrate the National Guard into the animal care and control operation was necessary. During evacuations, some animals were kept on their owner's property when it was deemed safe, and it was less traumatic for the animals to be secured in a familiar setting. A significant staffing gap was created about two weeks into the response when a voluntary animal control organization abruptly pulled out of the operation. Through a state resource request, the National Guard immediately filled the gap by conducting routine wellness checks, providing food, and caring for sheltered animals.
43. Animal sheltering was provided by both Yuba Sutter Domestic Animal Disaster Assistance (YSDADA) and Field Haven Feline Center, and the Sacramento County American Kennel Club assisted by loaning their trailer and equipment to YSDADA.
44. The Butte County JIC spearheaded a targeted media initiative showing footage and images of animal care and control operations, including reunifications between animals and their respective owners, as well as CNG personnel conducting routine wellness checks for animals sheltered in place.

Volunteer and Donations Management

45. Glenn County law enforcement and the Volunteers in Police Service Program provided much-needed shelter security. Organization and staffing coordination provided by the EOC Law Branch Coordinator was essential to this function.

46. The Glenn County HHSA partnered with the First Lutheran Church to receive and manage donations.

47. Local medical personnel provided volunteer support to shelter operations, including a local doctor who administered patient assessments and access to prescriptions.

48. There was an outpouring of community and partner support for the Yuba-Sutter Fairgrounds. The Sutter North Medical Group provided medical care and was an asset to shelter operations. Health care providers offered online services for evacuees to consult with doctors and obtain prescriptions. Habitat for Humanity supported donations management, and the Salvation Army assisted with food coordination. The AT&T phone charging station and Direct TV services allowed evacuees to maintain communications.

49. An overwhelming amount of donations inundated the county. There was no existing process for taking in this volume of donations. The county solicited the assistance of AmeriCorps, who came in approximately two weeks into the response phase and implemented the needed systems and processes to power the donations management function.



Celebrity chef served a surprise meal at Butte College to law enforcement officers during Camp Fire on Nov. 11. Photo Credit: Butte County Sheriff's Office

50. Butte County estimated that some 6,000 individuals came forward to volunteer during the response, and countless others continued assisting with recovery activities. These volunteers included government workers, people affiliated with NGOs, and Spontaneous Unaffiliated Volunteers (SUVs). Butte County activated the Caring Choices Emergency Volunteer Centers (EVC) on day one of the incident, funded by California Volunteers to develop,

recruit, and train volunteers specifically for the Butte County area, helping to bridge gaps in staffing in a time of great need.

51. Online forms enabled volunteers to register without driving to an EVC, reducing the number of people on the roads, and creating a more efficient volunteer registration and assignment process.

52. A partnership with HandsOn Sacramento enabled access to additional volunteer staff and assisted with the volunteer vetting process. The process reduced foot traffic in the EVC, enabled the county to deploy staff to areas of need directly, and gave the county access to another mechanism to recruit volunteers from areas unaffected by the fire.



Search and rescue teams were in Paradise, California on Monday, Nov. 12, 2018 to comb through rubble in search of victims of Camp Fire. Photo Credit: Sam Gross/USA Today Network

53. Digitizing Disaster Service Worker (DSW) volunteer forms helped to streamline volunteer operations. The county utilized its existing practice of engaging notaries as agents for the county to verify DSW registration forms. DSW sign-up, vetting, approval, and tracking were streamlined using tablets and smartphones.

Search and Rescue / Fatality Management

54. Butte County's morgue could not handle an incident of this magnitude. Sacramento County Coroner's Office assisted with coroner-related operations through pre-established relationships and agreements, including the California Coroners Mutual Aid Agreement.

55. Mutual aid was utilized to acquire traditional search and rescue teams, urban search and rescue teams, and forensic anthropologists to supplement the roles of the coroner's investigators.

56. The screening process to determine the level of search and rescue performed was efficient. Search and rescue operations were performed at varying levels based on the circumstances surrounding the potential location of the remains. For example, a heightened level of search and rescue was

facilitated at the burned-down residence of a person on the missing person's list.

57. County volunteers added value to search and rescue operations. BCSO's Search and Rescue team began after fire containment and spanned the response and recovery phases.
58. The process for handling and identifying remains was successful. Once remains were recovered, osteologists, anthropologists, and coroner's investigators worked together to implement the collection, documentation, and identification process. All remains were transported from a temporary county morgue via a refrigerated vehicle provided by Sacramento County to the Sacramento County morgue.
59. Integrating Rapid DNA technology into identification efforts was a significant asset and expedited the remains identification process. It provided identifying information in less than two hours when other identification methods failed to produce results.
60. Camp Fire was the first time local law enforcement secured CAL FIRE assistance to help sustain volunteer search and rescue operations and support necessary resources for three large incident base camps.
61. Using outside pathologists and assistants to conduct exams on weekends gave the Sacramento Coroner's staff needed time off. This action resulted in exams being completed expeditiously, which led to quicker victim identification.
62. Sacramento Coroner trained vital volunteers from the Medical Reserve Corps (MRC) before the incident, which decreased training time during the incident.
63. BCSO developed a system for tracking missing persons that successfully fulfilled the needs of the incident. Multiple streams for receiving missing persons data were created to include a missing person call center, email, and BCSO dispatchers. Data collected were entered into a database that contained critical information on each missing person's case. A dedicated unit of detectives was assigned to missing person operations. Shelters were checked to ascertain if residents were on the missing persons' list, and 9-1-1 calls were reviewed for any missing persons' information.

64. Mutual aid partners were instrumental in the large-scale missing persons operation. Sonoma County and Alameda County's mentorship, support, and previous lessons learned proved invaluable.

Recovery

65. A Family Support/Mass Casualty Center was available to support those who lost loved ones. The center conducted outreach and contacted next-of-kin to offer support with tasks such as obtaining death certificates and understanding how to handle the processing of remains. The center remained active through January 12, 2019. The following agencies and organizations provided support: Butte County DESS, Butte County Public Administrator and Public Guardian, Butte COE, BCSO, California Funeral Directors Association, CDSS – Disaster Services, Cal Northern School of Law, Church of the Brethren, ARC, and FEMA.



Well inside the evacuation zone surrounding the California Town of Paradise, resident thanks a Butte County Sheriff's deputy for the work she and other first responders are doing. Jones is one of the few still living inside the evacuation zone. Photo Credit: Sam Gross, Gazette-Journal

66. The county proactively reached out to provide information to the public. In addition to the Disaster Recovery Centers (DRCs), concerted efforts were made to provide information and resources to the public. The county board of supervisors provided open house forums for community members to ask questions. A family support center was opened where people who lost loved ones could obtain information, support, and assistance. The county held community meetings and developed an online frequently asked questions (FAQ) to inform the community further. Cal OES provided information and media assistance, and the ARC provided information to evacuees. These processes were enhanced through frequent public messaging and social media.

AREAS NEEDING IMPROVEMENT

STATE AGENCIES

EOC Operations

1. Better collaboration was needed between California Emergency Support Functions (CA-ESF) 6 – Mass Care and Shelter and CA-ESF 8 – Public Health and Medical.

Corrective Action Recommendation

CDPH Emergency Preparedness Office (EPO) formed a CA-ESF 6/CA-ESF 8 workgroup that met multiple times to discuss issues and potential solutions. Participants included local jurisdictions, California Health and Human Services departments, ARC, and Cal OES, to name a few. Many of the best practices regarding CA-ESF 6/CA-ESF 8 coordination in 2019 wildfire events were developed in this workgroup.

2. Lack of information sharing confused asset ownership. Both the county and state ordered hygiene assets.

Corrective Action Recommendation

Set expectations on information sharing for logistics with counties at the beginning of disasters.

3. At the time, staff activations in the MHCC and SOC were the most complex CDPH had participated in since the 2009-2010 H1N1 Pandemic Influenza event. With several new staff offering their time to the MHCC, there was an increased need for just-in-time training.

Corrective Action Recommendation

CDPH/EPO created several just-in-time training courses for response staff who have not previously worked in the MHCC.

4. Ensure local government has the proper training in ICS and EOC operations.

Corrective Action Recommendation

Cal OES regions to work with local government for necessary training to improve operations.

5. Collaboration was challenged among county partners, creating gaps and issues during response efforts, such as animal sheltering and animal control resources.

Corrective Action Recommendation

Provide support and guidance to county partners to train on response efforts, establish meetings with key partners, and assist with the logistics to meet resource needs.

Mass Care and Shelter

6. There was insufficient pre-disaster communication and coordination with the counties on shelter operations.

Corrective Action Recommendation

Develop MOUs with counties to pre-stage and store shelter supplies in anticipation of future needs.

Mutual Aid and Resource Management

7. Requests for CNG elements should be requested by packages rather than individual personnel or equipment to enhance capabilities.

Corrective Action Recommendation

Include subject matter experts to provide the correct language and terminology for mission tasking when requesting CNG resources.

8. Understand the need to rent versus buy, including the factors influencing emergency purchasing decisions.

Corrective Action Recommendation

DGS developed Disaster Procurement Training FAQ and training, such as infographics and cheat sheets.

9. DGS had difficulty tracking assets in the field and tracking daily costs to keep a running total.

Corrective Action Recommendation

DGS updated its tracking system to track both resources coordinated during the incident and their costs.

10. Mission tasking requests must be more specific; all fields on the resource request must be filled out completely and provide any supplemental documents, pictures, and defined scope of work.

Corrective Action Recommendation

Develop a better "ticket" system to identify specific Statements of Work and owner/project manager for tasks.

11. Communication between requesting agencies, task forces, and resource coordinators needs standardization and consistency for mission approval or denial.

Corrective Action Recommendation

A standardized approval process for resource requests must be set and followed from beginning to end.

12. As the incident grew, the incident command post facilities became overwhelmed. The massive increase in personnel led to insufficient food and room for operations. Law enforcement did not have the funding or contracts to set up a responder base camp to support the amount of personnel assisting with the incident.

Corrective Action Recommendation

Develop a plan to set up a responder base camp as the incident response increases with the influx of personnel to support ongoing operations.

Evacuation and Repopulation

13. Caltrans did not understand the evacuation procedures used by the Butte County Sheriff's Office, causing delays in providing support.

Corrective Action Recommendation

Caltrans should frequently train and practice evacuation procedures and coordinate with local law enforcement to provide evacuation assistance.

Communications

14. Requests for additional PIO personnel must follow the proper resource request procedures.

Corrective Action Recommendation

Anticipate, review, and follow the EMMA and SOC resource request processes for supplemental external staff.

15. When deployed to the field, the JIC staff need a better worksite solution that addresses mobility and functionality.

Corrective Action Recommendation

Research a viable permanent, self-contained mobile worksite that provides sleeping quarters, communication, and equipment transport to the field.

16. Cal OES' communications technology needs modernization to allow for more timely and accurate information to the media.

Corrective Action Recommendation

Acquire a similar bonded cellular service that the mainstream media uses or mobile satellite broadband, which provides a fast platform for the JIC to upload video or photographs or establish two-way communication with the media.

17. There is a need for modernized communication technology for fire personnel during incidents.

Corrective Action Recommendation

Explore new communication technology, such as push-to-talk with land mobile.

18. Caltrans cell phones lost connectivity. Portable communication systems could have worked better.

Corrective Action Recommendation

Caltrans must ensure all portable communication systems have network connectivity, sufficient battery backups, and are regularly tested.

Search and Rescue / Fatality Management

19. The state needs an integrated Law and Fire & Rescue "best practices" guideline for post-fire event mass fatality search operations. The guidelines should incorporate the pertinent elements of law enforcement investigators, SAR Teams, Fire & Rescue, coroners, forensic anthropologists, and where appropriate, the coordinated and surgical use of heavy equipment.

Corrective Action Recommendation

Cal OES developed *The California Mass Fatality Resource Guide in April 2024*, a post-conflagration mass fatality search operations "best practices" white paper and post-fire event operations guide.

20. Additional trained and certified HRD canines are needed for future post-conflagration searches. Studies are needed to qualify the ability of canines to sense incinerated human remains, including the transition state between burned human remains with significant soft tissue and truly incinerated (cremated) human remains.

Corrective Action Recommendations

In 2022, the Law Branch partnered with CSU Chico (Chico State) to develop a training course for K9s and their handlers for searching burned areas for human remains. This training is provided free of charge three times a year. Due to training course developed with Chico State in 2022, more human remains HRD K9s are available for deployment.

21. There are insufficient trained search and rescue personnel statewide.

Corrective Action Recommendations

A Burned Environment Course should be developed to train more personnel in search and rescue.

22. Untrained volunteers were initially used for search and rescue operations within the interior parameters of the incident, which exposed them to hazardous conditions.

Corrective Action Recommendations

New training and operational standards should be developed for large-scale wildland fire search and rescue operations, where volunteers only search the outside parameters of the burned structures.

23. The state has a shortage of rapid DNA equipment.

Corrective Action Recommendations

In 2022, the Law Branch purchased three rapid DNA machines for statewide response. One was prepositioned in Fresno County, the second at the Los Angeles County Medical Examiner's Office, and the third with Cal OES Law Branch for training and deployment, as needed.

24. Coroner resources had difficulty coordinating due to the lack of experience responding to a mass fatality incident.

Corrective Action Recommendations

Create a training program for coroners statewide on mass fatality response.

Public Health and Medical

25. The need to increase Emergency Medical Services Authority's (EMSA) capabilities for medical response was evident, including the need for greater "in-house" staffing levels, improvement of EMSA's mobile medical asset deployment speed and efficiency, and reinstatement of a Mission Support Team to provide field-level support to deployed medical teams.

Corrective Action Recommendations

- EMSA must develop a collaborative approach to assessing and addressing medical needs in general population shelters in coordination with partners and stakeholders.
- EMSA must also improve the use of Disaster Healthcare Volunteers and MRC by streamlining the resource requesting process and establishing better on-site support and management of volunteers to better utilize volunteers in future responses.
- EMSA must work internally on developing and implementing policies, procedures, and training to improve future responses.

Education

26. There was a lack of understanding of how the California education system's structure worked, which complicated information gathering and reporting. The California educational system did not follow the SEMS process.

Corrective Action Recommendation

County and state partners should work together to define California's education system's role and reporting structure during emergency response.

27. Data on the status of schools did not flow automatically from the operational area up to the state. CDE was required to obtain information from individual schools and school districts.

Corrective Action Recommendation

Identify data management practices to track student enrollment following a major disaster. CDE is developing the School Emergency

Reporting System tool. The tool will be an efficient, web-based data-gathering system between CDE and Local Education Areas, providing situational awareness for school disaster response.

28. The spread of wildfire smoke across Northern California led to unprecedented school closures without much consistency across counties. There were no consistent guidelines regarding air quality and school closures.

Corrective Action Recommendation

Work with technical subject matter experts to develop and issue wildfire smoke guidance that local educational agencies can use in consultation with local air districts to make decisions about school activity levels when air quality is poor. Since the production of this AAR, CDE and other interagency partners developed the Air Quality Guidance Template for Schools, found on CDE's website.

29. The Chico State Emergency Operations Plan (EOP) did not address communication and logistics with the Operational Area EOC. The inability to identify suitable shelter facilities delayed response to accommodate requests.

Corrective Action Recommendation

Establish EOP and protocols for communication and logistics coordination with Butte County EOC. In addition, the EOP needs to include evacuation routes and methods to conduct mass sheltering and identify campus buildings suitable as shelter facilities depending on the type of emergency.

30. SEMS requires state colleges and universities to coordinate with local government or operational areas during an emergency; however, ICS training courses 300 and 400 do not address this requirement, which is confusing if the universities report directly to Cal OES.

Corrective Action Recommendation

University emergency staff will be required to take the SEMS training (G606) within six months of hire. Chico State has updated their training curriculum and process by first coordinating with the Operational Area (Butte County) and if directed by the county, then go to Cal OES CSTI for assistance.

31. University EOC staff were unfamiliar with their roles and responsibilities concerning emergency management.

Corrective Action Recommendation

Provide initial and refresher training on ICS/EOC roles and responsibilities, as well as tabletop exercises and drills. Develop templates/checklist aids for each functional area.

32. Chico State did not have a centralized system in place for communication and task management.

Corrective Action Recommendation

Implement virtual EOC software, which provides a central mechanism to track communication, task management, and workflow.

33. Chico State did not have any documented mass evacuation plans.

Corrective Action Recommendation

Chico State EOC will develop and document mass evacuation plans.

34. Chico State campus threat assessment did not include wildfires.

Corrective Action Recommendation

Updated campus threat assessment development will include wildfire response, related impacts, and lessons learned.

Animal Care

35. CDFA emergency staff were deployed to an animal healthcare emergency in Southern California; they could not be redirected to Butte County without a significant impact on the agency.

Corrective Action Recommendations

Provide SEMS and National Incident Management System training to CDFA staff. Create an incident management team at CDFA to support counties requesting animal care needs separate from animal health emergencies.

Since 2018, CDFA has implemented the following to support statewide response to animal care:

- CARES Concept of Operations is being developed.
- Public Utilities Code §99166 best practices are being developed.

- CARES management holds regular strategic meetings with Cal OES Planning and Preparedness and the three Cal OES Regions.
- CARES management continues actively contacting external sources to develop a coordinated and collaborative relationship, especially during response operations.
- CARES developed a draft CARES DOC organizational chart and continues to recruit CDFA employees. CARES does not have enough staff to fill all functions.
- CARES is developing the CDFA DOC management plan.
- CARES created a volunteer organization resource directory for local government emergency management and animal services. This directory is based on a CARES survey.
- A resource request guidance document is being created to instruct local government emergency management and animal services, including volunteer organizations, on using SEMS. The resource directory will be part of this guidance document.
- CARES created a presentation for staff on CDFA's role during emergency response involving animals. CARES is providing ongoing training as courses are made available.

36. There were reports of miscommunication between incident management and the ACTF.

Corrective Action Recommendation

Decisions made by incident management or ACTF should be communicated between parties to help synchronize and prioritize response efforts.

Recovery

37. Cal OES Recovery's debris removal program and the FEMA Environmental Historic Preservation (EHP) evaluations do not address hazardous tree removal.

Corrective Action Recommendation

The State Consolidated Debris Removal Program now includes debris removal and hazardous tree removal, and environmental cleanup

services to property owners, running concurrently with the FEMA EHP evaluation process, to expedite recovery evaluation.

38. Search for direct housing sites and contacting property owners occurred without county involvement and validation.

Corrective Action Recommendation

Involve local government in recovery discussions, including identifying direct housing sites.

OPERATIONAL AREAS

The following section provides a point-in-time review of the Operational Area AARs and reflects only the conditions and characteristics present during the event period.

Please view the [current actions taken by Butte County](https://bereadybutte.com/valuable-lessons-we-learned-from-the-camp-fire):
(<https://bereadybutte.com/valuable-lessons-we-learned-from-the-camp-fire>)

Public Information and Warning

1. Only one trained BCSO staff member was available during the response phase to manage mass notification. Leading up to Camp Fire, five BCSO staff were trained to operate CodeRed and facilitate the county's mass notification process. However, four team members were unavailable or on other critical assignments at the time of the fire, resulting in only one trained person to craft and disseminate alert notifications for the entire county.

Corrective Action Recommendations

Butte County should analyze industry best practices and train additional personnel to sustain a mass notification effort during a complex incident response.

2. The CodeRed system integration that enables the simultaneous dissemination of Integrated Public Alert and Warning System (IPAWS) messages failed during Camp Fire.

Corrective Action Recommendations

The county should test the CodeRed system regularly for its operability and train auxiliary staff on IPAWS with basic mass notification.

3. Evacuation notifications were confusing to some residents.

Corrective Action Recommendations

Implement a regularly scheduled mass notification system test that simulates real-world disaster scenarios to ensure optimal functionality of system capabilities, especially CodeRed and IPAWS integration for simultaneous message dissemination.

BCSO should lead the development of an actionable mass notification policy that includes guidelines and tools to quickly convert field-specific language (e.g., evacuation zones) into public-facing messages (e.g., specific street coordinates) to mitigate confusion among evacuees.

4. In Glenn County, the primary PIO is also the EOC Director. One person managing dual roles is possible during smaller events but increasingly difficult during larger ones.

Corrective Action Recommendation

Staff the PIO position with a dedicated person during moderate to high level EOC activations.

5. Release of information from Glenn County was slow and limited.

Corrective Action Recommendation

As a support county in this incident, coordinate with the primary county and the JIC to ensure a coordinated release of information.

6. Public Information efforts were unprepared for this event's size, scope, and complexity. While experience gained through past activations was a contributor to the overall success of public information efforts during Camp Fire, prior efforts were not targeted to address worst-case scenarios. Instead, Butte County mainly prepared for disasters that feasibly fit within the response capabilities, available resources, and mutual aid support. Camp Fire presented a range of unprecedented communications and public messaging challenges.

Corrective Action Recommendation

Take an inter-departmental approach to expand the scope of future public information training and exercises that prepare the county to manage sustained public information operations in response to complex incidents involving large-scale, multi-operational periods.

7. Public information and messaging released during the onset of the fire did not include animal-specific information and guidance. This lack of information exacerbated rumors and misinformation and frustrated residents that were separated from their pets or livestock.

Corrective Action Recommendation

The county should review and revise its EOP to ensure the appropriate Animal Care and Control representative maintains an active presence in either the county EOC or JIC from the onset of an EOC activation. This measure ensures that animal-specific messaging is integrated into public messaging.

8. Communication failures and the lack of radio coordination resulted in limited information from the field to the Incident Command Post (ICP).

Corrective Action Recommendation

Pre-identify radio frequencies for communications among all mutual aid partners and further implement communication redundancies. Document the “look-out” method for establishing greater situational awareness, including reporting procedures. BCSO placed lookouts in the field to report real-time information, which later became a best practice and greatly improved situational awareness.

9. Dispatch operations were negatively impacted when the system was overwhelmed by call volume.

Corrective Action Recommendation

Evaluate the 9-1-1 system and the dispatch process for backup agencies to determine if an alternative process would more effectively meet the county's needs during a disaster.

EOC Operations

10. Information flow between the field and the EOC was hindered at the beginning of the response. Standard sources of field-level information from the UCP were not readily available to the EOC.

Corrective Action Recommendation

The UCP/Field Liaison position should be documented and integrated into the county EOP with position-specific guidance and checklists. A group of UCP/Field Liaisons (e.g., retired personnel, local volunteers, etc.) should be recruited, trained, and included in future EOC-related exercises.

11. The EOC's technological and space needs were inadequate to accommodate an incident of this scale and severity. The EOC's size and layout did not support a large-scale, multi-jurisdictional, multi-operational, complex response. Technology in the EOC did not adequately display critical incident information, which delayed situational awareness.

Corrective Action Recommendation

Butte County could seek funding opportunities to conduct upgrades to the county's EOC. The county must develop a guidance document outlining standardized EOC display procedures to project critical incident-related information supporting a common operating picture.

12. There was a lack of coordination and communication between county departments and the EOC.

Corrective Action Recommendation

Ensure all county employees have basic ICS Training. Review and update Continuity of Operations Plans for each county department to ensure clarification of roles. Discuss disaster preparedness at Plumas Town Hall meetings before disaster strikes.

13. Plumas County EOC was unaware of the full impact in the Lake Almanor/Chester areas and the needs of the evacuees.

Corrective Action Recommendation

Arrange for possible geographic liaisons if incidents occur outside the Quincy area. For example, arrange for branch or section liaisons in Portola, Chester, or other areas in Plumas County when needed.

Evacuation and Repopulation

14. While contraflow had been exercised by each evacuation zone in Paradise, contraflow of the entire town had not been practiced and residents were not prepared to execute the process. Law enforcement did not have enough personnel or time to staff intersections early in the evacuation to guide public action. Contraflow also failed once it reached towns receiving evacuees. These towns were not prepared for the influx of traffic to take preemptive action and assist the movement of vehicles through their jurisdiction.

Corrective Action Recommendation

Implement a public awareness campaign concerning evacuation contraflow practices and integrate them into public education materials. Develop an inter-jurisdictional coordinated mass evacuation plan with the operational area, regional, and state stakeholders, which includes contraflow planning. Train staff and conduct contraflow and evacuation drills with residents and stakeholders to educate the public.

15. Private sector engagement in repopulation meetings proved difficult due to nonparticipation. It was difficult to garner private sector participation in interagency planning team meetings, including having the proper stakeholders with the authority to make critical decisions.

Corrective Action Recommendation

Establish and strengthen relationships with the appropriate private sector partners to facilitate better access and engagement with personnel that have the authority to make decisions.

16. It was difficult to predict the cascading impacts of opening certain evacuation routes during repopulation.

Corrective Action Recommendation

Continue the coordination process with an interagency planning team to determine the appropriate prioritization of evacuation routes and the cascading impacts of opening disaster-affected areas. Document the process established for repopulation to formalize the process.

17. Information could have been more effectively conveyed to the public, including repopulation timeframes. In some cases, the county provided residents eight hours advanced notice to access and ascertain the status of their property. This timeframe did not accommodate residents who were relocated hours away, as it did not account for the drive time needed to return to their damaged/destroyed homes.

Corrective Action Recommendation

Establish and formalize a mechanism that allows residents ample time to view their property following evacuation; engage the public in this process and document it in formalized plans. Document the use of redundant information systems in a crisis communications plan to ensure a wide reach in public information efforts. Consider investing in a capability to conduct drone flights that capture aerial footage following major disasters for residents' peace of mind and insurance substantiation.

Mutual Aid and Resource Management

18. Some non-evacuated areas, surrounded by communities that were evacuated, were isolated within evacuation zones, and were not provided resources and support in a timely manner. These communities could not easily access surrounding cities and their subsequent resources, leading to fuel and other resource shortages.

Corrective Action Recommendation

Document the process of providing resources to areas isolated within evacuated zones in the evacuation plan.

19. Managing personnel resources became difficult throughout the evacuation period, especially prior to the staging area being established. The extreme speed of the fire and the overwhelming local resource response made it difficult to manage all personnel responding to the incident, which led to self-deployment and personnel working abnormally long hours for several days before receiving a break.

Corrective Action Recommendation

Document the process for establishing a staging area immediately upon incident initiation, including the process for communicating the location to response partners. Review existing plans and make updates to include a process for identifying and establishing staging areas outside the affected area to send and stage emergency resources.

20. Loss of network connectivity significantly hindered the resource management process.

Corrective Action Recommendation

The Butte County General Services Department (GSD) should devise a backup system and process for maintaining the continuity of the resource management function in the event of a network failure, which can include loss of internet and e-mail capabilities. GSD should also incorporate the backup system and process into regular training and exercises to ensure all pertinent staff are equipped to execute.

Mass Care and Shelter

21. Need to update the Glenn County Care and Shelter Plan with procedures for a county-operated shelter that is not dependent on ARC agreements and resources.

Corrective Action Recommendation

The Glenn County Care and Shelter Plan is under revision to outline procedures for a county-run shelter versus an ARC managed shelter. Although HHSA staff are ARC trained, ARC shelters should not utilize ARC resources and policies when the shelter is under county management. The Care and Shelter Plan revision will include items such as a field operations

guide, operational checklists, job action sheets, inventory supply lists, shelter forms, and designated shelter site maps. Site layout plans will include areas such as service locations for public health and behavioral health, isolation areas, staff break areas, and shelter information areas. Care and Shelter policies will be added to the OA EOP.

22. EOC managed shelters lack transition briefings, training, and action planning.

Corrective Action Recommendation

The EOC managed shelter staff organization and staffing. The EOC identified the need for shelter staff briefings during shift changes with EOC management initiating the briefings. Shelter managers need additional training in briefings and action planning, including more consistent scheduling without alternating between day and night shifts, which caused sleep pattern issues. Develop a shelter staffing schedule template that provides for a consistent shift schedule and long-term planning for the Care and Shelter Branch Coordinator.

23. Butte County and the ARC have differing policies regarding acceptance criteria at shelters, resulting in a complex array of needs that were not adequately planned for.

Corrective Action Recommendation

Butte County OEM, DESS, and local ARC chapters need to collaborate and mutually agree upon policies regarding the acceptance of shelter clients. These policies should address the sheltering needs of pre-disaster homeless populations and articulate considerations for when address verification should be waived during events where intake must be truncated.

24. Non-county and community-run shelters provided varying degrees of security, which led to inconsistencies and gaps in safety.

Corrective Action Recommendation

Butte County OEM, in coordination with DESS, should continue to proactively inform community partners of the requirements and liabilities of community-operated shelters. The county can also minimize pop-up shelters by continuing to work toward consolidating shelter efforts to a central location.

25. The nurse and behavioral health station at the Glenn County shelter was co-located with shelter registration, which caused confusion.

Corrective Action Recommendation

The medical/behavioral health services station should be located away from shelter registration. A location will be identified on the shelter facility map in the Care and Shelter Plan revision.

26. Some shelter volunteers from outside the county or state were not qualified to manage a shelter. A shelter also closed without advance notification, which caused excessive movement of evacuees between shelters.

Corrective Action Recommendation

The county needs a 72-hour plan to set-up shelters. Implement this plan with the appropriate county departments and make it a part of the Mass Care and Shelter Annex, which also needs to be revisited. Need an ARC, Salvation Army, or other volunteer agency liaison in the EOC from the start of an incident to address any staffing shortages.

27. Food was purchased for a shelter, but the need for cooks was not considered.

Corrective Action Recommendation

Develop a feeding plan for shelters.

28. ARC shelters did not allow evacuees with small pets.

Corrective Action Recommendation

The county should set up an area for small animals near ARC shelters.

29. Need trained staff on the proper management of patient care, medication administration, isolation techniques, and equipment usage.

Corrective Action Recommendation

Identify personnel that have worked in skilled nursing facilities or are currently trained in patient care, equipment use, and isolation techniques and ensure they are trained and exercised for disaster sheltering.

30. Plumas County Fairgrounds may not be an appropriate location for a shelter, due to a lack of shower facilities. The fairground shower facility was located downhill and did not comply with ADA accessibility requirements.

Corrective Action Recommendation

Reassess locations for human and small animal shelters in each geographical area within Plumas County, including locations at faith-based organizations. When identifying county shelter locations, accessibility should be considered for AFN evacuees. Plumas County Fairgrounds is looking to make improvements to their facilities to allow ADA-compliant showers, toilets, floor drains in the restrooms, heating, and cooling systems, etc.

31. Need earlier arrival of showers, washing stations, and laundry facilities. It took three days for a shower trailer and other assets to arrive.

Corrective Action Recommendation

Procure sanitation assets before an incident, improve sanitation facilities at the shelter locations, or have contracts in place before an incident to procure assets.

Animal Care

32. Yuba County needs an animal-related equipment reserve for immediate shelter set-up.

Corrective Action Recommendation

Prior to Camp Fire, Yuba County OES secured an animal disaster relief trailer through a grant. Continue to search for other available grant opportunities to enhance the animal shelter cache.

33. Roles and working relationships between the county, regional, and state animal control personnel were not defined. In accordance with SEMS, the state activated the REOC and the SOC and established a multi-agency ACTF. Resource requests to the state were followed by multiple field assessments to validate the need.

Corrective Action Recommendation

The county should coordinate with OA and regional-level leaders to advocate with state partner organizations and establish a single repository of California-based animal control mutual aid resources. This should also include a baseline standard for vetting, training, and credentialing staff and affiliated volunteers. Butte County OEM and Public Health need to work together to spearhead a process through which key animal control

personnel and relevant stakeholders regularly exercise SEMS-compliant plans, processes, and procedures.

34. Untrained and uncredentialed volunteer groups complicated the animal care and control mission. Understaffing caused the county to integrate untrained and uncredentialed volunteers into normal mission functions by creating teams that were led by trained personnel. However, the ability to ensure each team was led by trained personnel became challenging as volunteer groups continued to recruit more untrained and unvetted volunteers.

Corrective Action Recommendation

BCSO, Butte County OEM, and Butte County Public Health Department (BCPHD) need to identify challenges and lessons learned from Camp Fire relative to animal control volunteer groups and convergent volunteers. Develop and share baseline and just-in-time training, credentialing, and volunteer conduct requirements to ensure effective integration of volunteer groups and convergent volunteers into animal response and recovery operations.

35. There was a gap in legal authorities and a lack of guidance pertaining to animal care and sheltering after evacuations were lifted.

Corrective Action Recommendation

Butte County OEM and BCPHD should engage Butte County legal counsel in a discussion of current gaps, including strategies to mitigate those gaps, in legal authorities when evacuation orders are lifted.

36. There was a lack of animal-specific public information during the early phase of Camp Fire response. The public was exposed to stories of alleged animal abandonment and mishandling, but was not made aware of the county's animal care and control successes. Eventually, the county began to provide animal-specific messaging through the JIC.

Corrective Action Recommendation

The county should develop plans and procedures to ensure animal control is engaged at the onset during JIC activations to provide timely and accurate dissemination of animal control information to the public. Further, the county needs to integrate testing of these plans and procedures through regular exercises.

Volunteer and Donations

37. The volunteers and donations management center established in coordination with the Lutheran Church, could more effectively provide for incident needs by coordinating with the EOC under county management and/or on-site at the shelter.

Corrective Action Recommendation

Coordinate volunteer and donations management with the EOC or the on-site shelter. Also, consider off-site donations center locations.

38. The county lacked an adequate system for receiving, storing, and matching donations with identified needs across the community. Many donations received during Camp Fire had specific, intended placements and uses, such as desks donated specifically for schools. However, there was no comprehensive system within the EOC and Disaster Recovery Operations Center (DROC) structure to track donations from the time they were offered or received to the time they were delivered.

Corrective Action Recommendation

Butte County should establish an inter-departmental and multi-disciplinary team of county stakeholders to examine best practices learned from Camp Fire and secure the necessary partnerships with AmeriCorps or other organizations to manage donations during future large-scale, multi-operational period incidents. Also, develop a list of recommendations to include in the development of a donations management guidance document.

39. Butte County did not have adequate guidance and policies specific to donations management, including a written plan that comprehensively addresses the donations management function.

Corrective Action Recommendation

Butte County should develop a comprehensive donations management plan or an annex to the county's EOP. Staff should be familiarized with the plan or annex through training and planning exercises.

40. There was a lack of communication with the public and donations management staff regarding donations handling in Plumas County.

Corrective Action Recommendation

Ensure clear communication is released to all donations management staff and the public by using a centralized webpage for donations with a consistent message across all jurisdictions. Obtain a situation status report from the DOC more frequently.

41. Re-evaluate where donations are stored and managed, including how to handle excess or unused donations.

Corrective Action Recommendation

Pre-identify a warehouse or storage units to manage and store donations or hire a contractor to manage donations for large incidents.

42. Up to 1,000 donation-related phone calls inundated the Fairgrounds daily.

Corrective Action Recommendation

Open a joint information call center to handle phone calls pertaining to donations.

43. Yuba County needs a process for swearing in convergent volunteers as DSW volunteers. Convergent volunteers are members of the community who come forward to help without having been previously affiliated, prepared, or trained by the specific organizations in which they are supporting.

Corrective Action Recommendation

Develop an improved process to swear in convergent volunteers.

44. The processes in place could not manage the volume of calls, e-mails, and messages from people who offered to volunteer.

Corrective Action Recommendation

Butte County OEM, in coordination with GSD, BCPHD, and BCSO, should ensure the SUV management plan identifies strategies that are flexible enough to scale up or down depending on the size of the incident to allow for a more robust and accurate system.

45. Volunteers were reporting directly to shelters, instead of first arriving at the EVC for screening and assignment.

Corrective Action Recommendation

Butte County OEM, along with future entities charged with coordinating volunteers, needs to ensure messaging regarding the volunteer

deployment process is clear and consistent across all communication mediums.

Health and Safety

46. Care and feeding of responders and volunteers were initially difficult to support. Due to the pace and scale of the disaster, immediate response focused solely on tackling the incident and took precedence over effectively supporting responders. Some volunteers, mutual aid partners, and county staff spent weeks living out of their cars or in facilities not intended for hosting crisis response operations. A base camp was set up, but it took some time to scale accommodations to support the immense response operations.

Corrective Action Recommendation

Prioritize the establishment of a base camp as early as possible in an incident that requires sustained operations. Integrate this practice into EOPs or develop a base camp activation plan.

47. The Bi-County Public Health staff was overstaffed, and staff roles were unclear and undefined at times.

Corrective Action Recommendation

Improve bi-county shelter staffing coordination to minimize overstaffing and ensure staff have clearly defined roles.

48. It took a significant amount of time to transport evacuees to obtain prescription medication refills.

Corrective Action Recommendation

Authorize a county employee to pick up non-scheduled medications without the presence of the patient. Non-scheduled medications are over-the-counter medications and prescription medications that are not controlled because they do not have the potential for abuse.

49. Air quality deteriorated rapidly due to smoke from the wildfire.

Corrective Action Recommendation

Secure air scrubbers early in fire events or other events with poor air quality.

50. Staff lacked proper PPE.

Corrective Action Recommendation

The county purchased appropriate PPE to support unmet needs.

51. Although the decontamination process overall was successful, some responders were unaware of the decontamination best practices necessary to ensure the responder's health and safety or did not have the resources to ensure full decontamination. For example, while personnel were successfully decontaminated through the National Guard efforts, measures were not in place to decontaminate vehicles and equipment exposed to toxic ash.

Corrective Action Recommendation

Establish a process for the decontamination of resources and equipment to enhance the effectiveness of decontamination efforts.

Fatality Management

52. Public information efforts regarding fatalities and the identification of recovered remains were difficult to manage due to the sensitive nature of the topic.

Corrective Action Recommendation

Collaborate with Coroner's Office to develop and/or update crisis communication plans to provide specific guidance on public information messaging regarding fatalities and remains identification.

53. Rapid DNA testing was not incorporated into the testing process until five days after the fire. After that, the traditional way of collecting samples from potential family members halted and many samples caught in the middle of the process caused delays. Rapid DNA testing was done days before the DOJ DNA lab started testing the samples.

Corrective Action Recommendation

Incorporate Rapid DNA testing from the beginning of an incident when unable to use fingerprints for identification. The traditional method of DNA testing takes longer and is less efficient than newer Rapid DNA technology.

54. Training issues in search and recovery caused issues with morgue operations. Butte County had search and recovery volunteers from different agencies who needed training on documentation, including documenting the time bones were found to establish the time of death.

Corrective Action Recommendation

Need training that goes beyond search and rescue that focuses on mass fatality. Sacramento Coroner recommends developing mass fatality training videos shown at the first briefing for volunteers.

55. There were not enough anthropologists to work in the field and in the morgue to conduct bone remnant exams, which need to be completed before the release of victim identification. The anthropologist shortage caused release delays.

No corrective action recommendations were identified.

56. There was too much paperwork and duplication of effort. Additional samples from victims were requested despite victim sample processing was already completed. The collection and packaging of additional samples pulled staff from other critical areas.

No corrective action recommendations were identified.

57. In most cases, victims were identified quickly, but final test results to determine the cause of death took longer. FEMA would not accept a pending status as a cause of death, so causes were standardized as much as possible to allow families to proceed with processing victim paperwork.

Corrective Action Recommendation

Sacramento Coroner's Office met with Cal OES LEMA to discuss continuously training staff from other counties to run Rapid DNA equipment using a team approach. At the minimum, train a team in the northern part of the state and one in the south on Rapid DNA processing and follow consistent procedures. After training, the two teams could handle separate incidents in different areas of the state or support each other, if needed.

Missing Persons

58. The county faced challenges developing, sharing, and updating an effective and secure database for tracking missing persons. Also, staff needed training on how to handle the sensitive and confidential information contained in the database, which needed proper security measures.

Corrective Action Recommendation

Track the creation and release of an expected DOJ missing persons tool, which consists of a web-based platform to support missing persons operations. Train staff in missing persons operations to collect critical information and securing confidential information in missing persons databases. Implement protective measures and security procedures to secure confidential information in the databases.

59. Missing persons operations were difficult to execute due to the wide dispersal of county residents to surrounding areas, including other states, following the incident. Many evacuees had limited access to phones and the internet, which complicated missing persons' efforts, as evacuees were not receiving public information regarding missing persons processes and were unable to respond to directed public action.

Corrective Action Recommendation

Establish processes for disseminating information by coordinating with neighboring jurisdictions and other areas where residents may be expected to evacuate following disasters. Provide awareness to residents of their responsibilities to confirm their wellness and follow up on missing persons' status during and following a disaster.

Recovery

60. The county's buildings and infrastructure did not meet the HCD Code of Regulations.

Corrective Action Recommendation

The county should inspect and coordinate with HCD and local housing development to bring their buildings and infrastructure up to code.

61. The county must pre-identify sites approved for housing.

Corrective Action Recommendation

Work with Cal OES Recovery and FEMA to develop a list of temporary and permanent housing sites that are approved and up-to-code.

62. The county lacked a comprehensive recovery structure and plan during Camp Fire.

Corrective Action Recommendation

The county should coordinate with the Cal OES Recovery team to establish a recovery plan and checklist for future incidents. The county can adopt and use best practices from Camp Fire for future incidents.

OTHER RESPONSE ACTIVITIES OF NOTE

CALIFORNIA STATE UNIVERSITY, CHICO (CHICO STATE)

The Town of Paradise, located about 15 miles from Chico State, began evacuations early on November 8, 2018. Campus administration recognized the severity of powerful winds blowing toward the campus and convened a meeting of key personnel at 9:00 a.m. to discuss possible impacts on the university. At 9:30 a.m., Paradise sent an evacuation notice to the university and local partners, totaling approximately 18,300 individuals via Chico State Alerts, Chico State's Campus Emergency Notification System.

At 10:30 a.m., Chico State sent nursing students to the ARC shelter in Chico to assist evacuees. The campus EOC was activated with 15 staff at 1:00 p.m. At 2:45 p.m., Chico State Alerts notified the campus community regarding class cancellations. Chico State Alerts sent a subsequent notification at 5:10 p.m., extending campus closure through November 9. Residence halls accommodated approximately 1,460 displaced students. The university-owned property also housed six out-of-area police officers. The campus EOC remained staffed through the night to monitor Camp Fire and continued messaging the campus community.

On November 9, thirteen employees staffed the EOC and held a situation brief at 8:00 a.m. The housing of emergency responders expanded to include ambulance strike teams. The university announced a campus emergency closure through November 16, with classes resuming on November 26. An information line remained staffed through 5:00 p.m. The Chico State Critical Response Unit (CRU) law enforcement team activated 25 officers. The EOC closed at 8:00 p.m. when danger from Camp Fire moved away from the City of Chico and the university. Campus police assumed situation monitoring.

On November 10, the EOC was reactivated with 14 employees. The CRU reported to the CAL FIRE ICP at Butte College.

The EOC remained activated through November 21, 2018. Response actions taken during this period included ARC volunteer shelter set-up assistance. EOC staff referred the SoCal Animal Rescue group to the NVADG for animal support and housing when Butte County Animal Rescue could not accommodate them.

SACRAMENTO COUNTY CORONER

Sacramento County Coroner's involvement with Camp Fire began on November 9, 2018, through communication with the Assistant Chief of LEMA at Cal OES. Later that morning, Butte County made a LEMA request to Sacramento County Coroner for a small, refrigerated truck, bio-seal equipment, and one deputy coroner. Along with the delivery of the truck, Sacramento Coroner staff trained Butte County staff on how to operate the truck and equipment. The



Search and rescue teams were in Paradise, California on Monday, Nov. 12, 2018 to comb through rubble in search of victims of Camp Fire. Photo Credit: Sam Gross

deputy coroner stayed and assisted in Butte County for the day.

By November 10, Butte County requested Sacramento Coroner take over the examination and identification of deceased victims, estimated to total as many as 100 people. That evening, the Sacramento County deputy coroner returned to the Sacramento County Morgue with victims in the refrigerated

truck to begin processing, including photographing victims, processing the victims' property or evidence, and, where possible, fingerprinting and taking x-rays. Mass fatality forms were completed, and information was documented in the Sacramento County Coroner Case Management System. Sacramento County Morgue also stored victims until an autopsy was performed.

Sacramento County Coroner was running out of storage space for victims and requested assistance from Sacramento Sheriff to move Sacramento Coroner's 53-foot refrigerated trailer. There was a shortage of racked storage tables for the refrigerated trailer and truck but at Sacramento Coroner's request, Sacramento Metro Fire and Sacramento OES loaned approximately 30 backboards to help with this issue. Since the request was made on the weekend, it was delayed until the work week started. A local funeral home provided cremation boxes to store victims for the weekend.

Volunteers from other agencies and other professional organizations, including private citizens, began helping the morgue on November 11. Screening the

requests for specific qualifications took time and resulted in declining many offers that came from private citizens, other agencies, service professionals, and organizations.

Exams began with four Sacramento Coroner's doctors adding the victims to their regular workload. They started processing more evidence, took biological samples for Butte County, and continued with paperwork and case management documentation. The California DOJ MUPS assisted with obtaining antemortem records for missing persons and tentative identification of victims. Sacramento Coroner began providing statistics to Cal OES, Sacramento OES, and Butte County.

Sacramento Coroners assisted Butte County with victims processing, examination and collected property evidence. The Sacramento County Media Officer helped Sacramento Coroner handle heavy media requests and interviews. Placer County provided a pathologist to assist with exams while Yolo County coroners assisted in the morgue.

Due to the fire destroying dental offices in Butte County, a lead forensic odontologist contacted the Northern California Dental Society and requested they look at the missing person list to identify any missing persons as a patient and to locate and send antemortem records and x-rays. The missing person list changed over the first two weeks of the fire, so multiple requests were made. Arrangements were also made for volunteers from the MRC to arrive the next day.

Where fingerprints and dental records failed or if remains were too damaged, DNA testing was completed. It can take weeks to ship samples to a laboratory and conduct the DNA analysis, but a Colorado-based company that specializes in Rapid DNA analysis and has experience working with the US military and the FBI, named ANDE, stepped in to assist. Staff from ANDE arrived at the Sacramento Coroner's office and ran DNA tests on samples brought in by wildfire investigators, which reduced the turn-around time to less than two hours.

Traditional lab methods to run DNA tests delayed results, so the Sacramento Coroner's Office, Butte County, and ANDE acquired a second set of samples from families to conduct Rapid DNA testing. Confusion arose when outside agencies continued to send samples to the DOJ DNA lab for testing, instead of to the Sacramento Coroner for Rapid DNA testing.

YUBA-SUTTER COUNTY JOINT SHELTER RESPONSE

As the evacuation zone expanded, Butte County requested Yuba County to open a shelter to provide mass care services to evacuated citizens from Butte County. Yuba and Sutter County emergency managers joined forces to provide a bi-county response, which became the most significant mass care services response to the incident.

The Yuba-Sutter County Joint Shelter opened at the Yuba-Sutter Fairgrounds on November 8, 2018. Participating organizations included Yuba County, Sutter County, Yuba-Sutter Fairgrounds, Salvation Army, Habitat for Humanity, Field Haven Feline Center, and YSDADA. The ARC took over from the counties on November 16, 2018.

INITIAL RECOVERY ACTIVITIES – STATE AGENCIES

Multiple state agencies coordinated recovery in the aftermath of Camp Fire. These efforts were to assist survivors and rebuild the Town of Paradise and support all affected in Butte County.

Cal OES established the Interagency Recovery Coordination (IRC) Team during the response to Camp Fire. This team guided the State Recovery Support Functions (RSFs) and partnered with state agencies to provide immediate support with household hazardous waste removal, debris removal, hazardous tree removal, technical assistance, rebuilding, housing, and long-term recovery needs of disaster-impacted communities in California.

HOUSEHOLD HAZARDOUS WASTE REMOVAL – PHASE 1

Following the incident, California Environmental Protection Agency's Department of Toxic Substances Control and the United States Environmental Protection Agency assessed and removed household hazardous wastes from the thousands of destroyed homes and businesses. A total of 13,328 parcels were visited by State or Federal hazmat crews, who removed burned batteries, paint, cleaning chemicals, and other hazardous wastes impacted by the fire. Due to the urgency to remove hazardous waste, Phase 1 was conducted on every impacted parcel without requiring property owners to sign an enrollment document.

DEBRIS REMOVAL – PHASE 2

Upon completion of Phase 1, Cal OES, and the California Environmental Protection Agency's CalRecycle launched the "Phase 2" debris removal operation, the largest wildfire debris removal operation in American history at the time. The operation was led by an Incident Management Team staffed by personnel from Cal OES, CalRecycle, the California Department of Transportation, the California Department of Fish and Wildlife, the State Water Resources Control Board, and various other state agencies operating under the direction of a Unified Command filled by Cal OES and Butte County Public Health.

Three contractors conducted the work, each responsible for a specific part of the burn scar—the west half of the Town of Paradise, the eastern half of the town, while another managed cleanup in the unincorporated county areas, including the community of Magalia. An engineering and environmental firm oversaw the operation and provided various monitoring services to CalRecycle. Due to the size of the operation, three base camps were established to house the over 3,000 incident personnel. On November 19, 2019, close to one year after the anniversary of the fire, CalRecycle joined Cal OES to announce the completion of debris removal on nearly 11,000 properties with more than 3.66 million tons of ash, debris, metal, concrete, and contaminated soil removed as part of California's Consolidated Debris Removal Program. Property owners could enroll in the program or hire a contractor at their expense to remove the debris.

HAZARDOUS TREE REMOVAL

Initially, Cal OES Recovery had two separate missions to support debris removal and hazardous tree removal. FEMA EHP prioritized debris removal based on phases that addressed imminent threats to the public. After the debris removal was completed, it was discovered that many trees were hazardous and required evaluation for removal, which added time to the overall recovery process and prohibited the residents from returning to their properties.

Cal OES and CalRecycle implemented a hazardous tree removal program in Camp Fire burn scar, which removed approximately 90,000 trees, posing a hazard to public roads and other infrastructure. This program was the first of its kind and size in the Nation and included trees along public and private roads. Under the supervision of a Cal OES and CalRecycle Incident Management Team, hazardous tree removal was conducted by two licensed timber operators: one removed trees in the Town of Paradise and the other in unincorporated areas. Before removal, a certified arborist carefully inspected each tree. The operation removed trees from over 8,700 parcels, and the standards established by the operation have continued to guide post-fire hazardous tree removal programs across California and the West.

The unprecedented size of this operation and the conditions surrounding natural and cultural resources led to the development of an Environmental Protection Plan (EPP), which moved this operation and all disaster projects forward in a more expeditious manner, including areas with susceptible habitats and cultural significance.



Camp Fire Hazardous Tree Removal. Photo Credit: Butte County Recovery

State and Federal regulators and FEMA streamlined federal and state environmental compliance processes for disaster debris and hazardous tree removal recovery. The action assisted in building rapport and comfort with the agencies. This dialogue ultimately led to Federal and State partners developing an annual EPP, establishing best management practices, and temporarily suspending specific state

environmental laws and regulations to expedite Recovery operations.

Hazardous Tree Removal Operations:

- Established a Vegetative Debris, Timber and Biomass Task Force to estimate the volume of trees affected by the fire and develop a strategy to maximize the marketability of the felled trees. The end product of the task force was the Hazardous Tree Removal Operations Plan, which became the guidance document for tree removal operations.
- Mitigated tree loss by planting over 1,900 trees surrounding salmon habitat.

RECOVERY INDIVIDUAL ASSISTANCE

For Butte County, FEMA approved \$84,529,214 for 7,354 households under the Individuals and Households Program. SBA approved \$370,266,422 for 3,349 home and business loans.

Over 72,000 households were provided services through the DRCs, which provided resources from various federal, state, local and non-profit organizations.

DR-4407 Camp Fire DRCs/LACs DATA

DRC Name	Households Count	Service Count
Chico	58,976	36,653
Oroville	2,863	2,458
Ventura	428	891
Malibu	3,767	3,421
Agoura	3,265	2,619
Paradise	249	28
Total	69,548	46,070

A total of four FEMA Direct Housing group sites were built to provide temporary housing to Camp Fire survivors. FEMA leased pads in 16 existing manufactured housing parks with the highest count of occupants licensed at 684 households. By the end of the program on May 12, 2021, all applicants found a permanent housing solution with the help of Butte County Social Services, Camp Fire Collaborative, Cal OES and FEMA.

From November 12, 2018, through May 10, 2021, Disaster Case Management served over 2,400 families on an active caseload of over 4,600 families that requested assistance. Over 1,600 referrals were made on the survivors' behalf for various services and resources with an aggregate value of \$8,728,802 (average of \$5,384).

LONG-TERM RECOVERY PLANNING

With the assistance of State and Federal Recovery Support Functions, the Town of Paradise hired a Local Disaster Recovery Manager (LDRM) in 2019 using a grant from USEDA and philanthropic donations.

- Through this agreement, philanthropic funding allowed for project management to begin before federal funding was available.
- The LDRM was responsible for the Long-Term Community Recovery Plan, housing, coordinating projects, and other activities outlined in the town's Long-Term Recovery Plan.
- The LDRM worked closely with Cal OES, FEMA, town staff, local agencies, and residents to create process efficiencies and enhance resilience by maximizing collaboration and reducing duplicative efforts.

- The State-Federal RSF teams worked with local government to document the impacts in assessment reports to develop a Recovery Needs Assessment and frame projects that informed the Long-Term Recovery Plan.

The Town of Paradise and Butte County established the Building Resilience Center (BRC), also referred to as the “BRICK,” to assist Camp Fire survivors with navigating the rebuilding process by providing loans and grants technical assistance, and free resources such as home floor plans from the local floor plan library.

Prior to the establishment of the BRC, the Housing RSF coordinated a Housing Recovery Resource Fair that included Fannie Mae, the United States Department of Agriculture, California Department of Veterans Affairs, the Town of Paradise, United Policy Holders, and Money Management International.

- The Housing Recovery Resource Fair provided a centralized location for accessing information and resources to assist with housing reconstruction and served as a precursor for establishing the BRC as a permanent community resource.
- Early during the establishment of the BRC, the State and Federal RSFs assisted with staffing the Rebuild Advocate position within the BRC, which provided consultation at no charge to assist with rebuilding, insurance and financing.
- The building that houses the BRC sustained only minor roof damage during Camp Fire and was donated to the town by Bank of America. The structure was repaired using \$350,000 from North Valley Community Foundation’s Butte Strong Fund.
- A Cal OES-FEMA case study was developed on the Town of Paradise recovery that highlighted the establishment of the BRC as a best practice for local jurisdictions to model and streamline the housing reconstruction process.

Cal OES worked with the United States Department of Education, the United States Department of Health & Human Services, and the Butte County Office of Education to establish the Children and Youth Task Force to identify the impacts of Camp Fire to school-aged children. The Children and Youth Task Force included facilitating several coordination meetings with local, state, and federal partners.

- The Health & Social Services RSF coordinated presentations at schools in the area to provide community service information and opportunities for students wanting to get involved in their community's recovery.
- The Health & Social Services RSF hosted several Disaster Behavioral Health training courses with Butte County public officials and responder agencies, including support from the United States Department of Health & Social Services/Assistant Secretary Preparedness Response.
- This training was later delivered to the Long-Term Recovery Group, Spiritual & Emotional Wellness Subcommittee to assist local nonprofits and volunteer-based organizations with managing compassion fatigue while continuing to support the recovery effort.
- The Health & Social Services RSF developed GIS maps outlining healthcare facilities impacted by Camp Fire and population movement data. Following the destruction of the Feather River Adventist Hospital, the primary healthcare facility in the region, this resource was vital for local public health planning efforts.
- Provided consultation to Enloe Medical Center, a local hospital that experienced a surge of chronic care patients to the emergency department, impacting the ability to provide acute care.
- The Office of Planning and Research worked under the support of the Community Planning and Capacity Building RSF to develop a Town of Paradise Long-Range Planning Roadmap, which provided an initial framework for the town to develop a more specific scope of work around project management, effective community engagement, and a phased approach for updating long-term planning deliverables while supporting plan alignment and integration activities for the town to facilitate their planning efforts after Camp Fire.

DIRECT HOUSING

Housing was identified as a critical need for the community that lost over 14,000 homes due to the fire. Displaced survivors moved to nearby towns and areas within the county. The City of Chico accommodated 10,000 people from the Town of Paradise and neighboring jurisdictions, which was a significant strain on their resources to support those seeking housing options, public safety needs, and socio-economic resources.

Housing became a complex mission in Butte County, due to zoning requirements and agricultural land. The FEMA EHP and Butte Building Department assisted Cal OES Recovery with zoning requirements and searching sites for temporary housing needs in the area. The county assisted with public outreach to answer questions and concerns related to post-disaster housing, including the limited resources available in the area for direct housing.

Ninety-five percent of parks used as direct housing sites were not up to building code, and it required coordination, inspection, and approval from HCD. Cal OES Recovery worked with HCD to redevelop the infrastructure for mobile home parks.

Four group sites were selected and developed to support the housing needs of displaced survivors. In partnership with FEMA, the first group site in Oroville was dedicated to the AFN population. Several counties supported the direct housing needs and identified 1,000 leasing pads for mobile housing units and travel trailers. Group sites were built from the ground up, requiring infrastructure support, including water, electrical, wastewater, and associated wrap-around services.

After Camp Fire, many survivors who moved out of the community to the group sites were far away from their support network, families, and community. Cal OES Recovery advocated with FEMA to keep the group sites and direct housing sites close to the community to allow survivors to stay within their community and rebuild. However, zoning requirements prevented group sites to locate within the City of Paradise. FEMA focused on keeping people who lost their primary residences in the community and involved locals with the discussion on site search, selection, and resources needed to build the sites.

PHILANTHROPIC COMMUNITY

The philanthropic community provided direct support to the Town of Paradise by putting together community resource building, visioning sessions, and community feedback loops. Philanthropic funds supported many FEMA programs, as public assistance reimbursements were limited. The philanthropic community also paid for a recovery manager that worked with both the Town of Paradise and Butte County for the first year, with the USEDA funding the economic recovery framework for two additional years. Peer-to-peer support was made possible by bringing in subject matter experts from Pittsburgh, Pennsylvania with experience and expertise in disaster recovery and rebuilding. There were a series of meetings with the community to solicit feedback on priorities for recovery and how to rebuild the town, which allowed for a smoother transition to take over the recovery projects.

RECOVERY SUPPORT FUNCTIONS (RSF)

- Coordinated state funding through the State Waterboard to support the development of a regional wastewater system that would connect the Town of Paradise to the City of Chico.
- Identified funding opportunities to address the gap between city funds and implemented the emergency notification system to alert residents of future disasters.
- Identified funding opportunities to assist with road widening projects and connecting dead-end roads to improve evacuation times.
- Coordinated with Engineers Without Borders to inspect bridges impacted by Camp Fire.
- The Infrastructure RSF worked with IRC leadership, HCD, Butte County, and the State Water Resources Control Board (SWRCB) to layer grant funding from the Community Development Block Grant – Disaster Recovery program along with grant funding from SWRCB's Division of Finance Assistance to convert septic systems to sewer.
- Currently, the RSF team continues to work with the FEMA Long-Term Recovery Office in Chico and the Town of Paradise to identify funding and support gaps needs for Paradise's Long-Term Recovery Plan.
- Town of Paradise is currently on the second iteration of its recovery plan, which continues to be a strong example of whole-community planning.

WATERSHED TASK FORCE

The Watershed Task Force worked with Butte County to develop an evacuation plan that was subsequently utilized during a significant storm with the potential for trigger flash flooding or debris flows.

- California Conservation Corps (CCC) crew assisted with the installation of emergency protective measures throughout the burn scar.
- Department of Water Resources provided Flood Fight Specialists to guide CCC emergency protective measure installation.
- Caltrans and DGS provided K-rails, straw wattle, and silt fence to support flood protective measures.

INITIAL RECOVERY ACTIVITIES– OPERATIONAL AREAS

Butte County, the state, FEMA, and numerous other agencies and organizations worked together to aid communities affected by the fire. A Local Assistance Center was initially established on November 16, 2018, at the Chico Mall to provide information and assistance to county residents, which transitioned into a DRC with FEMA funding and support. The DRC was a singular location for disaster victims to procure assistance from federal, state, county, and local organization for resources, such as licenses, applications, small business loans, disaster victims registering for federal assistance, and those applying for critical documents lost during the fires. Mobile DRC units rotating to different locations around the county supplemented the main DRC. The DRCs were well-attended, and the presence of FEMA enhanced the capabilities of DRCs by allowing disaster victims to submit Right of Entry (ROE) paperwork for government-subsidized debris removal and apply for other assistance.

The EOC officially transitioned to recovery on November 26, 2018, at 8:00 a.m., coinciding with the opening of the DROC. Recovery operations included providing information and assistance to affected members of the public, conducting debris removal operations, coordinating the implementation of environmental protective measures, and managing the ROE permit process.

CONTRIBUTING AGENCIES

STATE AGENCIES

California Conservation Corps (CCC)
California Department of Education (CDE)
California Department of Food and Agriculture (CDFA)
California Department of Public Health (CDPH)
California Department of Social Services (CDSS)
California Department of Transportation (Caltrans)
California Highway Patrol (CHP)
California Military Department (CMD)
California State University, Chico
Department of General Services (DGS)
Emergency Medical Services Authority (EMSA)
Governor's Office of Emergency Services (Cal OES)

LOCAL AGENCIES

Butte County
Glenn County
Plumas County
Sacramento County
Sutter County
Yuba County

LIST OF ACRONYMS

AAR	After Action Report
AFN	Access and Functional Needs
ACTF	Animal Care Task Force
ADA	Americans with Disabilities Act
ARC	American Red Cross
ATO	Administrative Time Off
AT&T	American Telephone & Telegraph
BCPHD	Butte County Public Health Department
BCSO	Butte County Sheriff's Office
BRC	Building Resilience Center
CA-ESF	California Emergency Support Functions
CAL FIRE	California Department of Forestry and Fire Protection
Cal OES	California Governor's Office of Emergency Services
CalHR	Department of Human Resources
CalRecycle	Department of Resources, Recycling, and Recovery
Caltrans	California Department of Transportation
CARES	California Animal Resource Emergency System
CCC	California Conservation Corps
CDE	California Department of Education
CDFA	California Department of Food and Agriculture
CDPH	California Department of Public Health
CDSS	California Department of Social Services
Chico State	California State University, Chico
CNG	California National Guard
COE	County Office of Education
CPAP	Continuous Positive Airway Pressure
CRU	Critical Response Unit
CSU	California State University
DESS	Department of Employment and Social Services
DGS	Department of General Services

DNA	Deoxyribonucleic Acid
DOC	Department Operations Center
DOJ	Department of Justice
DROC	Disaster Recovery Operations Center
DRC	Disaster Recovery Center
DSW	Disaster Service Worker
EHP	Environmental Historic Preservation
EMAC	Emergency Management Assistance Compact
EMMA	Emergency Management Mutual Aid
EMSA	Emergency Medical Services Authority
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPO	Emergency Preparedness Office
EPP	Environmental Protection Plan
ESF	Emergency Support Function
EVC	Emergency Volunteer Center
FAQ	Frequently Asked Questions
FEMA	Federal Emergency Management Agency
FMAG	Federal Management Assistance Grant
GIS	Geographic Information System
GPS	Global Positioning System
GSD	General Services Department
HCD	Department of Housing and Community Development
HHSA	Health and Human Services Agency
HRD	Human Remains Detection
HTF	Housing Task Force
IA	Individual Assistance
ICP	Incident Command Post
ICS	Incident Command System
IPAWS	Integrated Public Alert and Warning System
IRC	Interagency Recovery Coordination
JIC	Joint Information Center

LDRM	Local Disaster Recovery Manager
LEB	Law Enforcement Branch
LEMA	Law Enforcement Mutual Aid
MCSTF	Mass Care and Shelter Task Force
MHCC	Medical and Health Coordination Center
MOU	Memorandum of Understanding
MRC	Medical Reserve Corp
MUPS	Missing and Unidentified Persons Section
NGO	Non-Governmental Organization
NVADG	North Valley Animal Disaster Group
OA	Operational Area
OEM	Office of Emergency Management
OES	Office of Emergency Services
PG&E	Pacific Gas & Electric
PIO	Public Information Officer
PPE	Personal Protective Equipment
REOC	Regional Emergency Operations Center
RIMS	Response Incident Management System
ROE	Right of Entry
RSF	Recovery Support Function
SAR	Search and Rescue
SBA	Small Business Administration
SEMS	Standardized Emergency Management System
SME	Subject Matter Expert
SOC	State Operations Center
SUV	Spontaneous Unaffiliated Volunteer
SWRCB	State Water Resources Control Board
UCP	Unified Command Post
US&R	Urban Search and Rescue
USEDA	United States Economic Development Administration
YSDADA	Yuba Sutter Domestic Animal Disaster Assistance