CalEPA
California Environmental Protection Agency

Emergency Response Management Committee (ERMaC) 2020 Accomplishments Report


UNSAFE
DO NOT ENTER OR OCCUPY
(THIS PLACARD IS NOT A DEMOLITION ORDER)
This structure has been inspected, found to be seriously damaged and is unsafe to occupy, as described below:
Destroyed
Do not enter, except as specifically authorized in writing by jurisdiction. Entry may result in death or injury.
Facility Name and Address
6761 PLEASANTS VALLEY RD
Vacaville, CA 95688
Date 8/24/2020
Time 1300 Hrs
This facility was inspected under emergency conditions for:
SOLANO COUNTY
(Jurisdiction)
Inspector ID / Agency
Jared Inouye, P.E.
Building Official 707-784-6765
Do Not Remove, Alter, or Cover this Placard until Authorized by Governing Authority
DEPARTMENT OF RESOURCE MANAGEMENT
SOLANO COUNTY
Environmental Health Division
(707) 784-6765
PHASE I
Disaster Debris Removal Status
Household Hazardous Waste REMOVED
Electronic Waste REMOVED
Asbestos Containing Materials REMOVED
IMPORTANT NOTE:
Fire ash and debris remains a health hazard.
Please review health advisories and use of personal protective equipment before entering burned area.
6761 Pleasants Valley Rd

CalEPA
California Environmental Protection Agency

California Environmental Protection Agency
California Air Resources Board
Department of Pesticide Regulations
Department of Resources, Recycling & Recovery
State Water Resources Control Board
Department of Toxic Substances Control
Office of Environmental Health Hazard Assessment

Cover: Photo of DTSC HazMat Crews conducting Phase 1 Assessments/Removals for the LNU Complex fire that occurred in August of 2020 near Vacaville, CA

Photo two: Photo of a do not enter sign from the LNU Complex Fire near Vacaville, CA.

Gavin Newsom
Governor

Jared Blumenfeld
Secretary

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Preface

On behalf of all California Environmental Protection Agency's (CalEPA) Emergency Response Management Committee (ERMaC) members and participants, I am pleased to submit the Committee's Annual Accomplishments Report for 2020.

2020 was an unprecedented year for emergency management in California. Not only did we experience severe impacts from the first global pandemic in over one hundred years, but this was compounded by a record-breaking year of wildfire activity and extreme heat waves. CalEPA and its Boards, Departments, and Offices (BDOs) had to convert many of the coordination efforts to a virtual format, while still ensuring that we provided successful emergency management to mitigate these disasters. Many staff from CalEPA and its BDOs were still required to conduct field work during the pandemic, and many were redirected to contract tracing efforts to support the Governor's efforts to combat the spread of COVID-19.

This 12th annual report highlights selected emergency planning, preparedness, response, and recovery activities of CalEPA and the six BDOs from this year. This report highlights and describes selected emergency incidents, such as hazardous chemical releases, fires, and oil spills. It also summarizes major training events, exercises, and projects in which ERMaC members participated over the year. It offers a great cross-sectional view of the important role environmental protection staff play in preparing for and responding to large-scale emergencies and disasters.

Effective emergency management relies on building working relationships among many subject matter experts with our local, state, federal, and tribal partners along with non-governmental organizations. Throughout 2020, the ERMaC team continued to build on its already admirable collaborations with many supporting agencies to mitigate an unprecedented year of environmental incidents and disasters. With climate-related disasters occurring at an increasing speed and scale, impacting all phases of emergency management, it is imperative that we continue to prepare and coordinate with all stakeholders to effectively mitigate and respond to all incidents. The incidents and events presented in this report exemplify the high degree of cooperation and interaction we have achieved in the response and recovery actions undertaken by each BDO and by CalEPA collectively. I welcome the next decade of growing proficiency and collaboration in CalEPA's Emergency Management Program!

Jason Boetzer

ERMaC Chair,
Assistant Secretary for Local Programs and Emergency Response

**Document compiled and edited by Krystle Taylor, State Water Board*

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's (CalEPA) ERMaC coordinates preparedness for responses to environmental emergencies in California under assigned statutory authorities. ERMaC is composed of appointed representatives and alternates from CalEPA and each Board, Department and Office (BDO), and is chaired by the Assistant Secretary for Local Program Coordination and Emergency Response appointed by the 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 statewide 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.

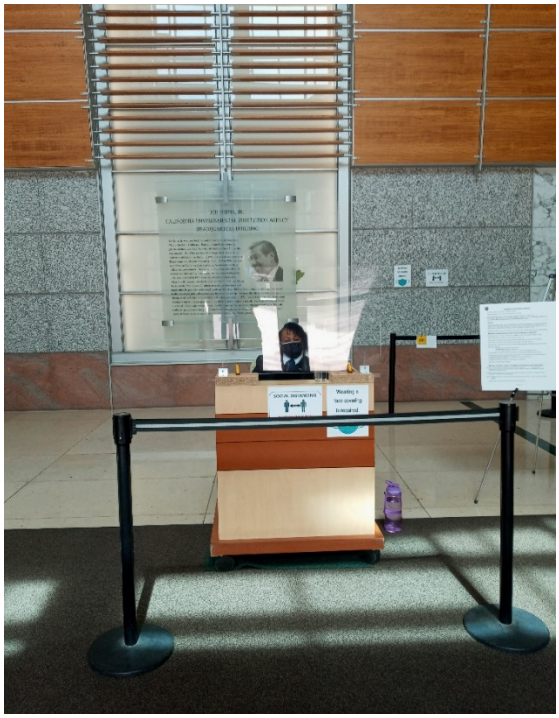
CalEPA responses conform to the National Incident Management System (NIMS) for emergency response. CalEPA operates as a state agency with specific jurisdiction under the California Standardized Emergency Management System (SEMS), coordinated by the Governor's Office of Emergency Services (Cal OES).

Incident Response & Recovery Actions

Throughout 2020, ERMaC coordinated with supporting agencies to mitigate an unprecedented year of environmental incidents and disasters. The incidents presented below highlight the response and recovery actions undertaken by CalEPA and its BDOs, as well as the collective efforts of ERMaC and its member agencies.

Global Pandemic – COVID-19

On March 19, 2020, Governor Newsom issued the first stay-at-home orders to all Californians to reduce the spread of the COVID-19 virus and protect public health. The COVID-19 pandemic had rippling effects across all sectors and required immediate action from CalEPA and its BDOs, to ensure continuity of government and protect public health.



CalEPA Headquarters security staff monitoring the public entrance under new covid-19 health & safety protocols. Photographer: Sarah Ries, State Water Board.

California Environmental Protection Agency (CalEPA)

In March of 2020, CalEPA was activated to the CalOES State Operations Center (SOC). CalEPA personnel developed and activated the CalEPA Virtual Emergency Operations Center, to support emergency operations in the remote work environment, and hosted coordination meetings three times per week to discuss impacts and needs related to the COVID-19 pandemic. CalEPA also participated in multiple task forces, such as the critical infrastructure and transportation task force, and coordinated PPE supply orders for the BDOs who had staff in the field.

Office of Environmental Health Hazards Assessment (OEHHA)

In response to COVID-19, OEHHA briefed executives twice weekly providing situational awareness on the pandemic and created a virtual Department Operations Center (DOC). OEHHA staff also conducted a literature review of current COVID-19-related scientific studies. OEHHA also participated in COVID-19-related activation and check-in calls regularly with CalEPA, the Unified Program committee, and the Interagency Refinery Task Force (IRTF).

State Water Resources Control Board & Regional Water Quality Control Boards (Collectively, California Water Boards)

At the State Water Resources Control Board (State Water Board), the Emergency Management Program (EMP) activated their virtual Emergency Operation Center (EOC) to track COVID-19

impacts to both critical water infrastructure and California Water Boards staff. Additionally, the Health & Safety Branch partnered with to develop the State Water Board's Surplus Personal Protective Equipment (PPE) Program. This program was intended to serve as a stopgap measure to supply all California Water Boards staff with essential job duties with necessary PPE when the normal procurement process did not meet those needs. Once these resources were exhausted, EMP coordinated with CalEPA to complete multiple PPE orders through the California State Operations Center (SOC) to provide California Water Boards staff the required PPE to complete their job duties.

EMP worked with the State Water Board's Environmental Laboratory Accreditation Program (ELAP) and the Division of Drinking Water (DDW) to provide updates on vaccination prioritization for eligible California Water Boards staff. EMP also attended California Department of Public Health (CDPH) Community Vaccine Advisory Committee meetings and recommended updating specifications for CDPH's water sector personnel to match August 18, 2020 guidelines from the Cybersecurity & Infrastructure Security Agency (CISA). Staff from EMP participated in the Transportation and Critical Infrastructure COVID-19 Task Force calls to maintain situational awareness of issues related to COVID-19, and potential impacts to the water sector.

During the onset of the COVID-19 pandemic, there were many environmental testing laboratories that were planning to close, as they were not aware of their status as essential services. These laboratories provide critical analysis services for drinking water and wastewater facilities, and had they closed, there would be no means for the water utilities to know if their treatment methods were effective. ELAP conducted outreach to the laboratory community to make them aware of their status as essential workers and worked diligently throughout the pandemic to support the laboratory community.

California Department of Pesticide Regulation (DPR)

In March 2020, DPR began receiving letters of concern from agricultural and non-agricultural industry groups requesting guidance on California PPE requirements for pesticide applications in light of respiratory PPE supply shortages (specifically N95 particulate filtering face-piece respirators) caused by the COVID-19 public health emergency. DPR's early response consisted of guidance on alternative PPE that meets or exceeds DPR respirator and glove requirements for pesticide handlers.

In April 2020, DPR, the California Department of Food and Agriculture (CDFA), and County Agricultural Commissioners (CACs) began collaborating on a series of PPE surveys of agricultural businesses to better identify areas of shortages and projected needs. To ensure effective protection of worker health and safety, DPR issued guidance letters in April and July to remind regulated industry and other stakeholders that existing DPR regulations for PPE still apply and would be enforced. DPR also worked with regulatory partners to identify ways to increase availability of PPE supply.

Throughout 2020, DPR, CDFA, and CACs worked closely with Cal OES to facilitate distribution of PPE supplies based on industry needs identified via the surveys that included N95 respirators, surgical masks, cloth masks, gloves, and hand-sanitizers for agriculture. Periodic PPE distribution through the CACs occurred in July, August, and September to support essential agricultural activities throughout California.

In response to COVID-19, DPR began expediting applications for registration of disinfectant products that appear on the U.S. Environmental Protection Agency's (US EPA) List N: Disinfectants for Use against SARS-CoV-2. Since April 2020, the Pesticide Registration Branch and the Microbiology Evaluation Station within the Pesticide Evaluation Branch have expedited and evaluated more than 700 applications for registration and amendment of disinfectant products on U.S. EPA's List N. This allowed for disinfectant products to be available in the marketplace sooner for use by the public as well as healthcare providers.

Additionally, the DPR School IPM and Child Care IPM Programs prioritized their outreach focus on the proper use of disinfectants. In early 2020, the Programs collaborated on outreach resources like the "Reminders for Using Disinfectants at Schools and Child Cares" factsheet and the "Step-by-Step Disinfecting for Child Care Programs" infographic. These resources were posted on DPR's website and shared by external partners, like the California Department of Education, the California Department of Public Health, and the UCSF California Childcare Health Program. As the Programs received more disinfectant-related questions throughout the year, staff created the "Disinfectants and Sanitizers in Schools and Child Care Programs" FAQs document, which answered more technical questions asked by stakeholders.

Furthermore, the Programs transitioned all outreach events to virtual platforms, so staff could maintain connections with stakeholders. Virtual events held in 2020 included: two School IPM Workshops (attended by 160 people), three Child Care Training-of-Trainers Workshops (attended by 120 people), and DPR's first Brown Bag Lunch seminar (attended by over 230 people, including 52 who received DPR continuing credit). The Programs kept their stakeholders informed of events and new resources by sending monthly messages through the School IPM e-list (2,900 subscribers) and the Child Care IPM e-list (1,900 subscribers). The DPR School IPM and Child Care IPM Programs also assisted the DPR Communications Office by creating posts and videos that were distributed through DPR's social media accounts.

Department of Toxic Substances Control (DTSC) and Department of Resources, Recycling, and Recovery (CalRecycle)

DTSC & CalRecycle updated their Health & Safety plans, and Continuity of Operations for field and enforcement work to ensure proper COVID-19 protections for staff conducting this work. CalRecycle also assisted with identifying essential workers for waste and recycling centers, ensuring these critical operations could continue during the shelter-in-place restrictions.

Cuyama River Spill

On March 21, 2020, a tanker truck collision on Highway 166 resulted in an estimated that 4,500 gallons of crude oil reached the Cuyama River, a tributary of the Santa Maria River, and surrounding area. A rapid response helped contain the oil upstream from Twitchell Dam and Reservoir, and contractors constructed underflow dams and a gravel access road so that vacuum trucks could remove the crude oil at the dam sites. Oiled Wildlife Care Network crews collected several impacted animals and some of them did not survive. During the initial response, California Department of Fish and Wildlife (CDFW) Office of Spill Prevention and Response (OSPR) notified the Office of Environmental Health Hazard Assessment (OEHHA) of the spill. OEHHA did not recommend a fisheries closure.

Aerial view of emergency cleanup activites, including temporary dams provided by Central Coast Regional Board staff. Photographer unknown.

On April 3, 2020, members of the Unified Command leading the response walked through the entire site and agreed that all cleanup endpoints in the Incident Action Plan have been met. All the underflow dams once used to contain the oil had been removed and the shoreline restored. The California Water Boards coordinated closely with OSPR on the response and took over leadership of the cleanup after the transition from response to recovery.

After the emergency response phase was concluded, staff from the Central Coast Regional Water Quality Control Board provided regulatory oversight of stream restoration and additional shallow soil and surface water assessment activities. Central Coast Regional Board staff collaborated closely with Santa Barbara County Environmental Health Services (SBCEHS), U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS), U.S. EPA, CDFW OSPR and local stakeholders throughout the process.

Harmful Algal Blooms (HABs)

The California Water Boards worked with state and local entities to identify and respond to reported HABs throughout the state. HABs contain cyanobacteria that can produce cyanotoxins, posing risk to human and animal health. HABs can impair beneficial uses of water pertaining to fishing, drinking, aquatic life, and water-contact recreational activities (e.g., boating, swimming).

Blooms were found from high elevation lakes in the Sierra Nevada Mountains down to coastal estuaries where the cyanotoxins could be exported into the marine environment.

The California Water Boards lead a multi-agency incident response task force for HABs and post voluntarily reported potentially HAB-related incidents on the Online Bloom Reporting System. The volume of submitted reports continued to increase from 2016-2020 (Table 1). The California Water Boards support state and local entities during response investigations by providing appropriate recommendations for public health advisories. Incident response results and public health advisories are displayed on a map and data dashboard at the CA HABs Portal.

Table 1. Voluntary bloom reports submitted (2016-2020)

Number of voluntary reports submitted to the online bloom reporting too from 2016 - 2020					
	2016	**2017**	**2018**	**2019**	**2020**
Total reports	91	181	190	241	370

OEHHA, in consultation with the California Department of Public Health (CDPH), recommends closures, delay of openings, and re-openings of fisheries based on high levels of toxic substances, including marine biotoxins such as domoic acid, under Fish and Game Code Section 5523 (see OEHHA's page on Domoic Acid). Recommendations to close or delay the opening of fisheries are made when levels of domoic acid meet or exceed the federal action level for this toxin. As shown in Table 2, two closures are ongoing since 2016. No actions were recommended in 2020 for spiny lobster, Dungeness, or Rock crabs.

Table 2. OEHHA Recommendations for Domoic Acid-related Delays, Closures, and Openings.

Date	Species	Action	Location
Ongoing	Rock Crab	Close Commercial Fishery (ongoing since November 2016)	1) the Mendocino/Humboldt County line (40° 00.00' N. Lat.) to 40° 30.00' N. Lat. (near Cape Mendocino, Humboldt County) and 2) the north jetty of the Humboldt Bay entrance (40° 46.15' N. Lat.) to the California/Oregon border (42° 00.00' N. Lat.)
Ongoing	Razor Clam	Close Recreational Fishery (ongoing since April 2016)	Del Norte and Humboldt County Beaches

In 2020, the Interagency HAB-related Illness Workgroup began investigating and tracking marine HAB-related illnesses in humans and animals throughout California. The workgroup includes staff from OEHHA, California Water Boards, CDPH, and CDFW. The workgroup investigates and tracks reported stranded marine animals identified with domoic acid intoxication, as well as fish and invertebrate mortality associated with blooms of *Lingulodinium polyedra* and *Akashiwo*.

Freshwater or estuarine HAB-related illnesses in California are also investigated and tracked by this workgroup. CDPH reported a total of 71 HAB-related cases in California between 2018 and 2020 to the Center for Disease Control's One Health Harmful Algal Bloom System (OHHABS). A summary of HAB-related illness by year is provided in Figure 1 below. Figure 2 displays the counties in which freshwater HAB-related illnesses in California (reported to OHHABS) have occurred for 2020. Illnesses are grouped by human only, human and animal (domestic or wild), or animal only.

Figure 1. Freshwater illnesses reported as HAB-related to OHHABS from 2018 – 2020. Numbers represent individuals (except when submitted as group, such as fish).

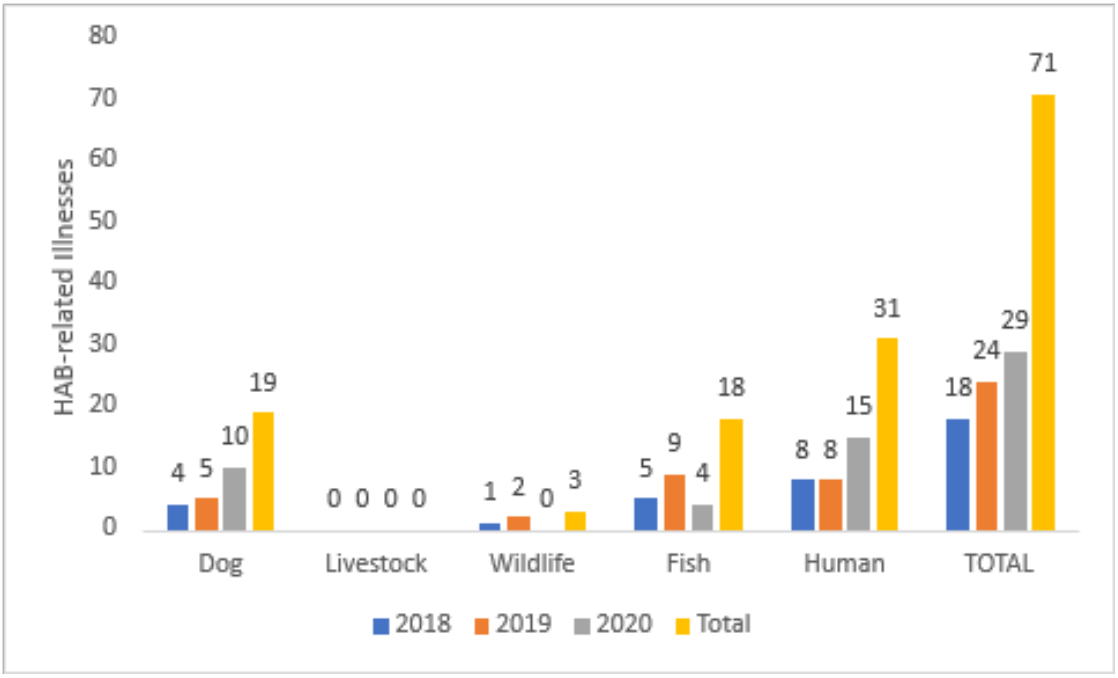
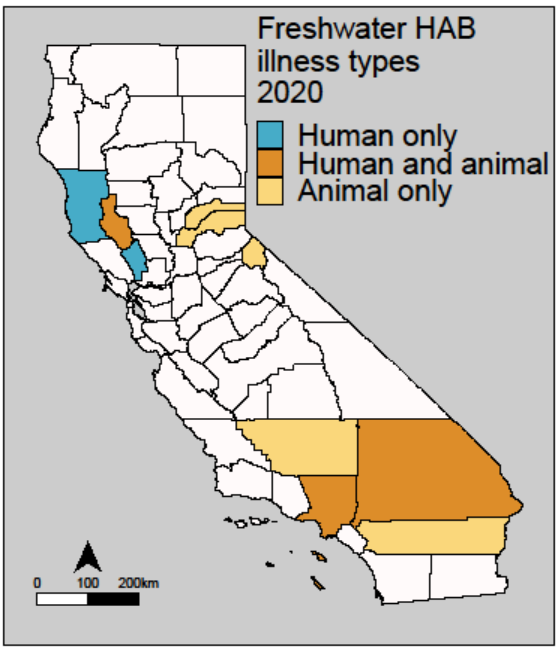


Figure 2. Counties in which freshwater HAB-related illnesses were reported for calendar year 2020.



2020 Fire Response & Recovery Actions

2020 was a record setting year for wildfire activity in California; by the end of the year over four million acres were burned, making 2020 the largest wildfire season in California's modern history. Five of the top twenty largest fires in California occurred in 2020, with the August Complex fire described as the first "gigafire," burning over one million acres across six counties. CalEPA and its BDOs provided response and recovery support for over 30 of these fires, and some of the work and efforts by CalEPA and its BDOs is highlighted below.

CalEPA Response & Recovery Activities

CalEPA was activated at the SOC for response to the 2020 wildfires. CalEPA staff coordinated with its BDOs, as well as with ERMaC and US EPA members. The Virtual EOC setup for COVID-19 was expanded to include coordination for response to the catastrophic wildfires across the state. Furthermore, staff from CalEPA participated in the CalOES led Debris Task Force meetings and the Debris Flow/Watershed Task Force meetings. Staff also coordinated with CDFA on Animal Carcass disposal guidance and updated the Secretary & Undersecretary on the status of emergency activities within CalEPA and its BDOs.

Environmental Waiver and Permitting Coordination for Wildfire Recovery

For the first time in CalRecycle's history, it was mission tasked to remove a significant quantity of Hazard Trees resulting from the Camp Fire and required consideration of the Forest Practice Rules for timber harvesting, in conjunction with the Federal National Environmental Policy Act environmental and historic preservation protections. CalRecycle, in coordination with Cal OES, the California Water Boards, and CNRA Staff developed Environmental Suspension documents for both CalEPA and CNRA Secretaries to approve and sign The Environmental Protection Plan (EPP), which outlines Best Management Practices, is a supporting document that contractors conducting the work were required to adhere to. Close coordination and cooperation with all involved agencies helped expedite the preparation and completion of the EPP and Secretarial Suspensions for protecting all environmental and historic resources, which were included as critical attachments to the environmental suspensions.

This process was repeated for the 2020 wildfires that occurred across the state, and was expanded to be a statewide suspension. These documents were prepared to cover structural debris removal and hazard tree removal operations slated for some 26 California Counties that experienced devastating wildfires during the late summer of this year. This effort required very close coordination with Cal OES Environmental Leads, Executive management at CAL FIRE, the California Water Boards, and CalRecycle Emergency Debris Removal Operations (EDRO) staff. This effort was conducted in a very condensed timeline, due to the very close coordination and communication with all involved agencies. The effort was conducted with a view at more streamlined environmental waiver preparation for future post-disaster debris and hazard tree removal programs in mind. Close coordination and cooperation with all involved agencies helped

expedite the preparation and completion of the Environmental Protection Plan (EPP) and Environmental Compliance Plan (ECP) for protecting all environmental and historic resources, which were included as critical attachments to the environmental waivers.

Additionally, CARB provided emergency fuel, back-up generation, air curtain, out of state trucking and relocation of fire suppression equipment, waivers, and guidance to entities supporting wildfire emergency response and recovery activities.

CARB Incident Air Monitoring Program

CARB's Incident Air Monitoring Section specializes in setting up state-of-the art portable air monitors to keep track of the plumes of wildfire smoke and provide crucial data on levels of fine particle pollution to local air districts and public health departments. The monitors provide accurate and dependable information about air quality to those who live downwind of fires so they can make informed decisions about how to protect themselves when there is smoke in the air. The section's first call to respond came in July, with their last deployment ending in the middle of November. During that timeframe the team deployed 93 air monitors to measure smoke from 21 large fires, often while managing multiple responses simultaneously.

CARB staff deploying air monitors. Photographer unknown.

OEHHA Wildfire Recovery

OEHHA worked with CalEPA and DTSC in a multiagency workgroup to hold regional meetings for wildfire cleanup and recovery to assist individual counties with questions regarding cleanup and recovery from wildfires. OEHHA ensured counties were referencing updated cleanup values and provided links to resources.

CalRecycle Response & Recovery Activities

CalRecycle was mission tasked by Cal OES to implement the state's consolidated debris removal program to remove structural debris and hazard tree from 5,991 private property parcels following the devastating and unprecedented 2020 Statewide Wildland Fire Siege which ravaged the state from August thru October 2020. Initial damage estimates indicated nearly 700,000 trees had been destroyed or damaged and would require assessments to determine the need for removal. To effectively approach this expansive and complex project, the operation was divided into four branches (Northern, Inland, Bay and Southern) with field management of assessment and monitoring consultants and structural debris and hazard tree removal contractors' contracts awarded to each.

Operations effectively began November 2, 2020, with an initial end of mission target identified as May 1, 2021. However, operational delays resulting from inclement weather and the addition of “special inclusion parcels (public/commercial properties) and atypical parcels (requiring specialized equipment) approved by the Federal Emergency Management Agency for public assistance reimbursement pushed the target end of mission twice. The first extension was statewide to August 1, 2021, and the second extension was based on branch specific needs: North Branch operations extended to December 31, 2021, Bay and Inland Branch operations were extended to October 1, 2021, and South Branch Operations will conclude by mid-November 2021.

On October 7, 2021, crews removed the last load of debris from 3,381 properties enrolled in the state managed debris removal program. Over 80 percent of the 4,486 properties participating in both the state-managed debris and hazard tree removal operations completed all the safety steps necessary to begin the rebuilding process. Crews removed over 1.25 million tons—or 2.5 billion pounds—of ash, debris, metal, concrete, and contaminated soil from participating properties. The total debris removed from the 2020 wildfires weighs about as much as 42,000 fire engines.

The estimated cost for this project is $2 Billion dollars.

CalRecycle also provided structural debris removal technical support to Imperial County and the City of Niland after the Wildfire destroyed approximately 40 residences in June 2020. CalRecycle provided support for determining the appropriate landfill for ash and debris disposal and locations for metals and concrete recycling. CalRecycle also provided support in the development of asbestos assessment and disposal support as well as soil cleanup goals for each property.

DTSC Response and Recovery Activities

The Department of Toxic Substances Control (DTSC) Emergency Response was Mission Tasked by Cal OES to conduct Phase 1 Assessments/Removals of Household Hazardous Debris in 18 counties across the state throughout 2020. For the August Complex Fire, DTSC Emergency Response began Phase 1 operations in early November 2020 and assessed 255 properties in four weeks. In Stanislaus County, staff completed Phase 1 operations in one week in Stanislaus County assessing 10 residential properties.

DTSC Hazmat Crews conducting Phase 1 Assessments and removals for the North Complex Fires in Butte and Plumas Counties. Photographer unknown.

In Lake, Napa, Solano, Sonoma, and Yolo Counties, Phase 1 Operations began in early September and DTSC completed the assessment of 955 properties in four weeks. Furthermore, In Butte and Plumas Counties, DTSC Emergency Response began operations in early October and assessed over 600 properties before demobilizing in early November. And in Tulare County, staff began operations in mid-November and assessed 200+ properties before completing the operation in mid-December. In Sonoma and Napa Counties, staff completed the work in four weeks and assessed 750+ properties.

In Shasta County, DTSC Emergency Response conducted Phase 1 operations on residential and commercial properties impacted by the Zogg Fire. The operation began in mid-October and staff assessed 150+ properties in three weeks. Additionally, in Siskiyou County DTSC Emergency Response began the operation in mid-November and assessed 200+ properties in four weeks. In Los Angeles County, DTSC Emergency Response began the operation in mid-November and assessed 140+ properties in four weeks. Staff also assessed 40 US Forest Service cabins that were only accessible by foot. In Lassen County and Nevada Counties, staff began operations in November and October respectively, and assessed 15 properties in one week, in Nevada County, and assessed 12 properties in one week in Lassen County.

California Water Boards Response and Recovery Activities

Staff from the State Water Board's EMP developed a new suite of GIS tools and resources to provide situational awareness regarding wildfire impacts. EMP also collaborated with State Water Board's DDW and Office of Information Management & Analysis (OIMA) on the use and development of GIS resources for emergency management. These resources provided near real time geographic context to where a wildfire was occurring, and whether critical water infrastructure and/or surface water or groundwater may be impacted. They also provided valuable information for recovery efforts.

CZU Fire smoke plume from waddell Bluffs provided by Water Boards Region 3 Staff. Photographer Unkown.

For each fire, EMP staff conducted regular GIS analysis to assess these impacts and distributed the information to the appropriate Waters Boards staff in DDW, ELAP, and the Regional Boards. These staff reached out to hundreds of potentially impacted, or impacted water utilities and laboratories to assess their operations status and provide support if needed. EMP shared information on impacts with CalEPA to send to the SOC if needed.

Additionally, staff across the Regional Boards provided critical recovery assistance to their jurisdictional areas. In particular, Staff from the North Coast Regional Water Quality Control Board (North Coast Regional Board), the San Francisco Bay Regional Water Quality Control Board (San Francisco Bay Regional Board), the Central Coast Regional Water Quality Control Board (Central Coast Regional Board), and the Central Valley Regional Water Quality Control Board (Central Valley Regional Board) provided response and recovery support due to impacts from the August Complex Fire, the LNU Complex Fire, Glass Fire, Slater Fire, CZU Fire, North Complex Fire, and the Slater Fire.

Staff from the North Coast Regional Board conducted site investigations and provided technical recommendations to National Forest Burned Area Emergency Response teams. Besides preparing a summary of emergency recommendations for immediate implementation, staff continue to work with the National Forests to develop long term restoration plans. In September of 2020, North Coast Regional Water Quality Control Board staff responded to the Slater Fire in Siskiyou County which burned through the Noranda Grey Eagle Mine Wastewater Treatment

Facility. Some piping and infrastructure related to the treatment plant was destroyed, resulting in a release of untreated drain water into Luther Gulch. When safe to do so, the infrastructure was repaired, and the plant was brought back online.

At the Central Coast Regional Board, staff facilitated wildfire response and recovery efforts by engaging with stakeholders and deepening partnerships with multiple agencies directly involved in emergency response and post-fire recovery activities. Central Coast Regional Board staff leveraged multiple internal programs to expedite emergency and post-fire activities and reorganized and expedited various permitting and water quality certification requirements to expedite recovery activities.

A tank used to store drinking water that was destroyed during the North Complex fires. Photo provided by Reese Crenshaw, State Water Board.

San Francisco Bay Regional Board staff assisted wildfire response and recovery activities by engaging with the local Resource Conservation District and local landowners regarding ground stabilization and expedited permitting for watershed recovery projects. Additionally, wineries and facilities regulated under the San Francisco Bay Regional Board's Industrial Stormwater General Permit were damaged, and staff advised local agencies and environmental non-profits on water quality monitoring, stormwater permit compliance, and funding opportunities. Furthermore, wildfires threatened five drinking water reservoirs in their jurisdiction, and staff worked with local water management agencies and public landowners on drinking water sampling and erosion control plans. Staff also advised the National Park Service on recovery actions to protect against erosion and limit invasive plant species within vegetative regrowth within the Point Reyes National Seashore and Bear Creek Watershed.

For the North Complex Fire, staff from the State Water Board's DDW met regularly with impacted water systems to answer questions and provide guidance on recovery operations such as providing technical assistance for leak detection and coordinating Volatile Organic Compound sampling. Additionally, staff from the Central Valley Regional Water Quality Control Board conducted a post-fire water quality monitoring project in coordination with the California Department of Water Resources (DWR) and CDFW to support the local communities impacted by the fire. They found that impacts to surface waters were minimal, and the ability for water

systems to provide clean drinking water was not impacted. This water quality monitoring project was part of a larger multi-agency North Complex Watershed Working Group (Working Group) comprised of local, state, and federal agencies. The Working Group was originally led by Cal OES and was later led by the State Water Board's EMP. It discussed watershed health and water quality status in the post-fire environment and conducted public outreach through social media events and news releases. The Working Group continues to meet quarterly to discuss watershed health and prepare for upcoming wildfire seasons.

Staff from the Central Valley Regional Board providing Watershed Assessment Training in the LNU Complex, October 2020.

On October 22, 2020, the State Water Board's EMP initiated discussions with CalRecycle concerning BMP installation and recovery tracking issues related to debris removal operations resulting from the ongoing wildfires. This meeting quickly grew into a larger workgroup consisting of multiple staff from the Regional Boards, State Water Board, CalRecycle, and Cal OES, with the goal to exchange information related to BMP installation and recovery efforts. Presentations were given to the Watershed Debris Task Force facilitated by Cal OES, allowing information to be disseminated to many County, State, and Federal agencies. This also allowed for more efficient cooperation between agencies and culminated in a document that was distributed to all the above referenced groups that could subsequently be given to any stakeholder (both private and governmental) that needed assistance with BMP installation issues. This workgroup continues to meet on a limited bases in preparation for upcoming fire seasons.

Ongoing Recovery from pre-2020 Fires

CalEPA and its BDOs are also providing ongoing recovery support for certain fires that occurred prior to the 2020 wildfires.

CalRecycle

In 2018, the Camp Fire left 85 people dead and over 13,000 homes destroyed or severely damaged in the idyllic Town of Paradise and in portions of unincorporated Butte County. Following the completion of structural debris removal in November 2019, Cal OES tasked CalRecycle with managing the safe removal of fire-damaged trees in danger of falling on public rights of way, public facilities, or private roads that serve as critical access for services to residents.

On November 13, 2020, The State Hazard Tree Removal Program officially launched with the mobilization of contracted tree felling crews and field management consultants to address the estimated 1.2 million damaged or destroyed trees and nearly 300,000 damaged trees threatening the public at large on roadway networks and near public structures. Through continued assessments, the current eligible tree count at this time of this report is 100,618 with over 73,000 hazard trees felled to date. The target end of mission for this project is July 1, 2021, at an estimated cost of $506 million dollars.

California Water Boards

Staff from the Central Valley Regional Water Quality Control Board continue to conduct inspections of wildfire recovery work for the 2018 Camp Fire to ensure water quality BMPs are implemented and used correctly, and provide technical advice to agencies and contractors conducting work in fire impacted areas.

Public Safety Power Shutoff (PSPS) Events

ERMaC responded to multiple PSPS events in 2020. Power shutoffs are an operational practice where energy companies turn off power to prevent the start and spread of wildfires. Local energy companies make the decision to turn off power by monitoring local fire danger conditions and considering weather and environmental factors. A power shutoff could mean no electricity for a long duration and wide expanse. Once high-threat conditions pass, energy companies will re-energize affected lines after inspection to ensure safety.

In response to 2020 PSPS events, CalEPA was active within the virtual SOC while coordinating with BDO ERMaC members and Certified Unified Program Agencies (CUPA) to ensure there were control measures in place to mitigate off-site impacts from hazardous material sites and facilities (including refineries). CalEPA coordinated with CARB to develop emergency waivers for the use of portable generators during the PSPS events.

Staff from the State Water Board's EMP developed GIS tools and resources to identify critical infrastructure vulnerabilities, and staff from DDW Field Offices, ELAP, and the Regional Boards proactively informed Public Water Systems, Wastewater Systems, and Environmental Testing Laboratories in potentially affected and impacted areas, and monitored the situation and reported situation status up the chain of command and to SOC as requested.

CARB is developing backup measurement systems to collect data at air monitoring stations during PSPS events. These platforms are being designed to operate using an independent power source and communication system, will operate separately from the regulatory the air monitoring network, to generate and provide data when air monitoring stations are affected by PSPS events.

Other Incidents

United States Navy Ship Fire

On July 12, 2020, while docked at the San Diego Naval Station, a fire broke out aboard the USS Bonhomme Richard and burned for 5 days. During the first few days of the fire, the California Air Resources Board (CARB) arranged coordination calls with the San Diego County Air Pollution Control District's (SDAPCD) Monitoring and Technical Service Division and CalEPA to discuss the air districts current and planned monitoring actions and offered state level support.

After the ship fire was extinguished, CARB in collaboration with San Diego County and other state and federal agencies, convened a workgroup to review actions performed during the vessel fire and prepare a report to summarize the air district's response process, identify strengths and weaknesses, and provide recommendations for improvement to SDAPCD's incident air monitoring response program. The report was released, and a public meeting was held to provide information on the air monitoring analysis results.

OEHHA was contacted directly by the SDAPCD to assist in comparing the air monitoring results to OEHHA's Reference Exposure Levels (RELS). OEHHA also coordinated briefings on OEHHA's involvement with CalEPA, US EPA, and the US Navy. OEHHA participated in the after-action effort with CARB and provided recommendations and a timeline of response events for the report.

Iron Horse Trail Incident

The US EPA reached out to OEHHA regarding community air monitoring during the Iron Horse Trail Pipeline Incident. OEHHA, US EPA, and Contra Costa County staff held a virtual conference regarding the use of OEHHA's Reference Exposure Levels (RELs) for community air monitoring. Questions posed by attendees were addressed, and there are no further requests for OEHHA's input at this time.

Oil Spill Response and Seafood Safety (January-December 2020)

OEHHA and CDFW OSPR coordinated to assess seafood safety following marine and freshwater 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 aquatic life impacted by the spill. Fisheries closed for more than 48 hours require expedited testing of seafood and a risk assessment conducted by OEHHA before the fishery can be re-opened.

In 2020, OEHHA was notified of 20 oil spills or potential oil spills. OEHHA worked with CDFW to compile and evaluate information on the spills. For 13 spills, OEHHA found that there was not likely to be a public health threat. Thus, CDFW did not close fisheries in those cases. No action was required for the remaining seven spills reported to OEHHA. A "no action" response may occur in cases where the spilled product was sufficiently contained, or the spill took place in areas where fishing or aquaculture does not take place.

OEHHA also participated with OSPR in two virtual oil spill drills and a fisheries closure was recommended in both scenarios.

Projects, Presentations, & Exercises

Presentations and Trainings given by ERMaC Members

- February 6, 2020. Karen Riveles, OEHHA. California Wildfires: From Natural Disaster to Natural Hazards: Geospatial Tools to Measure Social Vulnerability. CUPA Conference, Burlingame, CA.
- August 4, 2020. Charles Pearson, CARB. California's Coordinated Wildfire Smoke Monitoring Response, TSI Incorporated Wildfire Educational Series.
- January – February 2020. Staff, CARB. Prescribed Fire Smoke Management Training, Ukiah and Diamond Bar, CA.
- November 19, 2020. Charles Pearson, CARB, California's Coordinated Wildfire Smoke Monitoring Response/Environmental Issues in the age of COVID-19, Air and Waste Management Association Annual Conference.
- Tuesday July 14, 2020. Staff, CARB, Interagency Fire Season Preparedness Meeting.

Presentations and Trainings given at ERMaC Meetings

- June 17, 2020. Russ Bennett, CARB. GovDelivery cloud-based digital communications platform.

Exercises

- March 12, 2020. Wes Smith, OEHHA. CalTriVEX Tabletop Exercise.
- September 10, 2020. Wes Smith, OEHHA. ExxonMobil Las Flores (Heritage Platform) Tabletop Exercise.

Other Projects and Reports

- June – December 2020. Charles Pearson, CARB and Karen Riveles, OEHHA. US EPA's Children's Health and Wildfire Guidance Workgroups. School Indoor Air Quality During Wildfire Smoke Events and Using Sir Sensors to Understand Air Quality During Wildfire Smoke Events and Guidance on Children's Physical Activity During Wildfire Smoke Events.
- April – December 2020. Karen Riveles, OEHHA. Worked as a part of the Wildfire Smoke Guide Team with US EPA on the development of guidance for Wildfire Smoke and COVID-19.

Appendix A: Acronym Guide

Acronym	Definition
AB	Assembly Bill
BDO(s)	Board(s), Department(s), and Office(s)
BMP(s)	Best Management Practice(s)
California Water Boards	State Water Resources Control Board and Regional Water Quality Control Boards
CAISO	California Independent System Operator
CalEPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
Cal OES	California Governor's Office of Emergency Services
CalRecycle	Department of Resources, Recycling & Recovery
CARB	California Air Resources Board
CACs	County Agriculture Commissioners
CDFA	California Department of Food and Agriculture
CDFW	California Department of Fish and Wildlife
CDPH	California Department of Public Health
CESA	California Emergency Services Act of 2006
CISA	Cybersecurity & Infrastructure Security Agency
CNRA	California Natural Resources Agency
CUPA	Certified Unified Program Agency
DDW	Division of Drinking Water at the State Water Resources Control Board
DOC	Department Operations Center
DPR	Department of Pesticide Regulation
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
ECP	Environmental Compliance Plan
EDRO	Emergency Debris Removal Office at the Department of Resources, Recycling, and Recovery
ELAP	Environmental Laboratory Accreditation Program at the State Water Resources Control Board
EMP	Emergency Management Program at the State Water Resources Control Board
EOC	Emergency Operations Center
EPP	Environmental Protection Plan
ERMaC	Emergency Response Management Committee
ESF-10	California Hazardous Materials and Oil Emergency Support Function Annex
GIS	Geographic Information Systems
HABs	Harmful Algal Blooms
HazMat	Hazardous Materials
IAMS	Incident Air Monitoring Section
IRTF	Interagency Refinery Task Force
LEA	Local Enforcement Agencies

NEPA	National Environmental Policy Act
NIMS	National Incident Management System
OEHHA	Office of Environmental Health Hazard Assessment
OHHABS	One Health Harmful Algal Blooms System
OIMA	Office of Information Management and Analysis at the State Water Resources Control Board
OSPR	Office of Spill Prevention and Response at the California Department of Fish and Wildlife
PPE	Personal Protective Equipment
PSPS	Public Safety Power Shutoff
RAPID	Railroad Accident Prevention and Immediate Deployment
Regional Board(s)	Regional Water Quality Control Board(s)
RELS	Reference Exposure Levels
SBCEHS	Santa Barbara County Environmental Health Services
SCAQMD	South Coast Air Quality Management District
SDAPCD	San Diego Air Pollution Control District
SEMS	Standardized Emergency Management System
SEP	State Emergency Plan
SOC	State Operations Center
State Water Board	State Water Resources Control Board
USACE	United States Army Corps of Engineers
US DOT	United States Department of Transportation
USFWS	United States Fish & Wildlife Service
US EPA	United States Environmental Protection Agency

Appendix B: ERMaC Members & Supporting Agencies

Member Agencies

California Environmental Protection Agency (CalEPA)

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

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

CalEPA provides a chairperson to ERMaC, and is 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.

California Air Resources Board (CARB)

CARB's Incident Air Monitoring Section (IAMS) focuses on protecting downwind communities in the event of unanticipated airborne releases affecting air quality. IAMS mission is to provide air monitoring support to help protect the public from acute exposure to hazards and focuses its efforts on wildfire smoke monitoring. Since the passage of Assembly Bill 617, which is the Nonvehicular air pollution: criteria air pollutants and toxic air contaminants (2017-2018) bill, CARB has focused its efforts on creating more holistic community air monitoring capabilities. CARB is orienting its program to include air monitoring for other non-routine air emissions and incidents.

California 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 includes 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 several federal, state and local agencies in carrying out these response activities. DTSC Emergency Response also responds to requests from local agencies seeking assistance with removing hazardous waste associated with natural or human-caused disasters such as floods, fires, and earthquakes. The Emergency Response Program responds to calls requesting DTSC's assistance for removals from illegal/clandestine drug labs and other hazardous materials (HazMat) emergencies throughout the state. 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 by 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 materials release. OEHHA also assesses seafood safety following marine and inland oil spills.

State Water Resources Control Board (State Water Board)

The State and Regional Water Boards in California are dedicated to a single vision: abundant clean water for human uses and environmental protection to sustain California's future. The State Water Resources Control Board develops policy and regulations for water quality protection, regulates drinking water, administers California's water rights system, provides financial assistance, and supports Regional Water Quality Control Board's efforts. The Regional Boards implement these policies and regulations, issue permits, evaluate compliance, and conduct enforcement.

Supporting Agencies

California Governor's Office of Emergency Services (Cal OES)

Cal OES 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 diary, 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 Center for Healthy Communities Environmental & Occupational Emergency Preparedness Team and the CDPH Center for Environmental Health Environmental Management Branch serve as liaisons between CalEPA and CDPH by providing insight into public health perspectives relative to oil and/or hazardous materials incidents.

US Department of Transportation (US DOT)

The Regional Emergency Transportation Representative (ESF1) in Northern California for the US DOT acts as a liaison to the ERMaC regarding emergencies that impact transportation systems and infrastructure. The representative works on coordination, support, prevention, preparedness, response, recovery, and mitigation activities among transportation stakeholders.

US Environmental Protection Agency (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 & 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 the site of a tragic train derailment that spilled a toxic chemical 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. After 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 Cal OES. After several years of effective service and realizing a role that was far more than advisory, ERMaC was renamed 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 emergency preparedness and response laws and executive orders. It required that all state agencies carry out activities assigned by the Governor and Cal OES. State agencies must cooperate with one another, Cal OES and other government agencies 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 Cal OES that describe 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. Cal OES 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 effectively manage 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.

The CalEPA and BDO Administrative Orders were updated in 2014. Periodically, Cal OES requires the orders to be updated and recertified, notably when there is a significant change to the state's emergency plan, emergency policy or law.