



Emergency Response Management Committee (ERMaC)

2017 Accomplishments Report



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I. Introduction

Mission Statement:

The Emergency Response Management Committee (ERMaC) manages and reduces environmental health consequences of emergency events through effective, coordinated agency-wide preparedness, response, recovery, and mitigation efforts.

The California Environmental Protection Agency (CalEPA) ERMaC coordinates preparedness for responses to environmental emergencies in California under assigned statutory authorities. ERMaC is composed of appointed representatives and alternates from each CalEPA board, department and office (BDO), and chaired by the Assistant Secretary for Local Program Coordination and Emergency Response appointed by the Agency Secretary. ERMaC members can activate and direct resources and personnel to affect timely and appropriate response to disasters and large-scale emergencies.

ERMaC is responsible for emergency planning and training, and coordinating all CalEPA entities in emergency preparedness, response, and recovery actions. It serves as the forum for developing and maintaining the CalEPA collective Administrative Orders and Emergency Response Plans.

ERMaC is also responsible for maintaining and executing the California Hazardous Materials and Oil Emergency Support Function Annex 10 (ESF-10). The ESF-10 Annex is a planning-specific addendum to the California State Emergency Plan (SEP). The SEP establishes CalEPA as the State's lead agency for the organizational scope and coordination of State-wide emergency management in an environmental disaster involving a large-scale oil or hazardous materials release. The ESF-10 Annex provides for a coordinated response from agencies and governmental entities with jurisdiction to perform all phases of emergency management in the response to and recovery from an oil or hazardous materials release.

CalEPA responses conform to the National Incident Management System (NIMS) for emergency response. CalEPA operates as a state agency with specific jurisdiction under the California Standardized Emergency Management System (SEMS), coordinated by the Governor's Office of Emergency Services (CalOES).

This 8th annual Accomplishments Report highlights the 2017 emergency management, response, and recovery activities of CalEPA and its six BDOs, such as hazardous chemical releases, fires, and oil spills as well as major trainings, exercises, and projects in which ERMaC members participated over the year.

II. Incident Response and Recovery Actions

Throughout 2017, ERMaC coordinated with supporting agencies to mitigate environmental incidents and disasters. Doing so, ERMaC and its member agencies had a busy year collectively bettering the health of humans and the environment throughout the state. The incidents presented below encompass a wide variety of environmental incidents. This variety of incidents also highlight the response and recovery actions undertaken by each BDO during incidents and disasters, as well as the collective efforts of ERMaC and its member agencies.

A. Select Incident Response and Recovery Actions

1. Incident Name: 2017 California Floods (January – February)

Heavy precipitation in early January caused the Russian River in Sonoma and Mendocino Counties to rise 3 feet (0.91 m) above flood stage, and the American River, east of Sacramento, to reach record flows. The San Joaquin River reached its highest levels since 1997 due to the opening of upstream dams to manage flooding, and flood stage was exceeded along portions of the river.



The South Yuba River at Highway 49 flooded after heavy rain on January 9, 2017. The flow is about 25,000 cubic feet per second (710 m³/s), more than 40 times the normal flow.

On the morning of February 18th, flash flooding on Stone Corral Creek flooded the town of Maxwell in Colusa County, while the Anderson Dam in San Jose overflowed in the same month for the first time in eleven years.



Maxwell in Colusa County near Interstate 5 was among the towns hardest hit by the storms in early 2017.

Additionally, high water flows in the Feather River caused considerable damage, collapsing the riverbanks and destroying large areas of farmland. The flooding did not end there. On February 20th, a levee breached near Manteca resulting in evacuation of hundreds of residents.

The California State Water Resources Control Board (SWRCB) provided guidance and assistance to public water systems as needed. They also kept situational awareness of affected, and potentially affected public water systems issuing unsafe water alerts, such as boil water notices, as necessary.

ERMaC coordinated and collaborated with the SWRCB, CalOES, California Water/Wastewater Agency Response Network (CalWARN), and other partners and stakeholders in response to these floods.

2. **Incident Name: Drug Lab Responses** (January – December)

The Department of Toxic Substances Control (DTSC) experienced a significant increase in drug lab responses associated with illegal cannabis butane-honey oil (BHO) labs. Over 50% of DTSC's responses to drug-labs in 2017 were associated with BHO labs. DTSC is currently preparing documentation to increase funding to the Illegal Drug Lab Cleanup Account to address the significant increase in BHO labs as it is anticipated that the trend will continue to increase in the years ahead.



3. **Incident Name: Oil Spill Response and Seafood Safety** (January – December)

The Office of Environmental Health Hazard Assessment (OEHHA) and the California Department of Fish and Wildlife (CDFW) Office of Spill Prevention and Response (OSPR) coordinated to assess seafood safety following marine and inland oil spills. CDFW must close access to fishing, unless OEHHA determines that there is not likely to be a public health threat from consumption of impacted aquatic life.



OEHHA conducts testing of seafood and risk assessments whenever fisheries are closed for more than 48 hours, in order for them to safely re-open without risk to public health.

In 2017, OEHHA responded to 13 oil spills or potential oil spill notifications. No action was required for nine spills reported to OEHHA due to the spilled product being contained, or because the spill took place in areas where no fishing or aquaculture was at risk. For the remaining four spills, OEHHA found that there were not likely to be a public health threat, resulting in CDFW allowing the fisheries to remain open in those cases.

4. Incident Name: Domoic Acid in Spiny Lobster and Rock Crab (January – December)

In consultation with the California Department of Public Health (CDPH), OEHHA made recommendations on closure and re-opening of commercial spiny lobster and rock crab fisheries in CDFW's jurisdiction, based on the results of domoic acid testing in those species. OEHHA, in cooperation with the ongoing monitoring efforts of CDPH, continued to review the domoic acid levels in these species, as well as Dungeness crab.



<https://cdfgnews.wordpress.com/2018/03/29/opening-of-commercial-rock-crab-fishery-extended-to-sonoma-mendocino-county-line/>

In January, OEHHA declared that domoic acid levels in Dungeness crab from Mendocino County were low and would not cause adverse health effects to human health resulting in the reopening of the fishery. In October, OEHHA found high levels of domoic acid in lobster from Anacapa and Santa Cruz Islands in Santa Barbara and Ventura County, respectively. These fisheries were reopened in November and December after OEHHA testing showed domoic acid levels to be below toxic thresholds.

5. Incident Name: Oroville Spillway Collapse (February – March)



On February 7th, significant damage occurred at the spillway of Oroville Dam in Butte County due to high amounts of precipitation during the months of January and February. The damage led to millions of cubic feet of water being released from the overflow. Nearly 200,000 people were evacuated from the

area as a precaution against dam failure.

ERMaC participated in a workgroup with collaborating agencies in response to the spillway collapse. SWRCB worked with various water facilities near the impacted area to mitigate potential hazards associated with each water facility affected.

CalEPA representatives at the CalOES State Operations Center (SOC) relied



on CalEPA's Regulated Site Portal to identify potential sites and sources of hazardous chemicals located in the floodplain below Oroville Dam. OEHHA provided technical information on the health effects of the chemicals involved.

The California Air Resources Board (CARB) assisted the Butte County Air Quality Management District (BCAQMD) with air monitoring plan assessments during debris removal and reconstruction of the Oroville Dam spillway. CARB's Incident Air Monitoring Section (IAMS) provided a continuous evaluation of the California Department of Water Resources (DWR) environmental contractor's monitoring program for particulate matter (PM) and naturally occurring asbestos to ensure appropriate environmental monitoring techniques were being applied during repair and construction of the spillway.

CARB provided support that resulted in the deployment of three filter-based PM samplers to monitor for the presence of asbestos using subsequent laboratory

analysis. CARB also deployed a remote automated weather station (RAWS) to assess meteorological conditions and measure collected rainfall, providing on-site information to the dam reconstruction project operations team. CARB hosted daily coordination calls with BCAQMD and the appointed environmental contractor to evaluate monitoring plans and review sampling results to ensure populations adjacent to work zones were not adversely impacted by the large amount of construction and rebuilding operations.



6. Incident Name: E-D Coat Inc. Electroplating Response, Oakland, CA (April – May)



DTSC's Emergency Response (ER) searched E-D Coat, Inc. and removed several hundred gallons of hazardous waste from a defunct electroplating shop in Oakland, CA. The removal eliminated the threatened release from several deteriorated tanks located within the facility, and ensured the safety of the community that surrounds the facility.

7. Incident Name: Valero Refinery Emergency Flaring, Benicia, CA (May 5th)

ERMaC responded after a flaring incident at the Valero Refinery in Benicia, when heavy plumes of smoke were emitted into the surrounding communities. A 15-minute power outage by Pacific Gas and Electric (PG&E) resulted in a forced emergency shutdown of the refinery, and Valero expelling 74,000 pounds of sulfur dioxide and other contaminants into the air.

CARB IAMS deployed staff that collaborated with the Bay Area Air Quality Management District



(BAAQMD), United States Environmental Protection Agency (US EPA), California Department of Forestry and Fire Protection (CalFire), and California Department of Transportation (Caltrans) to assess public safety impacts. CARB deployed two portable instruments downwind of the incident and measured PM concentrations while BAAQMD monitored for sulfur dioxide. The ground-level air quality downwind from the facility was determined to be within normal ranges, despite the massive overhead plume. The deployed instruments remained in place until the flaring event concluded and normal operations resumed.

CalEPA, in its refinery safety role, worked to ensure coordination among the responding state, federal, and local agencies and to maximize real time situational awareness.

8. Incident Name: Argonaut Mine Stability, Amador County (August – December)

At the request of US EPA Region IX and the Amador County local government, CARB redeployed a weather station to the Argonaut Mine Superfund site in Amador County. The instrument collected and measured rainfall levels to evaluate the site stabilization of saturated ground for the remediation project. There remains a concern that increased rainfall may lead to a failure of the aging retention dams that protect the residential and commercial communities in the City of Jackson from exposure to toxic metals in mine tailings. The RAWS equipment is currently still in position and supports the project.

9. Incident Name: Hepatitis A Outbreak Among Homeless, San Diego, CA (October)

The California Department of Pesticide Regulation (CDPR) assisted the San Diego County Agricultural Commissioner's Office and San Diego County Department of Public Health, when they requested a "Special Local Need" pesticide registration for sodium hypochlorite for disinfectant use in a number of homeless encampments where Hepatitis A had been identified. The County submitted a request for use in public rights-of-way, drainage culverts, channels and open spaces from CDPR in October. The use was entered into scientific evaluation for review by CDPR's Human Health Assessment, Worker Safety, Microbiology, Environmental Monitoring, and Ecotoxicology branches. While this review was ongoing, CDPR's Enforcement Branch reached an interim agreement with San Diego County Public Health so that they could effectively and immediately respond to the outbreak.

B. Fire Response and Recovery

The 2017 fire season was one of the most devastating in California's recorded history. From the northern part of the state, to central and southern parts, California was ablaze during the months of March to August, early October, and for over 30 days between December 2017 and January 2018. Through 2017, over 505,000 acres of land burned, resulting in vast response and recovery efforts from CalEPA and its BDOs.

1. Incident Name: Valley Fire Forest Remediation, Lake County, CA (March – July)

CARB deployed a portable weather station to Boggs Mountain in Lake County to assist in the recovery of the Boggs Mountain State Forest. Recovery land managers used the weather station to monitor precipitation levels in the 76,067 acres destroyed by the Valley Fire in 2015.

2. Incident Name: Summer Wildfires: Butte, Mariposa, and Trinity Counties (July – August)



ERMaC and its member and collaborating agencies coordinated efforts to respond to summer wildfires. CARB IAMS deployed multiple portable air monitors to measure smoke concentrations. CARB's field response team used the portable instrumentation to supplement the existing air monitoring network and focus on locations experiencing extended periods of heavy

smoke.

DTSC's Emergency Response responded to four major wildfires. The Ponderosa and Wall Fires in Butte County destroyed 52 structures and 4,016 acres, and 90 structures and 6,033 acres respectively. The Detwiler Fire in Mariposa County damaged or destroyed 113 properties and 81,826 acres in August, while the Helena Fire in Trinity County damaged or destroyed 72 properties and 21,846 acres in the same month. DTSC crews assessed and removed household hazardous waste (HHW) and asbestos from over 300 residential properties impacted by these wildfires utilizing off-highway

contractors. In addition, the Department of Resources, Recycling & Recovery (CalRecycle) responded with coordinated disaster debris removal programs in Mariposa and Trinity Counties. Approximately 100 properties were remediated in Mariposa County and 70 properties in Trinity County.



3. Incident Name: Northern and Southern California Fires (October – December)

ERMaC participated in a variety of technical workgroups to manage smoke impacts, ash, and debris from the Northern and Southern California fires in the months of October and December.



A. Northern California Fires

A tragically synergistic mix of conditions including gusty winds, low humidity, and dry vegetation led to the start of over seventeen fires throughout Sonoma, Napa, Mendocino, Butte, Solano, Nevada, Yuba, and Lake Counties in Northern California. Together, these fires burned over 44,000 acres and 9,000 were destroyed.

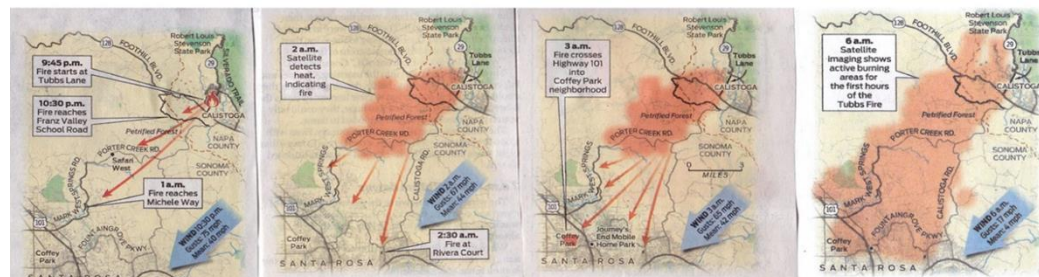
CARB deployed air monitoring equipment to measure smoke from the North Bay fires at the request of Yolo-Solano Air Quality Management District (YSAQMD) and BAAQMD to monitor particulate matter 2.5 (PM2.5) in the communities of Winters, Dixon, Cotati, Sonoma, Cordelia, Santa Rosa and Napa.



Aerial view of Northern California during the 2017 fires.

OEHHA participated in a multi-agency workgroup to develop messaging on public-health related issues. CDPH's Division of Environmental and Occupational Disease Control (DEODC), in consultation with OEHHA, created or updated fact sheets on the risk of exposure to fire ash and on deposition of ash onto vegetable gardens and into swimming pools. OEHHA also provided public information about health and safety regarding use of masks and other protective equipment to reduce exposure to smoke and ash. Additionally, OEHHA provided information to local county health officers on wet and dry deposition of heavy metals that hypothetically could travel due to the fires.

CalRecycle provided subject matter experts to assist US EPA and Army Corps of Engineers with wildfire debris removal projects from 255 properties in Lake, Mendocino, and Napa Counties.



Progress of the Tubbs Fire over an 8-hour period.

On October 19th, 2017, DTSC deployed six crews. Each crew included one DTSC staff supervisor and six to eight contract personnel to assess approximately 800 properties damaged or destroyed by the Northern California fires. The teams identified HHW and asbestos, and removed over 400,000 pounds of waste from residential, commercial, and public properties in Nevada, Yuba, Butte, Lake, and Mendocino Counties. DTSC also assessed tribal properties for the first time in Mendocino County.

DTSC efforts resulted in an estimated clean-up cost of \$1.2 million and 1,500 hours of staff time.

CalRecycle performed debris removal activities in Butte, Nevada and Yuba Counties; US EPA and the Army Corps of Engineers focused on Napa and Sonoma Counties.

SWRCB coordinated and collaborated with various partner and collaborating agencies, and activated the SWRCB Division of Drinking Water (DDW) Division Response Center, which developed and updated operational procedures. SWRCB provided guidance and assistance to public water systems — including watershed protection — as needed, and maintained situational awareness on affected and/or potentially affected public water systems issuing unsafe water alerts and “Boil water” notices as necessary. The North Coast Regional Water Quality Control Board (NCRWQCB) assisted by monitoring and providing guidance on best management practices in protecting area water resources from the effects of the fire debris and ash.

SWRCB DDW coordinated closely with County-level actions and CalOES over the water system intelligence, status, and need. SWRCB DDW also assisted in communications to help facilitate necessary resources toward recovery. Due to the heavy effects of the fire smoke and the damages to the area homes and facilities, local offices had to temporarily suspend operations. This activity initiated the implementation of continuity plans until local offices could resume operations.

B. Southern California Fires

Similar weather conditions led to over 29 fires in Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside, and San Diego counties. The intensity of extreme fire conditions brought about the largest fire in California’s recorded history; the Thomas Fire. The Thomas Fire resulted in over 281,000 acres burned, and 1,343 properties damaged or destroyed in Ventura and Santa Barbara counties. Over 308,000 total acres burned due to the Southern California fires.



Thomas Fire in Ventura and Santa Barbara Counties.

Photo courtesy of the Santa Barbara Air Pollution Control District

In December, CARB assets were deployed in Southern California to the communities of Santa Ynez and Santa Barbara to support the air monitoring response and measure effects from the Thomas Fire.



CalRecycle was mission-tasked with debris removal for the wildfires. The debris removal activities began at the end of 2017, and extended well into 2018.

On December 18th, 2017, five DTSC crews of six to eight contract personnel and one DTSC coordinator began assessment activities in Ventura County. Staff were in the field for six continuous weeks, assessed 987 properties, and removed over 400,000 pounds of hazardous waste. The estimated cost of these removal activities was \$1.3 million and 1,100 staff hours.

CalEPA coordinated closely with the Santa Barbara Public Health Officer and Environmental Health Director, along with the Regional Water Quality Control Board to address public health and environmental challenges associated with the fires and aftermath.

CalRecycle conducted disaster debris removal activities in the City of Ventura and Ventura County.

The SWRCB DDW worked closely with the County of Santa Barbara and the County of Ventura gathering information on the status of area water systems, making connections for necessary resources (e.g., emergency generators), monitoring the situation, and reporting up the chain of command and to the State Operations Center.



4. **Incident Name: Sonoma County Remediation Efforts** (October – December)

ERMaC continued to coordinate recovery and cleanup efforts after the Northern California fires were over with several of its BDOs. CARB staff participated as part of a state-level multi-agency evaluation team led by CalOES to conduct a visual assessment and provide input on the impacts of the fires to several schools in Santa Rosa.

Working in a multi-agency workgroup, CARB in conjunction with CalEPA, CalRecycle, OEHHA, Federal Emergency Management Agency (FEMA), local air districts, local county representatives, and other agencies, met to evaluate the impacts of metals in the air on Santa Rosa area schools. CARB provided particulate matter (PM) and metals monitoring to schools located in the Santa Rosa area.



In Sonoma County, CARB deployed five portable continuous PM monitors and two filter-based PM samplers for metals analysis, while in Napa County they deployed one continuous PM monitor. In addition, CalRecycle provided subject matter experts to assist the Army Corps of Engineers with the wildfire debris-removal project from 255 properties in Sonoma County.

III. Special Projects

A. Instrument Evaluation of Real-Time and Near Real-Time PM 2.5 Smoke Monitors

CARB's IAMS, in collaboration with the United States Forest Service (USFS) and the Desert Research Institute (DRI), conducted a portable PM instrument evaluation study. The purpose of the study was to identify and evaluate instruments that can be used to measure PM during wildland fires that are accurate, precise, easy to transport and setup, and cost effective. The study included testing the candidate instruments in an environmental chamber and in field trials during the fire season. CARB performed chamber tests at the DRI environmental chamber in Reno, Nevada, and the field portion of the evaluation in Weaverville, CA from October through December. CARB staff analyzed the chamber and field data and will – in collaboration with USFS and DRI – lead the write-up of the final report in 2018 outlining the study findings.

B. Northern California Catastrophic Flood Plan

The ESF-10 Working Group comprised of CalEPA staff completed the Annex X: Executive Checklist for CalEPA and ESF-10. They also provided CalOES input on the flood plan, revisions, and comments, as well as discussions of tasks and objectives to be included for several response and recovery phases during flood events.

IV. Training, Exercises, and Presentations

In 2017, ERMaC representatives and agency colleagues led various emergency exercises and presented various emergency preparedness and response training sessions and workshops to better prepare others for an environmental emergency. These included the following:

A. Training

- ERMaC 101 Training for New ERMaC Members. CalEPA Headquarters, Sacramento, CA.
Created by the ERMaC Training Subcommittee to inform new ERMaC members about the history, roles, and responsibilities of ERMaC and its member agencies.
- ERMaC Training for Managers and Supervisors. CalEPA Headquarters, Sacramento, CA.
Created by the ERMaC Training Subcommittee to provide managers and supervisors with the necessary knowledge to understand their responsibilities, expectations and/or activities related to their staff that serve on ERMaC.
- ERMaC Training for Executive Staff. CalEPA Headquarters, Sacramento, CA.
Created by the ERMaC Training Subcommittee to provide executive staff of CalEPA and its BDOs with general information about ERMaC and the roles and responsibilities related to their staff that serve on ERMaC.
- May 22nd-23rd, and September 6th, 2017. Emergency Water Quality Sampling Kit (EWQSK), Training.
SWRCB conducted training on EWQSK to Orange County water systems, hazardous materials (HazMat) responders and partners in attendance.
- July 20th, 2017. California Earthquake Clearinghouse Stakeholder Workshops.
SWRCB participated and provided input regarding the water sector, and how different tools can assist in responding to earthquakes.
- December 5th, 2017. Environmental Health Training for Emergency Response (EHTER), Training. Sacramento, CA.
SWRCB assisted with module development and delivery for several iterations, and conducted training on drinking water during emergencies as part of the EHTER training by CDPH.

B. Exercises

- January to December, 2017. CDFW in 13 Oil Spill Drills (various).
OEHHA participated with CDFW in 13 oil spill drills. A recommendation for fisheries closure was issued in eight of the drill scenarios. These drills are intended to ensure preparedness for real oil spills and ensure the adequate response and recovery actions are implemented.
- January 17th, 2017. Underground Bay Area Rapid Transit (BART) Transportation Restoration Team Exercise. Lawrence Livermore National Lab, Livermore, CA.
OEHHA participated in a federal exercise sponsored by Lawrence Livermore National Lab and the Department of Homeland Security that involved federal, state, and local agencies and stakeholders. The tabletop exercise examined a scenario where a BART train had been contaminated with anthrax. OEHHA helped to develop key approaches for decontamination and clearance.
- April 1st-13th, 2017. Lower Colorado River Pipeline Incident Functional Exercise. Yuma, AZ.
CalEPA served as a controller of a Lower Colorado River Pipeline Incident Functional Exercise involving California, Arizona, Mexico, and Regional Response Team agencies.
- May 4th, 2017. Santa Barbara Tabletop Exercise on Water Outage. Santa Barbara County Emergency Management, Santa Barbara, CA.
SWRCB DDW participated in tabletop exercise hosted by the Santa Barbara County Emergency Management for the area water systems; provided input on how the area water systems can increase their resiliency in the face of threats.
- July 12th, 2017. “Black Sky West” Tabletop Exercise. California Governor’s Office of Emergency Services, Mather, CA.
In this exercise, participants explored the cascading impacts of a catastrophic power disruption in a large geographical area over an extended period. This exercise helped better understand the consequences of and critical interdependencies during a prolonged power disruption. SWRCB provided input on the effects on the water sector in the event of a massive and prolonged electrical blackout.
- August 23rd, 2017. Earth Ex Virtual Exercise.
SWRCB participated in this virtual exercise, and provided input on the effects on the water sector. The event offered “a unique opportunity to examine preparedness, response and restoration postures for severe hazard scenarios without extensive preparation for the exercise.”

C. Presentations

- February 8th, 2017. Riveles, Karen. OEHHA. "Principles of Risk Communication." California Certified Unified Program Agency (CUPA) Forum Training Conference. San Diego, CA.
- February 8th, 2017. Penn, Paul. CalEPA. "Refinery Safety, Environmental Health Mutual Assistance." California Certified Unified Program Agency (CUPA) Forum Training Conference. San Diego, CA.
- May 2nd-3rd, 2017. Copple, Mark. CARB. "Prescribed Burned Program." Interagency Air and Smoke Council Annual Meeting. McClellan, CA.
- May 2nd-3rd, 2017. Pearson, Charles. CARB. "Next Generation Air Monitoring." Interagency Air and Smoke Council Annual Meeting. McClellan, CA.
- May 2nd-3rd, 2017. Mehadi, Ahmed. CARB. "Laboratory and Field Evaluation of Real-time and Near Real-time PM2.5 Smoke Monitors, Study Plan." Interagency Air and Smoke Council Annual Meeting. McClellan, CA.
- May 15th-18th, 2017. Penn, Paul. CalEPA. "Interagency Refinery Task Force" (Poster Presentation). International Oil Spill Conference. Long Beach, CA.
- August 22nd, 2017. Penn, Paul. CalEPA. "New Refinery Safety and Prevention Regulations." Environmental Enforcement Training Coordination. Sacramento, CA.
- September 6th, 2017. Crisologo, Joseph. SWRCB. "Drinking Water, the Emergency Water Quality Sampling Kit (EWQSK), the Water Containment Information Tool (WCIT), and HazMat Involvement." Continuing Challenge Hazardous Materials Emergency Response Workshop. Sacramento, CA.
- September 7th, 2017. Pixton, Michael. DTSC. "Incompatible Chemicals and What to Do With Them." Continuing Challenge Hazardous Materials Emergency Response Workshop. Sacramento, CA.
- September 7th, 2017. Riveles, Karen and Klasing, Susan. OEHHA "Wildfires, Oil Spills, and Harmful Algal Blooms, Oh My! - Case Studies in Public Health Emergencies." Continuing Challenge Hazardous Materials Emergency Response Workshop. Sacramento, CA.
- September 8th, 2017. Riveles, Karen and Yerabati Sauda. OEHHA. "Risk Communication and a Field to Lab Communication Case Study After a Cyanide Exposure." Continuing Challenge HazMat Emergency Response Workshop. Sacramento, CA.

- December 7th, 2017. Bennett, Russ. CARB. "Refinery Emergency Air Monitoring Assessment Project." Contra Costa County Community Awareness and Emergency Response (CAER). Contra Costa County, CA.

V. Appendices

APPENDIX A: ACRONYM GUIDE

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|------------|---|
| AQMD | Air Quality Management District |
| BAAQMD | Bay Area Air Quality Management District |
| BART | Bay Area Rapid Transit |
| BCAQMD | Butte County Air Quality Management District |
| BDO | Board, department and office |
| BHO | Butane-honey oil labs |
| CAER | Community Awareness and Emergency Response |
| CalEPA | California Environmental Protection Agency |
| CalFire | California Department of Forestry and Fire Protection |
| CalOES | California Governor's Office of Emergency Services |
| CalRecycle | Department of Resources, Recycling & Recovery |
| Caltrans | California Department of Transportation |
| CalWARN | California Water/Wastewater Agency Response Network |
| CARB | California Air Resources Board |
| CARPA | California Air Response Planning Alliance |
| CDFA | California Department of Food and Agriculture |
| CDFW | California Department of Fish and Wildlife |
| CDPH | California Department of Public Health |
| CDPR | Department of Pesticide Regulation |
| CEH | Center for Environmental Health |
| CESA | California Emergency Services Act of 2006 |
| CUPA | Certified Unified Program Agency |
| DDW | Division of Drinking Water |
| DEODC | Division of Environmental and Occupational Disease Control |
| DRI | Desert Research Institute |
| DTSC | Department of Toxic Substances Control |
| DWR | California Department of Water Resources |
| EHTER | Environmental Health Training for Emergency Response |
| EMB | Environmental Management Branch |
| EPT | Emergency Preparedness Team |
| ER | Emergency Response |
| ERMaC | Emergency Response Management Committee |
| ESF-10 | California Hazardous Materials and Oil Emergency Support Function Annex |
| EWQSK | Emergency Water Quality Sampling Kit |
| FEMA | Federal Emergency Management Agency |
| HazMat | Hazardous materials |
| HHW | Household hazardous waste |
| IAMS | Incident Air Monitoring Section |
| LEA | Local Enforcement Agencies |
| NCRWQCB | North Coast Regional Water Quality Control Board |
| NIMS | National Incident Management System |

| | |
|--------|---|
| OEHHA | Office of Environmental Health Hazard Assessment |
| OER | Office of Emergency Response |
| OSC | On-scene coordinator |
| OSPR | Office of Spill Prevention and Response |
| PG&E | Pacific Gas and Electric |
| PM | Particulate matter |
| PM2.5 | Particulate Matter 2.5 (2.5 refers to the diameter of the particulate matter, measured in micrograms) |
| RAPID | Railroad Accident Prevention and Immediate Deployment |
| RAWS | Remote automated weather station |
| SEMS | Standardized Emergency Management System |
| SEP | State Emergency Plan |
| SOC | State Operations Center |
| SWRCB | California State Water Resources Control Board |
| US EPA | United States Environmental Protection Agency |
| USFS | United States Forest Service |
| WCIT | Water Containment Information Tool |
| YSAQMD | Yolo-Solano Air Quality Management District |

APPENDIX B: ERMaC MEMBER AND SUPPORTING AGENCIES

Member Agencies:

California Environmental Protection Agency (CalEPA)

CalEPA's Office of the Secretary coordinates and administers ERMaC and oversees various tasks:

- Coordination between CalEPA's six BDOs,
- Emergency preparedness, response and recovery activities,
- Preparation of Agency and BDO emergency plans,
- Coordination between federal, state, and local agencies
- Environmental recovery from major disasters involving hazardous materials

The Office provides a Chairperson to ERMaC, and acts as the lead agency coordinator for oil and hazardous materials response and recovery actions under the ESF-10 Hazardous Materials and Oil Emergency Support Function Annex to the SEP. ERMaC was established to ensure that CalEPA's BDOs carry out emergency response planning, preparation, and incident response functions in a coordinated and effective manner.

Air Resources Board (CARB)

In December of 2017, CARB renamed its Office of Emergency Response (OER) as the Incident Air Monitoring Section (IAMS). IAMS focused on protecting downwind communities in the event of an unanticipated airborne chemical release or other emergencies affecting air quality. However, as time progressed, requests for IAMS to deploy its portable air monitors for non-emergency incidents and special studies increased.

Due to the recently passage of AB 617 and CARB's efforts to create more holistic community air monitoring capabilities, CARB is orienting its program to include short-term air monitoring for other non-routine air emissions and incidents. CARB's IAMS provides technical assistance to federal, state, and local response partners including the collection and analysis of air monitoring and sampling data and providing meteorological and plume modeling forecasts. CARB is also a founding member of the California Air Response Planning Alliance (CARPA), an ad hoc governmental alliance with the mission of increasing California's capacity to respond effectively to toxic airborne releases.

Department of Pesticide Regulation (CDPR)

The mission of CDPR is to protect human health and the environment by regulating pesticide sales and use, and by fostering reduced risk pest management. CDPR provides technical and investigative expertise for pesticide incidents and related events with the assistance of County Agricultural Commissioners. CDPR provides human and

ecological toxicological data related to pesticide exposure, public and occupational health and safety information, and various California pesticide sales and usage.

Department of Resources, Recycling & Recovery (CalRecycle)

CalRecycle is responsible for the regulation of solid waste facilities in California, which include landfills, closed disposal sites, transfer stations and other solid waste processing facilities. Local Enforcement Agencies (LEA) enforce CalRecycle's regulations typically through City and County Environmental Health Programs. CalRecycle provides technical expertise to LEAs and other government agencies on the management of disaster debris including characterization, reduction/recycling processes, transportation and disposal. In certain cases, when authorized by a Governor's Executive order and funding is provided, CalRecycle has managed disaster debris removal operations by providing staff and contractor resources.

Department of Toxic Substances Control (DTSC)

DTSC's Emergency Response Program provides statewide response to actual and potential releases of hazardous substances that pose an acute threat to public health and/or the environment. DTSC Emergency Response interacts with a number of other federal, state and local agencies in carrying out these response activities. The Emergency Response Program responds to statewide calls requesting DTSC's assistance for removals from illegal/ clandestine drug labs and other HazMat emergencies. The DTSC's Emergency Response Duty Officers handle requests for assistance.

Office of Environmental Health Hazard Assessment (OEHHA)

OEHHA provides toxicological expertise and public health recommendations during all phases of emergency management. OEHHA aids in emergencies by providing emergency personnel with information on the adverse health effects of chemical agents and characterizing the risk to the public and environment from chemical releases. OEHHA identifies different exposure scenarios, their potential health effects, and exposure levels. OEHHA also provides information on re-entry, cleanup, and clearance levels after a hazardous material release. OEHHA also assesses seafood safety following marine and inland oil spills.

State Water Resources Control Board (SWRCB)

SWRCB preserves and enhances the quality of California's water resources and ensures their proper allocation and efficient use for the benefit of present and future generations. The State Water Board works in coordination with the nine Regional Water Quality Control Boards to preserve, protect, enhance, and restore water quality. The SWRCB Division of Drinking Water works with California public water systems to ensure their provision of safe, clean, and wholesome drinking water, reliably and adequately and in compliance with the Safe Drinking Water Act and its associated laws and

regulations. The DDW's Duty Officer Program receives, triages, and relays incoming alerts from the California State Warning Center and the CDPH Emergency Preparedness Office to appropriate DDW District Offices.

Supporting Agencies:

California Governor's Office of Emergency Services (CalOES)

CalOES promotes collaboration between CalEPA and other state agencies by offering insight to statewide emergency response and emergency management perspectives relating to planning, operations, training, reporting, and financial assistance.

California Department of Food and Agriculture (CDFA)

CDFA emergency preparedness and response functions address health-related incidents potentially effecting the state's food supply and commercial agricultural interests, including incidents effecting dairy, livestock, poultry, feed, and crop production. Agricultural emergencies involve disposal of livestock carcasses and food during natural disasters, livestock specific disasters, and other incidents involving disease or contamination. CDFA monitors these incidents, provides updated information to the involved agencies, and coordinates activities as necessary.

California Department of Fish and Wildlife (CDFW) Office of Spill Prevention and Response (OSPR)

Protecting and managing fisheries and wildlife habitats, CDFW wardens act as incident commanders and investigators on numerous oil spills and hazardous material incidents throughout California.

California Department of Public Health (CDPH)

Representatives of the CDPH Division of Environmental and Occupational Disease Control's (DEODC) Emergency Preparedness Team (EPT) and the CDPH Center for Environmental Health (CEH) Environmental Management Branch (EMB) serve as liaisons between CalEPA and CDPH by providing insight into public health perspectives relative to oil and/or hazardous materials incidents.

US EPA Region IX

US EPA Region IX's Emergency Response Program—with federal On-Scene Coordinators (OSC) based in San Francisco, Signal Hill, and Carson City, NV—responds to environmental disasters, hazardous materials releases, time-critical removals, and inland oil spills that threaten human health and/or the environment. OSCs bring considerable federal authority and resources, as authorized under their governing statutes, to assist state and local agencies in emergency response, removal, and recovery efforts.

APPENDIX C: ERMaC HISTORY AND AUTHORITIES

History

In its relatively brief history, CalEPA has risen to the challenge of major environmental emergencies. The beginnings of its interdisciplinary approach to emergency response are traced back to the year of the Agency's formation in 1991. That year, the Cantara Loop, five miles north of Dunsmuir was site of a tragic train derailment leading to a toxic chemical spill into the upper Sacramento River. Public outcry for improved response from emergency responders to such incidents gave rise to the Railroad Accident Prevention and Immediate Deployment (RAPID) program. ERMaC owes its origin to RAPID, though the program was eventually disbanded. ERMaC has evolved in its place as the interdisciplinary forum of choice for coordinating CalEPA's emergency response and recovery efforts.

In 1998, Gerald G. Johnston—CalEPA's then-Deputy Secretary for Law Enforcement and Counsel—called for Agency BDOs to designate representatives to the CalEPA Emergency Response Multi-Agency Coordinating Group. His memorandum provided the initial mission statement and objectives for ERMaC. Subsequent to Governor Davis's issuance of Executive Order D-3-99, the ERMaC focused on preparation for the Y2K calendar change.

With the Westley Tire Fire disaster in 1999, Undersecretary Brian Haddix refocused the working group on traditional disaster response scenarios. This iteration of ERMaC was known as the Emergency Response Management Advisory Committee. Later, under the leadership of Assistant Secretary Don Johnson, ERMaC focused on developing administrative orders and emergency plans for the BDOs with the assistance of CalOES. After several years of effective service and realizing a role that was far more than advisory, ERMaC was renamed as the Emergency Response Management Committee, adopting its first operating charter in 2004.

Statutory Authority

The California Emergency Services Act of 2006 (CESA) enacted a major update and consolidation of the State's pre-existing emergency preparedness and response laws and executive orders. It required that all State agencies carry out activities assigned by the Governor and CalOES. State agencies must cooperate with one another, CalOES and other political subdivisions to prepare for, respond to, and mitigate the effects of regional and statewide emergencies, as declared by the Governor. The statutory duties of ERMaC members under CESA align with their routine functional responsibilities for environmental protection.

APPENDIX D: ADMINISTRATIVE ORDERS

The primary tools for defining CESA responsibilities are BDO-specific Administrative Orders. Administrative Orders refer to documents approved by CalEPA and CalOES describing the roles, responsibilities, and authorities of the respective agencies during State emergencies. Administrative Orders, prepared under the authority of the Governor's Executive Order W-9-91 and subsequent law, expand upon and consolidate emergency assignments of State agencies. CalEPA and its BDOs first developed collective Administrative Orders in 2002.

Each agency and BDO also develops an Emergency Response Plan that must be consistent with the provisions of the applicable Administrative Orders and the statutory authorities of the individual agency. CalOES reviews and approves these plans, in accordance with California Standardized Emergency Management System and the National Response Framework, to accomplish assigned emergency management tasks. Agency plans may delegate authority and assign responsibilities to divisions, bureaus, field offices, or other elements of the agency. State agencies must ensure that all personnel assigned specific responsibilities in support of this plan receive adequate training and are prepared to assume those responsibilities.

CalEPA and the BDOs chartered ERMaC in 2004 as the forum for developing and maintaining the CalEPA collective Administrative Orders and Emergency Response Plans. ERMaC's mission is to manage effectively the public health and environmental consequences of emergency events through coordinated, agency-wide preparedness, response, recovery, and mitigation efforts. ERMaC is responsible for emergency planning and training, and coordinates all CalEPA entities preparing for, responding to, and recovering from emergencies.