



# Use of EBAMS for Air Emergencies

IASC/CARPA Workshop, May 1, 2014

# When Would EBAM Monitoring be Necessary ?

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- Incident lasting more than 1 day
- Extreme smoke or plume
- Anticipated public health impacts
- Prescribed fires, volcanic eruptions

# When/How to Request Monitoring Assistance

- Insufficient resources or may be overwhelmed
- Initial email from APCO to CARB OER
- Follow with formal request from APCO to op area (County) → REOC → CalEMA
- Mission request to CARB OER to provide monitoring assistance

# Steps to Request Support

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## Steps to Obtain OER Support

1. Contact OER
2. Obtain a State Support “Mission Task”
3. Mission Request Approval
4. Deployment

# OER Mission Request Procedure

The screenshot shows the California Air Resources Board (ARB) website. The top navigation bar includes links for 'About ARB', 'Calendars', 'A-Z Index', and 'Contact Us'. The main header features the ARB logo and the text 'California Environmental Protection Agency Air Resources Board'. A search bar is located on the right side of the header. Below the header, there is a navigation menu with links for 'Home', 'Reducing Air Pollution', 'Air Quality', 'Business Assistance', 'Laws & Regulations', and 'Health'. The main content area is divided into several sections. On the left, there is a sidebar with 'UP LINKS' (including ARB Homepage, Outreach Programs, and California Air Response Planning Alliance (CARPA)), 'PROGRAM LINKS' (including Background and Mission, Charter, Fire Information Page, Newsletter, Steering Committee, Subcommittees, Tool Kit, Data, Data to Message, Message to Audience, and Emergency Response), and 'RESOURCES' (including Contact Us, Join the CARPA Email List, and RSS / Newsfeed). The main content area features a banner for CARPA (California Air Response Planning Alliance) with the text 'In the event of an emergency, contact:' followed by contact information for the California State Warning Center, US EPA Region 9 Duty Officer, and CDC/ATSDR 24-Hour Emergency Response Center. Below this is a section for 'Current Emergencies' which states 'There are no current fires with major impacts in California. More information can be found at:' followed by a list of links. The link 'Office of Emergency Response: Mission Request Procedure' is circled in red. Other links include 'www.northcasmoke.blogspot.com', 'CAL FIRE Current Incidents', 'Fire Information Map - FEIRP', and 'Federal Interagency Smoke Management Site Interagency Incident Information System (Inciweb)'. Below the 'Current Emergencies' section is a section for 'New fire related articles of interest:' which includes 'California 2014 Fire Conditions Forecast (January 29, 2014) (pdf)' and '2014 Summer Assessment (January 31, 2014) (pdf)'. The bottom section is titled 'Latest Information' and contains the text 'Program Available: IASC/CARPA Spring 2014 Workshop, 4/30 and 5/1, McClellan' and 'The steering committees for the California Interagency Air and Smoke Council and the California Air Response Planning Alliance invite you to the IASC/CARPA Spring 2014 Workshop.'



## Requesting ARB Emergency Air Monitoring Support Services

*Updated March, 2014*

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This procedure applies to any emergency involving release of a hazardous airborne contaminant for which a local agency has exhausted its resources to protect public health or the environment. Requesting agencies typically include local air districts, public or environmental health departments, and county or city fire departments. The process for requesting State support is established by the Emergency Services Act (Government Code § 8550-8692 et seq.) and the Standardized Emergency Management System, or SEMS.

The Air Resources Board's (ARB) Office of Emergency Response (OER) can provide State-level support for air contaminant monitoring, sampling, analysis, and dispersion modeling. OER also coordinates with numerous partner agencies to provide emergency toxicological assessments, health advisory recommendations, indoor air quality assessments, air monitoring for recovery operations, and assessment of air quality for re-entry.

### Steps to Obtain OER Support



# Deployment Coordination

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Planning and coordination

Necessary for multi-agency response

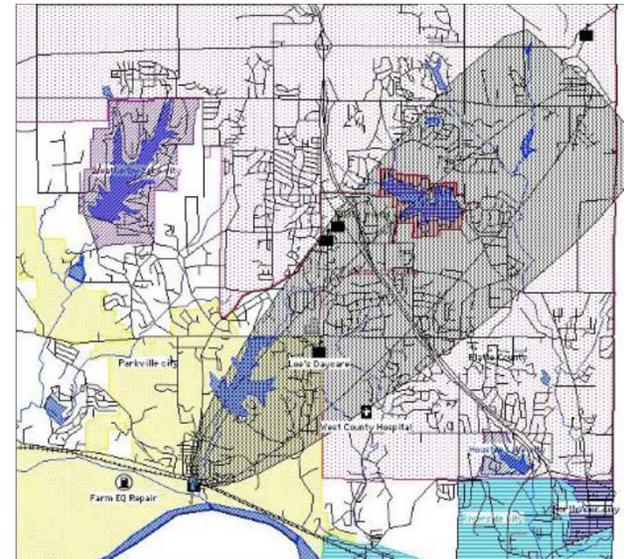


# Deployment Coordination

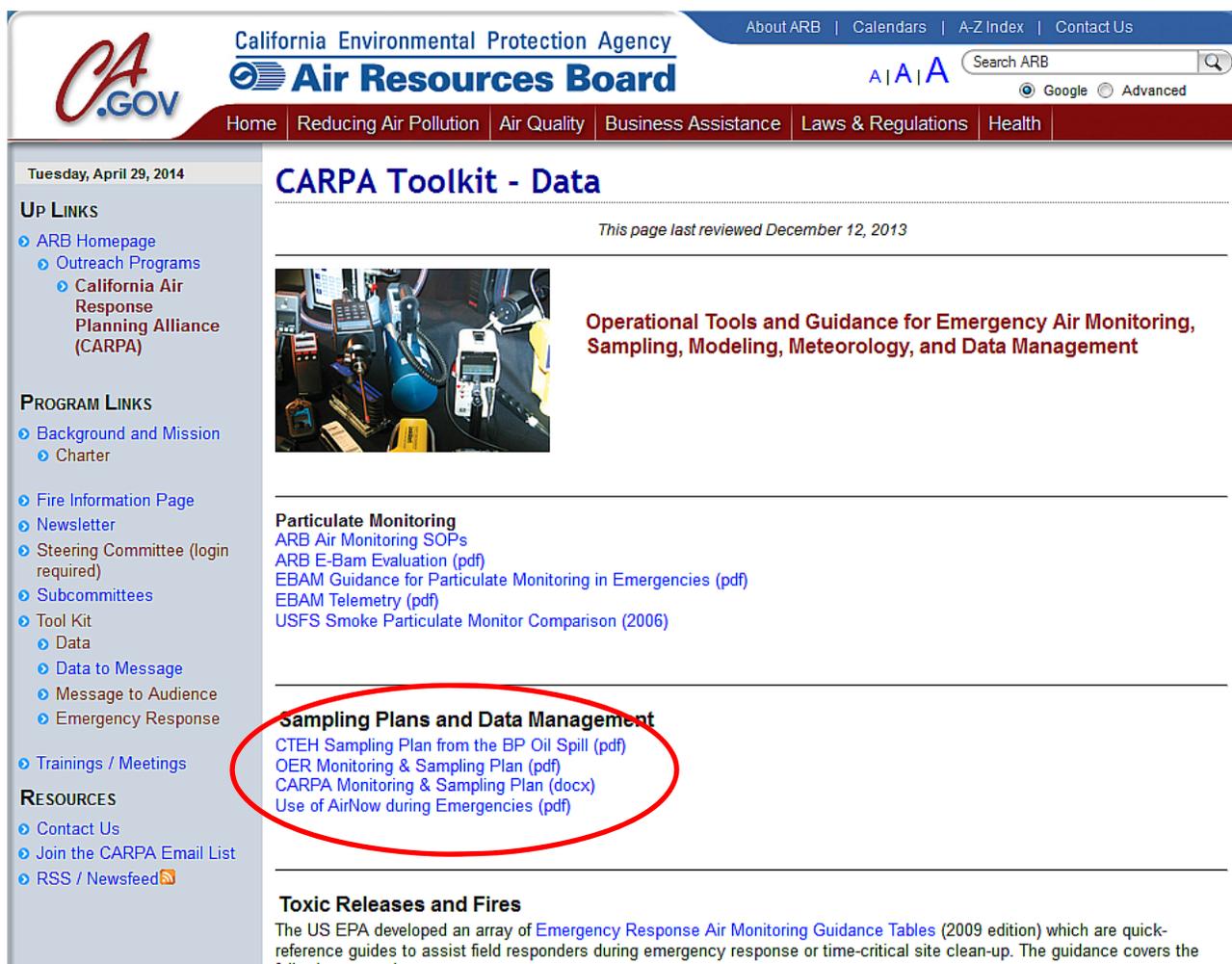
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- Air Monitoring Plan

- Incident objectives (what)
- Personnel (who)
- Coordinated siting (where)
- Data collection and management (how)



# Monitoring Plans Location



**CA.GOV** California Environmental Protection Agency  
**Air Resources Board**

About ARB | Calendars | A-Z Index | Contact Us

Search ARB

Google Advanced

Home Reducing Air Pollution Air Quality Business Assistance Laws & Regulations Health

Tuesday, April 29, 2014

## CARPA Toolkit - Data

*This page last reviewed December 12, 2013*



**Operational Tools and Guidance for Emergency Air Monitoring, Sampling, Modeling, Meteorology, and Data Management**

**Particulate Monitoring**  
ARB Air Monitoring SOPs  
ARB E-Bam Evaluation (pdf)  
EBAM Guidance for Particulate Monitoring in Emergencies (pdf)  
EBAM Telemetry (pdf)  
USFS Smoke Particulate Monitor Comparison (2006)

**Sampling Plans and Data Management**  
CTEH Sampling Plan from the BP Oil Spill (pdf)  
OER Monitoring & Sampling Plan (pdf)  
CARPA Monitoring & Sampling Plan (docx)  
Use of AirNow during Emergencies (pdf)

**Toxic Releases and Fires**  
The US EPA developed an array of [Emergency Response Air Monitoring Guidance Tables](#) (2009 edition) which are quick-reference guides to assist field responders during emergency response or time-critical site clean-up. The guidance covers the

**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

# Monitoring Plan

Operational Period Date/Time to Date/Time	 <b>CARPA</b> California Air Response Planning Alliance <b>Air Emergency Response          Monitoring &amp; Sampling Plan</b>	Prepared by: Approved by: Version #	State Responsibility Area Federal Responsibility Area																																								
Incident: _____ Counties/District Affected: _____ CalEMA Mission/Task No. _____ Description _____ ICP/EOC Location(s): _____																																											
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Sampling Plan Page 1 of 6

**Area of Impact and any Specific Targets of Concern:**

**Contaminant(s) and Health Action Levels:**

**Weather forecast (12-24 hrs):**

**General Sampling Objectives**

- Gather reference sampling data within area of concern to for historical/background pollutant levels
- Establish real-time sampling within affected population center to determine contamination levels
- Establish monitoring in evacuation area for pending re-entry
- Establish air sampling to determine contaminant gradients or boundaries
- Conduct personal air sampling of on-site ERT personnel
- Site-specific sampling for targeted location (i.e., evacuation center, hospital, fire camp, etc)
- Complaint investigation; Location: \_\_\_\_\_
- Other objective: \_\_\_\_\_

Field Monitoring Equipment	
<b>Reference (network sites):</b> <b>Particulate Matter</b> BAM 10 BAM 2.5 Gravimetric Filter:    PM10    PM2.5 <b>Meteorology</b> station met <b>Toxics</b> VOC canisters (910) Metals filters (924)	<b>Portable (day-week):</b> <b>Particulate Matter</b> EBAM 2.5 <b>Meteorology</b> WEATHERPAK iMet <b>Toxics</b> VOC canisters (910) Metals filters (BG)
<b>Mobile (hour-day):</b> <b>Particulate Matter</b> MicroDust <b>Toxics</b> ac@RAE (PID) Canister (critical orifice)	<b>Survey/Confirmation (min-hour):</b> <b>Toxics</b> Miran (field IR) ppBRAE (PID) Colorimetric tubes Sorbent tubes Canister (grab sample) ac@RAE (PID)

Sampling Plan Page 2 of 6

# Deployment Objectives

(monitoring plan)

- Determine impacted communities for monitoring
- Select best siting locations
- Deploy monitors
- Determine health metrics
- Report to Air District/Health Officers
- Issue health advisories and recommendations.
- Maintenance

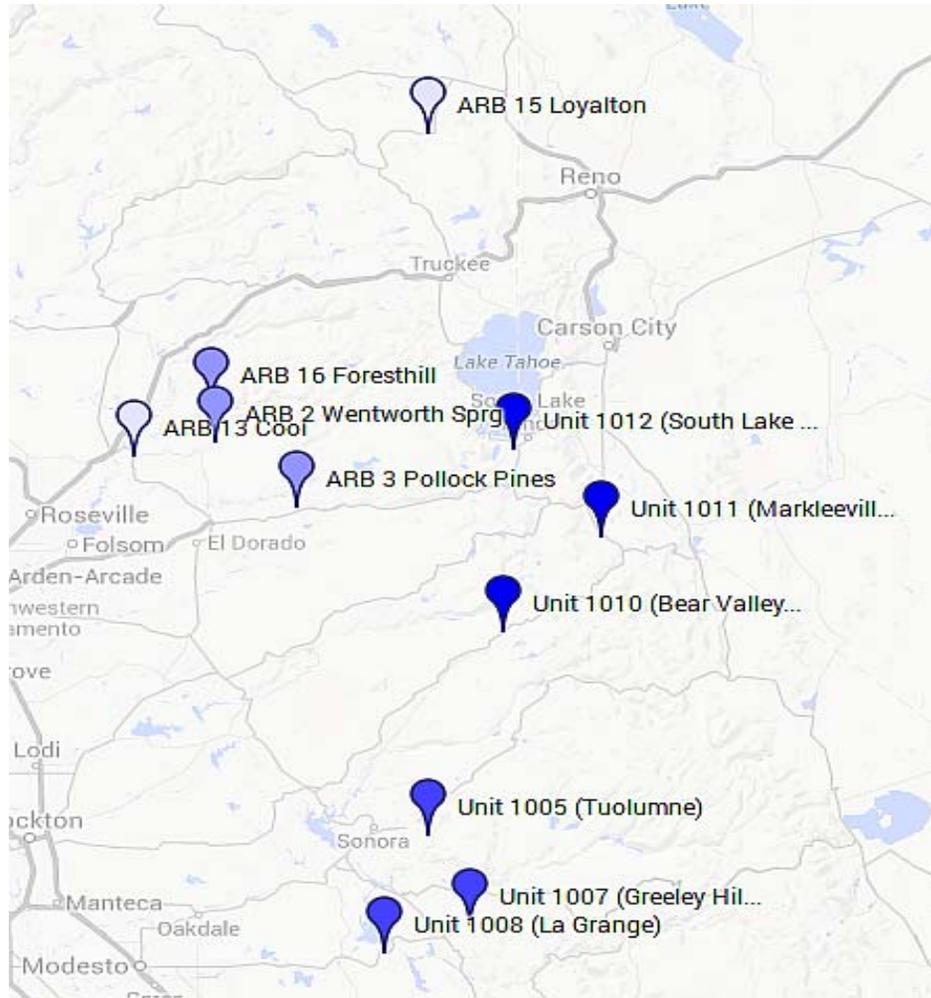
# Instrument Siting



- Safety
- Power
- Security
- Access
- EPA Siting Criteria
- Local sources

Coordinate  
w/district on  
location

# Multi agency response



8/28/13'

Portable Monitors  
(PM2.5)

Coordination w/5  
Districts, USFS,  
NPS, EPA