Engage, Educate, and Empower California Communities on the Use and Applications of “low-cost” Air Monitoring Sensors

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for

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Outline

• Introductions
  – Project Background
  – Current Community Deployments

• Toolkit & Guidebook Overview

• Discussion Topics and Q&A
Project Background

- Environmental Protection Agency (EPA) Science to Achieve Results (STAR) Grant
- Awarded to South Coast AQMD, Sonoma Technology, and University of California, Los Angeles (UCLA)
- Work with California communities to increase awareness and address local air quality issues

Main Objective

Provide communities across California with the knowledge necessary to appropriately select, use, and maintain “low-cost” sensors and to correctly interpret the collected data
Community Deployments
Developing a Toolkit

• Guidebook
  – Best practices
  – Issues to consider during planning and measurement stages
  – Data handling and interpretation

• Training Videos

• Data Collection Checklist

• Surveys
Guidebook Topic Areas

1. Introduction
   What makes a project successful?

2. Understanding Air Quality
   Air quality basics & monitoring air quality fundamentals

3. Planning Your Project
   • Framing the problem
   • Identifying pollutants of interest
   • Where and when to measure
   • Selecting a sensor system

4. Deploying your sensors
   • Using and troubleshooting your sensor
   • Collecting useful data
   • Interpreting your data

5. Taking Action
   • Communicating results
   • Mitigation and outreach

6. Resources
   • Links to more information
   • Resources and citations
1. Introduction

• What makes a project successful?

• Match goals and expectations to project design

• Communicate limitations (if any) early-on
2. Understanding Air Quality

- What is air pollution?
- How does air pollution impact our health?
- How is air pollution measured?
3. Planning Your Project

• What are the air quality issues concerning our community?
• What pollutants may be of concern?

• Frame the issue
• Define SMART project goals
3. Planning Your Project (2)

- Where, when, and how can we measure?
- How do we select a sensor (or other) monitoring system?
3. Planning Your Project (3)

• How can we engage our community and encourage participation?

WEDNESDAY, FEBRUARY 28, 2018
AIR QUALITY COMMUNITY MEETING
South Coast Air Quality Management District (AQMD) and the
South Gate Community Environmental Health Action Team
(CEHAT) will be providing the community with air quality sensors
to gain a better and more accurate understanding of how air
quality changes in the city of South Gate. The sensor will collect
real-time data on particulate matter (PM 2.5), ozone, and other air
pollutants. Sensors will be mounted outdoors throughout the
community and will require a wireless internet connection. Data
will be available to the public, helping you become more informed
about the air quality in your area. If interested in participating, you
must plan to live in your residence until at least July 2020 and
provide WiFi to the sensor. Please join us on Wednesday,
February 28th at 6pm at South Gate Museum to learn more.
Sensors are available on a first-come, first-served basis.

For more information contact:
Haylee Becerra
323-363-5594
hbecerra@aqmd.org

What’s in our air?
Alhambra residents! Are you interested in learning more about
our local air quality? Come to an informational session to learn
how you can host an air quality sensor at home and contribute to
local data gathering that can help better understand our air

Mark Keppel High School
Friday, December 8, 2017
6:00pm - 8:00pm
RSVP to schan@apifm.org

This is a joint project of API Forward Movement and the
South Coast Air Quality Management District.
4. Deploying Sensors (1)

- Where should we install sensors?
- What are common problems with sensors?
4. Deploying Sensors (2)

• How do we view the data and what does it mean?
5. Taking Action

What are actions that can be taken?

- Personal/Individual Actions
  - Personal exposure-avoidance
  - Education and awareness
  - Data analysis (‘citizen science’)

- Group Actions and Campaigns
  - No-idle campaign at schools
  - Identifying Violations Affecting Neighborhoods (IVAN)
    [www.ivanonline.org](http://www.ivanonline.org)
  - Sharing results at civic meetings
6. More Resources

- Air District Web Pages
  - South Coast AQMD (http://www.aqmd.gov/)
  - Bay Area AQMD (http://www.baaqmd.gov/)
- Information about California Assembly Bill 617 and the Community Air Protection Program (https://ww2.arb.ca.gov/our-work/programs/community-air-protection-program)
- EPA's AirNow provides real-time information nationwide (https://airnow.gov/)
- Latest air quality data for California (https://www.arb.ca.gov/aqmis2/aqmis2.php)