AB 617 Community Air Protection Program Steering Committee Meeting Draft Agenda

4/23/2019

6:00 pm – 8:00 pm

Perkins Elementary School (1770 Main Street, San Diego, 92113)

Note: A mobile monitoring vehicle was made available for viewing in the parking lot prior to the commencement of the meeting.

- Opening Remarks
  - Introduce Newest Member: Andrea Lopez-Villafana
  - Approval of 3/21/19 Meeting Notes and tonight's agenda
    Meeting Notes were approved
  - AB-617 Consultation Group Meeting Update
    - ❖ Discussed best practices
      - ✓ Trend is to have facilitator, should we?
        No direct comments.
      - ✓ Get feedback from committee on effectiveness of meeting, next meeting's agenda (hand out provided to get feedback)
        Comments were solicited
      - ✓ CARB's Liaisons to Communities
  - License Reader Update

- Steering committee vote on 2 new members
  - 1 Union representative seat – Sal Abrica (Teamsters)
  - 1 National City government official seat
    Both members were approved by majority vote of the Steering committee
- Public Comments
  - Each speaker is limited to 3 minutes

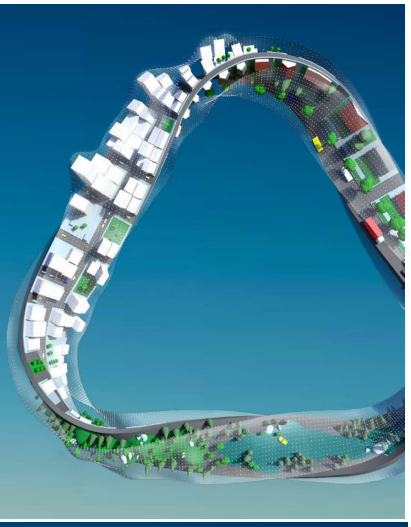
  There were no public comments during this period

- Update on Mobile Monitoring (Aclima)

aclima

Environmental intelligence
for people and the planet

April 2019



Agenda

- Hyper-local Mapping Review & County Contract 559672
- Progress
- Initial Findings

ACLIMA CONFIDENTIAL AND PROPRIETARY 2019

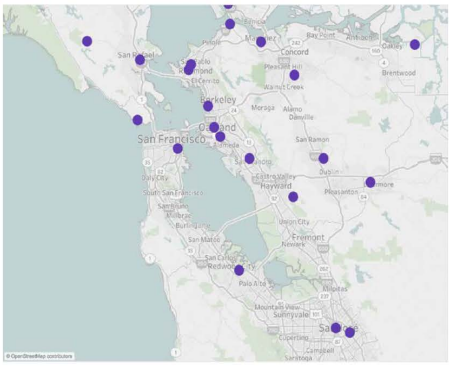
aclima

Hyper Local Mapping

ACLIMA CONFIDENTIAL AND PROPRIETARY 2019

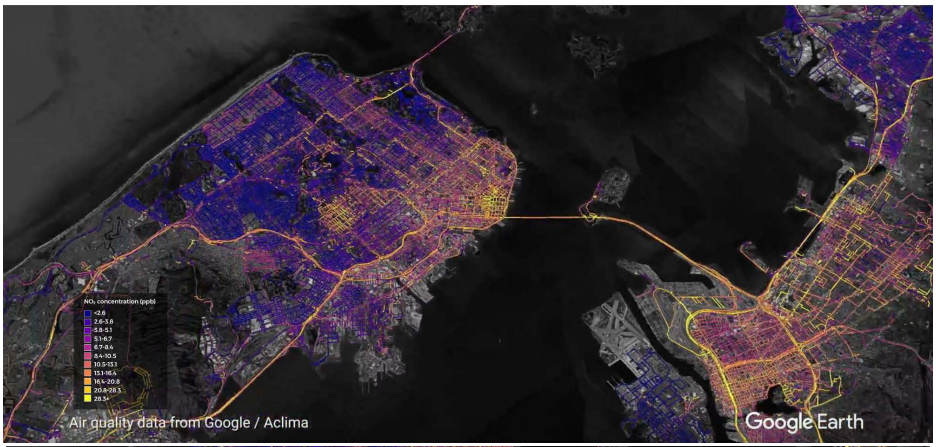
aclima.

Today: Sparse Coverage, Low Resolution



aclima.

Aclima Future: Hyper-local, high resolution



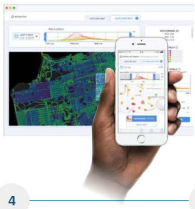
Measuring what matters

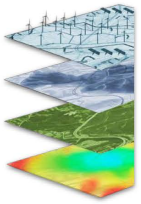
For a multi-pollutant view, we measure critical air pollutants, greenhouse gases, and more:

- Black Carbon
- Carbon Dioxide (CO_2)
- Carbon Monoxide (CO)
- Methane (CH_4)*
- Nitric Oxide (NO)
- Nitric Dioxide (NO_2)
- Ozone (O_3)
- Particulate Matter (PM2.5)
- Total Volatile Organic Compounds (TVOC)*
- Meteorology
- +More

aclima.

A Unified Platform





1 — **Stationary & Mobile Sensors**
Best-in-class data quality

2 — **End-to-end network management**
Enabling unprecedented scale and block-by-block resolution

3 — **Data Management + Analytics**
Synthesis of Aclima and integrated third party data to derive insights

4 — **Software Tools**
Intuitive software tools for experts and citizens to drive action

5 — **Data integration for diagnosis + action**
Wind, land-use, health data and more

ACLIMA CONFIDENTIAL AND PROPRIETARY 2019

aclima.

In Partnership with Districts

Empowering rapid and effective AB 617 implementation, maximizing district resources and investment, supporting community engagement and responsiveness, and unlocking new science and innovation.

Bay Area Air Quality Management District

APCD Air Pollution Control District County of San Diego

South Coast AQMD

ACLIMA CONFIDENTIAL AND PROPRIETARY 2019

aclima.

In Partnership with Communities

Aclima's participatory development process engages community members directly in technology design.

ACLIMA CONFIDENTIAL AND PROPRIETARY 2019

aclima.

Benefits of the Aclima Platform

Diagnose

- IDENTIFY HOTSPOTS & SOURCES
- UNDERSTAND GREENHOUSE GASES
- REVEAL EXPOSURE
- INTEGRATE LAND USE

and Act

- TARGET INTERVENTIONS
- ENGAGE COMMUNITIES
- TRACK PROGRESS
- OPTIMIZE INVESTMENT

ACLIMA CONFIDENTIAL AND PROPRIETARY 2019

aclima.

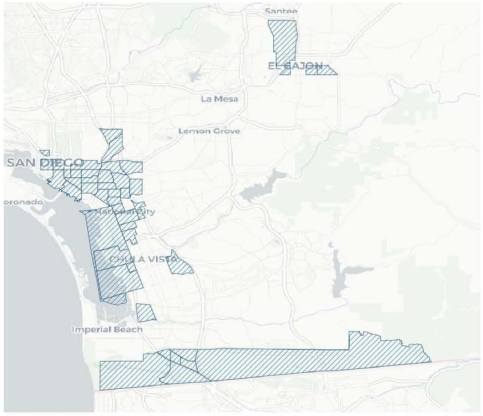
Progress

ACLIMA CONFIDENTIAL AND PROPRIETARY 2019

aclima.

Summary Statistics March 1- 30

- Mobile data collection began March 1, 2019
- 8,920 miles of data collection to achieve 20 runs in each of the 6 service areas
- Aclima completed 2,802 miles in March which equates to 31% progress
- As of March 30, each tract has been at least partially driven on average 7.4 times

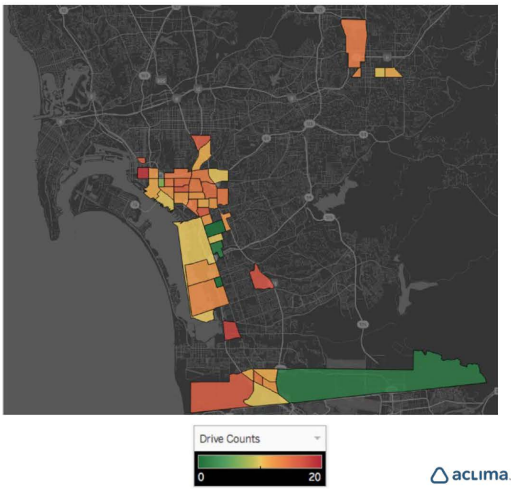


ACLIMA CONFIDENTIAL AND PROPRIETARY 2019

aclima.

Current Status

- On track for 20 runs by end of May/first half of June.
- Redder tracts have more complete runs, greener tracts have fewer complete runs.



ACLIMA CONFIDENTIAL AND PROPRIETARY 2019

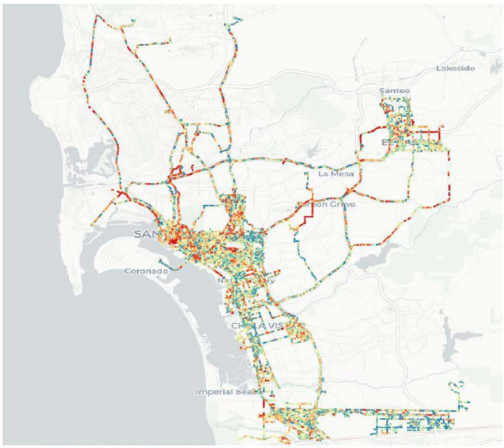
aclima.

Initial Findings

ACLIMA CONFIDENTIAL AND PROPRIETARY 2019

aclima.

Preliminary Mean Black Carbon aggregated by road segment

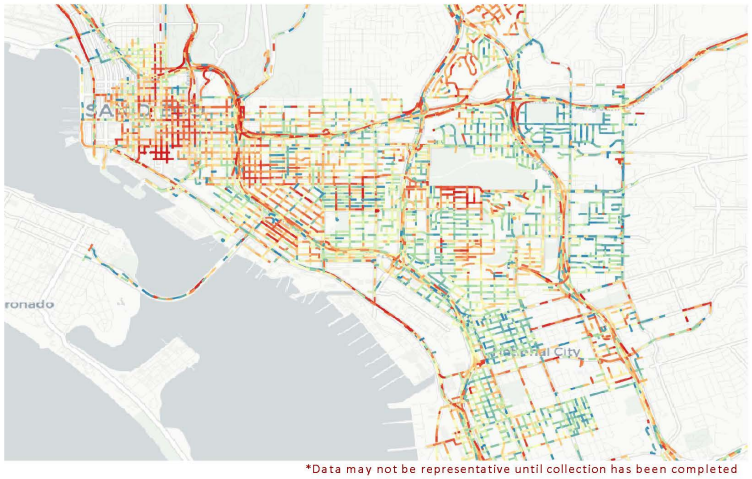


— 0 μ/m³ to
— 6.0 μ/m³

*Data may not be representative until collection has been completed

ACLIMA CONFIDENTIAL AND PROPRIETARY 2019

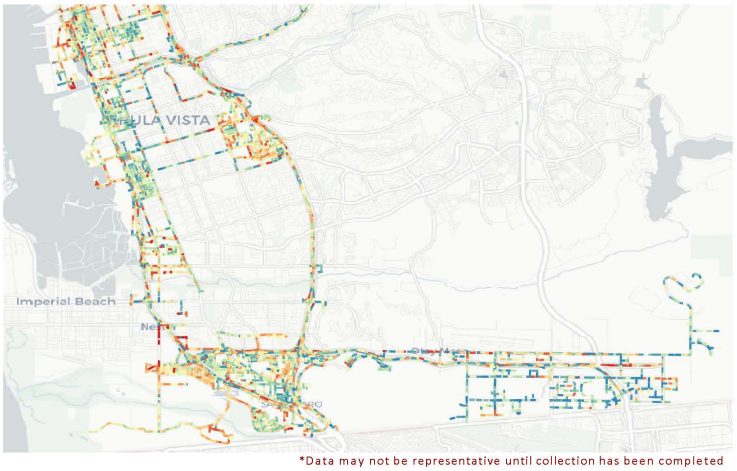
aclima.



*Data may not be representative until collection has been completed

ACLIMA CONFIDENTIAL AND PROPRIETARY 2019

aclima.

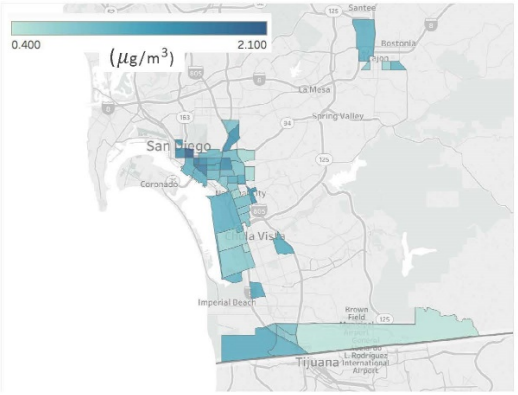


*Data may not be representative until collection has been completed

ACLIMA CONFIDENTIAL AND PROPRIETARY 2019

aclima.

Preliminary Mean Black Carbon aggregated by census tract

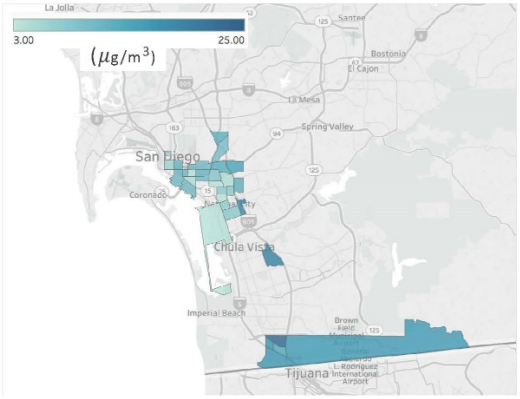


*Data may not be representative until collection has been completed

ACLIMA CONFIDENTIAL AND PROPRIETARY 2019

aclima.

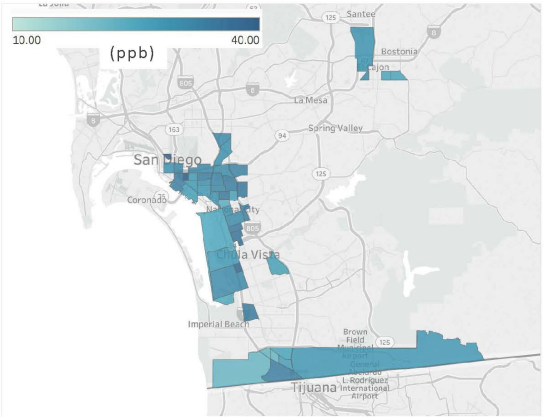
Preliminary Mean PM 2.5 aggregated by census tract



*Data may not be representative until collection has been completed

ACLIMA CONFIDENTIAL AND PROPRIETARY 2019

Preliminary Mean Ozone aggregated by census tract



*Data may not be representative until collection has been completed

ACLIMA CONFIDENTIAL AND PROPRIETARY 2019

Thank You

- Question: To what testing standard is the data provided by this mobile monitoring proved to be accurate?
- Answer: The preliminary data provided by the mobile monitoring is to identify hot spots to better identify areas to conduct District monitoring.
- Question: Regarding the breakdown of the analyzed pollutants for mobile monitoring, can you please provide a breakdown of black carbon, Ozone, CO_2, $PM_{2.5}$?

- Answer: Black carbon is a granular form of pure carbon that is the primary component of soot from diesel fueled vehicles; Ozone is formed from the reaction of oxygen-containing compounds with other air pollutants in the presence of sunlight; CO_2 is a growing pollutant from vehicles as it is one of the products of combustion. The carbon in the fuel bonds with the oxygen in the air. $PM_{2.5}$ is particulate matter that is less than or equal to 2.5 micrometers in diameter. The size of this particulate is a concern as it can penetrate deep within the lungs. As a comparison, a strand of human hair is much larger than 2.5 microns (75 microns).
- Question: How does the mobile monitoring data consider routes that are based solely on freeway pollutants versus routes that are adjacent to industry?
- Answer: This data and data statewide will be captured in a CARB database that will be available so comparisons can be made.
- Question: What times are the cars running?
- Answer: 24-hrs; in shifts of 8-10 hours
- Question: The accuracy of the particulate sensor is 20%. How is that considered accurate?
- Answer: The sensor is collocated with an EPA FRM/FEM instrument. The sensor is then adjusted to read the same as the FRM instrument. 20% is considered by EPA as acceptable.
- Question: What does FRM mean?
- Answer: Federal Reference Method.

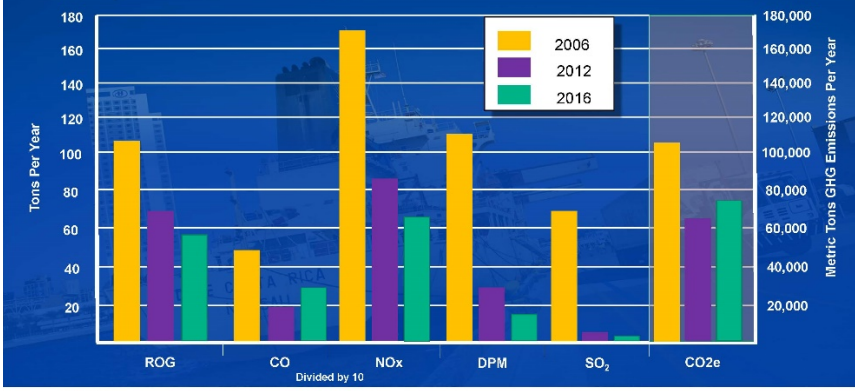
- Larry Hofreiter (Port of San Diego)
  - Update on Port's Future Emission Reduction Plans

PORT of SAN DIEGO

Maritime Air Emissions Inventory

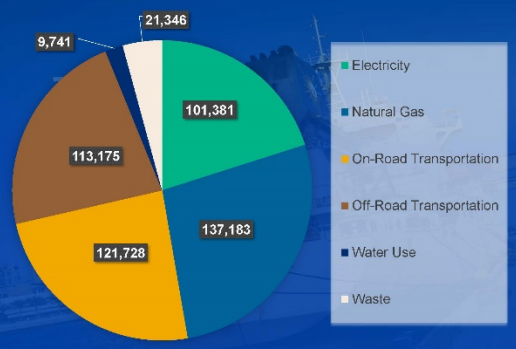
- Tracks emissions dating back to 2006
- Represents the third maritime-related air emissions inventory
- Emissions are estimated based on activities and characteristics of equipment
- Provide comparison and analysis of trends
- Informs the Climate Action Plan

Comparison of Results



PORT of SAN DIEGO

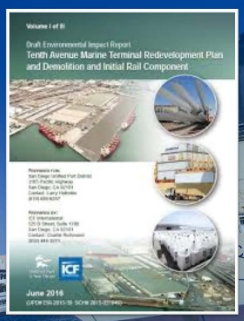
Port-Wide Greenhouse Gas Emissions



- 47% of Port-wide emissions from transportation-related sources
- 13% of Port-wide emissions from maritime-related sources
- Passenger vehicles are the highest source of transportation emissions

PORT of SAN DIEGO

Tenth Avenue Marine Terminal Program EIR



- BMPs for Diesel Equipment during Operation
- Conveyor System for Dry Bulk with 95% control efficiency
- Vessel Speed Reduction Program
- At-Berth Emission Capture and Control System
- Renewable Energy
- Electric Cargo Handling Equipment Upgrades

PORT of SAN DIEGO

- Question: Is actual monitoring data used to determine data points in the emission inventory?
- Answer: No, the data is based on modeling only.
- Question: How do you apply for these grants and what do they apply to?
- Answer; I'll let Kathy answer that.
- Answer Kathy: Agencies and companies can apply for these grants.
- Question: Do the programs still require projects to scrap old equipment to qualify for incentives.
- Answer Kathy: Yes, old equipment have to be destroyed to qualify for new equipment.

- Presentation on State's Mobile Emission Rules (Liliana Nunez, CARB)

CALIFORNIA
AIR RESOURCES BOARD

Highlights on Statewide Strategies Benefitting Communities

Portside Environmental Justice Neighborhoods Steering Committee Meeting

April 23, 2019

1

Air Quality Agencies

Federal

U.S. EPA

Sets/enforces national air quality standards. Regulates interstate transportation.

Trains Ships Planes

State

CARB

Regulates mobile sources of air pollution, greenhouse gases, and consumer products.

Cars Trucks Buses

Local

Local Air Districts

Regulate stationary and local sources of air pollution.

Factories Refineries Residential woodstoves

CARB

2

Existing Regulations and Control Measures

Ports
- Commercial Harbor Craft
- Shore Power
- Ocean-Going Vessels Fuel Rule
- Cargo Handling Equipment
- Drayage Trucks

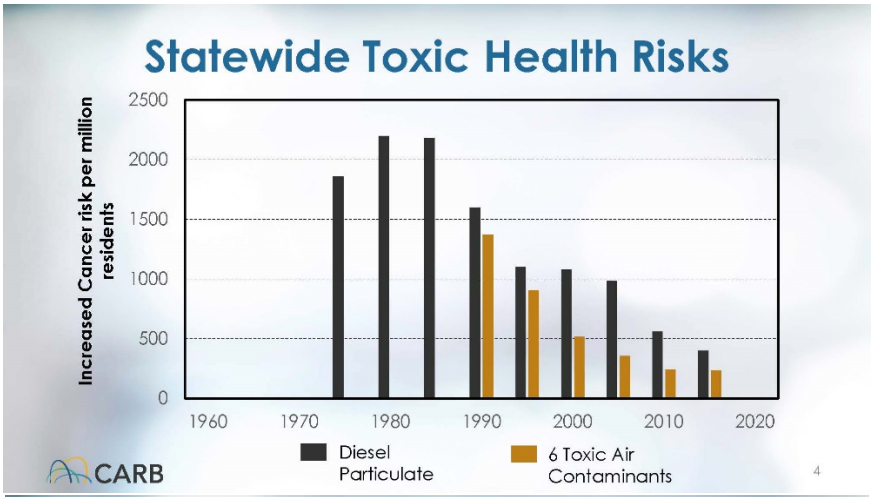
Rail
- Cargo Handling Equipment
- Drayage Trucks

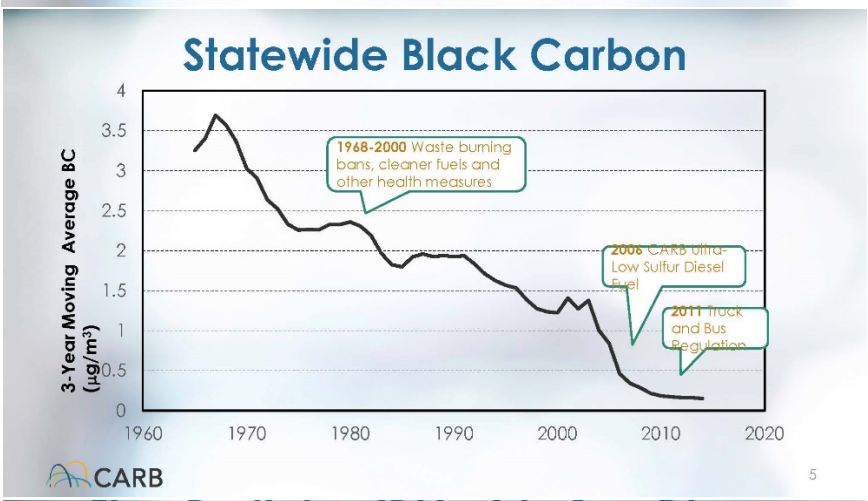
Mobile On-Road
- Truck and Bus Regulation
- Heavy-Duty Vehicle Inspection Program
- Truck Idling Control Measure

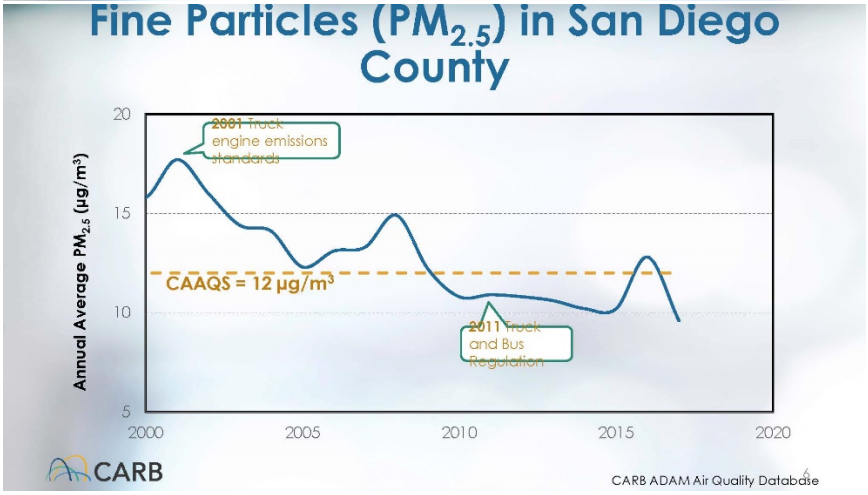
Mobile Off-Road
- Transport Refrigeration Unit
- Off-Road Diesel Vehicle Regulation
- Small Off-Road Engines

Other Toxics
- Chrome Plating Control Measure
- Composite Wood Control Measure

CARB


Statewide Toxic Health Risks
Increased Cancer risk per million residents
2500
2000
1500
1000
500
0
1960
1970
1980
1990
2000
2010
2020
Diesel Particulate
6 Toxic Air Contaminants
CARB
4

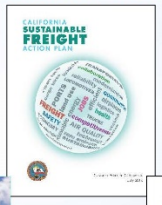

Statewide Black Carbon
3-Year Moving Average BC (µg/m³)
4
3.5
3
2.5
2
1.5
1
0.5
0
1960
1970
1980
1990
2000
2010
2020
1968-2000 Waste burning bans, cleaner fuels and other health measures
2006 CARB Ultra-Low Sulfur Diesel Fuel
2011 Truck and Bus Regulation
CARB
5

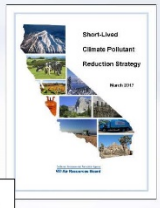

Fine Particles ($PM_{2.5}$) in San Diego County
Annual Average $PM_{2.5}$ (µg/m³)
20
15
10
5
2000
2005
2010
2015
2020
2001 Truck engine emissions standards
CAAQS = 12 µg/m³
2011 Truck and Bus Regulation
CARB
CARB ADAM Air Quality Database
4

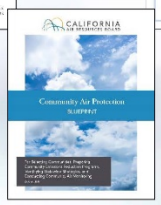
CARB EMISSIONS REDUCTION STRATEGIES

CARB

Recent Plans



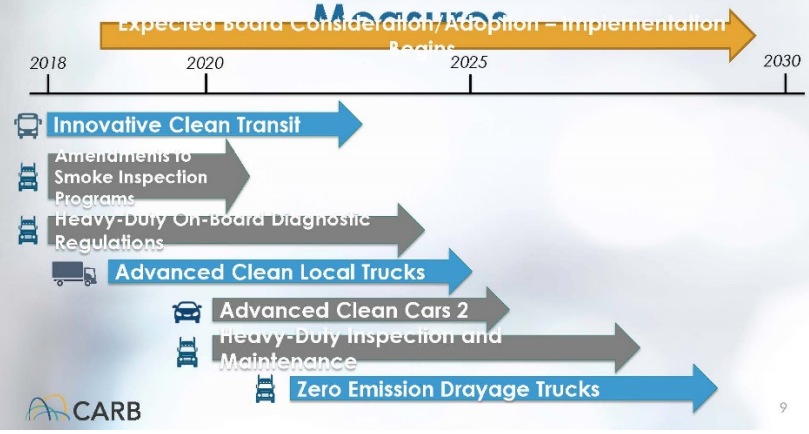




All dates for proposed rules are tentative and subject to change

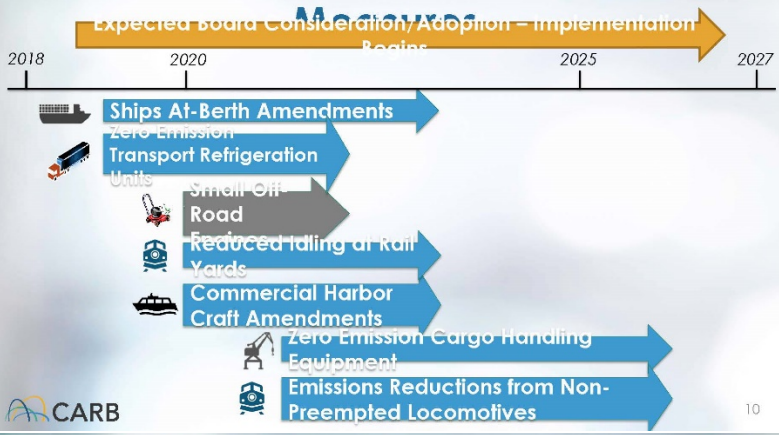
CARB

Proposed On-Road Mobile Source Measures



CARB

Proposed Off-Road Mobile Source Measures



CARB

10

Additional Proposed Control Measures

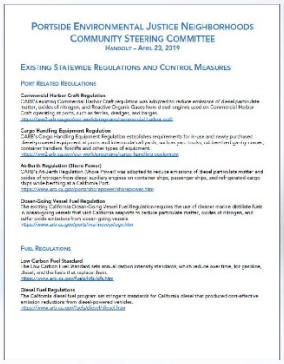
- Chrome Plating Control Measure Amendments
- Composite Wood Products Control Measure Amendments
- Commercial Cooking Suggested Control Measure

Expected Board Consideration Date= TBD

CARB

11

Handout



PORTSIDE ENVIRONMENTAL JUSTICE NEIGHBORHOODS COMMUNITY STEERING COMMITTEE

HANDOUT – APRIL 22, 2019

EXISTING STATEWIDE REGULATIONS AND CONTROL MEASURES

PORT RELATED REGULATIONS

Commercial Harbor Craft Regulation

CARB's existing Commercial Harbor Craft regulation sets adopted to reduce emissions of diesel particulate matter, oxides of nitrogen, and Reactive Organic Gases from diesel engines used on Commercial Harbor Craft operating at ports, such as ferries, dredges, and barges.

Cargo Handling Equipment Regulation

CARB's Cargo Handling Equipment Regulation establishes requirements for in-use and newly purchased diesel-powered engines and equipment, such as cranes, sweepers, and other specialized gas-powered container handlers, forklifts and other types of equipment.

At-Berth Regulation (Shore Power)

CARB's At-Berth Regulation Shore Power was adopted to reduce emissions of diesel particulate matter and oxides of nitrogen from diesel auxiliary engines on container ships, passenger ships, and refrigerated cargo ships while berthing at a California Port.

Ocean-Going Vessel Fuel Regulation

The Ocean-Going Vessel Fuel Regulation requires the use of cleaner marine distillate fuels in oceangoing vessels that visit California seaports to reduce particulate matter, oxides of nitrogen, and sulfur oxide emissions from oceangoing vessels.

FUEL REGULATIONS

Low Carbon Fuel Standard

The Low Carbon Fuel Standard sets annual carbon intensity standards, which reduce over time, for gasoline, diesel, and the fuels that replace them.

Diesel Fuel Regulations

The California diesel fuel program set stringent standards for California diesel that produced cost-effective emission reductions from diesel-powered vehicles.

CARB

12

Contact Us

Liliana Nuñez
Office of Community Air Protection, CARB
Liliana.Nunez@arb.ca.gov or 626-350-6561

Melissa Niederreiter, Community Liaison
Office of Community Air Protection, CARB
Melissa.Niederreiter@arb.ca.gov or 916-323-6576

CARB

13

- APCD Update on AB-617 Progress
    - Monitoring Update – David Shina, Andrew Langley

    Explanation of the different monitoring equipment that takes up a small footprint – combined units take up a parking lot sized space.
    Question: How loud are these units
    Answer: The units are on right now, which are quieter than the refrigerator in the meeting room. If it is identified that the placement of these units will cause noise pollution to nearby residents, a barrier will be constructed to reduce noise.
    Question: What will be the sampling frequency?
    Answer: For metals; every six days. For Elemental Carbon; every three days.

    - Emission Inventory Update – Omar Rana (ran out of time)
    - Inspection Update – Mahiany Luther (ran out of time)

- Closing Remarks
    - Discuss, Collect committee members feedback forms

Next scheduled meeting is 5/21/19 at Perkins Elementary School Cafeteria (1770 Main Street, San Diego, 92113 from 6:00 pm – 8:00 pm