

AB 617 COMMUNITY STEERING COMMITTEE

WILMINGTON, CARSON, WEST LONG BEACH

AUGUST 25, 2022

2:00 – 4:00 PM

[ZOOM MEETING LINK](#)



AGENDA



- CSC Member Updates
- Southern California Hydrogen Hub Project
- Update on Parter Sterilization Services
- Community Air Monitoring Plan (CAMP) Update
- Community Emissions Reduction Plan (CERP) Implementation Update
 - Annual Report
- Draft 2022 Air Quality Management Plan (AQMP) Overview
- Agenda Items for Next Meeting
- Public Comment

AB 617 WCWLB

CSC Member Updates



Southern California Hydrogen Hub Project



**US DOE Opportunity and Stakeholder Engagement
Process**

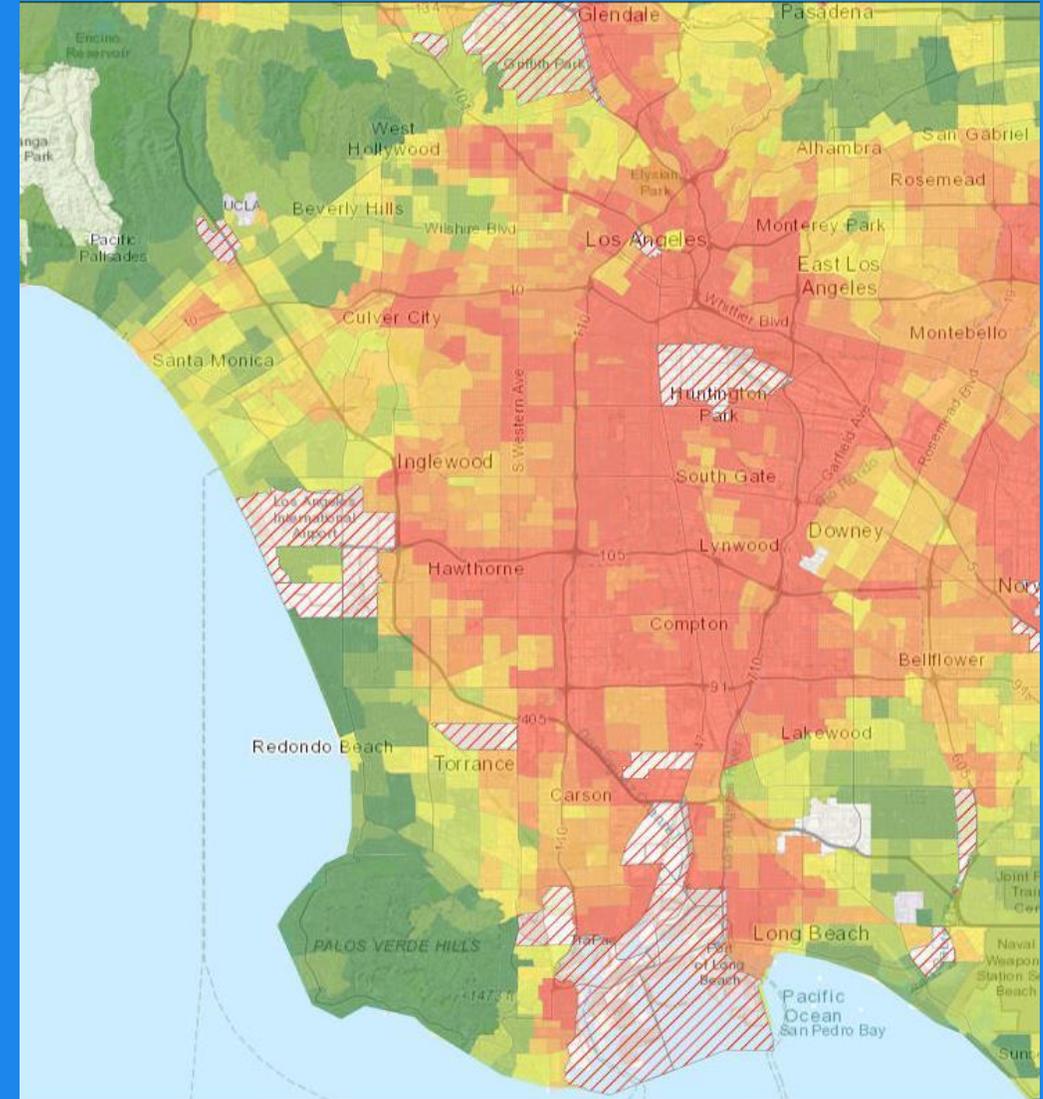
**Presentation to AB 617 Community Steering Committee
8-25-22**

Presentation Overview

- **The SoCal Hydrogen Hub Cluster is seeking ongoing input from you (and similar community groups)**
- **Agenda:**
 - **US Department of Energy (DOE) Clean Hydrogen Hubs Program**
 - **Hydrogen Economy: Safety and Sustainability Review**
 - **Potential Benefits**
 - **Southern California Cluster Process**
 - **Q/A**

Air Quality Challenges

- Local region has historically suffered from some of the worst air quality impacts in the United States
 - Ozone (smog); PM_{2.5}
- Disadvantaged communities disproportionately penalized for commerce



US DOE Clean Hydrogen Hubs Opportunity

- Regional Clean Hydrogen Hubs program - \$8 billion for large-scale hydrogen projects
 - Maximum grant award - \$1.25 Billion (or more)
 - Potentially equal match funding from the state of California
 - Private participants will be expected provide at least 50% match for their project(s)
- The State of California plans to submit a proposal
- Regional effort must be organized and diverse
 - Public Agencies
 - Local Advocates
 - Private participants
- The DOE intends for Hydrogen Hubs to advance equity for all, and solicit meaningful input from disadvantaged communities and underserved populations
 - DEI Plans, Justice40 Plan, Community Engagement

Upcoming Timeline

US DOE is expected to release the Funding Opportunity Announcement (FOA) sometime in September/October 2022

- Final requirements and limitations on spending will be included in the full FOA release
- No project(s) have been determined yet



Hydrogen (H₂) Production and Distribution Applications and Opportunities

Production

- Electrolysis
 - Renewable Power
- Sites TBD



Distribution

- Liquefaction plants
- Trucks/trailers
- Pipeline
- Fueling Stations



Storage

- Curtailed Renewables
- Salt-Caverns
- Mobile Trailers



**ALL HYDROGEN PRODUCED FOR THE
PROJECT WILL BE GREEN HYDROGEN!**

Hydrogen (H₂) End-Use Applications and Opportunities

Energy

- Power generation
- Curtailed renewables
- Load management

Transportation

- Light-Duty (LD)
- Medium/**Heavy-Duty** (MD/HD)
- **Material Handling**
- **Maritime**/Aviation/Rail (Ships, Trucks, Cargo Handling Equipment, Harbor Craft, Locomotives)

Industrial Decarbonization

- Concrete
- Ammonia
- Steel

Disaster Resilience

- Fuel cell generators
- ZE vehicles/transportation without the need for electrical grid



ALL HYDROGEN PRODUCED FOR THE PROJECT WILL BE GREEN HYDROGEN!

Engagement with environmental justice, environmental and community-based organizations

- Initial group of environmental stakeholders identified.
 - CCA, LA Water Keeper actively participating in weekly meetings.
- Outreach to environmental justice, environmental and other community-based organizations has begun via Hub members.
- Key issues identified (so far):
 - Maintain focus on green (renewable) hydrogen.
 - Directly address air quality and health impacts in communities impacted by pollution from goods movement.
 - Avoid repeating previous mistakes and inequitable policy decisions in terms of vehicle and infrastructure deployment.
 - Ensure investments in hydrogen result in direct economic benefits to the community while avoiding potential unintended harms.

Potential Benefits of H₂ Economy to Disadvantaged Communities

- **Job creation:** Generate 700,000 to 1 million new jobs by 2030
 - Technicians, installers, manufacturing professionals, trainers, insurers, educators, scientists, engineers, chemists, managers, etc.
 - Many of these will require associate's degrees, long-term on-the-job training, or trade certifications which pay higher than US average wages.
- **Job retention:** Much of the fossil fuel power and gas infrastructure today can be repurposed to retain skilled workers
 - Power plants, pipelines, storage assets, etc.,
 - Enables more affordable energy transition
- **Health benefits from emissions reductions:** Widespread deployment of hydrogen fuel cell technology will offer significant reductions in ozone pollutant concentrations and offer health benefits valued from \$3.21 to \$7.11 million per day (depending on the penetration by technology category).
 - Further, socioeconomically disadvantaged communities are found to experience larger health savings from FCEV deployment in contrast to the population as a whole.
 - Source: https://www.sciencedirect.com/science/article/pii/S1352231022000619?casa_token=46QPXca5e6MAAAAAA:uLRS74Jg-_vnHqK_WVY1t_nmMhXi6Bq_eGwu4FXt_xdlfUrV1zMehO4fonQnJUE6f4ft4hUJLg

Cluster Objectives



Pursue environmental justice and equity-based solutions that reduce emissions, create jobs, spur economic growth, benefit communities, and address environmental disparity.



Advance multi-sector decarbonization in Southern California by leveraging shared infrastructure and innovative, proven technologies



Foster a culture of innovation in pursuit of commercially viable technologies and net-zero solutions that accelerate decarbonization and maximize system-value outcomes.



Realize emissions reduction targets of more than 10 MMt CO₂e annually by 2035



Support GO-Biz in connecting hydrogen clusters across California and establish the foundations for an interconnected network across US

Potential Stakeholders

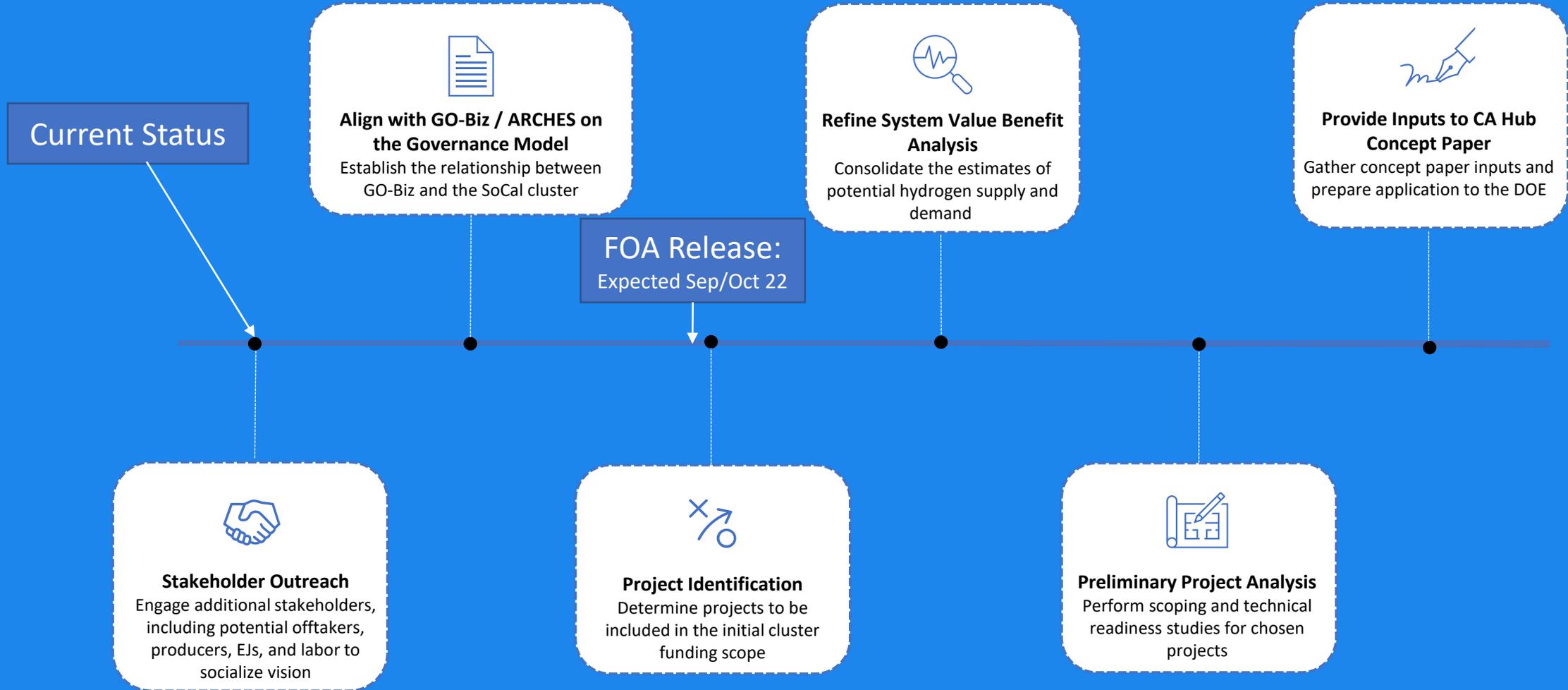
Seeking engagement with all stakeholders that have an interest in clean air, energy, and water, including solutions using green hydrogen. Organizations will work together as a “cluster” to work together to enable the sustainable growth of the new H2 economy in Southern California (SoCal Cluster).

This effort is in support of the California State’s statewide efforts.



Note: This is an illustrative list only

Timeline



Questions?

Next Steps

- AltaSea Workshop [TBD]
- Please reach out!

Contact:

Jacob Goldberg – POLA
jgoldberg@portla.org

Peter Ogundele – GNA
peter.ogundele@gladstein.org

Thank you!

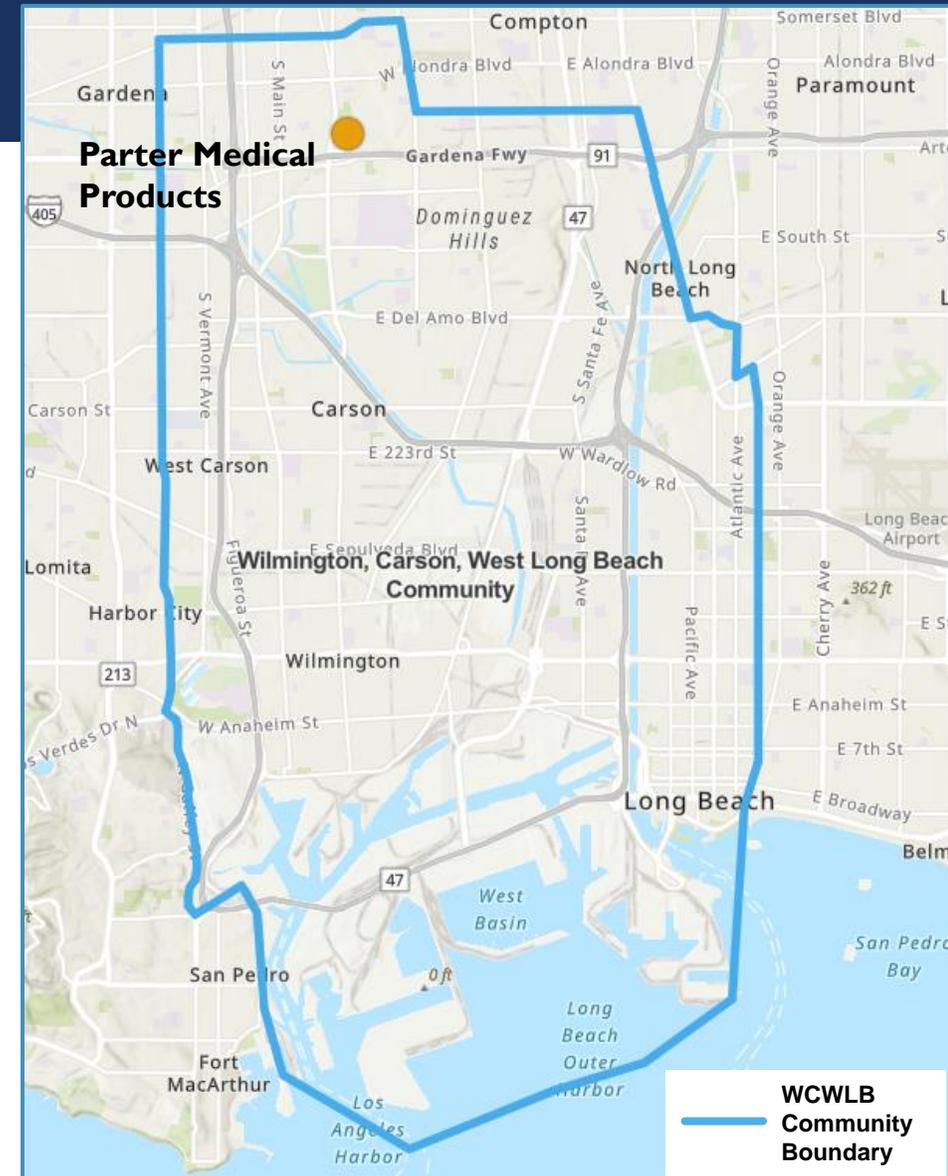
Parter Medical Products, Inc. Emissions Investigation in Carson



**Andrea Polidori, PhD
Director of Monitoring & Analysis**

BACKGROUND

- Ethylene oxide (EtO) is a flammable and colorless gas
 - Short-term exposure may cause headaches, weakness, nausea, difficulty breathing, eye/skin burns, and other effects
 - Long-term exposure increases the risk of certain type of cancers
- U.S. EPA and OEHHA are reassessing the toxicity of EtO
 - Reassessment prompted South Coast AQMD to conduct air monitoring near Parter Medical Products, Inc. (Parter) and other large sterilization facilities
- Parter conducts sterilization of medical equipment using EtO at one facility in Carson



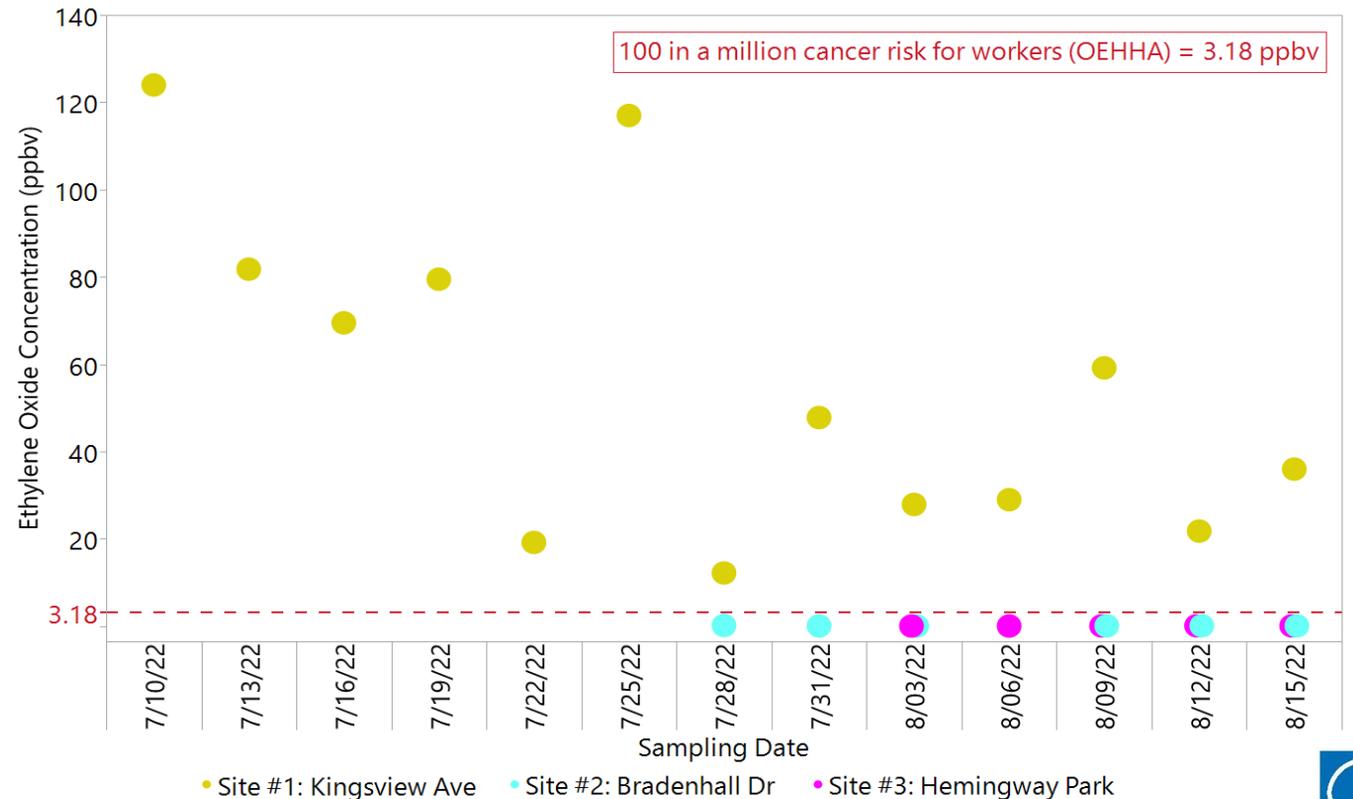
INITIAL MONITORING EFFORTS

- Nearest residential area is about 700 ft away; nearest school is about 2,000 ft away
- Conducted initial monitoring surveys and air sampling near the facility, in nearby residential areas, and near the school
- Results showed elevated EtO near the facility, which prompted expansion of monitoring efforts, which are ongoing



AIR MONITORING: 24-HR TIME-INTEGRATED ETO SAMPLE RESULTS

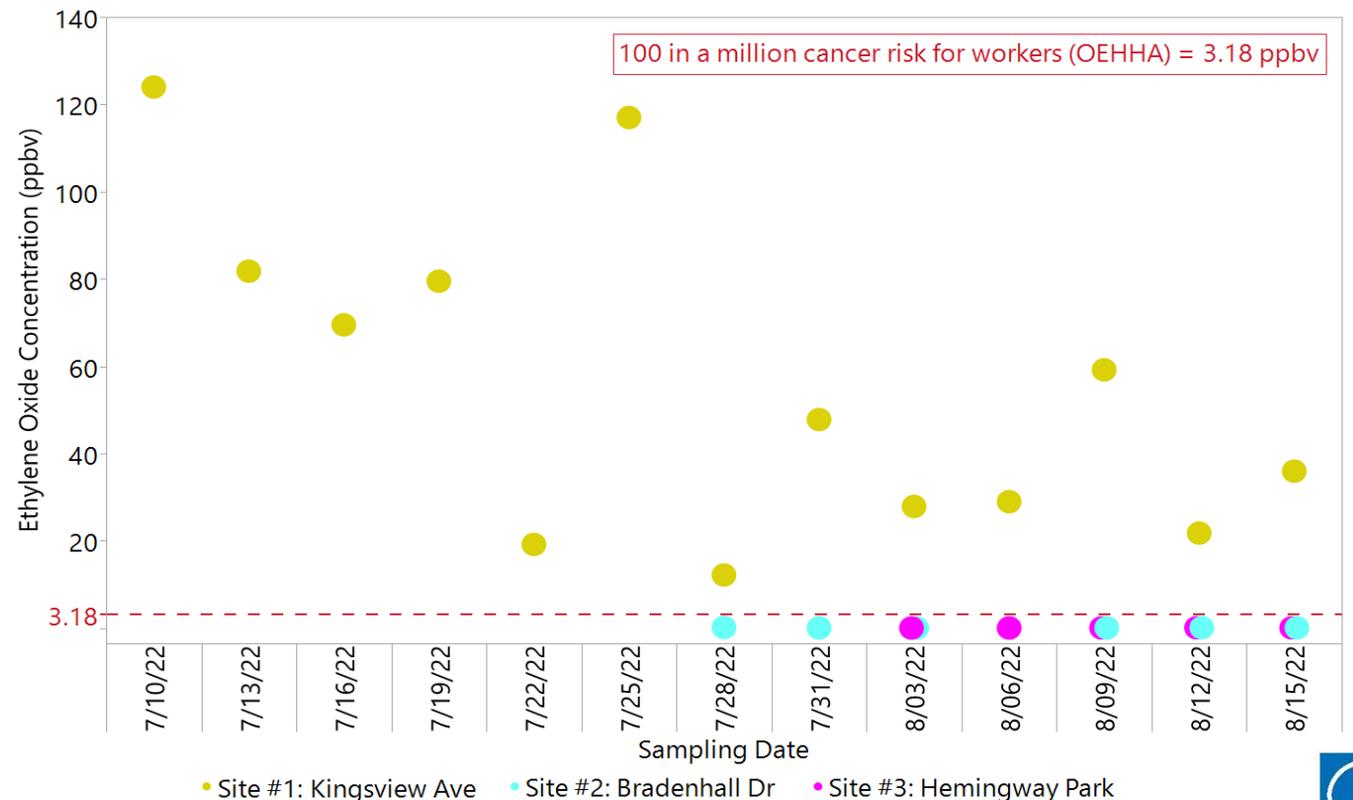
Sampling Locations*



*Sampling assistance provided by California Air Resources Board (CARB)

AIR MONITORING: 24-HR TIME-INTEGRATED ETO SAMPLE RESULTS

- Elevated health risk at neighboring businesses
- Long-term exposure to EtO over a number of years increases the risk of certain cancers
- Air monitoring results show that EtO levels drop off significantly moving away from the source
- EtO levels at Sites 2 and 3 near the community are at background levels



SOUTH COAST AQMD'S ACTIONS AND ONGOING ACTIVITIES

- Continue air monitoring efforts nearby the facility and near the surrounding community
- Evaluation of and implementation of immediate actions to be taken by the facility to reduce leaks or fugitive emissions, including increased leak checks and source testing
- Proposition 65 Notice
- Complete investigation into the facility's equipment and compliance with South Coast AQMD rules, regulations and permit requirements
- Issued a Notice of Violation (NOV)
- Notified Parter that South Coast AQMD may designate the facility as a Potentially High Risk Level Facility under its Rule 1402 which, if designated, will require Parter to quantify health risks and implement early risk reduction measures
- Initiated rulemaking to amend *Rule 1405 – Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization or Fumigation Processes* which will include additional provisions to address point and fugitive emissions

SUMMARY

- Elevated levels of EtO were measured near Parter, indicating elevated health risk levels at an offsite worker location
- Levels of EtO measured at monitoring sites near residential areas are within typical background levels
- Air monitoring efforts and investigation of the facility are ongoing
- South Coast AQMD continues to take actions to reduce EtO emissions, including:
 - Implementation of Rule 1402 that will require Parter to quantify its health risk and implement risk reduction measures
 - Amendments to Rule 1405 to strengthen provisions to further reduce point and fugitive EtO emissions

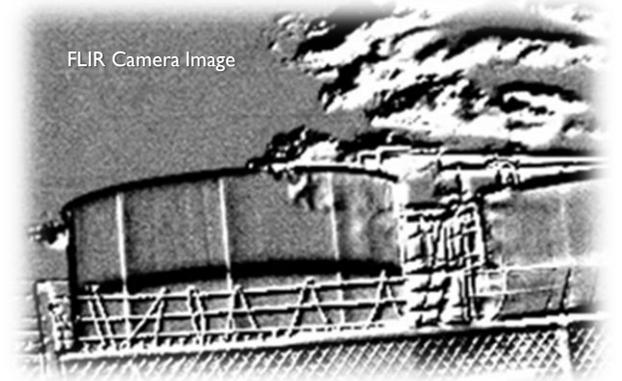
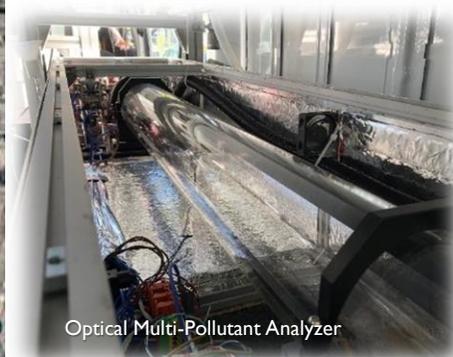
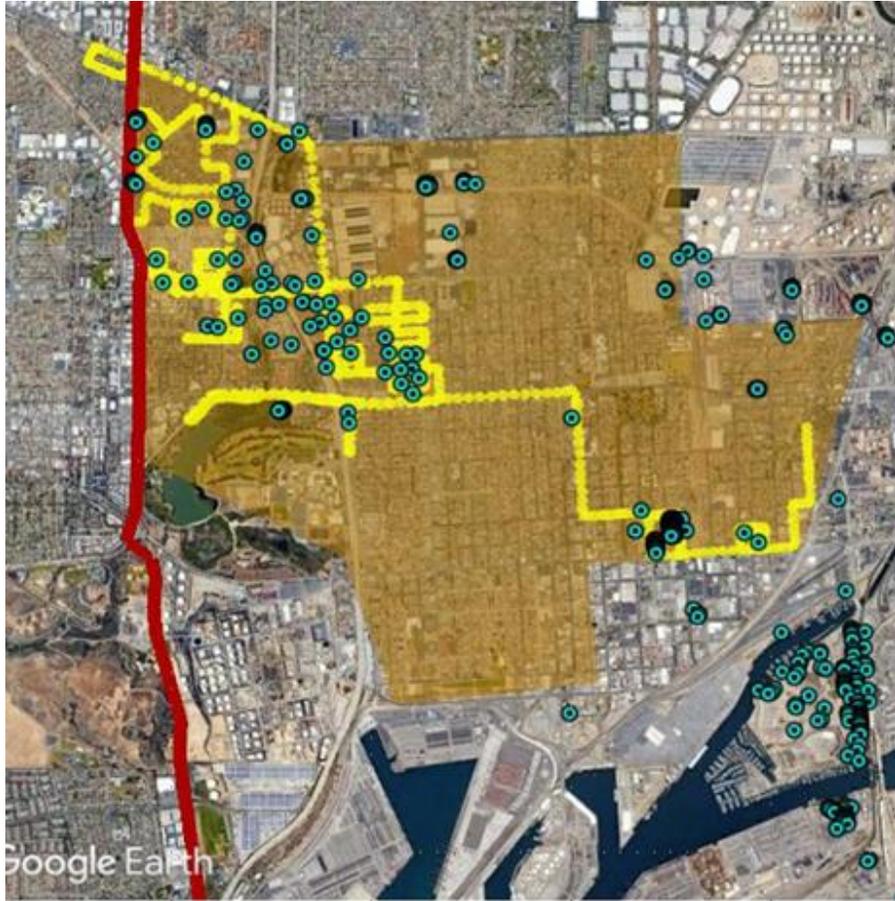
SOUTH COAST AQMD RESOURCES

- EtO Emissions Investigation: <http://www.aqmd.gov/home/eto>
- Parter Emissions Investigation in Carson: <http://www.aqmd.gov/home/news-events/community-investigations/parter>
(you can sign up here for updates on this issue)
- To receive notifications related to Parter you can also fill out the form at www.aqmd.gov/sign-up

CONTACTS



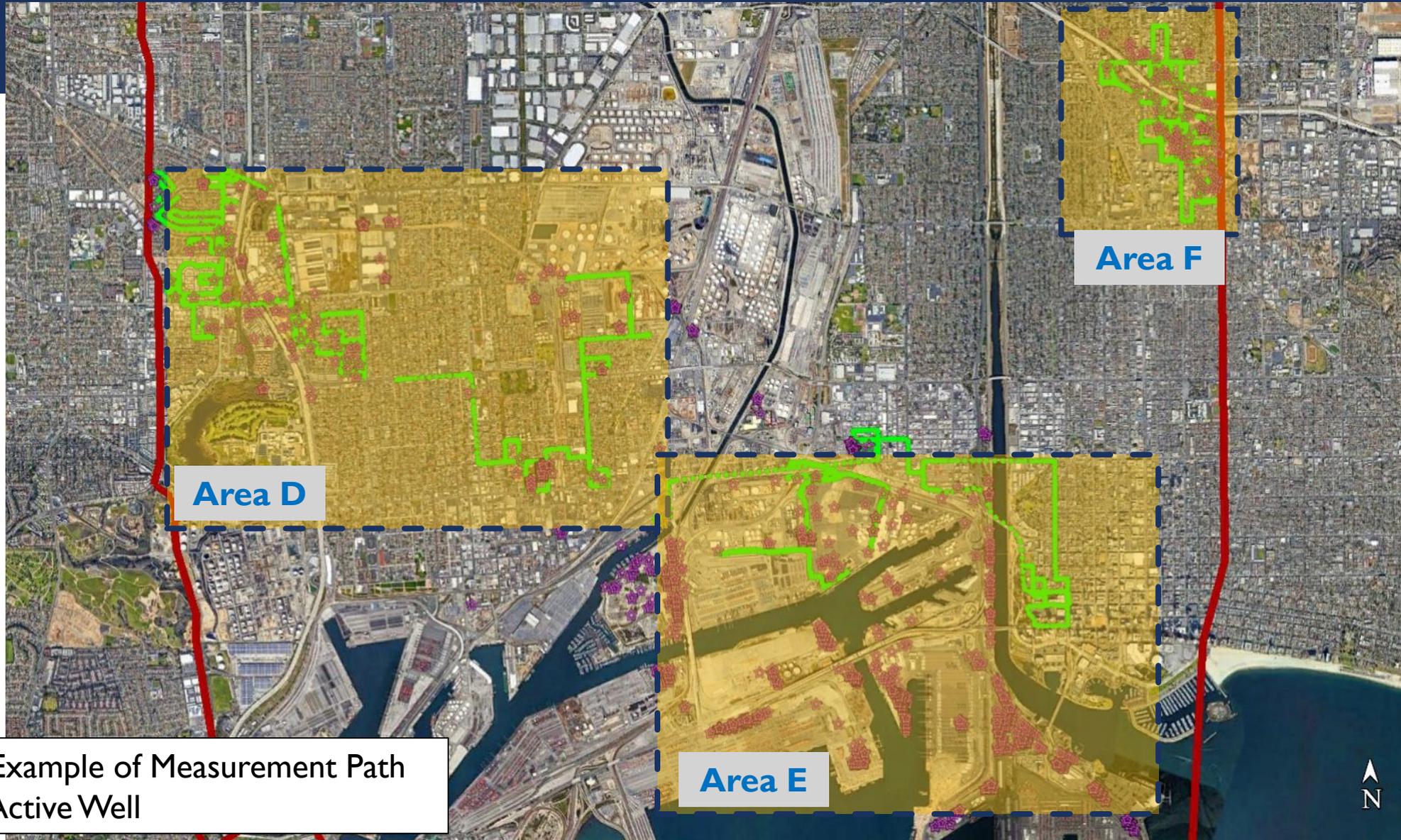
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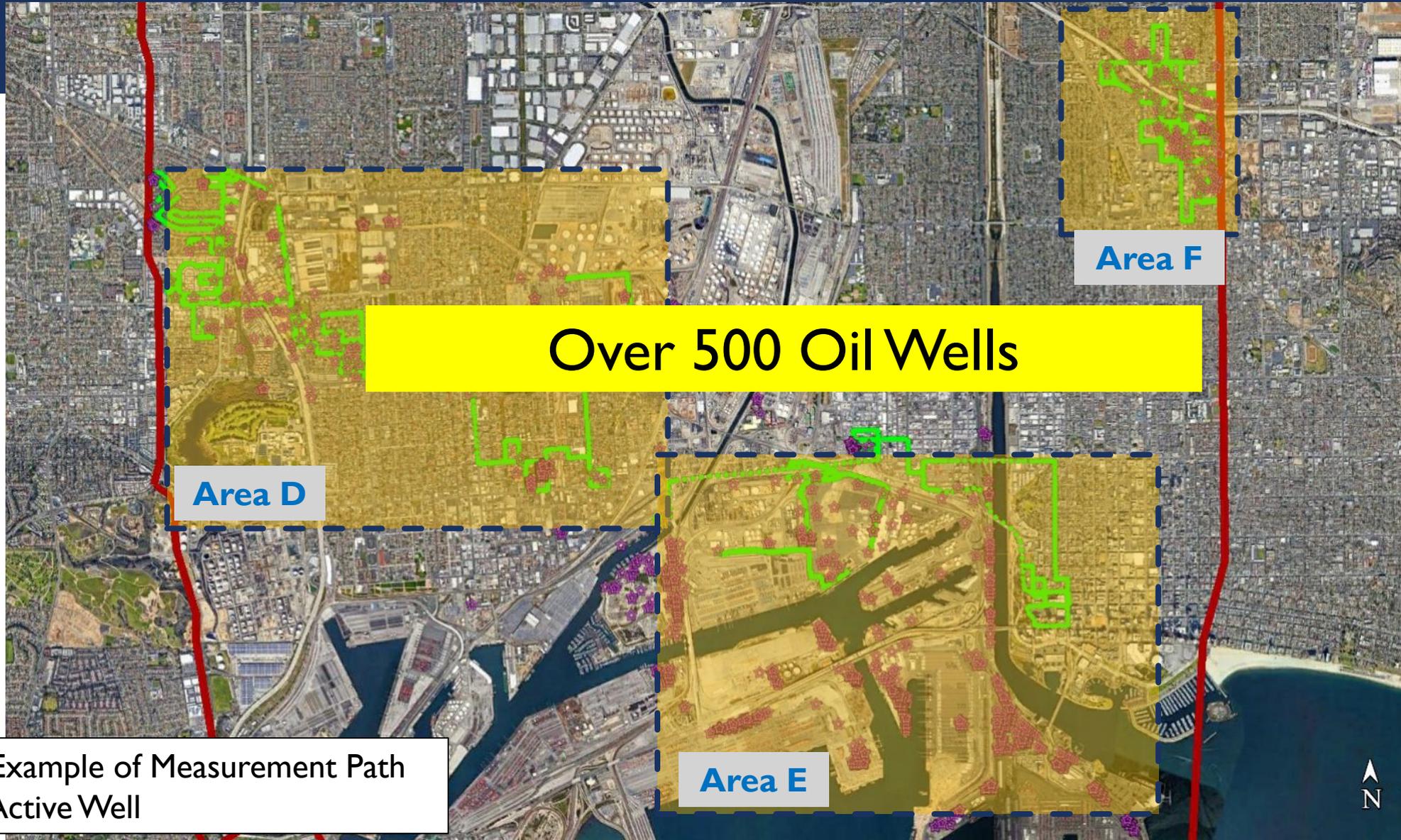
OIL AND GAS IMPLEMENTATION UPDATE

OLGA PIKELNAYA AND PAVAN RAMI

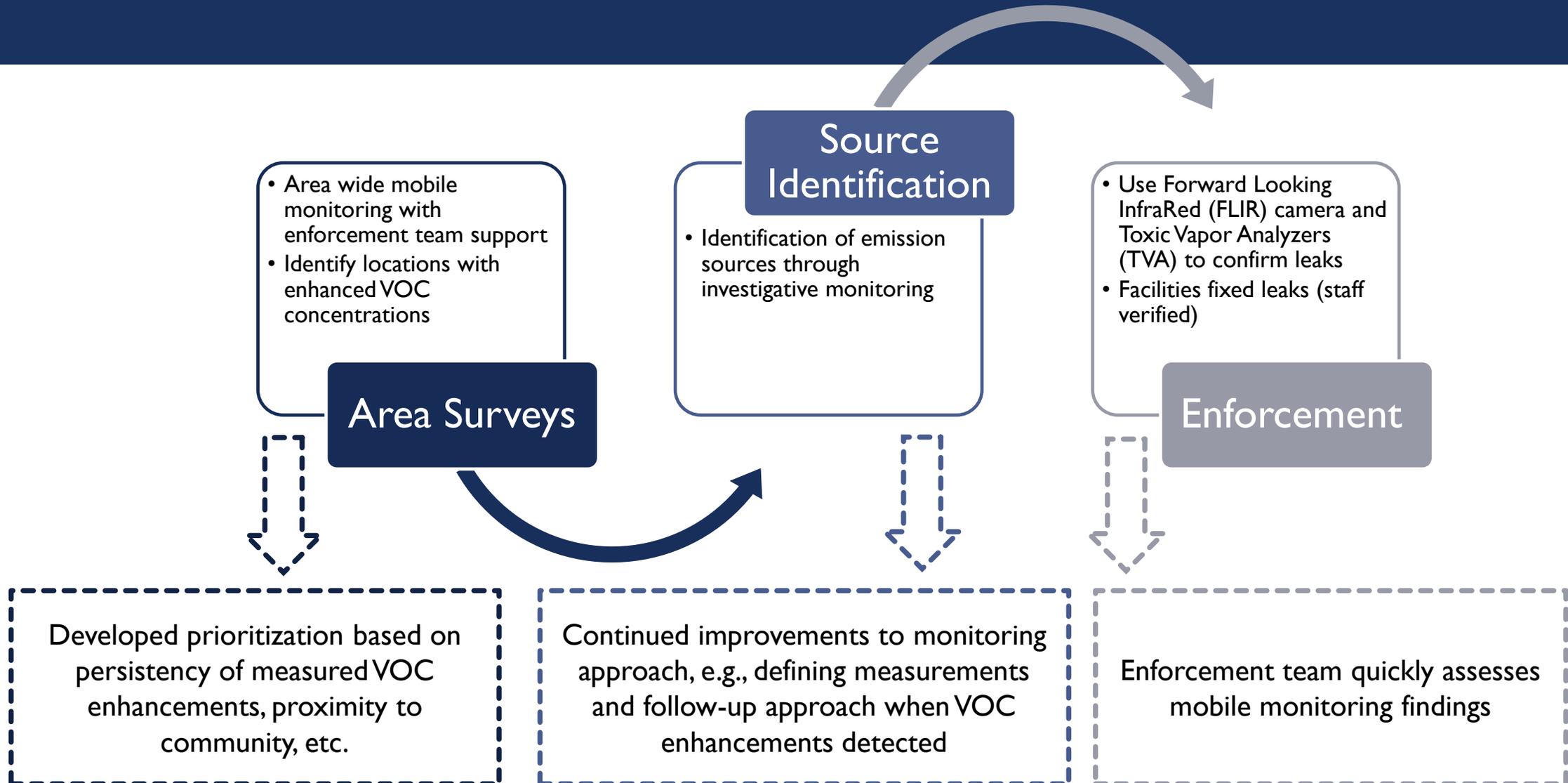
LOCATIONS OF OIL WELLS IN THE COMMUNITY



LOCATIONS OF OIL WELLS IN THE COMMUNITY



AIR MONITORING ACTIVITIES NEAR OIL WELLS

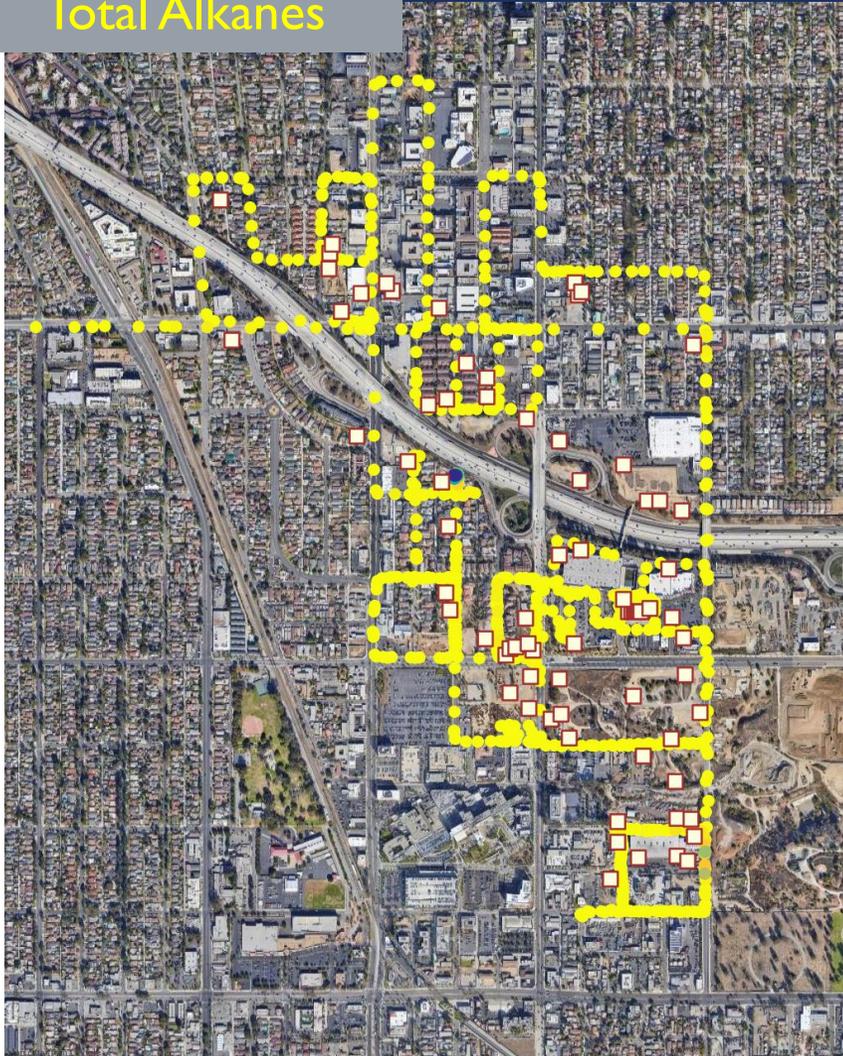


MOBILE MEASUREMENTS NEAR OIL WELLS JUNE - AUGUST 2022

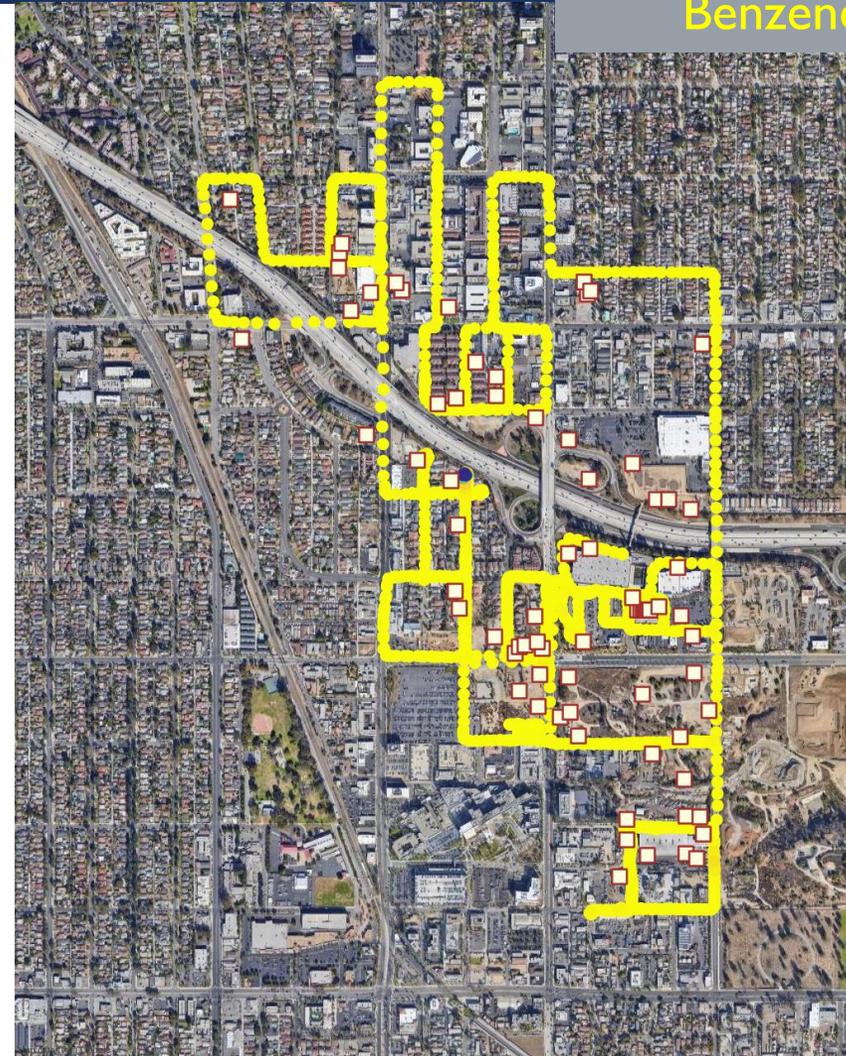
Dates	Summary	Compliance Inspections
June 16, 2022	<p>Area F and D</p> <ul style="list-style-type: none"> ▪ Follow-up measurements near locations where VOC enhancements were detected in the past <ul style="list-style-type: none"> ➤ No VOC enhancements detected during June 16th survey 	<p>4 Inspections 0 Enforcement Actions</p>
July 19, 2022	<p>Area F</p> <ul style="list-style-type: none"> ▪ Complete area survey ▪ Emphasis on locations where elevated VOCs were measured in the past <ul style="list-style-type: none"> ➤ On July 19th VOC enhancements detected and mitigated in one location – will be discussed during this presentation 	<p>3 inspections 1 NOV issued</p>
July 21, 2022	<p>Area D</p> <ul style="list-style-type: none"> ▪ Complete area survey ▪ Emphasis on locations where elevated VOCs were measured in the past <ul style="list-style-type: none"> ➤ No VOC enhancements detected during July 21st survey <p>Area F</p> <ul style="list-style-type: none"> ▪ Follow-up measurement of the site where VOC enhancement detected during July 19th survey <ul style="list-style-type: none"> ➤ VOC enhancements were no longer present 	<p>2 inspections 0 Enforcement Actions</p>

OVERVIEW OF AREA F SURVEY JULY 19, 2022

Total Alkanes



Benzene



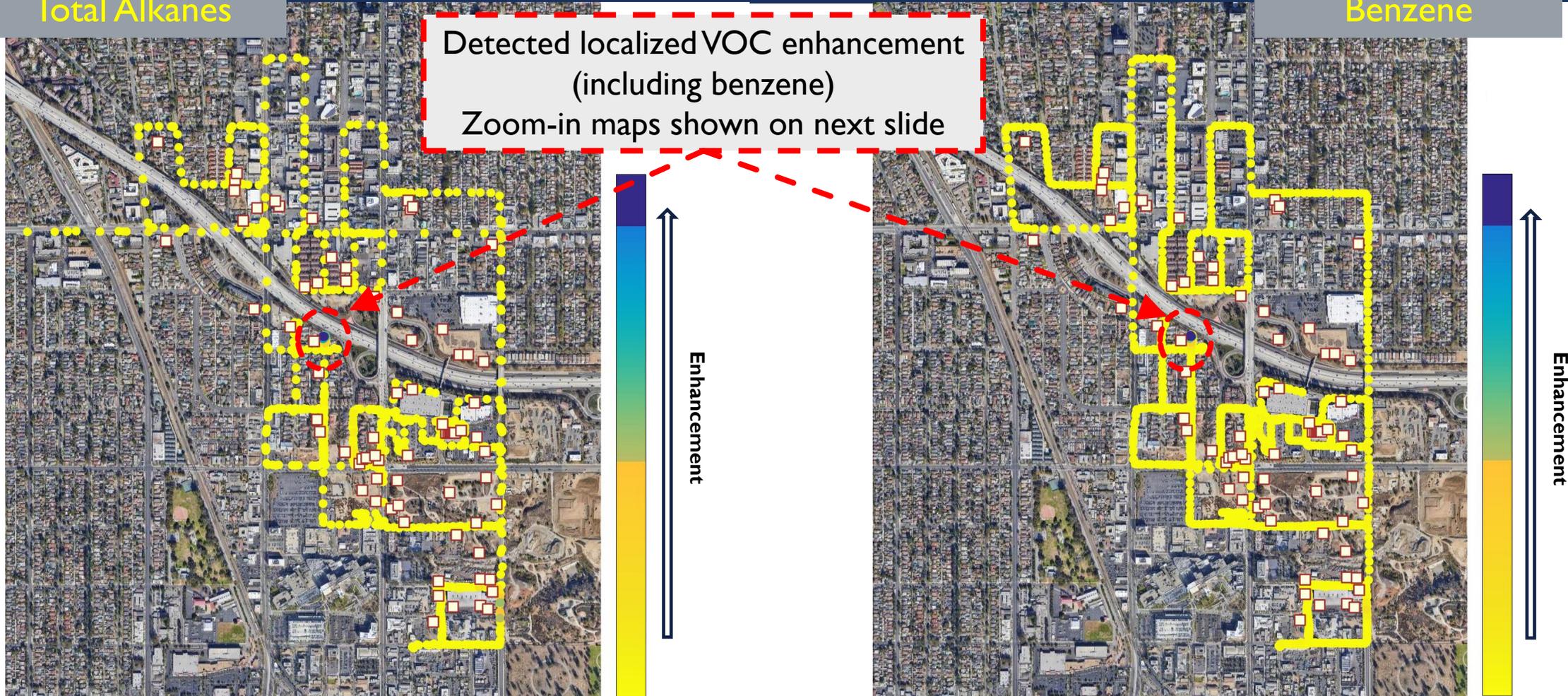
Oil Wells

OVERVIEW OF AREA F SURVEY JULY 19, 2022

Total Alkanes

Benzene

Detected localized VOC enhancement
(including benzene)
Zoom-in maps shown on next slide



Oil Wells

PASADENA AVENUE AND E 32 STREET JULY 19, 2022

Total Alkanes



Benzene



Localized enhancement

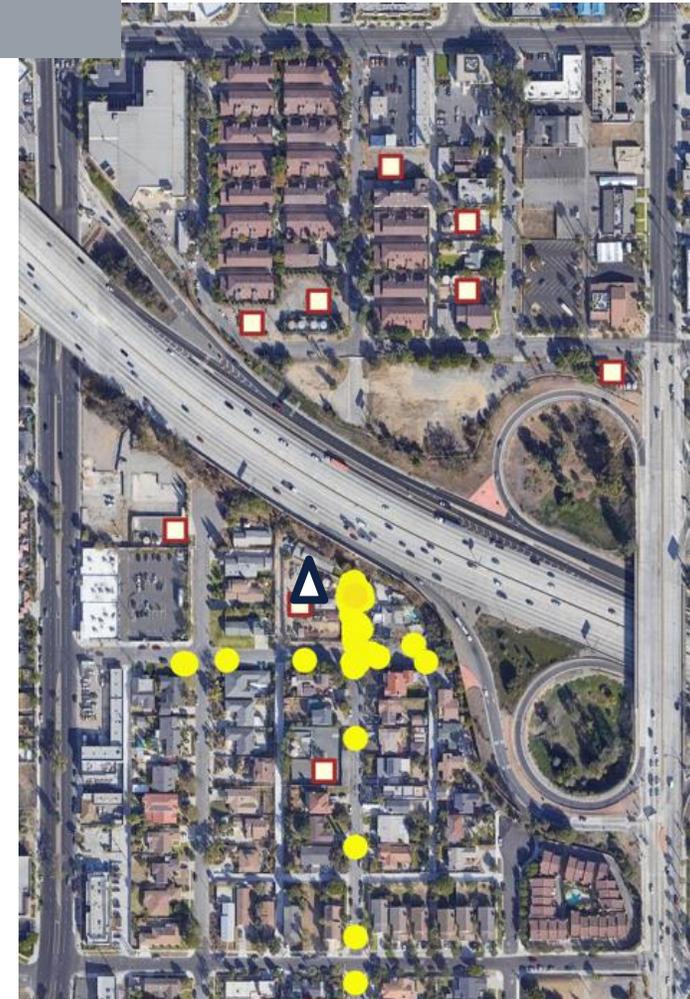
△ Oil Site

PASADENA AVENUE AND E 32 STREET JULY 21, 2022

Total Alkanes



Benzene



△ Oil Site

SUMMARY OF MEASUREMENTS NEAR OIL WELLS IN WCWLB

Area D

- ~ 300 active oil wells
- Two locations with elevated VOC concentrations
- One location with persistent elevated VOCs* in the past, no VOC enhancements were detected during this quarterly survey

Area E

- ~ 160 active oil wells
- One location with elevated VOC concentrations#
- Zero locations with persistent elevated VOCs*

Area F

- ~ 75 active oil wells
- Four locations with elevated VOC concentrations
- Three locations with persistent elevated VOCs* in the past, no VOC enhancement were detected during this quarterly survey

18 survey days in the past 18 months

*Emissions from different components and/or other sources may have been responsible for elevated levels of VOCs measured during different measurement days

#Area E was at an industrial location, far from the community

DISCUSSION

Comments, Suggestions, Questions

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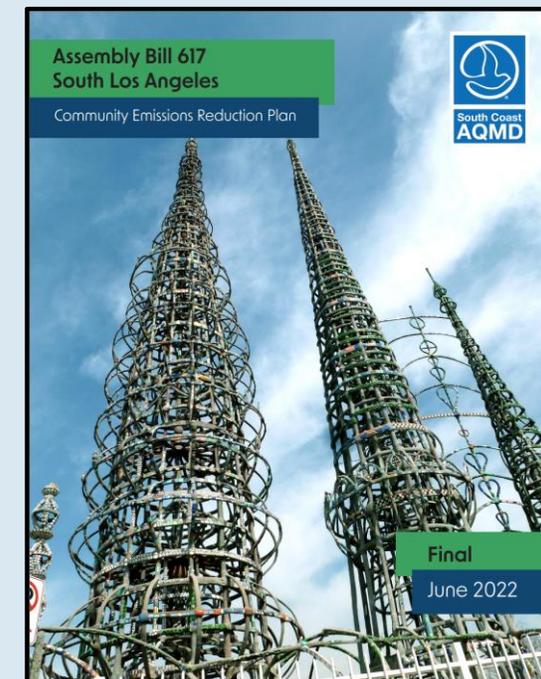
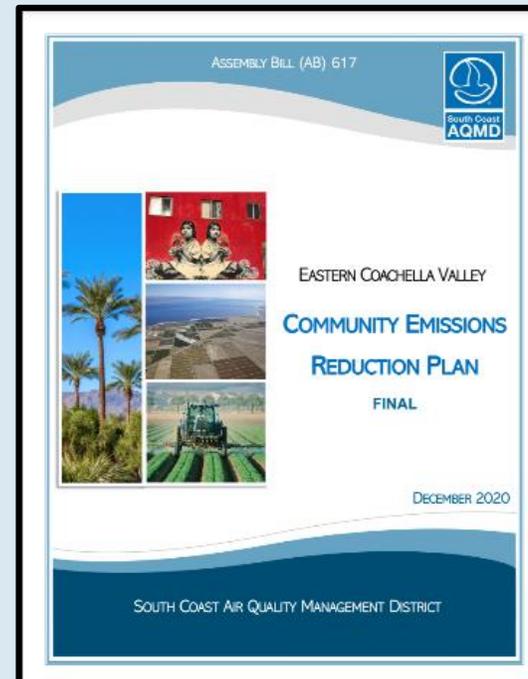
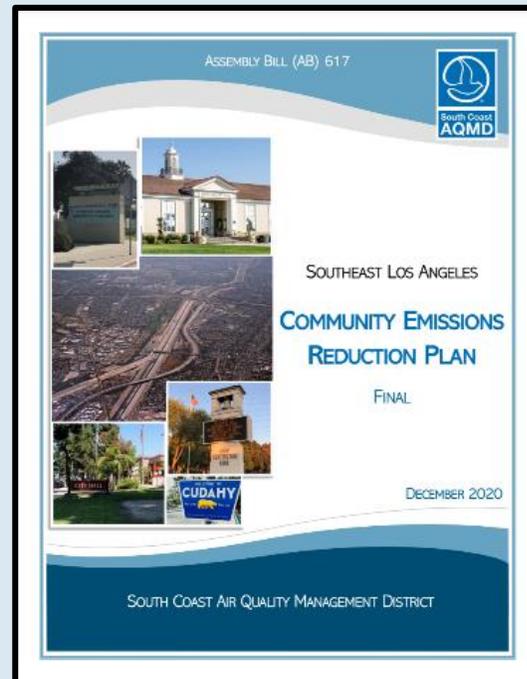
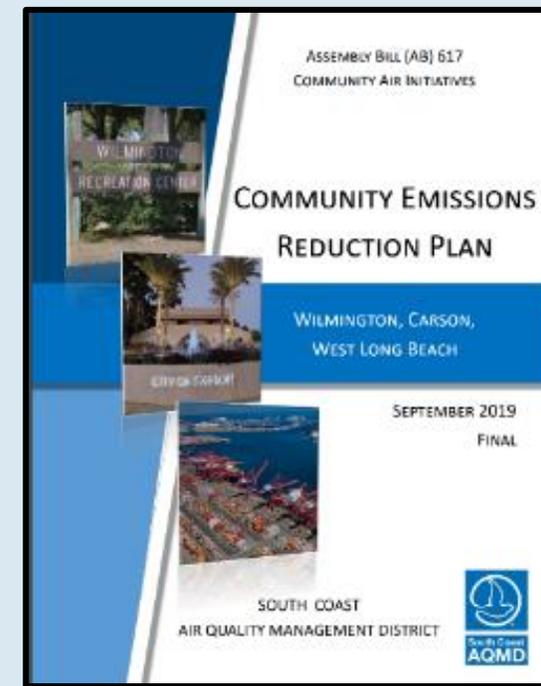
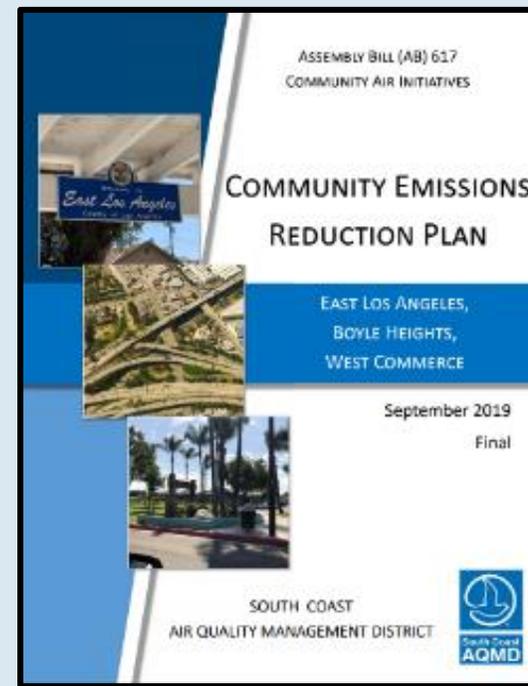
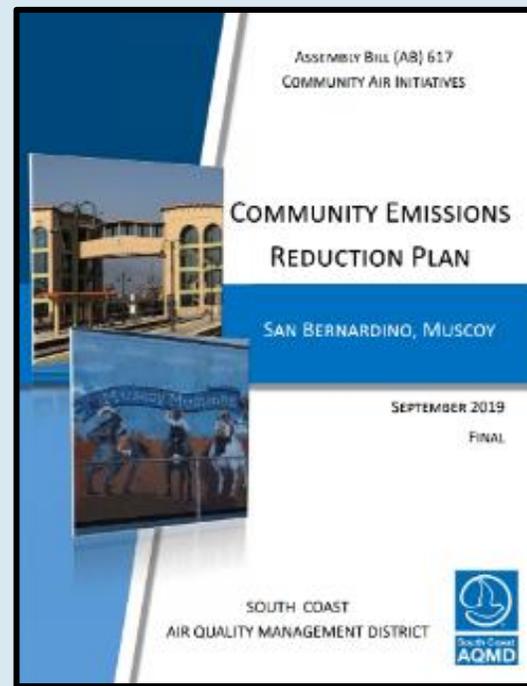
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2022 ANNUAL PROGRESS REPORT

BELINDA HUY

AIR QUALITY SPECIALIST



OVERVIEW



Assembly Bill 617 (AB 617)* requires an annual report on the progress of CERP implementation



Annual Progress Report (Report) will be updated to include implementation totals to-date



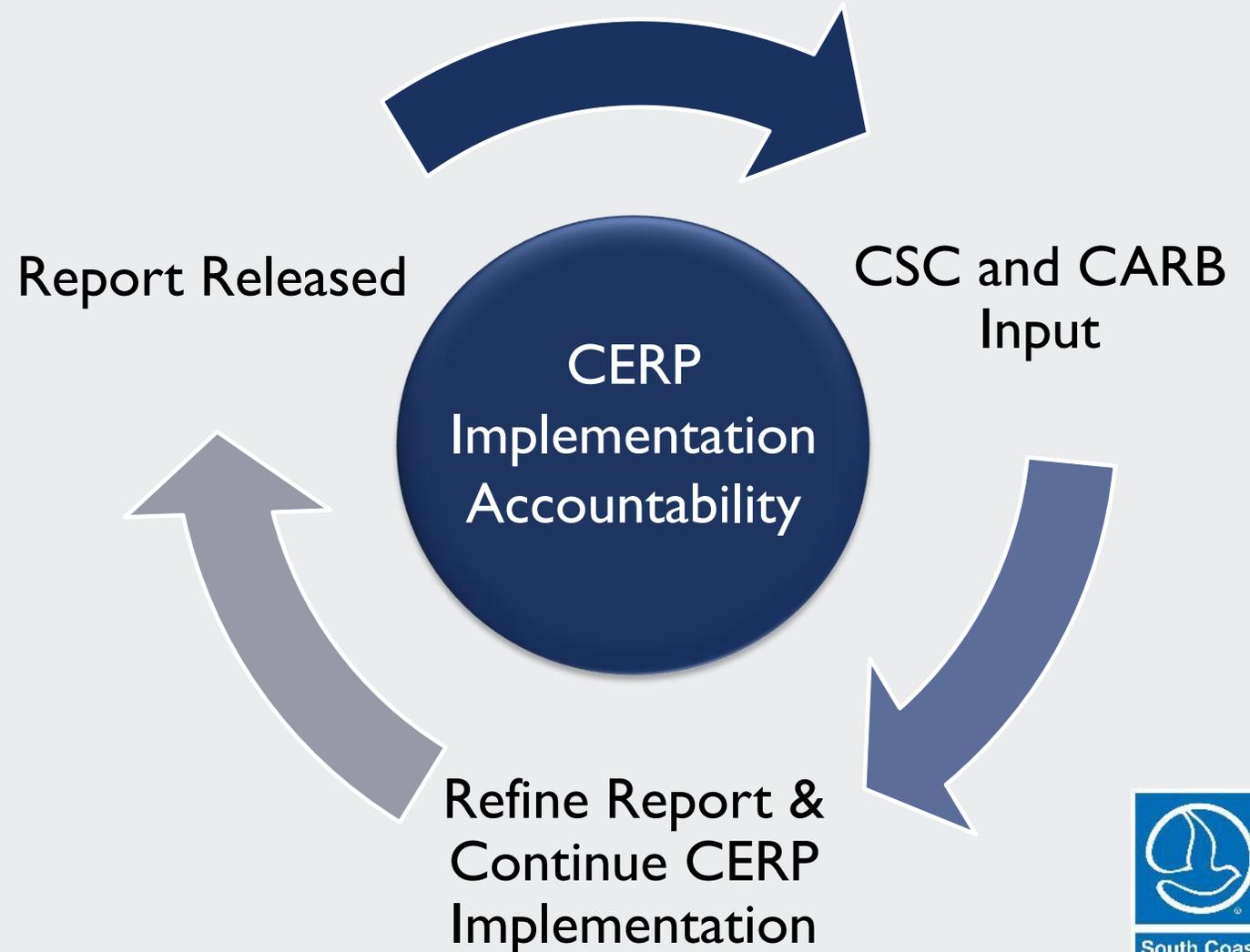
Report sent to each CSC and CARB for review



CARB may provide suggestions on CERP implementation

* Health and Safety Code §44391.2(c)(7)

PURPOSE



OVERVIEW OF ANNUAL PROGRESS REPORT ELEMENTS

ANNUAL PROGRESS REPORT FOR
ASSEMBLY BILL 617
COMMUNITY EMISSIONS
REDUCTION PLANS

October 2022



South Coast Air Quality Management District

Community Profile Updates

Overview of CERP Framework

Status of CERP Actions, Goals, and Strategies

Metrics for Tracking Progress

Qualitative Assessment

Summary of Key Plan Adjustments

WCWLB CERP IMPLEMENTATION HIGHLIGHTS BY STRATEGY

Rule Development

- Adopted **Rule 1109.1 – Emissions of Oxides of Nitrogen from Petroleum Refineries**¹
- Initiated **Proposed Amended Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities**,² conducted five Working Group Meetings (WGMs)
 - *Anticipated Board Hearing Date: 4th quarter 2022*
- Initiated **Proposed Rule 2306 – Indirect Source Rules for New Intermodal Facilities**,³ conducted five WGMs
 - *Anticipated Board Hearing Date: 1st quarter 2023*

Enforcement

- Continued CARB/South Coast AQMD **quarterly truck idling sweeps**, totaling 1,330 inspections, resulting in 51 violations
- Conducted seven **inspections at offshore oil tankers**, resulting in four Notice of Violations (NOVs)
- Conducted 51 **inspections at oil well facilities identified by monitoring as having elevated emissions**, resulting in 21 NOVs

Monitoring

- South Coast AQMD has conducted comprehensive air monitoring, participated in multiple emissions investigations, released air monitoring data summary dashboards and progress reports on the WCWLB air monitoring webpage
- Air monitoring and emissions investigations are ongoing and additional monitoring, inspections, and/or enforcement actions are taken, if needed

¹<http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1109-1.pdf?sfvrsn=8>

²<http://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/proposed-rules/rule-1178>

³<http://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/proposed-rules/rule-2306>

WCWLB CERP IMPLEMENTATION HIGHLIGHTS BY STRATEGY (CONT.)



Incentives

- Over \$29 million awarded for over 100 **marine engine repower projects**
- \$13.5 million allocated for **cargo handling equipment**
- \$20 million in incentive funds awarded to **truck projects** (including drayage trucks)
- \$4.6 million allocated for **locomotive replacement projects**
- South Coast AQMD developed a CARB-approved **Reducing Air Pollution Exposure in Schools and Other Facilities (2022-15CIP-SC)** project plan¹ for \$2.4 million for air filtration systems in schools



Outreach

- Provided four **Why Healthy Air Matters (WHAM)** presentations at Carson High School and collaborated with Long Beach Alliance for Children with Asthma (LBACA) regarding **air filtration system and asthma trigger education** at four presentations to Long Beach Unified School District
- Continued incentive program **outreach; participation and/or presentations** at multiple events (e.g., Carl Moyer funding opportunities, Truck Incentives Workshops)



Collaboration

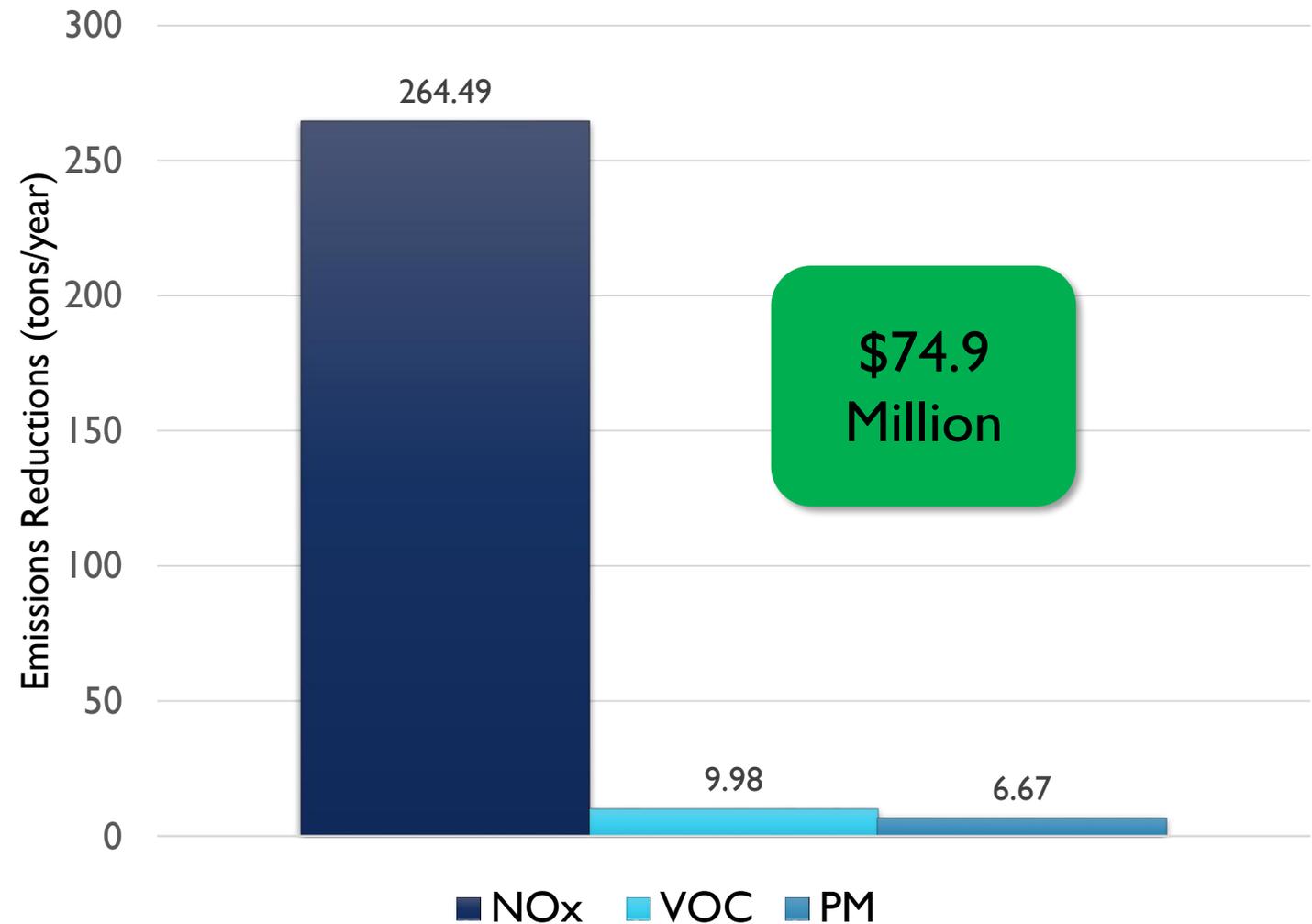
- Worked with CSC and CARB to identify locations and install **“No Truck Idling” signs**
- Worked with the Chinese Consulate on a **Pacific Rim clean vessel incentive program**

¹<http://www.aqmd.gov/docs/default-source/tao-capp-incentives/ab617---school-air-filtration-project-plan.pdf?sfvrsn=8>

TOTAL INVESTMENT IN INCENTIVES

- Future incentive-based emissions reductions dependent on amount of program funding

Approximate Emissions Reductions¹ Based on Total Investment



¹Emissions reductions resulting from community-identified projects will be quantified at a later time, where feasible

ANNUAL PROGRESS REPORT TIMELINE



¹2022 Draft Annual Progress Report will be available online at:
<http://www.aqmd.gov/nav/about/initiatives/environmental-justice/ab617-134/wilm>

Questions and/or Comments?

Please submit questions and comments to
ab617@aqmd.gov

UPCOMING RULE DEVELOPMENT MEETINGS

Rule Number	Rule Name	Next Meeting	Contact
1118	Control of Emissions from Refinery Flares	October 2022	Zoya Banan Zbanan@aqmd.gov
1148.2	Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers	September 1, 2022	Jose Enriquez jenriquez@aqmd.gov
1178	Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities	September 2022	James McCreary JMcCreary@aqmd.gov
2306	Indirect Source Rule for New Intermodal Facilities	September or October 2022	Dylan Plautz Dplautz@aqmd.gov

- For more information on South Coast AQMD Rules: <http://www.aqmd.gov/home/rules-compliance/rules>
- To sign up for email notifications: <http://www.aqmd.gov/sign-up>



South Coast
AQMD

DRAFT 2022 AIR QUALITY MANAGEMENT PLAN



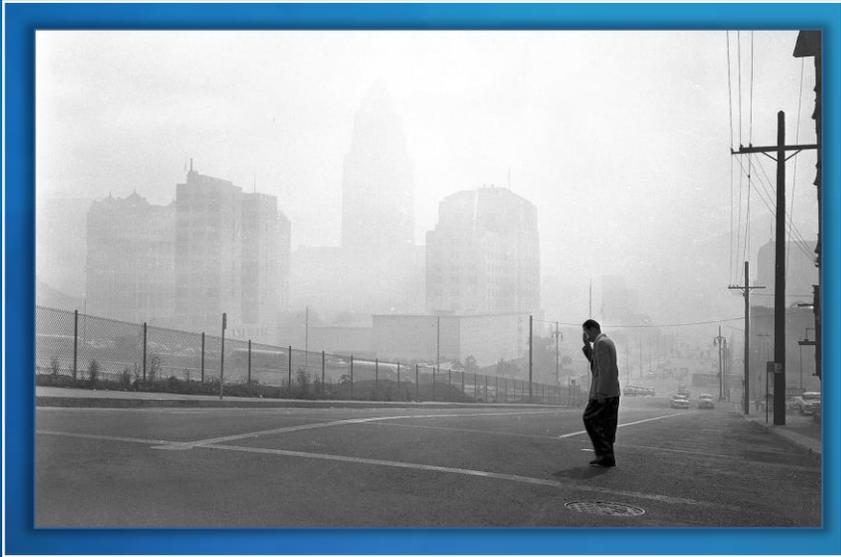
South Coast Air Quality
Management District

2022 Air Quality Management Plan (AQMP)

- AQMP is a blueprint to improve air quality and achieve federal air quality standards in the South Coast Air Basin and Coachella Valley
- In 2015, the U.S. EPA tightened the ozone air quality standard to 70 parts per billion (ppb), triggering the need to develop an AQMP
- The 2022 AQMP addresses control strategy to meet the ozone standard by 2037
- The Draft 2022 AQMP and all supporting documents are available online at: <http://www.aqmd.gov/2022aqmp>



Our Challenge



Los Angeles c. 1950

Our region has historically suffered from some of the worst air quality in the United States

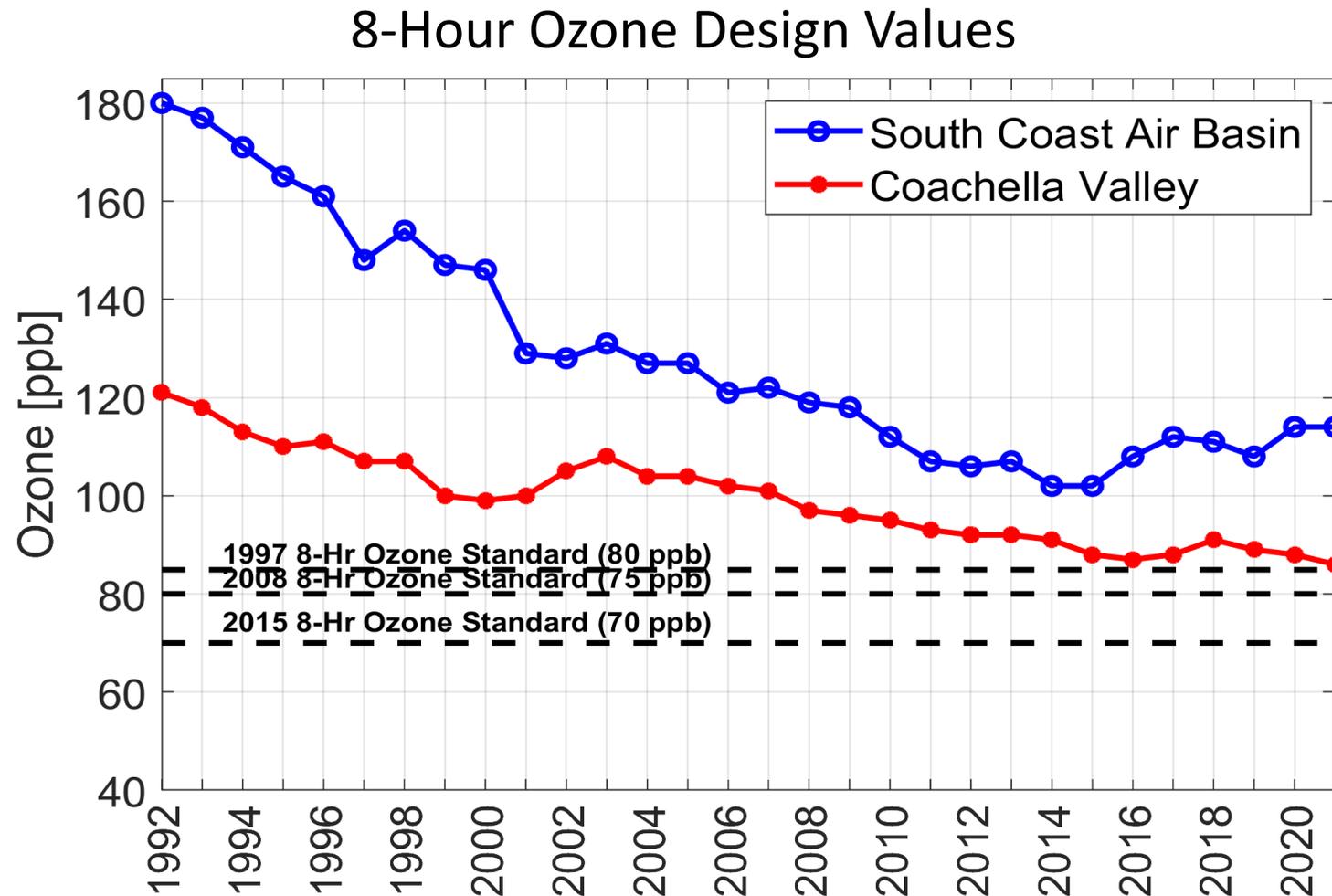


Los Angeles Recent Condition (2018)

We have made significant progress, but still suffer from poor air quality

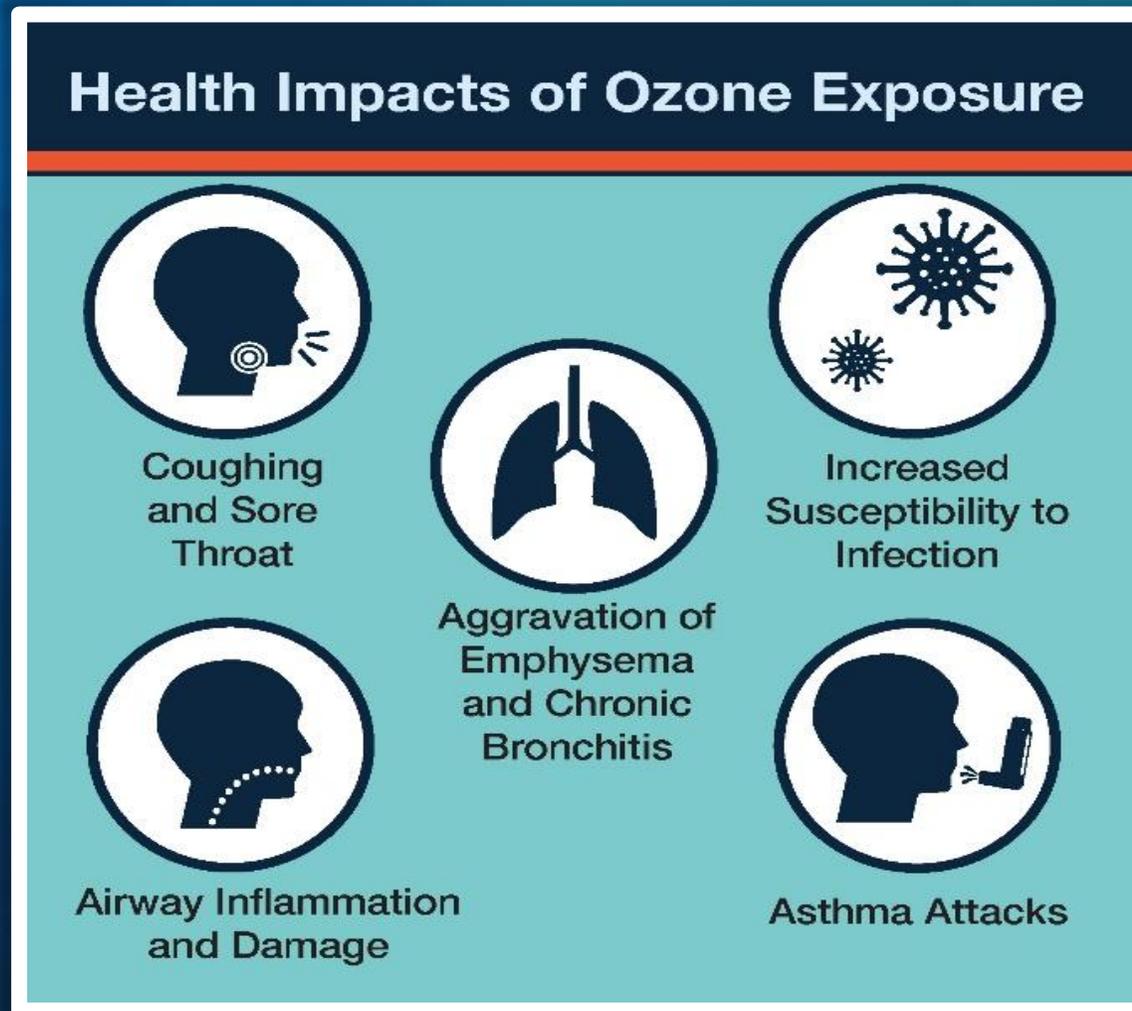
- Worst ozone (smog) in the nation
- Among the worst fine particulate matter (PM2.5)

Ozone Trends in the South Coast Air Basin



- Overall air quality has dramatically improved
- High ozone in recent years were due to adverse meteorology. Continued emission reductions will improve ozone

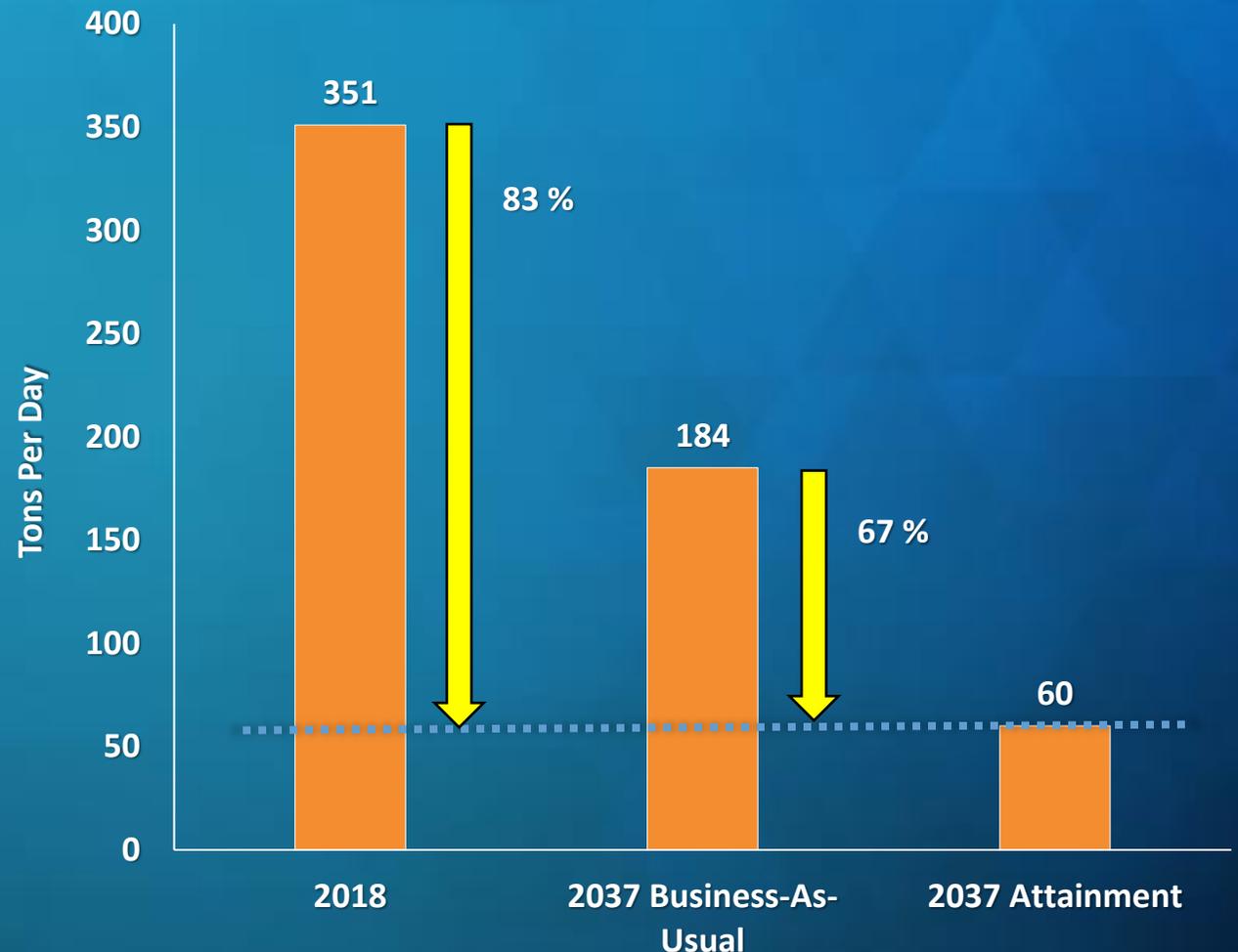
Health Impacts of Ozone



- Ozone precursor pollutants also increase fine particulate (PM2.5) pollution
- PM2.5 can cause **premature death** in addition to other serious health effects

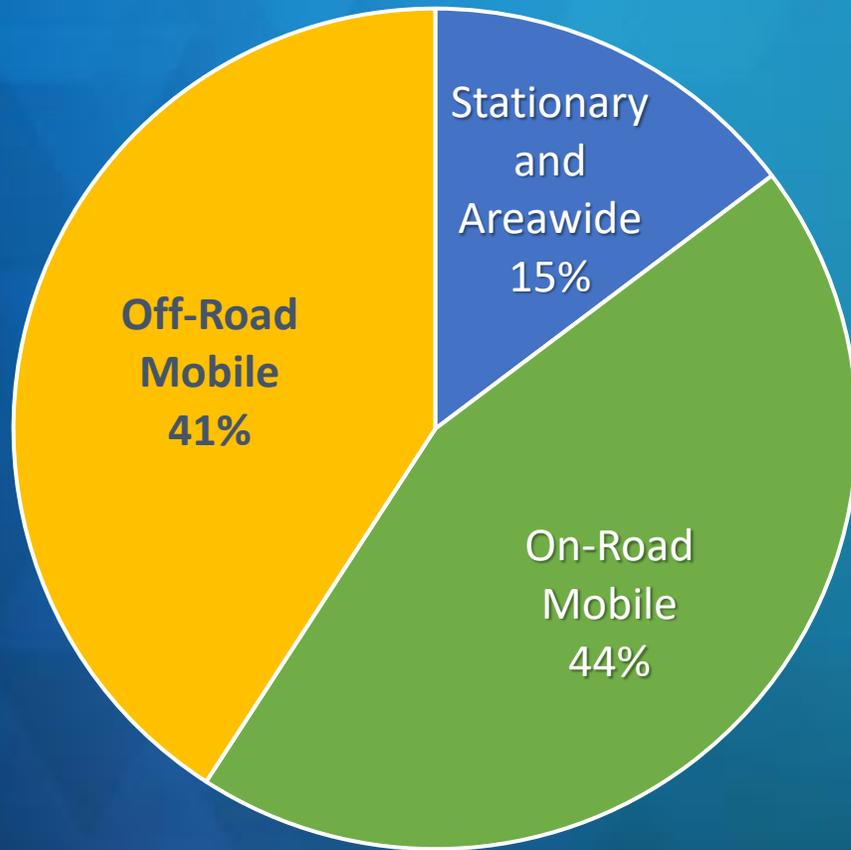
Need to Reduce NOx Emissions

- The primary pollutant that must be controlled to reduce ozone in our region is nitrogen oxides (NOx)
- NOx is formed during processes that burn fuels
- NOx must be reduced to 60 tons per day to meet the ozone standard
 - 83% below current conditions
 - 67% below Business-As-Usual conditions in 2037

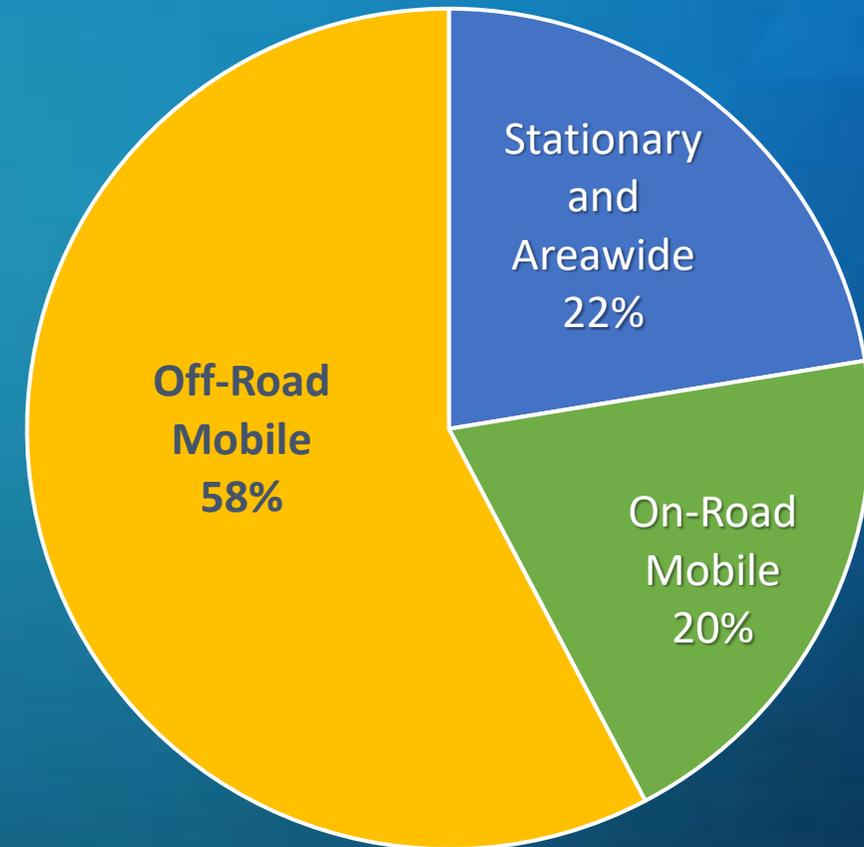


NOx Emission from Different Source Category

2018 NOx Emission
351 tons per day

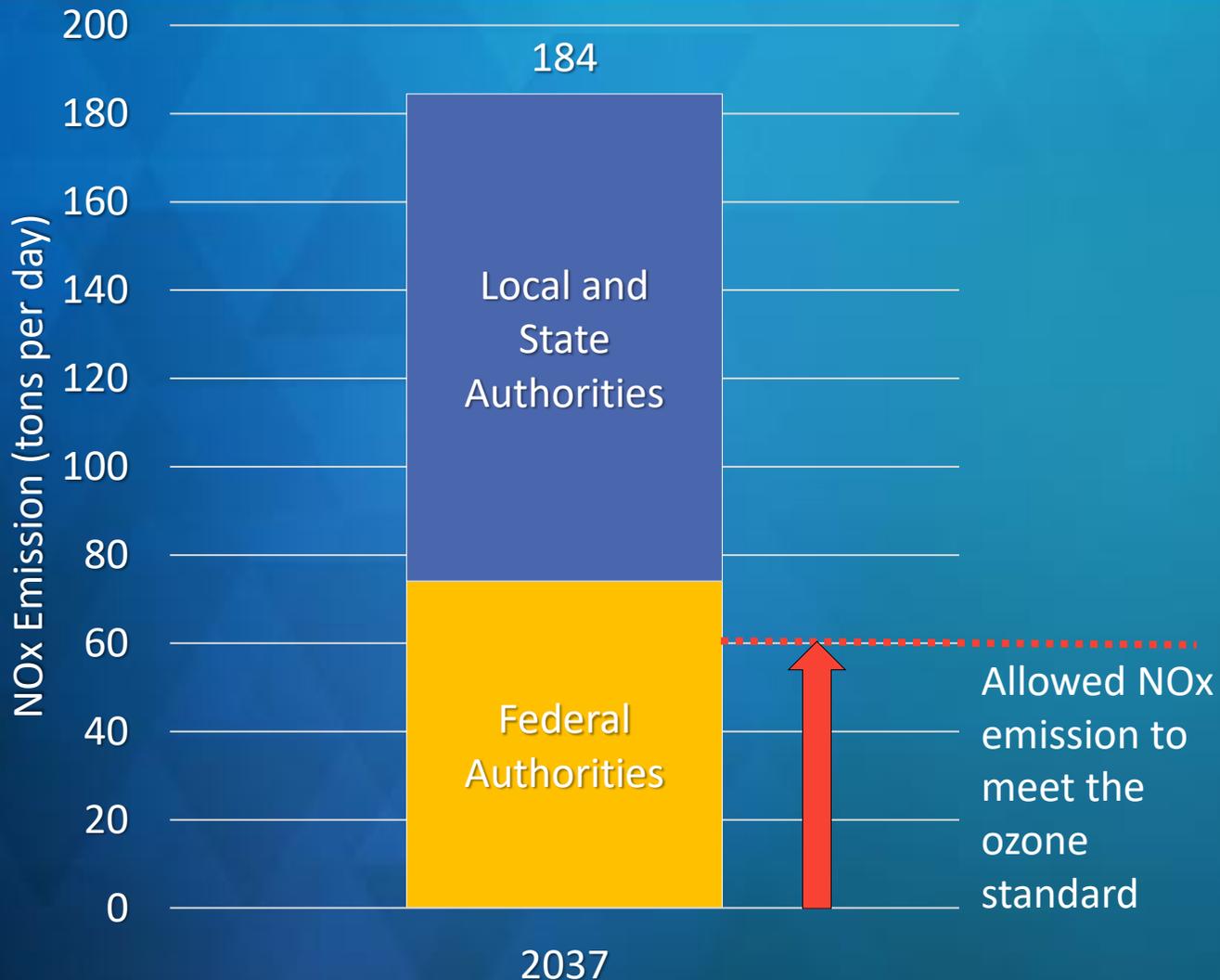


2037 NOx Emission
184 tons per day



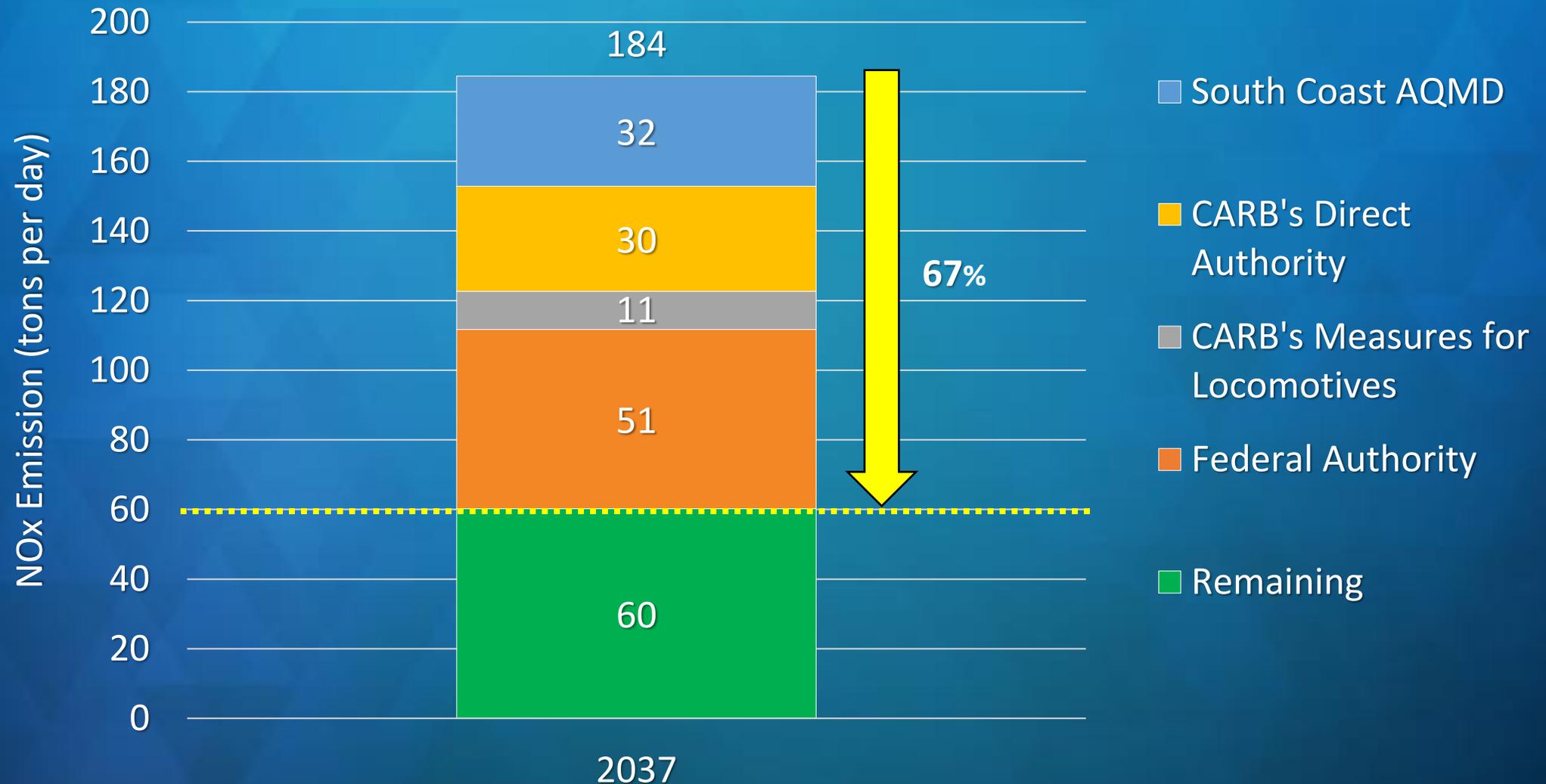
Over 80% of the NOx Emission in 2018 is from mobile sources

Shared Responsibility for Emission Reductions



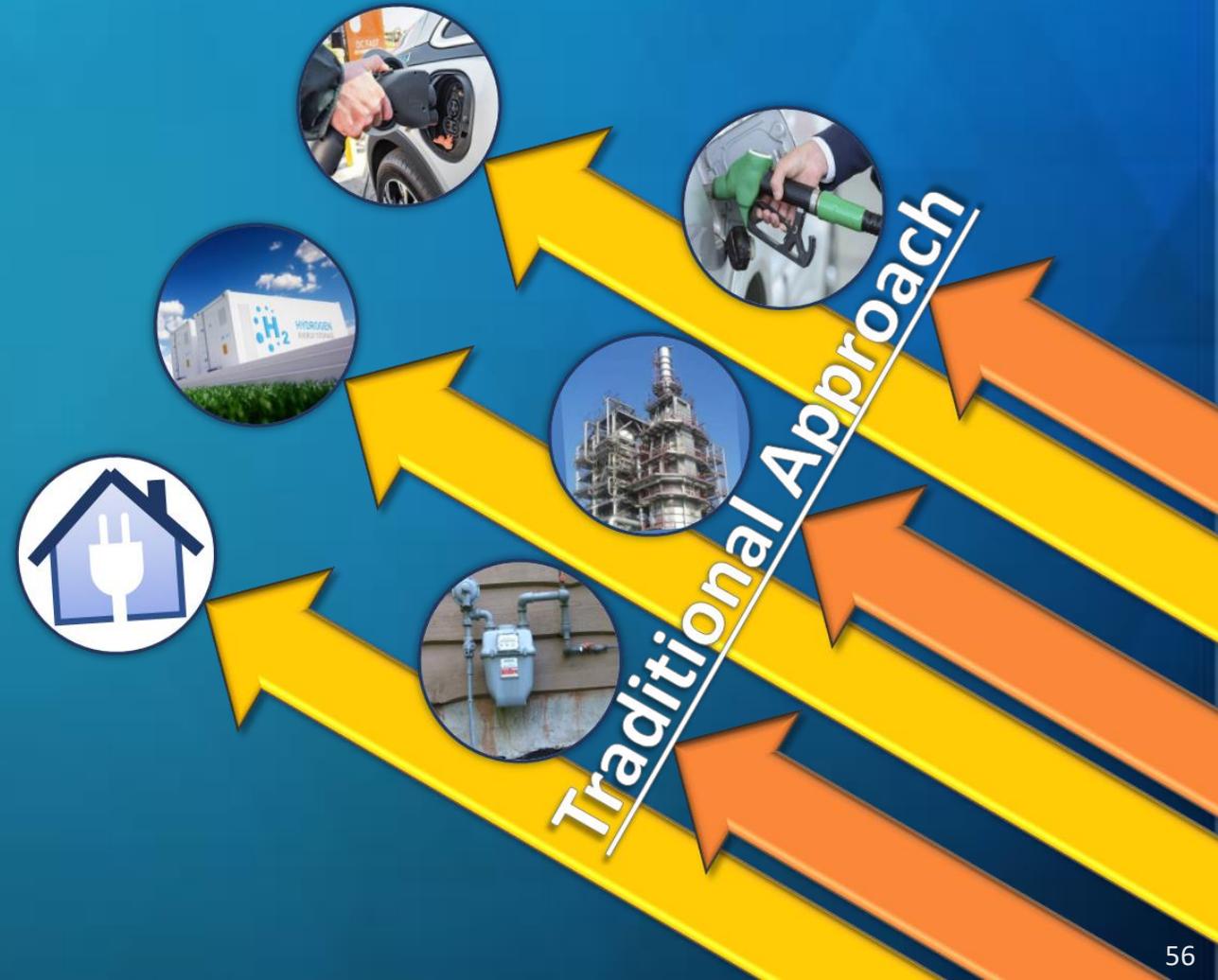
- More than 1/3 of the 2037 baseline emissions inventory is regulated primarily under federal and international jurisdiction, with limited authority for CARB/South Coast AQMD
 - Ships, aircraft, locomotives, etc
- Cannot assign responsibility to federal government to reduce emissions, even from federal sources
- Attainment is not possible without significant reductions from these sources

NOx Reductions Needed for Attainment

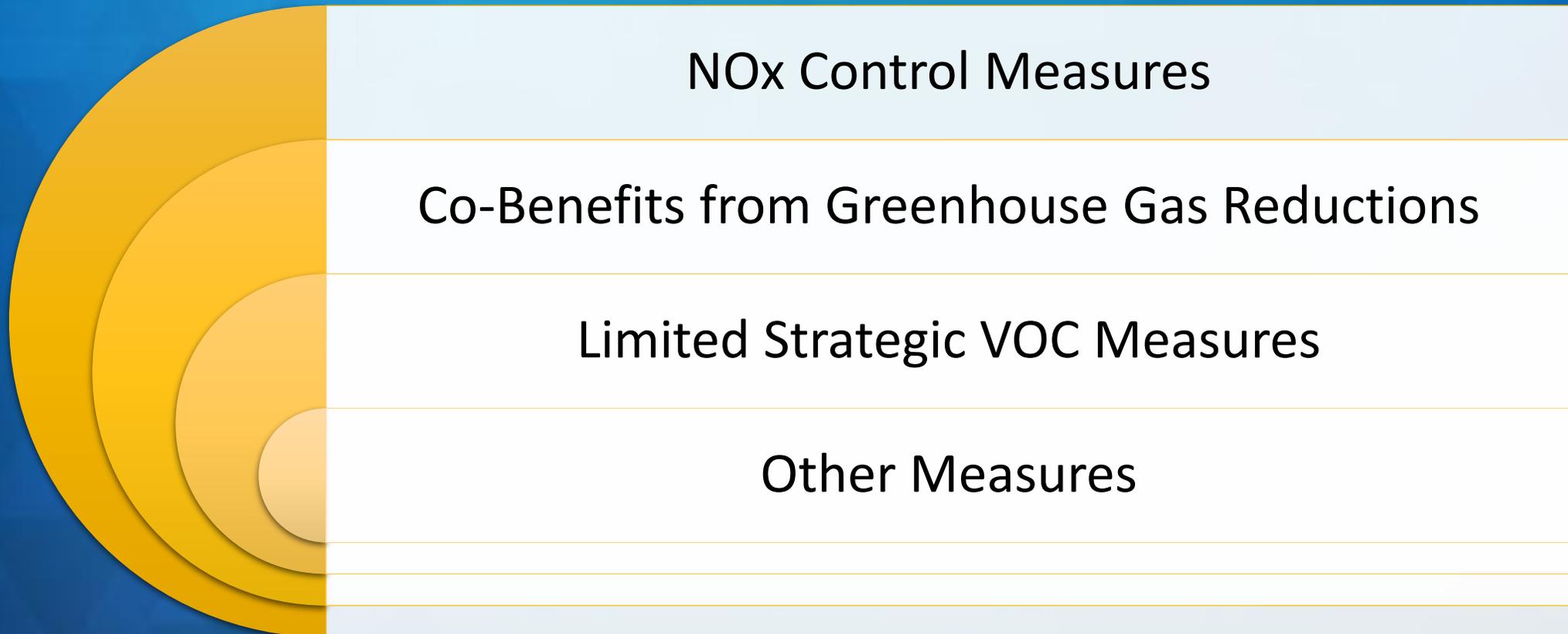


Innovative Approaches Needed

- Traditional approach relies on additional tailpipe/exhaust stack controls, new engines technology, or fuel improvements tailored to individual use cases
- These traditional approaches will not reduce emissions by the amount needed
- We must turn to zero emission and advanced technologies wherever possible



Overview of Draft South Coast AQMD Stationary and Area Source Control Strategy



Draft Stationary and Area Sources NO_x Control Measures



Residential Combustion
Water/Space/Heating/
Cooking/Others



Commercial Combustion
Water/Space/Heating/
Cooking/Others



Industrial Combustion
Boilers/Process Heaters/
Refineries/EGUs/Etc.

Overview of Draft South Coast AQMD Mobile Source Control Strategy



Public Input and Outreach

'Standard' Comprehensive



Development Process

- Release of the Draft 2022 AQMP: May 6, 2022
- Public comments were received during May 6 – July 22, 2022
- Revised 2022 AQMP to be released in late Summer
- Upcoming public meetings and schedule:

Timeline	Milestone
August 5, 2022	Status update on Draft 2022 AQMP development to South Coast AQMD Governing Board
August 10, 2022	Advisory Council Meeting on Health Effects Appendix
Late August, 2022	Release Revised Draft 2022 AQMP
October 7, 2022	Status update on Draft 2022 AQMP development to South Coast AQMD Governing Board and Set Hearing
Mid October, 2022	Regional Public Hearings
December 2, 2022	South Coast AQMD Board Consideration of Draft Final AQMP

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**2022 AQMP
Interested Parties**



For comments or questions,
please email:

AQMPteam@aqmd.gov

NEXT STEPS

Future Announcements

- Newsletters or emails
- Continue CERP implementation

Future Meeting

- Tentatively November 3, 2022 (virtual)
- AQ Priority Updates & Agenda Topics
 - What would you like to hear about?

Public Comment



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