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Wildfire-Related Alert Systems and Technology and the Wildfire Forecast and Threat Intelligence Integration Center

PRESENTED TO:

Senate Committee on Governmental Organization
Hon. Bill Dodd, Chair



LEGISLATIVE ANALYST'S OFFICE

State Agency Roles Related to Wildfire Preparedness and Response

Office of Emergency Services (OES)

- Coordinates and supports state and local disaster planning activities, as well as monitors and coordinates disaster response and recovery activities, including tasking other agencies with carrying out specific activities and coordinating mutual aid.
- Operates the California State Warning Center that alerts the public in the event of an emergency, as well as implements several communications-related systems that enable public safety communications, such as the California Public Safety Microwave Network and the Next Generation 9-1-1 system.

California Department of Forestry and Fire Protection (CalFire)

- Main state entity involved in fire response. (Local and federal fire agencies also participate in fire response.) Primarily responsible for protecting state responsibility areas, which cover about one-third of the state's acreage and include primarily privately owned timberlands, rangelands, and watersheds.
- Oversees the implementation of multiple wildfire-related technology solutions, such as fire detection cameras.

Other Various Agencies

- **California Military Department (CMD).** Provides support—such as aircraft, hand crews, and other military equipment—to assist with combatting large fires and responding to other disasters. In addition, CMD utilizes satellite imagery that provides near real-time fire intelligence for local, state, and federal officials.
- **California Public Utilities Commission (CPUC).** Maintains various roles and responsibilities related to reducing the likelihood of utilities causing wildfires and protecting consumers in the event of a wildfire. For example, CPUC has established guidelines requiring utilities to implement a public safety power shutoff to reduce wildfire risk under certain circumstances.



Three Primary Types of Emergency Alert Systems Used in Wildfires

Federal, state, and local authorities primarily use the emergency alert systems below to notify impacted individuals of emergencies, including wildfires.

- ***Wireless Emergency Alert System.*** Wireless emergency alerts are sent through mobile carriers by authorized government alerting authorities, including federal, state and local public safety officials. These alerts are concise, text-like messages designed to get people's attention in critical situations, including imminent threat to life or property. The authorized government alerting authority designates a geographic area to receive a message and anyone in that area with a cell phone receives the message, which includes a special tone and vibration.
- ***Emergency Alert System.*** The Emergency Alert System is a national public warning system that requires radio and television systems to allow the President to address the public during a national emergency. The system also may be used by state and local authorities to deliver important emergency information, such as wildfire alerts targeted to specific areas.
- ***Subscription Alert Services.*** Local public safety agencies also have community notification systems to alert people about emergency events and other public safety information. People sign up to receive alerts through telephone calls, text messages, and/or emails for events that might affect addresses of interest, such as their home, work, or child's school address. These alerts can complement other emergency alerts. For example, because wireless emergency alerts are limited in length, subscription alert services could be used to provide additional information.



Key State Wildfire-Related Technology and Communications Augmentations in Recent Years

Governor's Office of Emergency Services (OES)

- ✓ **California Public Safety Microwave Network.** \$78.3 million (SETNA) over the five-year period starting in 2018-19 to upgrade the California Public Safety Microwave Network from an analog system to a digital system to enhance emergency response communications.
- ✓ **Next Generation 9-1-1 and Broadband Communications.** \$11.5 million (SETNA) in 2018-19 (\$41 million ongoing) to implement a statewide Next Generation 9-1-1 system and to support the implementation and workload associated with emergency communications coordination and First Responder Network Authority broadband network services. \$50 million (General Fund) one-time deposited into SETNA in 2019-20 to continue implementing improvements to the state's 9-1-1 system.
- ✓ **California Interoperable Public Safety Radio System.** \$59.5 million (General Fund) over the five-year period starting in 2019-20 and \$2.7 million in 2024-25 and ongoing and 13 positions to implement a statewide public safety radio system.
- ✓ **Modernizing Technology and Data Analytics.** \$10.2 million (General Fund) in 2021-22 (\$9.6 million ongoing) and 14 positions to modernize OES' technology and data capabilities through new technology and updating outdated systems.
- ✓ **Los Angeles Regional Interoperable Communications System Land Mobile Radio System.** \$18.6 million (General Fund) one-time in 2022-23 to complete the system, which is intended to create unified communication, remove barriers to multi-jurisdictional responses, and allow police, firefighters, and paramedics to communicate directly with users outside of their agency.

California Department of Forestry and Fire Protection (CalFire)

- ✓ **Innovative Procurement.** \$15 million (General Fund) one-time in 2019-20 for CalFire to work with vendors to test proofs of concept for various potential firefighting technology solutions.
- ✓ **Fire Detection Cameras.** \$5.2 million (General Fund) in 2019-20 (\$3.5 million ongoing) for CalFire to join an existing network of wildfire detection situational awareness cameras and to expand the network by 100 cameras.
- ✓ **Situational Awareness Staffing.** \$4.5 million (General Fund) in 2019-20 (\$4.1 million ongoing) and 13 positions for CalFire to enhance its staffing to provide intelligence to decision-makers, including through leveraging information gathered by technologies such as satellite imagery and remote sensing platforms.
- ✓ **Wildfire Forecasting.** \$4.4 million (General Fund) in 2020-21 (\$7.6 million ongoing) and 24 positions to implement the Technosylva FireSim and FireCast wildfire forecasting technologies that were identified through the innovation procurement.
- ✓ **Office of Wildfire Technology Research and Development (SB 109).** \$1.8 million (General Fund) in 2022-23 (\$1.7 million ongoing) and 7 positions to establish the office as specified by Chapter 239 of 2021 (SB 109, Dodd).

Multiple Departments

- ✓ **Wildfire Forecast and Threat Intelligence Integration Center.** For OES, CalFire, California Military Department, and California Public Utilities Commission, \$2 million (General Fund) in 2020-21, \$9.5 million in 2021-22 (\$9.3 million General Fund and \$190,000 PUCURA), \$6.5 million in 2022-23 and ongoing (\$4.3 million General Fund and \$190,000 PUCURA) and 22 positions to establish the center, consistent with the requirements of Chapter 405 of 2019 (SB 209, Dodd).
- ✓ **Fire Integrated Real Time Intelligence System (FIRIS).** For OES and CalFire, \$30 million (General Fund) in 2022-23 and ongoing and 31 positions (\$24.4 million and 11 positions for OES and \$5.6 million and 20 positions for CalFire) to support the FIRIS system.

SETNA = State Emergency Telephone Network Account and PUCURA = Public Utilities Commission Utilities Reimbursement Account.



Wildfire Forecast and Threat Intelligence Integration Center

Establishment of Center. Chapter 405 of 2019 (SB 209, Dodd) required OES and CalFire to jointly establish the Wildfire Forecast and Threat Intelligence Integration Center to collect, assess, and analyze fire weather data, atmospheric conditions, and other threat indicators in order to produce fire-related intelligence products for government decision makers. The center has representatives from OES, CalFire, CPUC, CMD, University of California, California State University, California Utilities Emergency Association, and utility companies.

Budget. The 2020-21 budget provided \$2 million from the General Fund to establish the center. The center is currently supported by \$6.3 million General Fund and \$190,000 Public Utilities Commission Utilities Reimbursement Account annually and 22 authorized positions.

Initial Progress. To date, the Wildfire Forecast and Threat Intelligence Integration Center has been focused on:

- **Staffing the Center.** The center has been filling positions across OES, CalFire, CMD, and CPUC to allow it to be staffed five days per week. The center serves as a central hub for sharing fire forecast and threat information, where these departments collectively gather and review data to make decisions.
- **Integrating Data Into Fire Forecast and Threat Products.** The center produces a daily fire size potential and weather forecast, which pulls data from a variety of entities, including CMD and Geographic Area Coordination Centers, which help coordinate federal, state, and local fire response. This product is distributed throughout the state and is available to the public online. Over time, the center plans to integrate additional technologies and data sources, such as the Fire Integrated Real Time Intelligence System, into its products.

