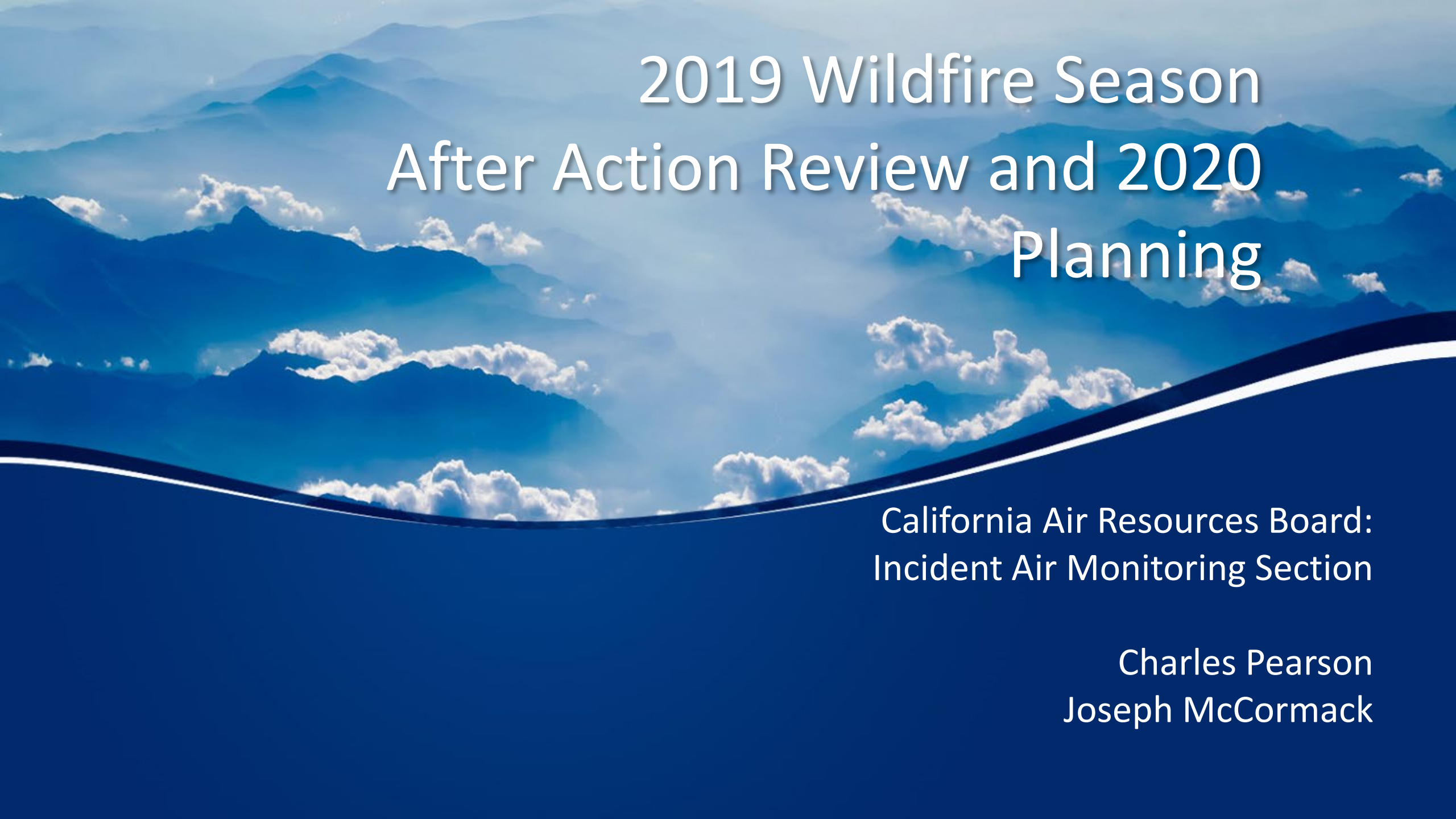




2019 Wildfire Season After Action Review and 2020 Planning

California Air Resources Board:
Incident Air Monitoring Section

Charles Pearson
Joseph McCormack

2019 Wildfire Deployments

IAMS Wildfire Response and Mission Requests

Year	Number of Fires	Number of Mission Requests
2012	2	10
2013	6	7
2014	15	12
2015	21	20
2016	12*	8
2017	14*	8
2018	18*	12
2019	9	5

In 2019, IAMS provided monitoring support to the following wildfires (county):

Milepost 97 (Douglas)

Tucker (Modoc)

Springs (Mono)

Walker (Plumas)

Lime (Siskiyou)

South (Tehama)

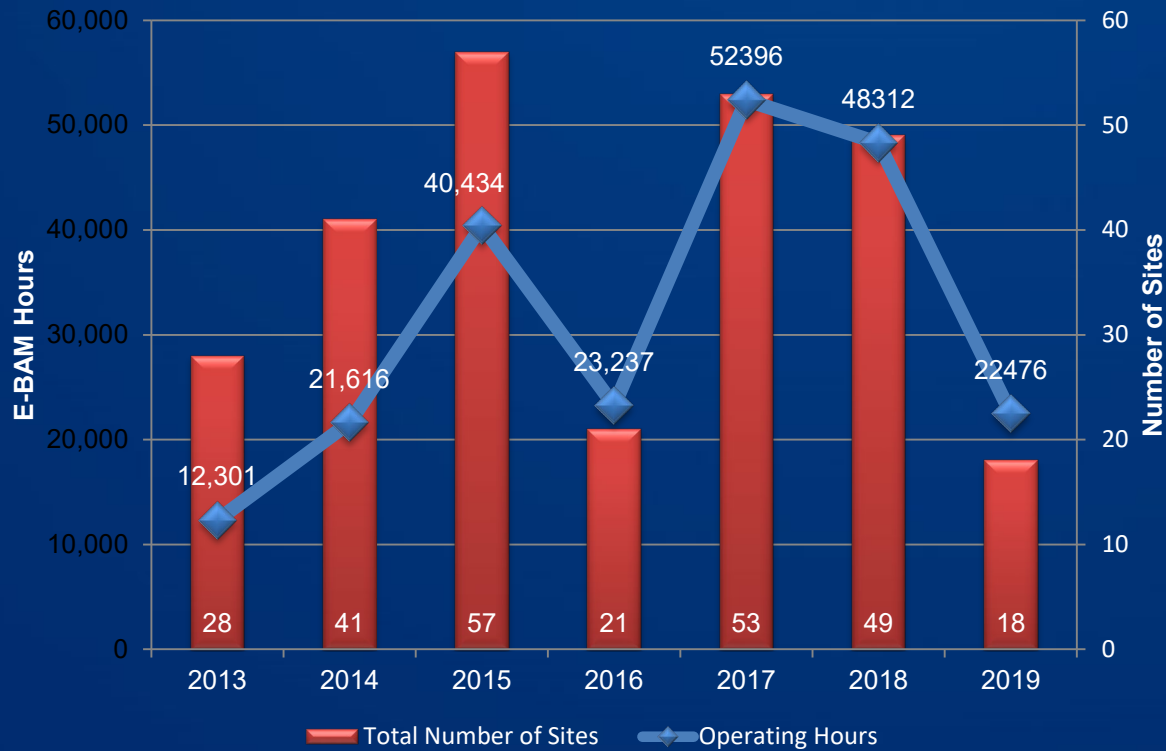
Briceburg (Mariposa)

Caples (El Dorado)

Kincade (Sonoma)

Deployment Cont.

E-BAM Sites and Operating Hours



- Increasing Number of Fires
- Increasing Number of Monitoring Sites
- Increasing Number of Staff

Year	Staff
2013	5
2014	4
2015	4
2016	5
2017	6
2018	7
2019	9

Shipping



- CARB shipped around 20 units during the 2018 wildfire season
 - 32 units shipped in 2019
- Shipping:
 - Units should arrive by 1400
 - Ground (3 Day Delivery)
 - cheapest
 - Next Day
- UPS charges by weight:
 - EBAM Case $\approx$ 90 lbs
 - Transmitter Case $\approx$ 60 lbs
 - Pole Bag $\approx$ 20 lbs
- Developing a quick guide for shipping units back to CARB and sending return shipping labels.

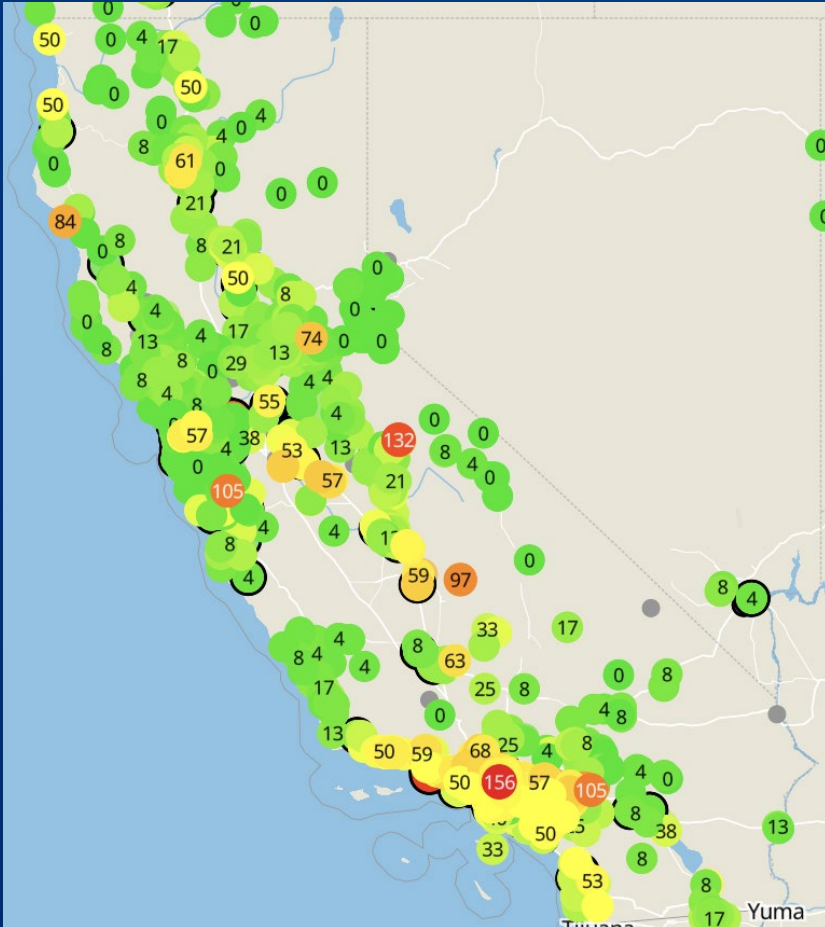
Cache Program

- Four Cache Locations:
 - Mariposa
 - Santa Barbara
 - South Coast
 - Sacramento
- Two E-BAMs per cache:
 - Cache locations intended to speed up the deployment process
 - Cache contains everything to set up, deploy, and calibrate E-BAM

1300 vs 1400 Call

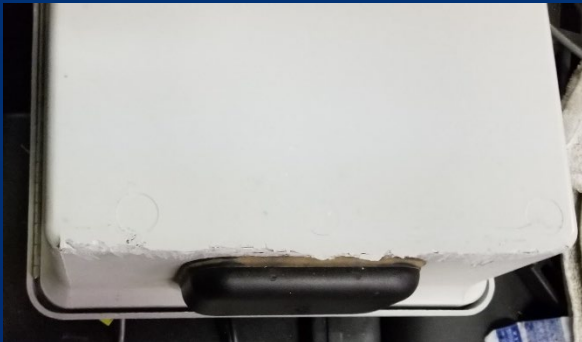
- 1300 Weather Call hosted by CARB Air Quality Planning and Science Division
 - Modeling and forecast information regarding weather patterns
 - 888-844-9904 passcode 5189154#
- 1400 Wildfire Monitoring Call (when activated) hosted by CARB Incident Air Monitoring Section
 - Resource and Coordination Call
 - 888-405-8211 passcode 6959739#

PurpleAir PA-II Sensors



- Roughly 15 sensors distributed to each air districts/about 460 distributed in total in 2018 to detect smoke trends.
- CARB purchased an additional 250 in 2019/2020
- Data Download for PurpleAir PA-II sensors:
 - <https://www.purpleair.com/sensorlist>

Monitoring Locations



- Security vs Safety
 - Rooftops (COVID-19)
 - Ground level
 - Accessibility
 - Convenience
 - Siting Criteria
 - Colocation
 - Downwind
 - Sensitive Receptors
 - Schools
 - Athletic Events

Prescribed Fire Program

- Goals: Gradual increase of *treatment* each on Federal and State lands (Forest Carbon Plan)
- 2019: ~59K acres reported to PFIRS (Federal 43K, CalFIRE 16K)
- Goal is to monitor 100-120 prescribed burns
- Prescribed Fire Project Progress
- June 1, 2019 through March 31, 2020 (3/4 of year)
 - Reported prescribed fire projects: 2,700
 - Total acreage burned: 100,00
 - Number of prescribed fires which included air monitoring: 189



Prescribed Fire Program: Training

Prescribed Fire Smoke Management Training (CARB, CAPCOA, CALFIRE, USFS and USEPA Region IX)

- Approximately 180 people trained throughout the series/75 people receiving hands-on EBAM training (federal, state, tribal, and local partners)
- Two day training events held in seven locations throughout California from Nov 2019 – Feb 2020 (Sacramento, Fresno, Santa Barbara, Ukiah, Redding, Diamond Bar, and Mariposa).
 - Day one: classroom instruction (permitting, managing, and communicating prescribed fire activities).
 - Day two: hands-on EBAM training or Prescribed Fire Incident Reporting System workshop.
- For Fall/Winter 2020, plan to hold 3 live training events (North, Central, and South) and create videos for equipment deployment, smoke management software programs, hosted on a website or portal along with resources and links related to the program.

Prescribed Fire: Resources

- CARB has 5 staff dedicated to prescribed fire:
 - Air Quality Planning and Science Division, Monitoring and Laboratory Division, Public Information Officer
- Monitoring (Air Pollution Specialist and Technician)
 - Plan and coordinate with CalFire, USFS, and Air Districts
 - Manage equipment caches and provide logistical support
 - Assist on large scale projects, assist during wildfire response

Developing, updating and expanding web based interactive modeling, communications tools and messaging platforms:

- Prescribed Fire Information Reporting System (PFIRS): streamline the prescribed fire permitting, approval and reporting process.
- Mobile Device Smoke App: is near release for the public, greater awareness of the causes of smoke.
- Public Outreach and Messaging: improved for public outreach and planning regarding prescribed burning, and to help promote awareness of the benefits of prescribed fire vs. extreme fires.

COVID-19 and Monitoring

- Deployment will continue during the COVID-19 outbreak.
- Equipment is staged and ready to go.
- Attempt to ship equipment to avoid personal contact and travel.
- Field staff will follow directions for performing field work during COVID-19, follow social distancing guidance and implement equipment sanitation protocols.
- Virus disinfectant and cleaning supplies.



Questions ?

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