

# Imperial-Mexicali Air Quality Work Plan Update and Calexico-Mexicali PM2.5 Air Quality Trends



February 7, 2019

# Draft Work Plan Actions Initiated

## Public Education and Awareness

- Air quality alerts and forecasting expanded to Mexicali
- Winter media campaign
- Increased District Outreach

## Monitoring

- First set of 25 PM sensors provided to Mexicali for enforcement
  - CARB provided PurpleAir training in December
  - Additional 25 sensors will be installed later this year
- Regulatory PM2.5 monitoring in Mexicali
- 14 monitors in Baja California to be rehabilitated using grant funds

# Draft Work Plan Actions Initiated Continued...

## Reduce unpaved road emissions in Mexicali

- City of Mexicali allocated \$5 million to pave 15 miles of dirt roads

## Improve border region emission inventory

- Emission inventory improvement for Baja California

## Agricultural Burning

- District working to increase special zone buffer
- Plan to establish a program in Mexicali
- CARB committed to the following:
  - Provide training to enhance accuracy of agricultural burn calls
  - Consider Mexicali air quality into burn calls for Imperial
  - Provide burn calls to Mexicali when program is established

# Future Actions and Recommendations

## Near term actions

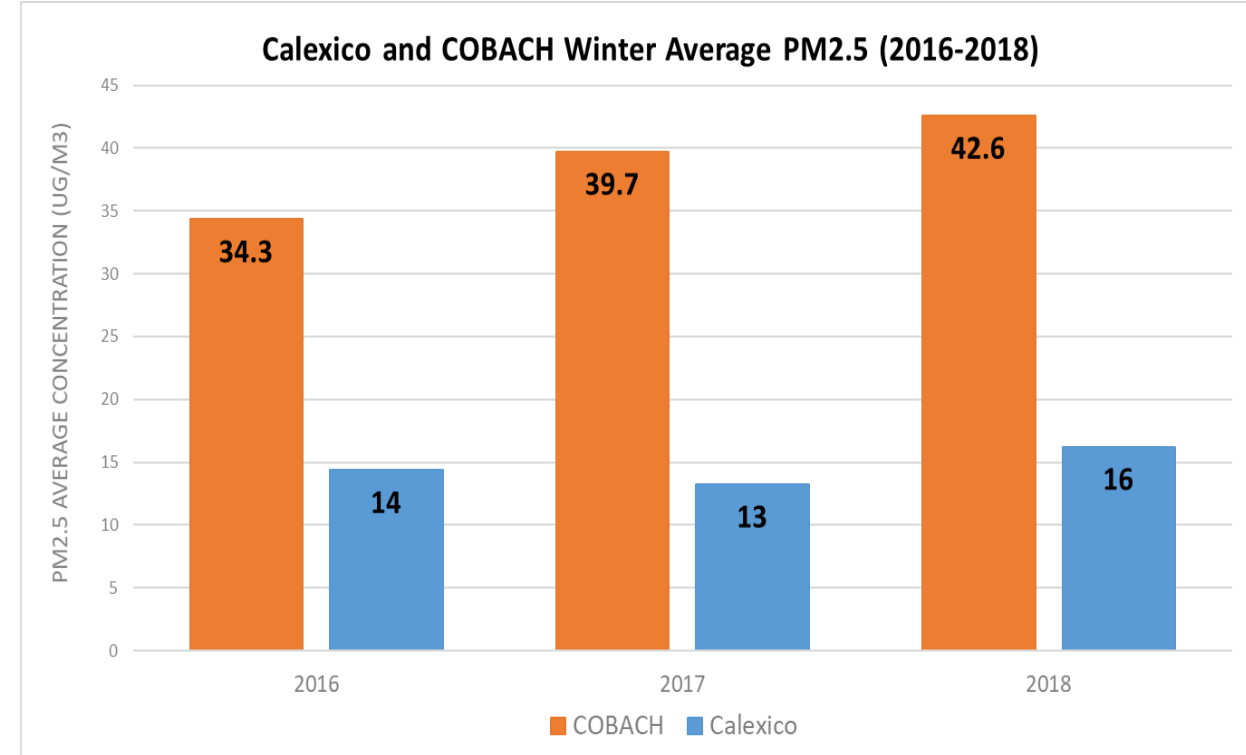
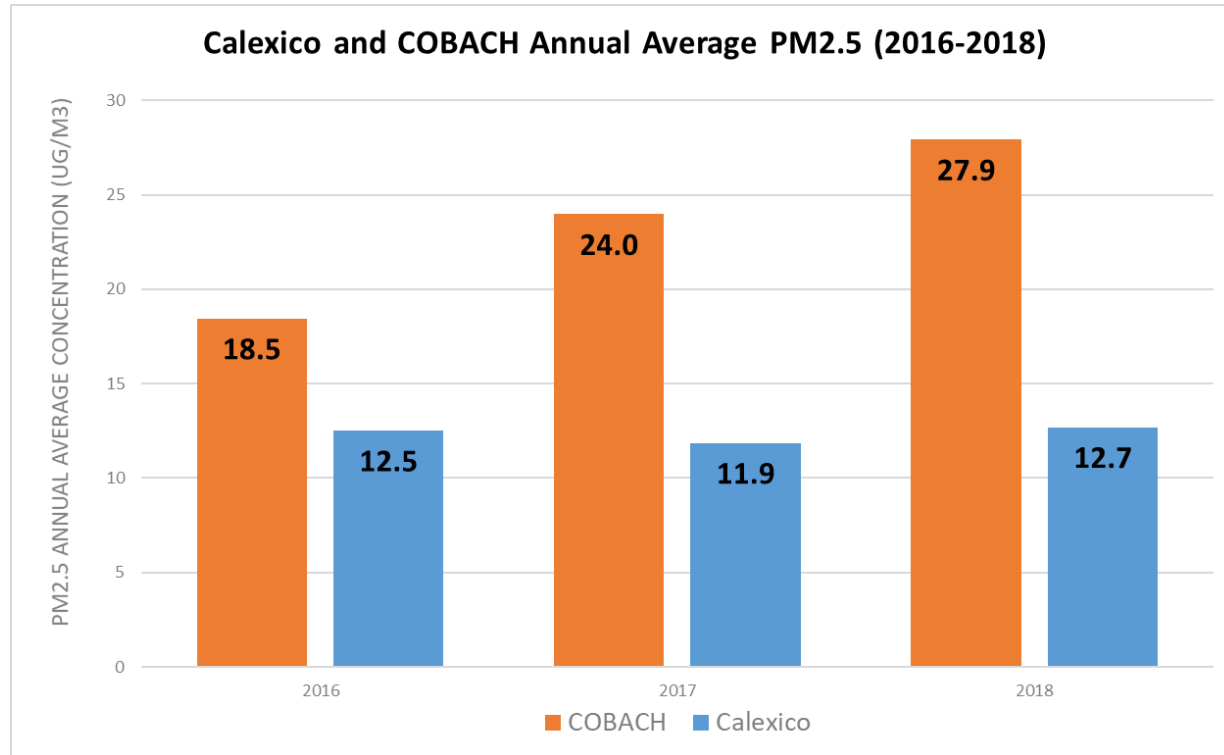
- Plan to Evaluate and Mitigate Windblown Dust Sources in Imperial County
  - Develop a complete emission inventory, determine most emissive sources, investigate and evaluate alternative controls, seek operator and public feedback, and adopt and enforce new regulations
- Establish a model flag program for a school in Mexicali
- Website/Mobile app to display all air quality monitors in Mexicali
- Media campaigns for air quality website and agricultural burning in Mexicali

## Long term recommendations - need further discussion

- Obtain more resources for inspection and enforcement in Mexicali
- Tighten vehicle inspection programs in Mexicali and Imperial
- Evaluate border crossing emissions

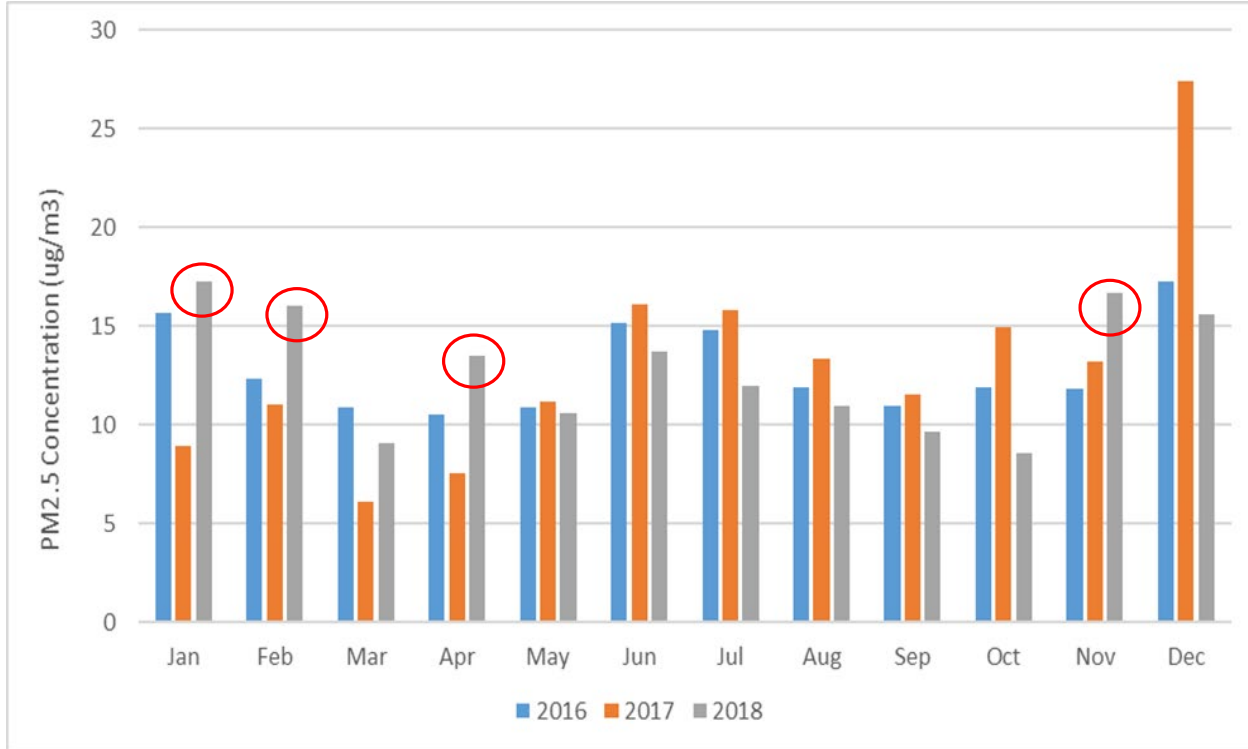
# **Mexicali and Calexico Air Quality Trends (2016-2018)**

# Annual and Winter Average PM2.5 Trends (2016-2018)



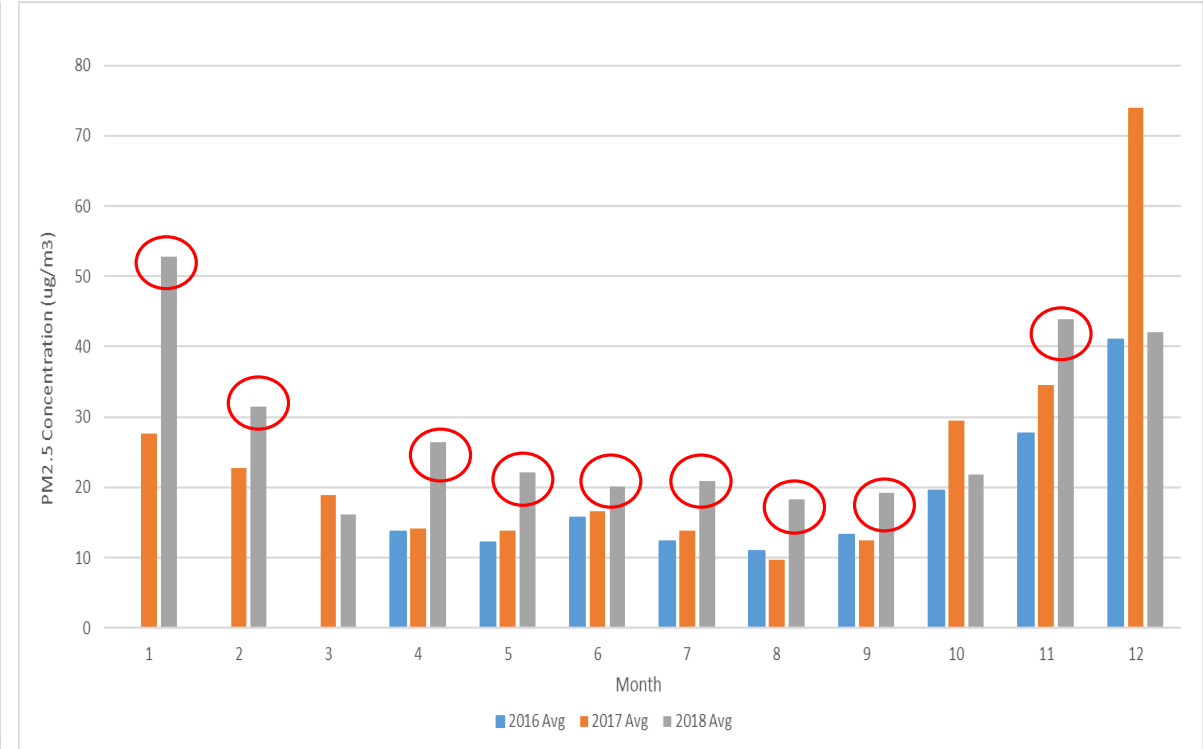
# Calexico and COBACH Monthly Average PM2.5 Average Trends (2016-2018)

Calexico



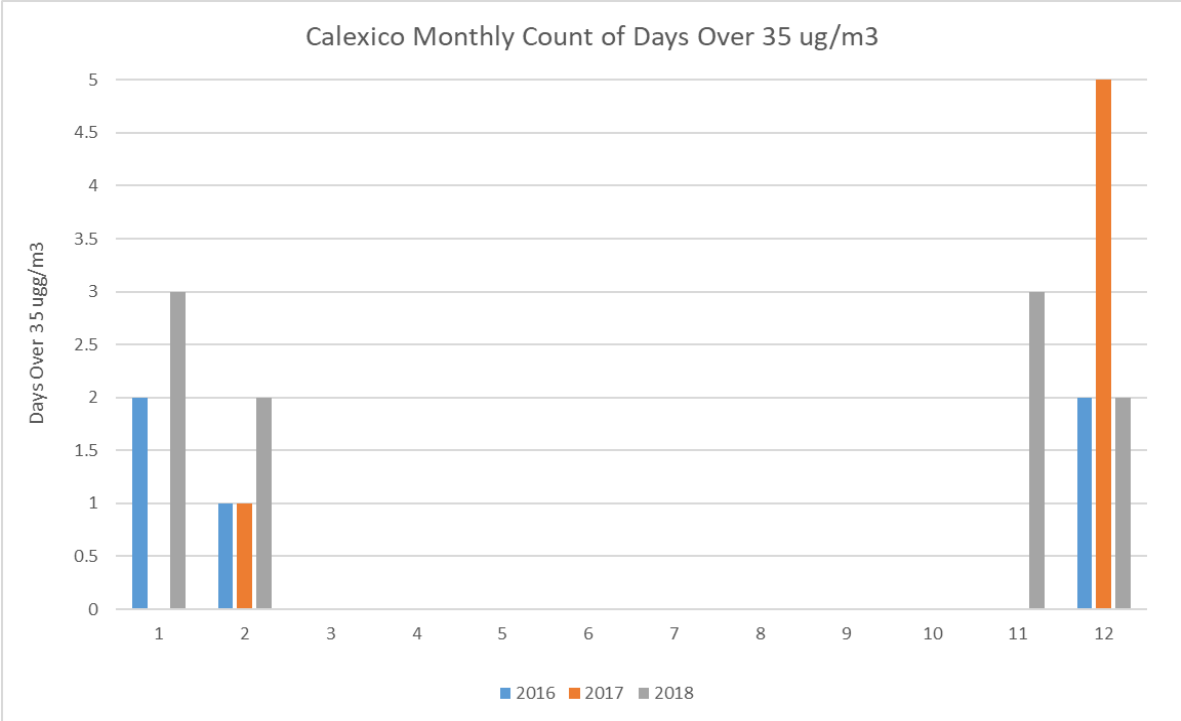
2018 monthly average PM2.5 concentrations were higher at Calexico during 4 months when compared to 2016 and 2017

COBACH

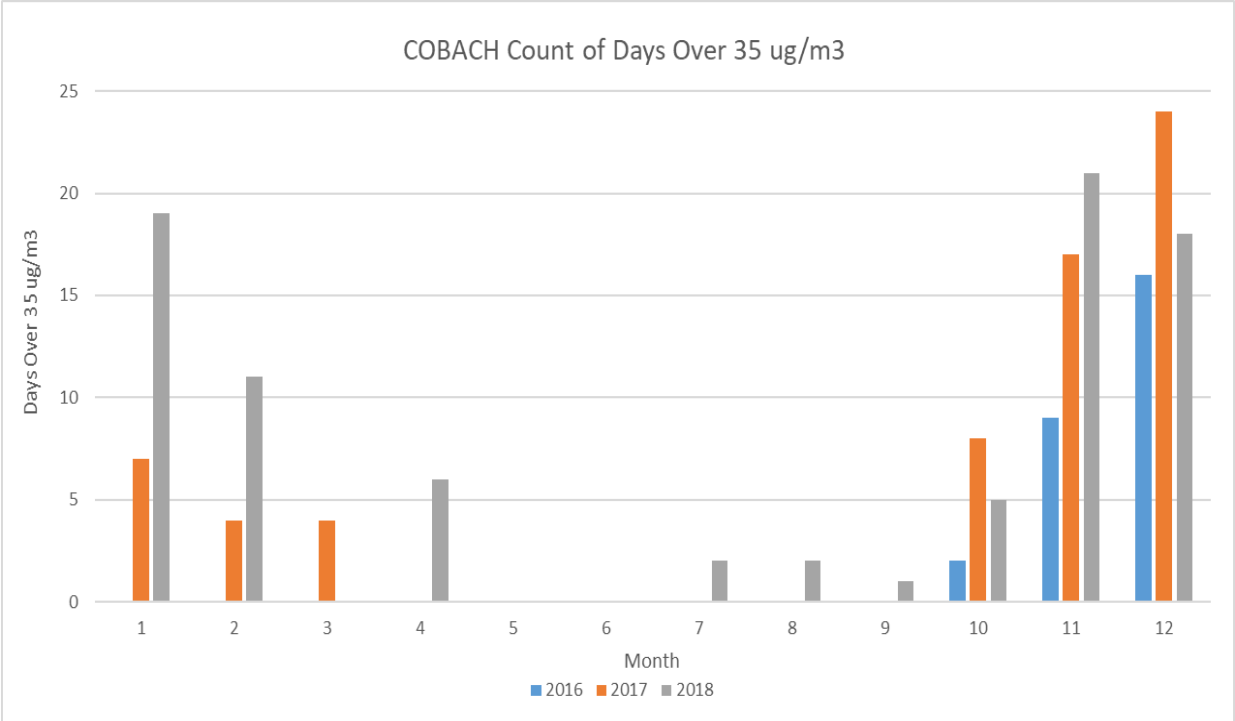


2018 monthly average PM2.5 concentrations were higher at COBACH during 9 months when compared to 2016 and 2017

# Calexico and COBACH Days Over 35 ug/m<sup>3</sup> by Month (2016-2018)



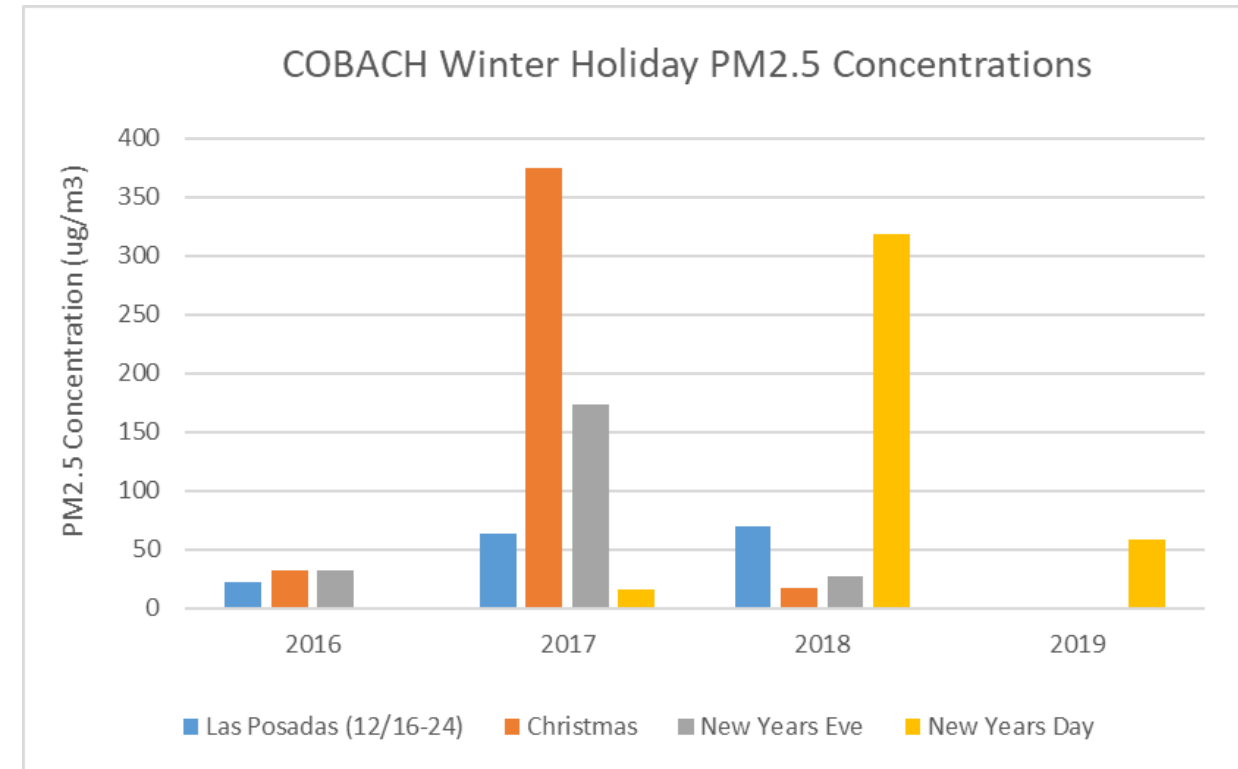
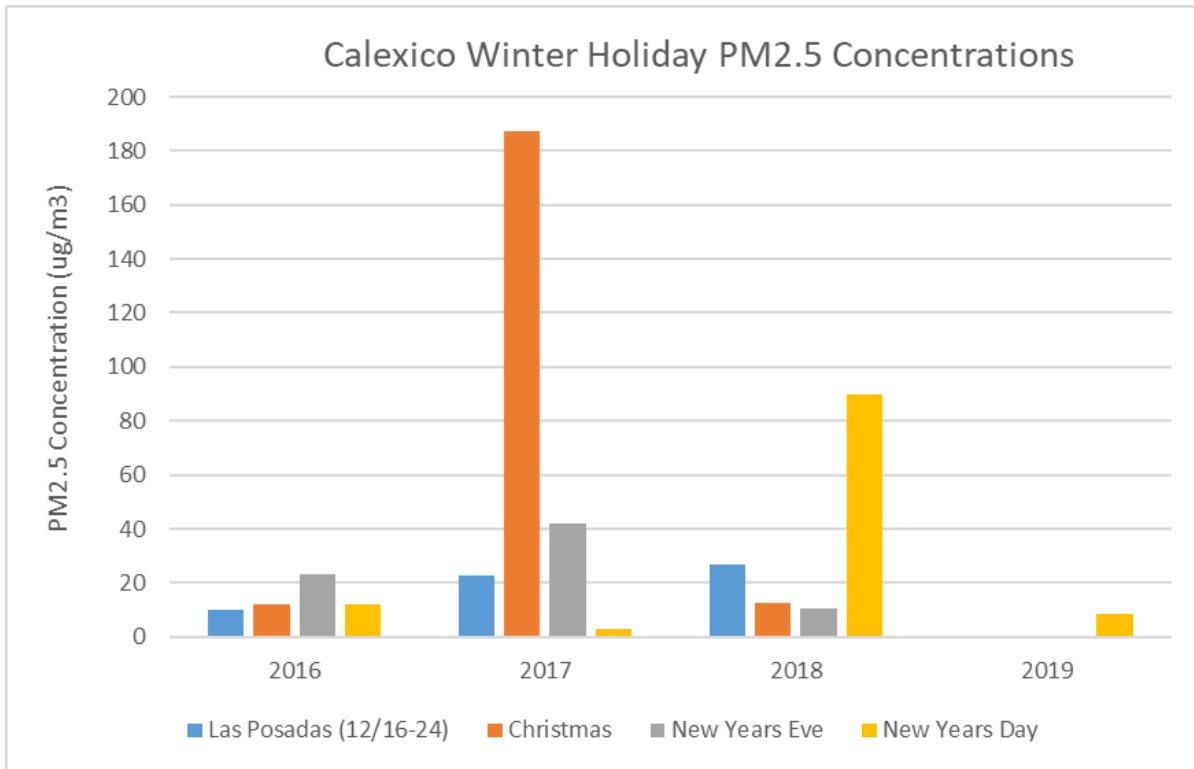
Calexico had days over 35 ug/m<sup>3</sup> in winter months. 2018 had highest count of days over 35 ug/m<sup>3</sup> (10 days in 2018, 6 days in 2017, and 5 days in 2016)



COBACH experienced days over 35 ug/m<sup>3</sup> in April, July, August, and September. 2018 had highest count of days over 35 ug/m<sup>3</sup> (85 days in 2018, 64 days in 2017, and 27 days in 2016 (incomplete data collected for 2016))

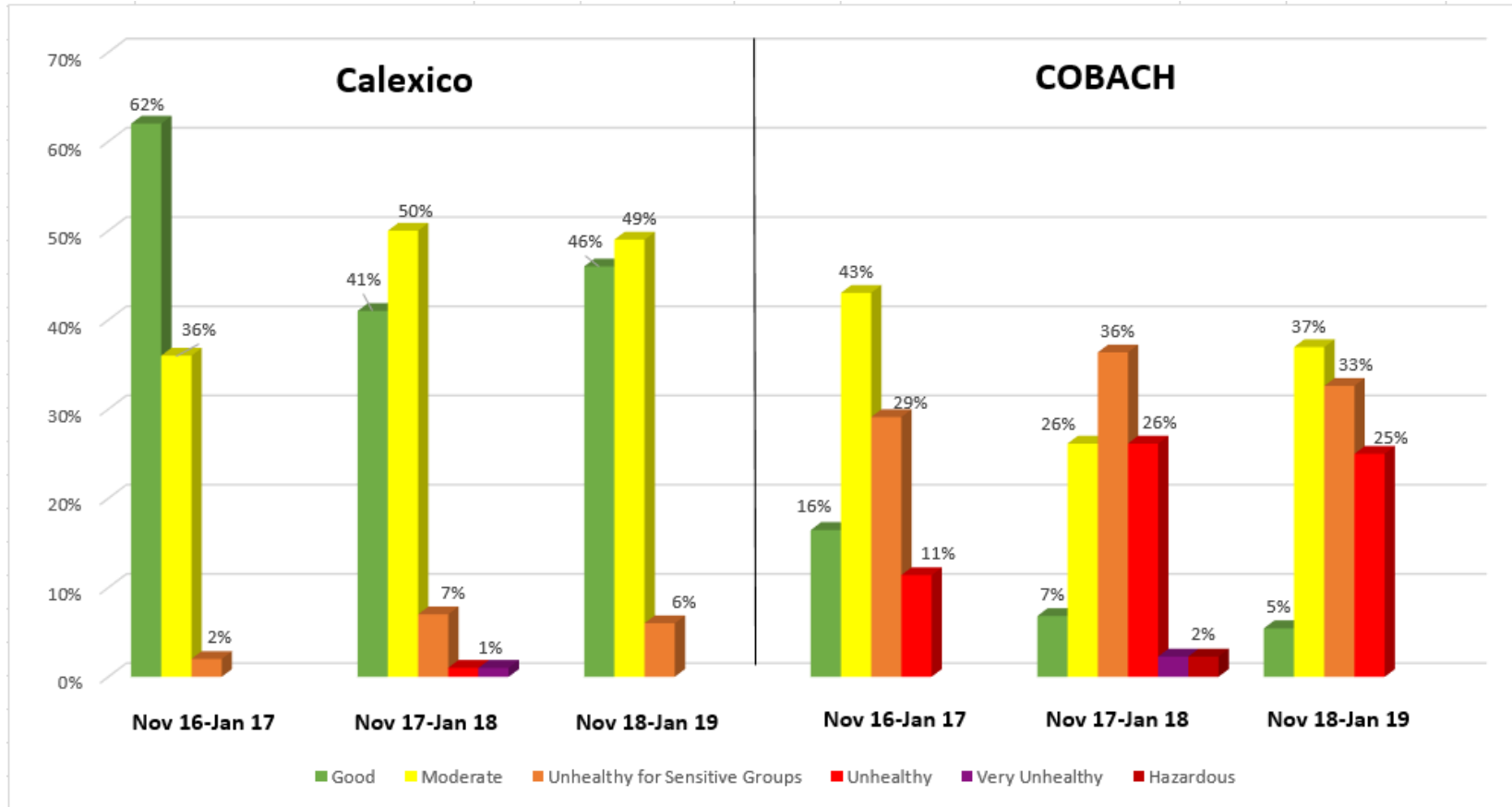


# Winter Holiday PM2.5 Concentrations at Calexico and COBACH



Recent holiday concentrations were lower in 2018 when compared to 2017. Average for other days in December (Las Posadas) increased in 2018.

# Calexico-COBACH AQI Readings Winter 2016-2019



PM2.5 AQI to Concentration (ug/m <sup>3</sup> )						
AQI	Good (0-50)	Moderate (51-100)	Unhealthy for Sensitive Groups (101-150)	Unhealthy (151-200)	Very Unhealthy (201-300)	Hazardous (>300)
PM2.5 Concentration	0-12	12.1-35.4	35.5-55.4	55.5-150.4	150.5-250.4	>250.4

# Takeaways

- PM2.5 concentrations: Mexicali > Calexico
- Highest PM2.5 concentrations occurred Dec. 2017- Jan. 2018
- PM2.5 winter averages for Jan., Feb., and Nov. were highest in 2018
- Days over 35  $\mu\text{g}/\text{m}^3$  : 2018 > 2016, 2017
- Calexico days over 35  $\mu\text{g}/\text{m}^3$  are limited to winter months
- COBACH experiences days over 35  $\mu\text{g}/\text{m}^3$  throughout the year
- Favorable meteorological conditions (increased dispersion) occurred during winter holidays in 2018

# CARB California-Mexico Border Website

<https://www.arb.ca.gov/planning/border/border.htm>



The screenshot shows the CARB California-Mexico Border Website. The header includes the CARB logo, navigation links (Calendars, Help & FAQs, Contact), and a search bar. The main content area is titled "California-Mexico Border Activities" and features a sidebar with "UP LINKS", "PROGRAM LINKS", and "RESOURCES". The main text discusses the work plan developed in May 2018, the December 2018 Board hearing, and the Border 2020 program. It also mentions the Memorandum of Understanding (MOU) signed in July 2014 and the California-Mexico Border Relations Council (CMBRC).

Thursday, January 31, 2019

**UP LINKS**

- ◊ Reducing Air Pollution - ARB Programs
  - ◊ Air Quality and Transportation Planning

**PROGRAM LINKS**

- ◊ Background
- ◊ California - Mexico Border Activities Update
- ◊ Climate Change Scoping Plan
- ◊ Diesel Risk Reduction Plan
- ◊ Goods Movement Emission Reduction Plan
- ◊ District Program Reviews
- ◊ Regional Haze
- ◊ Retrospective on California's Air Quality Program
- ◊ State Implementation Plans
- ◊ Strategic Planning
- ◊ Transportation Strategies and Air Quality

**RESOURCES**

- ◊ Contact Us
- ◊ Join Any Planning Email List(s)
- ◊ RSS / Newsfeed

## California-Mexico Border Activities

*This page last reviewed January 30, 2019*

On May 25, 2018, the CARB Board directed staff to develop a work plan in coordination with the Imperial County Air Pollution Control District (ICAPCD) and agencies in Imperial County and Baja California, Mexico to explore additional actions to improve air quality in the border region.

Since May, CARB staff have been working with community members and agencies in Imperial County and Mexico to provide input on what priorities to include in the work plan. The Imperial County - Mexicali Air Quality Work Plan to Improve Air Quality in the Border Region lays out a set of actions and recommendations to improve air quality in the Imperial County - Mexicali border region.

CARB staff provided an update on the work plan and its accomplishments thus far at the December 13, 2018 Board hearing.

**NEW!** Imperial County - Mexicali Air Quality Work Plan to Improve Air Quality in the Border Region (English)  
**NEW!** Plan de Trabajo para mejorar la Calidad del Aire en la Region Fronteriza del Condado de Imperial - Mexicali (Spanish)

**NEW!** Analysis of PM2.5 Air Quality and Meteorological Data: Calexico, California, and Mexicali, Baja California (English)  
**NEW!** Analisis de la calidad del aire en cuanto a PM2.5 y datos meteorologicos: Calexico, California y Mexicali, Baja California (Spanish)

### Other California-Mexico Efforts to Improve Air Quality in the Border Region

**Border 2020**  
Border 2020 utilizes a bottom-up approach to tackling environmental issues in the border region. Programs under Border 2020 were established binationally and seek to improve air and water quality, reduce waste, strengthen emergency preparation and response, promote environmental stewardship and address environmental health. More information about the Border 2020 program can be found [here](#).

California-Mexico Memorandum of Understanding to Enhance Cooperation on Climate Change and the Environment  
In July 2014, California and Mexico signed a Memorandum of Understanding (MOU) to Enhance Cooperation on Climate Change and the Environment. This joint effort aimed to improve and protect the environment while ensuring sustainable use of natural resources to improve quality of life and increase trade and investment opportunities. The MOU was a four-year effort that ended in July of 2018 and contained four priority action areas: climate change, air quality, wildfires and clean vehicles. The MOU Fact Sheet can be found [here](#).

California-Mexico Border Relations Council  
The California-Mexico Border Relations Council (CMBRC) was created in 2006 (AB 3021, Nunez) and coordinates cross-border programs, initiatives, projects and partnerships along the California-Mexico border. The CMBRC serves as a representative body of the State of California whose goal is to continue to develop and enhance cross-border relations between California and Mexico.