

Emergency Response: Overview



Presented by Greg Vlasek

ARB/OER Mission



OER Program

- Fires, chemical spills, industrial disruptions, natural disasters that exceed local capabilities.
- Community based (non-hot zone) air monitoring and surveillance.
- Air quality assessment (modeling/meteorology).
- Respond to local government requests, with 'lean forward' posture.
- Coordinate interagency response with other air quality and public health partners.

Needs During an Emergency

- Chemical identification
- Plume predictions
- Air monitoring and sampling results
- PPE recommendations
- Protective health actions
- Coordinated messaging for PIO/JIC
- Re-entry and clearance issues

OER Monitoring Capability

- AreaRAE/ppbRAE PID
- Miran Sapphire IR spectrometer
- Portable Met
- Colorimetric Tubes
- E-BAM/Microdust
- Laboratories: Organics, Inorganics
- Fixed ARB, District, NPS, and USFS air monitor network



Layered Monitoring Approach



Portable Samplers



Mobile Samplers



Network Monitors

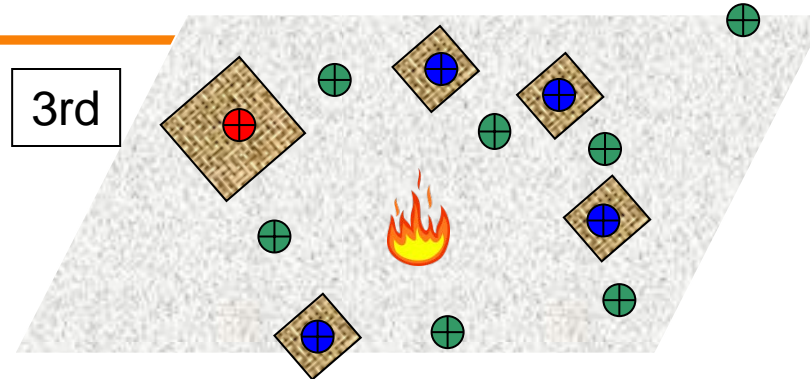


Field IR
Detectors



Summa Canisters

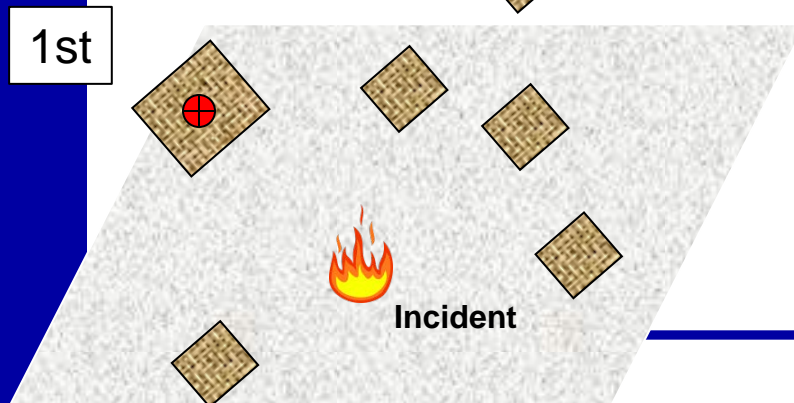
Layered Deployment Strategy



Mobile Sites
Complaints
Micro situation
Follow up to action
Reentry



Portable Sites
Population exposure
Short terms changes and trends

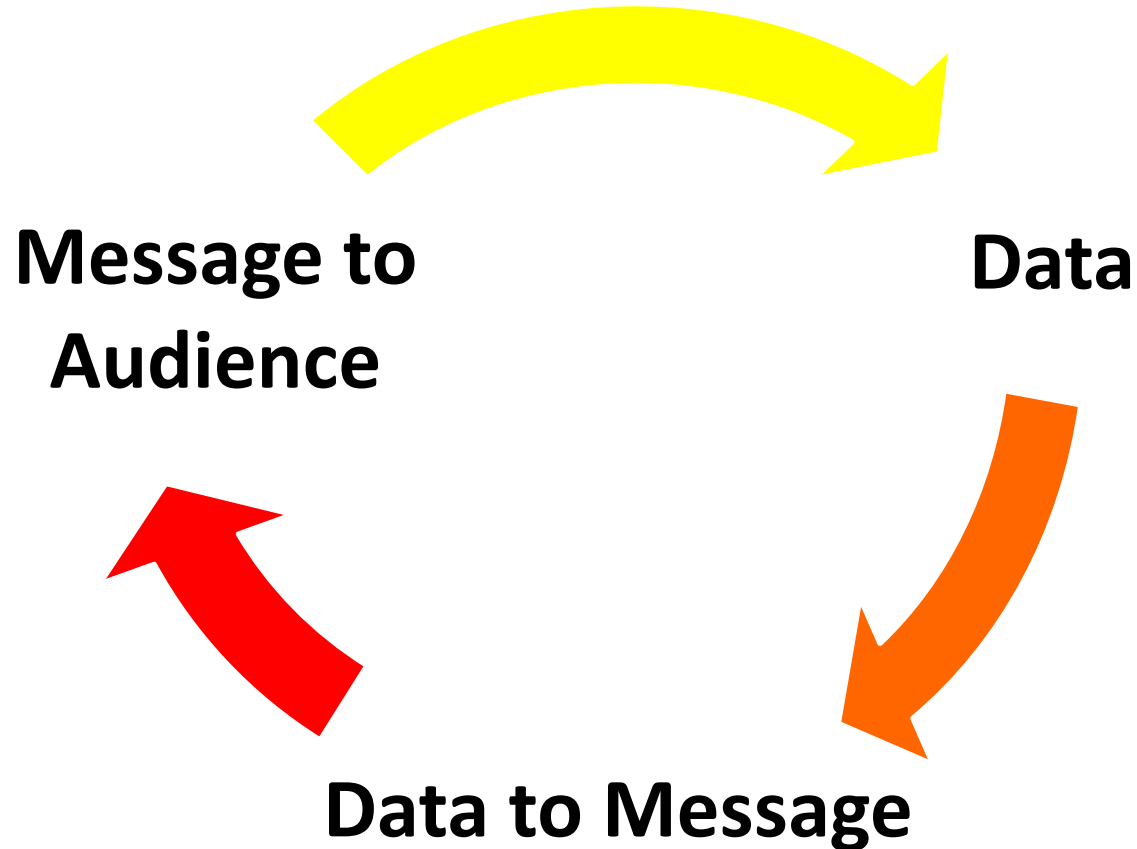


Network Sites
Compliance
Trends
General exposure studies

Interagency Coordination



Air Response Model



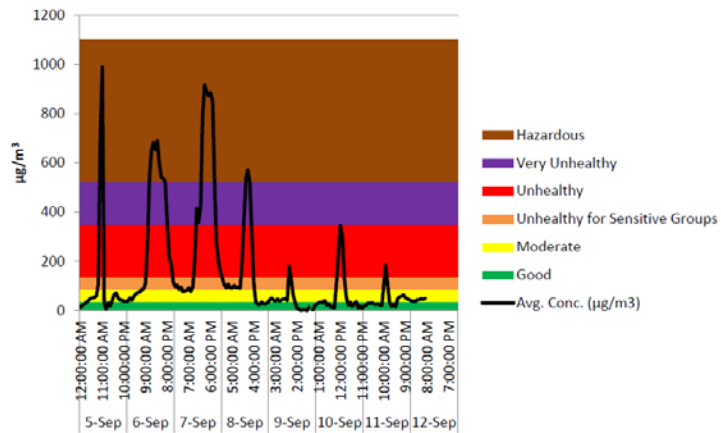
Example Responses

- San Bruno Natural Gas Explosion – Sept 2010
- Escondido “Explosives” House – December 2010
- Fukushima Radiation Monitoring – March 2011
- Clearlake Geothermal Venting – Spring 2011
- Chips/Ponderosa Wildfires – Summer 2012
- Rim Fire – Summer 2013
- Redding “Explosives” House – Feb 2014
- King Fire – Summer 2014

Wildfire Air Monitoring



Klamath Fires E-BAM #29 Seiad Valley
1-3 Hour $PM_{2.5}$ AQI (09/05/14 - 09/12/14)



Portable air monitor deployments during wildfires



San Bruno Pipeline Explosion



Recovery phase air
monitoring for
particulate matter
and asbestos





King Fire 2014

Single largest OER deployment

- Ten E-BAMs
- Five weeks



Cache and Loan Programs

PM2.5 Monitor
Cache Program
Redding
Mariposa
Santa Barbara

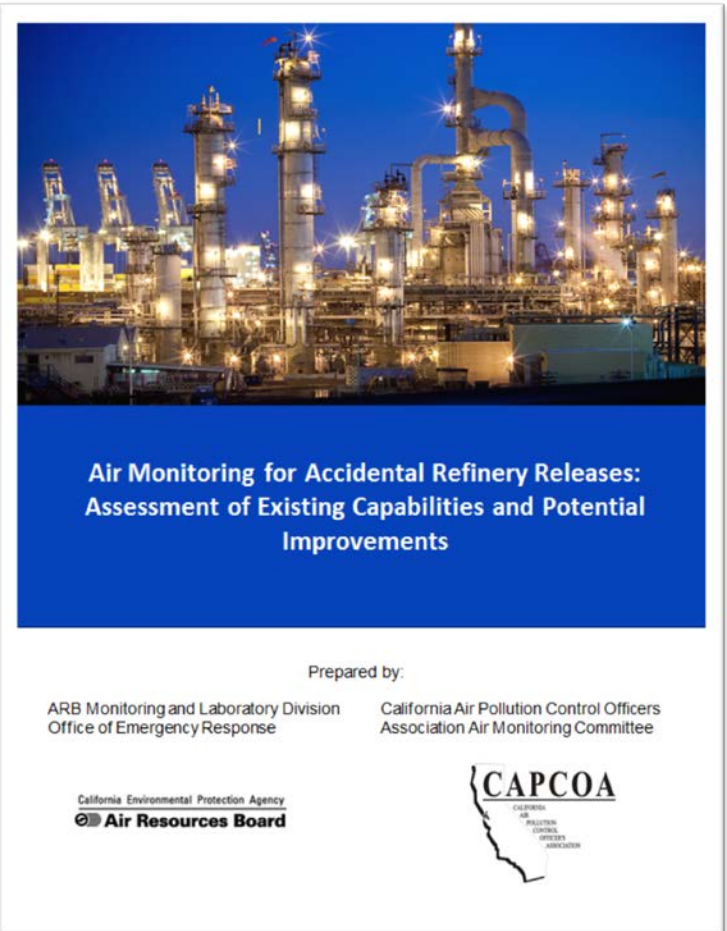
Cache consists of
two complete
E-BAMs.

Other loans
available



Refinery Air Monitoring Project

- Inventory existing assets and resources: **Completed**
- Evaluate capabilities and propose enhancements
- Develop statewide guidance on best practices
- Improve coordination, training, and preparedness



Industrial Monitoring Methods

Fixed Network Stations



Personal and Handheld Monitors



Hazmat Vehicles and Mobile Labs



Community Monitors



Process Unit Monitors



Fenceline Monitors

Open Path Monitoring



Community Monitoring



Future Monitoring Platforms

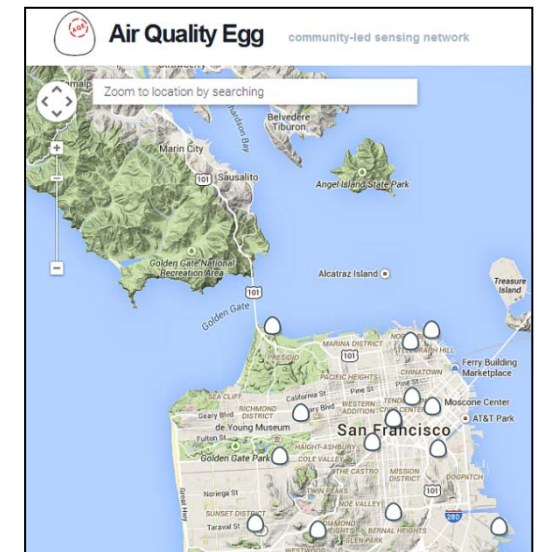
Advantages :

- Lower Cost
- Portable
- Real-time
- Widespread distribut
- Increased spatial resolution



Challenges :

- Accuracy/precision
- Calibration
- Interferences
- Interpretation



Web and Electronic Tools

AirNOW wildfire webpage

- http://airnow.gov/index.cfm?action=topics.smoke_wildfires
- Dynamic map with data overlays: Current PM2.5 AQI (network & E-BAM), fire locations, and smoke plumes.

California Smoke blog

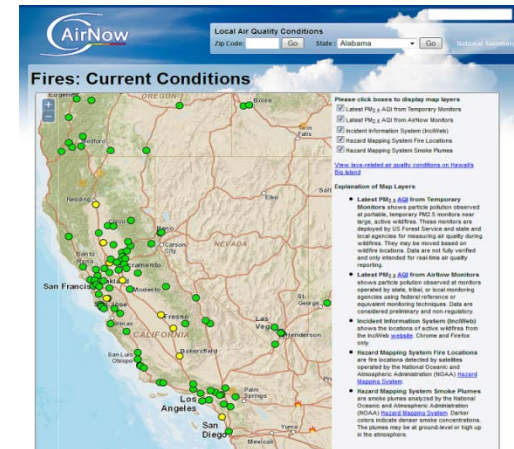
- <http://californiasmokeinfo.blogspot.com/>
- Available for public messaging (multiagency support).

CARPA website


- <http://www.arb.ca.gov/carpa/carpa.htm>
- Password protected 'coordination center' directory for specific coordination needs.

Office of Emergency Response webpage

- <http://www.arb.ca.gov/aqgm/erp/erp.htm>
- Technical capabilities, past deployments, request for support.



OER Webpage



California Environmental Protection Agency
Air Resources Board

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UP LINKS

- Reducing Air Pollution - ARB Programs
- Community Health Program
- Smoke Management Program
- Emergency Response Program**

PROGRAM LINKS

- AIRNow
- Cal-OES
- Cal-EPA
- Cal Fire
- Inciweb
- DTSC Emergency Response Program
- ERMAC
- CARPA
- Office of Emergency Response: Refinery Assessment

RESOURCES

- Contact Us
- Listsers

Emergency Response

This page has been updated as of January 30, 2015

Latest Information

California Office of Emergency Services Contact List

The CalOES Emergency Services Contact List provides names and contact information for each counties Emergency Service Coordinator. When requesting emergency air monitoring equipment from the California Air Resources Board: Office of Emergency Response, contact the Emergency Service Coordinator for assistance. The coordinator can guide you through the mission tasking process to request services from the Office of Emergency Response.



Office of Emergency Response: Mission Request Procedure

The California Air Resources Board (ARB): Office of Emergency Response (OER) has created a step by step procedure to request emergency air monitoring services from the ARB. This procedure applies to any emergency involving the release of a hazardous airborne contaminant when a local agency has exhausted its resources to protect public health or the environment. The Office of Emergency Response can provide State-level support for air contaminant monitoring, sampling, analysis, and dispersion modeling.

The Office of Emergency Response: Mission Request Procedure provides a detailed procedure on how to request support from the Office of Emergency Response and provides contact information for requesting assistance.

Page Links

- Assets and Technical Capabilities
- Background and Mission Statement
- Past Deployments
- Staff Expertise
- Training Opportunities



California Smoke Blog

California Smoke Information

This site is a voluntary effort by city, county, state, tribal and/or federal agencies to coordinate and aggregate information for California communities affected by wildfire smoke.

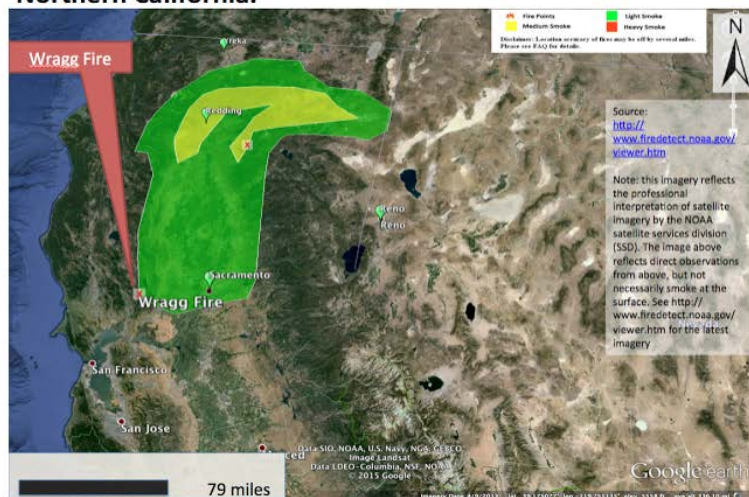
[HOME](#)[CURRENT AIR QUALITY](#)[WHERE'S THE FIRE](#)[SMOKE AND HEALTH](#)[MAPPING - WEBCAMS - AIR QUALITY](#)[SATELLITE IMAGERY](#)

THURSDAY, JULY 23, 2015

Thursday, July 23, 2015 - Wragg Fire - Napa County

Smoke Plume from the Wragg Fire as it looks from satellite imagery. This does not reflect air quality data at one's breathing level. Information on can be found at <http://smoke.airfire.org/monitoring/#/>

July 23, 2015 (6:30 AM): Satellite-observed Smoke over Northern California.

[BLOG ARCHIVE](#)[Blog Archive](#)

CALIFORNIA AIR DISTRICTS

[Amador County APCD](#)[Antelope Valley AQMD](#)[Bay Area AQMD](#)[Butte County AQMD](#)[Calaveras County APCD](#)[Colusa County APCD](#)[Eastern Kern County APCD](#)[El Dorado County AQMD](#)[Feather River AQMD](#)[Glenn County APCD](#)[Great Basin Unified APCD](#)[Imperial County APCD](#)[Lake County AQMD](#)[Lassen County APCD](#)[Mariposa County APCD](#)[Mendocino County AQMD](#)[Modoc County APCD](#)[Mohave Desert AQMD](#)[Monterey Bay Unified APCD](#)[North Coast AQMD](#)[Northern Sierra AQMD](#)[Northern Sonoma APCD](#)[Placer County APCD](#)[Sacramento Metropolitan AQMD](#)[San Diego APCD](#)

Posted by PlacerCounty APCD at 10:42 AM No comments:

CARPA Webpage



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UP LINKS

- ARB Homepage
 - Outreach Programs
 - California Air Response Planning Alliance (CARPA)

PROGRAM LINKS

- Background and Mission
 - Charter
- Fire Information Page
- Newsletter
- Steering Committee (login required)
- Subcommittees
- Tool Kit
 - Data
 - Data to Message
 - Message to Audience
 - Emergency Response
- Trainings / Meetings

RESOURCES

- Contact Us
- Join the CARPA Email List
- RSS / Newsfeed



California Air Response Planning Alliance

In the event of an emergency, contact:

California State Warning Center	(800) 852-7550
US EPA Region 9 Duty Officer	(800) 300-2193
CDC/ATSDR 24-Hour Emergency Response Center	(770) 488-7100

Current Emergencies

There are no current fires with major impacts in California. More information can be found at:

- California Smoke Information Blog
- CAL FIRE Current Incidents
- Fire Information Map - PFIRS
- Federal Interagency Smoke Management Site
- Interagency Incident Information System (Inciweb)
- How to Request Emergency Air Monitoring Support from the ARB: Office of Emergency Response

Latest Information



IASC
Interagency Air and
Smoke Management Council

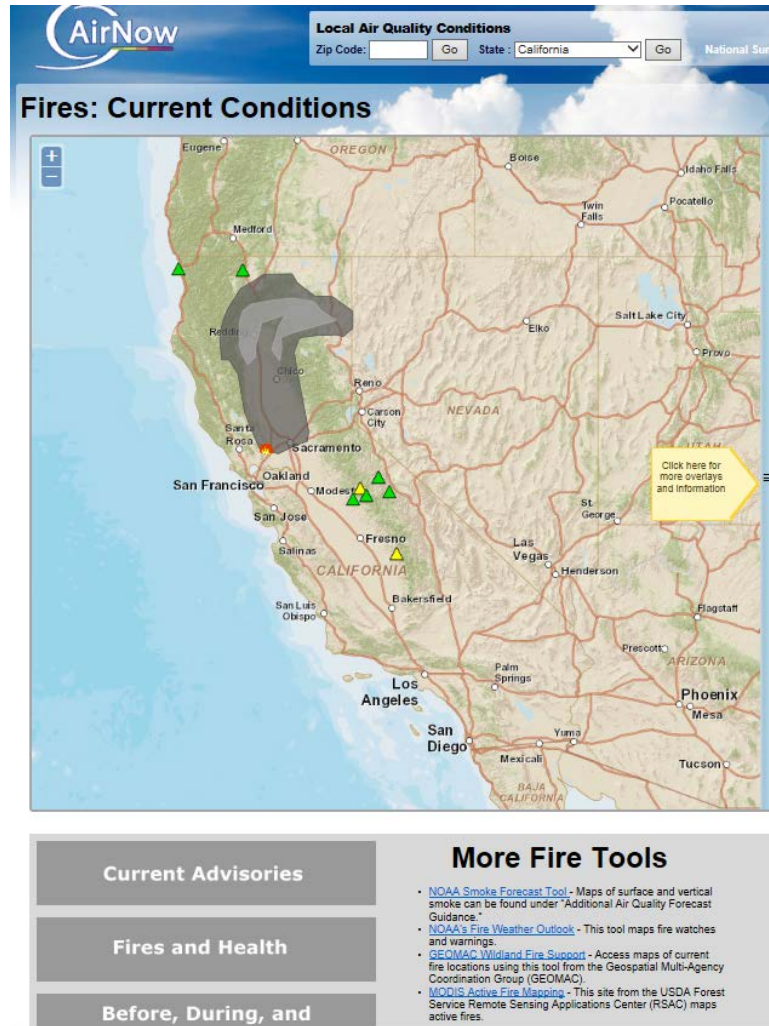


CARPA
California Air Response Planning Alliance

2015 IASC/CARPA Workshop: Managing Smoke Impacts
May 13th and 14th 2015

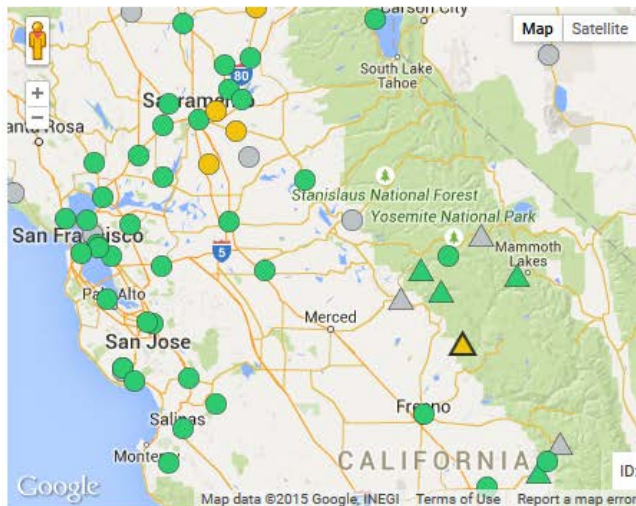
California Air Resources Board/Monitoring and Laboratory Division
1927 13th Street Sacramento, Ca. 95811

AirNow Wildfire Webpage



AirFire Webpage and Graphs

monitoring



☒ Permanent ○
(from AirNowTech)

☒ Temporary △
(from AirSys & WRCC)

Plot Type

24 Hour Rolling Mean

Y Scale

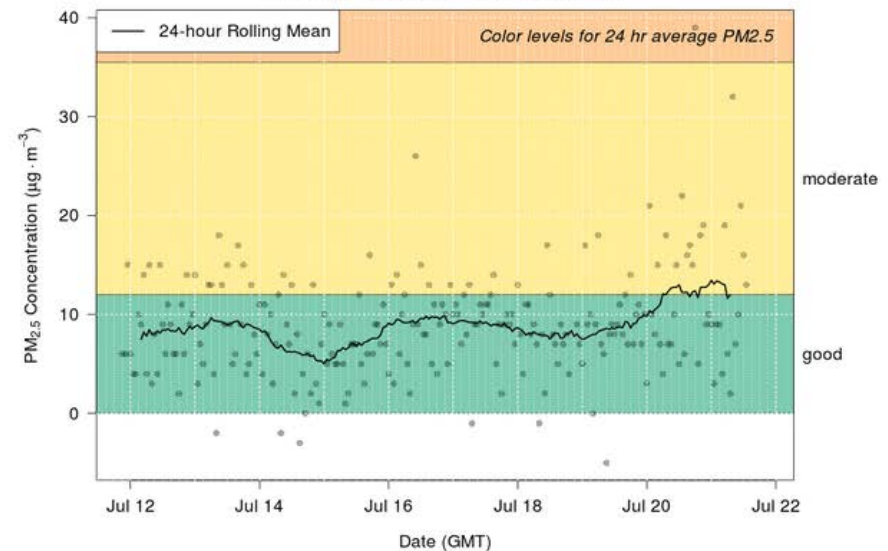
Automatic

☒ Use AQI Colors

24-Hour Rolling Mean of Raw PM_{2.5} Data

NA (NA)

Operated by United States Forest Service



Refinery Webpage



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UP LINKS

- Reducing Air Pollution - ARB Programs
 - Fuels Program
 - California Refineries
 - Refinery Air Monitoring**

PROGRAM LINKS

- ARB Response Plans and Reports
- Information by Region
- Other Helpful Information

RESOURCES

- Contact Us
- Join the Refineries Email List

Refinery Air Monitoring

This page last updated July 2, 2015

There Are No Alerts At This Time

Latest Information

Real-Time Refinery Fenceline and Community Monitoring Data

- Alon Bakersfield
- Chevron Richmond
- Phillips 66 Rodeo

California Refinery Emergency Air Monitoring Capabilities Report Released NEW
May 12, 2015

ARB's Monitoring and Laboratory Division and the California Air Pollution Control Officers Association (CAPCOA) have completed the first volume of the Refinery Emergency Air Monitoring Assessment Report. The May 2015 report, "Objective 1: Delineation of Existing Capabilities" is now available online.

The report provides a comprehensive inventory of emergency air monitoring assets and capabilities located in and around California's fifteen major oil refineries. It serves as the basis for the ongoing assessment and guideline development phases of the project.

To view this report, please select the links below:

[Refinery Emergency Air Monitoring Assessment Report: Objective 1 Final Report \(1.8 MB\)](#)

[Refinery Emergency Air Monitoring Assessment Report: Objective 1 Appendices \(30.17 MB\)](#)

Torrance Refinery Incidents // Air Quality Impacts

Fire at ExxonMobil Torrance (March 11th, 2015)

[Fire at ExxonMobil Torrance Extinguished \(Reuters\)](#)

[Firefighters Douse Another Fire at ExxonMobil Torrance \(Daily Breeze\)](#)

ExxonMobil Torrance Air Impacts Assessment (February 18th, 2015)

The unit that reportedly failed is the electrostatic precipitator that

Information or Questions

ARB/Office of Emergency Response

Greg Vlasek

Greg.Vlasek@arb.ca.gov