

AQ-VIEW: COMMUNITY AIR QUALITY VIEWER CARB'S STATEWIDE DATA PORTAL

January 16th, 2019

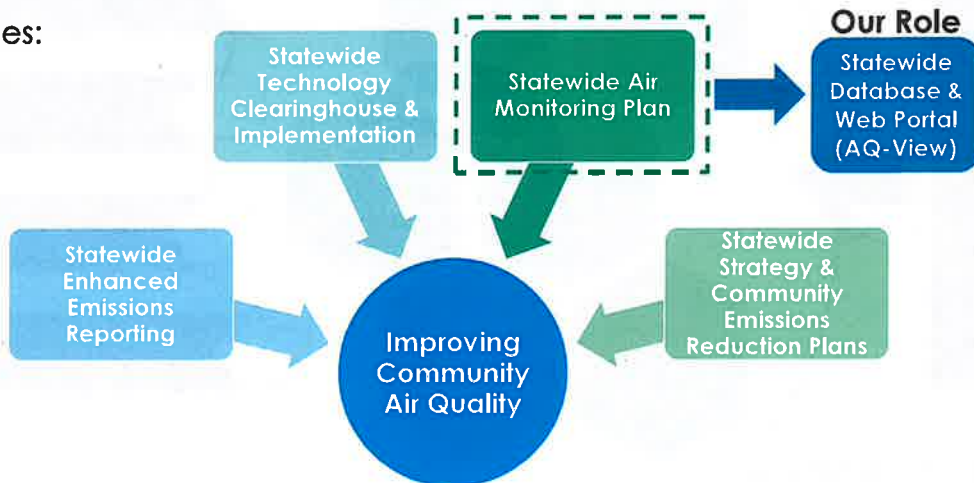
Mena Shah & Emily Gorrie



ASSEMBLY BILL 617 (AB 617)

AB 617 aims to improve air quality within California's most impacted communities with a shift in focus from regional to community level

CARB's Roles:



COMMUNITY AIR MONITORING

AB 617 – Year One

- 9 communities selected for **monitoring programs**
 - Monitoring efforts led by Air Districts
 - Required to follow 14 elements in Blueprint
 - PM, DPM, VOC, NOx, Pesticides, TACs, odors

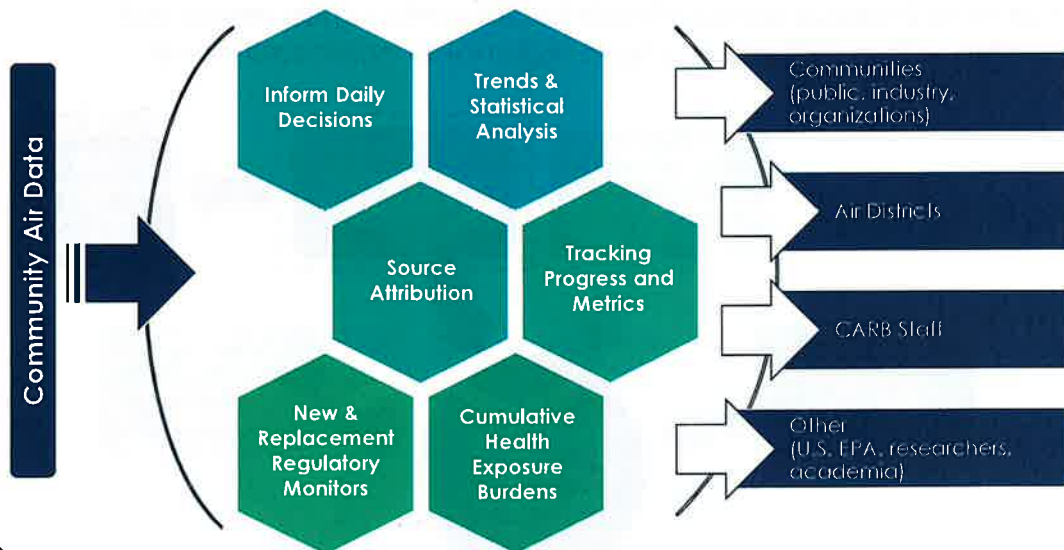
- 23 projects with monitoring selected for **Community Air Grants**
 - Monitoring efforts led by Community Based Organizations
 - Encouraged to follow 14 elements in Blueprint
 - PM, CO, NOx, O₃, CH₄, Cr⁶⁺, BC, TACs, BTEX

- Various monitoring objectives
- Combination of regulatory grade equipment and low-cost sensors



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DATA USES AND CLIENTS



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DATA PORTAL OUTREACH ACTIVITIES

Communities

- Community Members in San Diego, South Coast, San Joaquin Valley, Bay Area...
- Comité Civico Del Valle (CCV)
- Environmental Health Coalition (EHC)
- Physicians for Social Responsibility (PSR-LA)
- Central Valley Air Quality Coalition (CVAQ)
- Central California Environmental Justice Network (CCEJN)
- Central California Asthma Collaborative (CCAC)
- All Positives Possible
- Groundwork Richmond
- Bayview Hunters Point Community Advocates
- City of Richmond

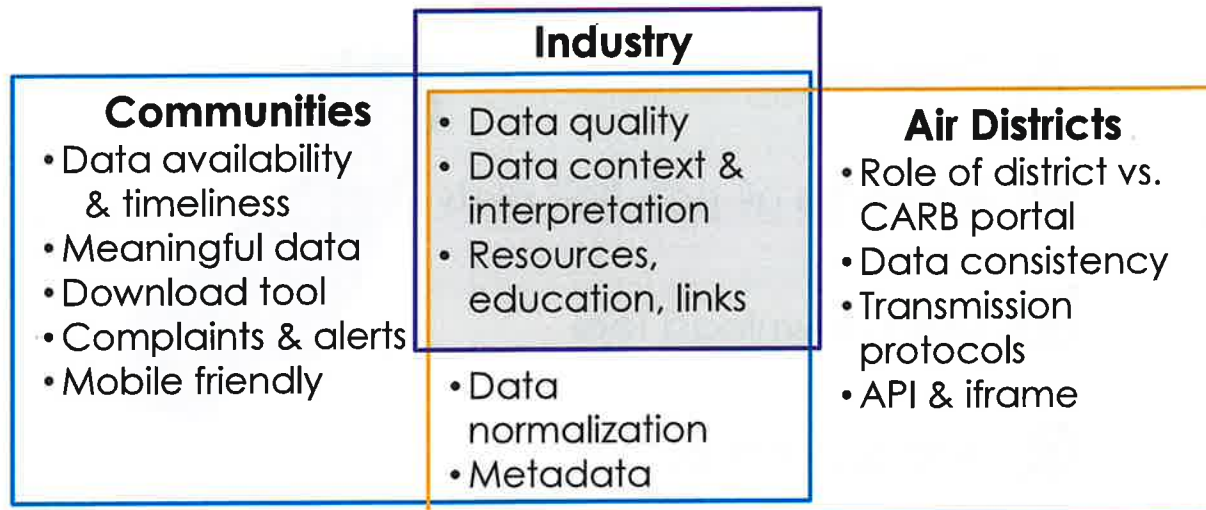
Local Air Districts

- San Diego APCD
- South Coast AQMD
- San Joaquin Valley APCD
- Bay Area AQMD
- Sacramento Metropolitan AQMD

Industry

- Western States Petroleum Association (WSPA)
- California Council for Economic and Environmental Balance (CCEEB)

OUTREACH FEEDBACK



EXISTING DATA PORTALS

← IVAN

← Air Watch Bay Area





Arvin Air Quality →

Air Now →

San Ysidro AQ & Border Traffic Study →

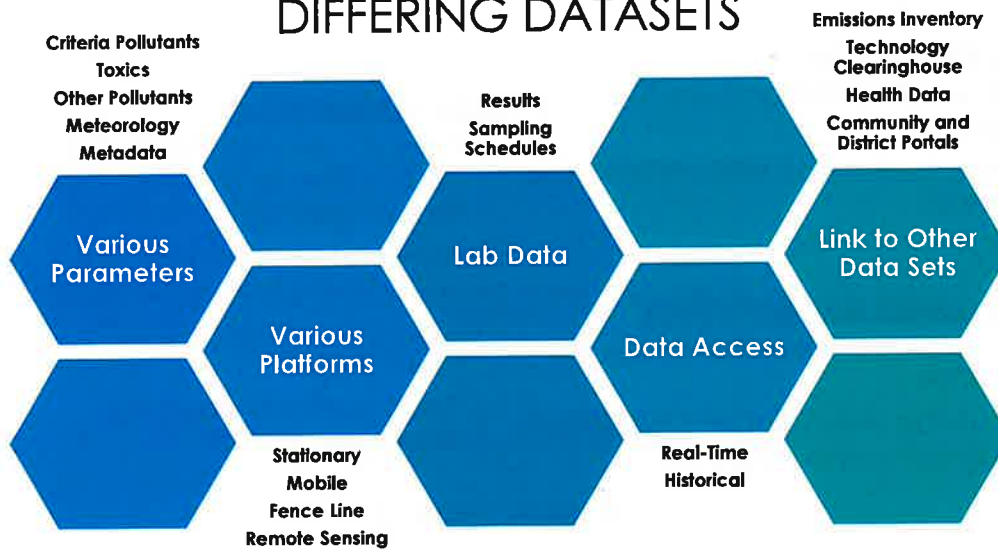
CALIFORNIA AIR RESOURCES BOARD

KEY FEATURES FOR DATA PORTAL

-  Web map
-  Real-time air pollution plots
-  Data download tool
-  Additional resources



CHALLENGE: DIFFERING DATASETS



CHALLENGE: REGULATORY MONITORS AND LOW-COST SENSORS

Various monitoring technologies produce data of different quality
→ How do we show all data together so that it is meaningful?

Design ideas:

- 1) Layers based on quality
- 2) Contour Map
- 3) Adjust data for consistency



MORE CHALLENGES

Data acquisition

- How will CARB acquire the data?
- How soon will CARB acquire the data?

Data quality and limitations

- How accurate/reliable are the data?
- How do we indicate changes in reliability over time?

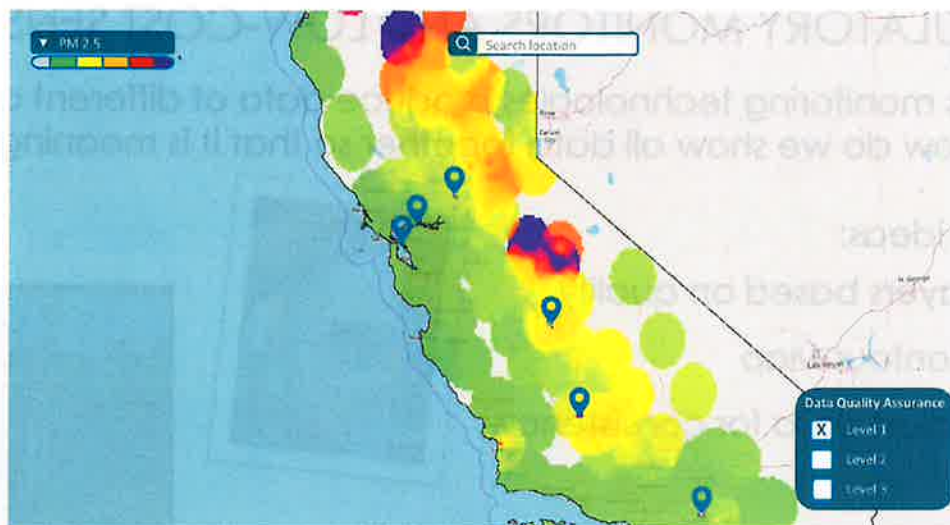
Data interpretation

- How do we include as much information as possible in a simple and clean display?
- How do we represent the various levels of data quality?
- How can we ensure data are meaningful?
- What formats/colors for displaying data?

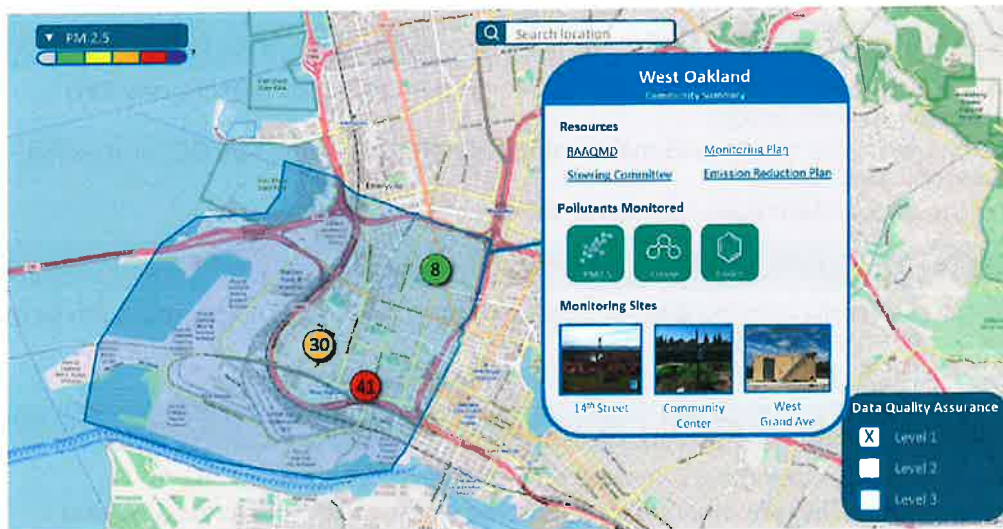
& many more...!

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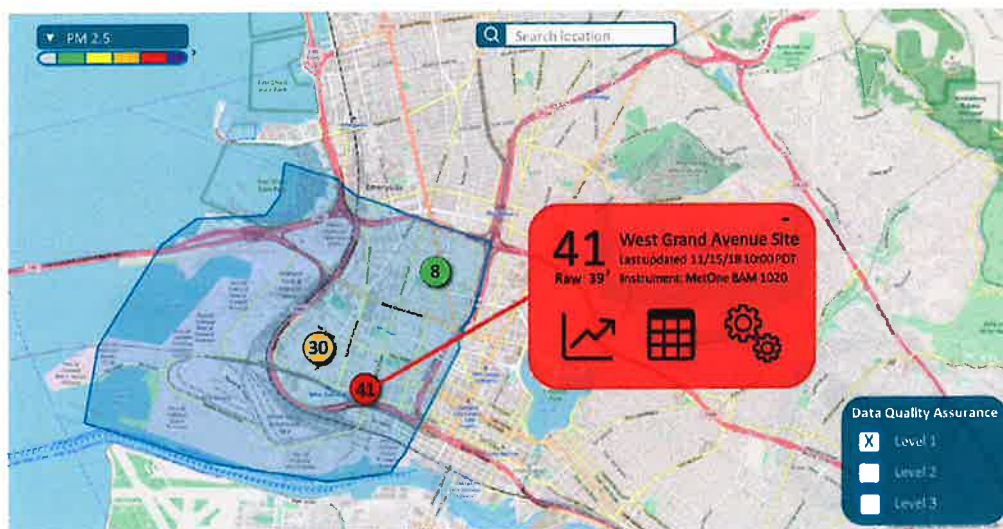
DATA PORTAL MOCKUP



DATA PORTAL MOCKUP



DATA PORTAL MOCKUP



PROJECT VISION

Short Term (by the end of the ERG contract - July 2019)

- Work internally (with CARB) and externally with communities, air districts, and ERG (contractor) to finish design
- Develop system: Air quality and meteorological data collection, QA/QC, processing, visualization, and reports
- Store and display community and air grants data

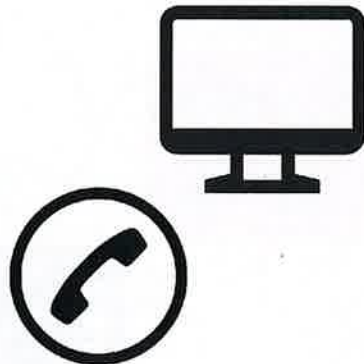
Mid Term (within 2 years after the ERG contract - 2021)

- Add data from new communities, air grant projects, and additional sources such as mobile monitoring and satellite data
- Identify location of emission sources and publish on our web pages

Long Term (within 5 years after the ERG contract - 2024)

- Develop tools for calculating summary statistics to track progress
- Develop tools to link with other emission and meteorological data related systems
- Maintenance and update to accommodate new needs and requirements

CONTACT US



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