

Community Workshop

Topic	Workshop Table #
Community Emissions Reduction Plan (CERP)	Table 1
Community Air Monitoring	Table 2
Incentives	Table 3

Community Air Initiatives

San Bernardino, Muscoy Community Steering Committee Meeting #8

*Thursday, July 18, 2019
San Bernardino, CA*



Announcements

- Community Tour

Please contact:
Daniel Wong
dwong@aqmd.gov
(909) 396-3046



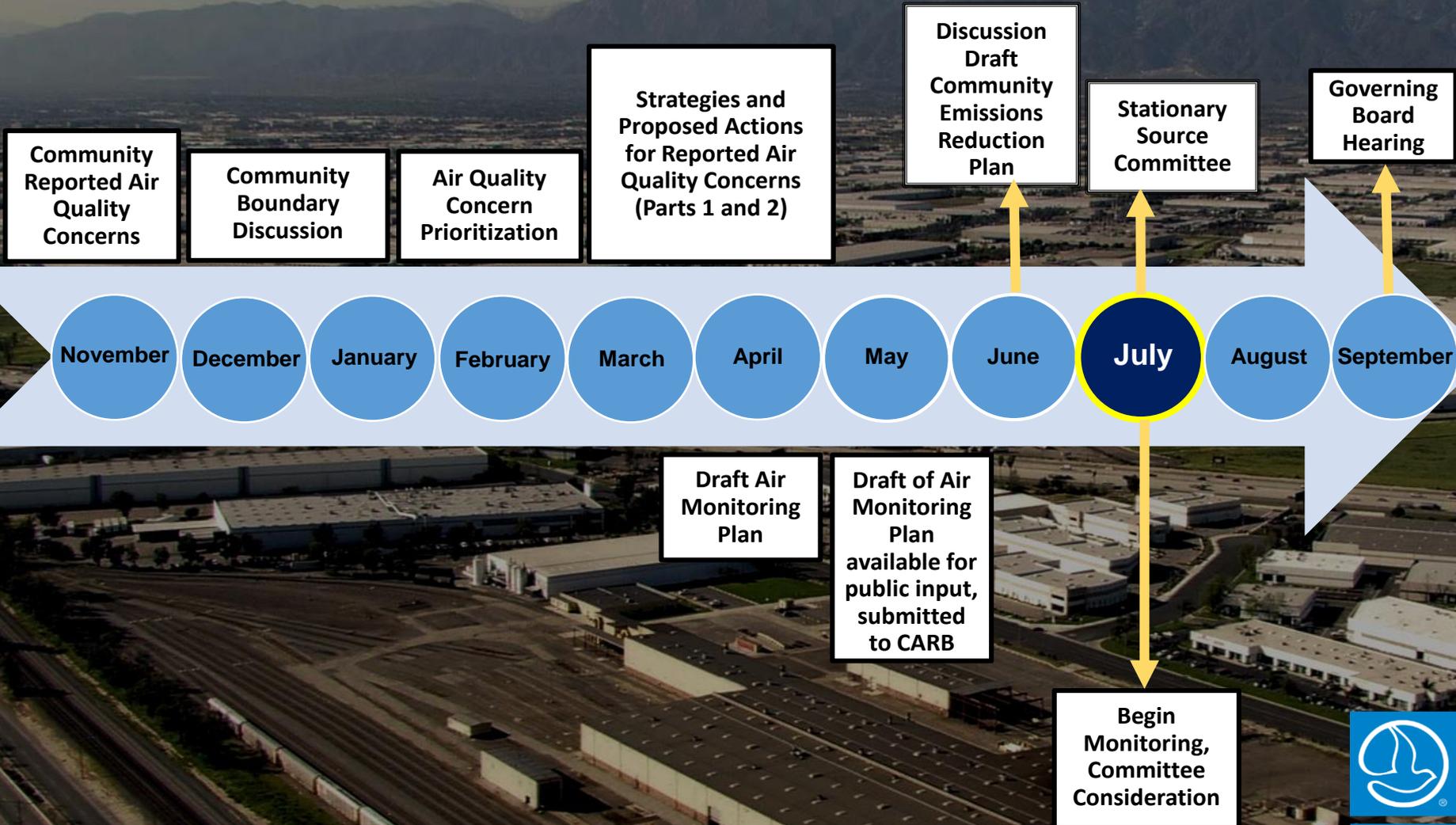
- Community Testimonials
- Technical Advisory Group (TAG) meeting update

Meeting Objectives

- Review Comments Received on Discussion Draft Community Emission Reduction Plan (CERP)
- Discuss CARB Enforcement Actions
- Update CSC on Community Air Monitoring
- Provide information on current truck technologies



SBM Progress





California Air Resource Board Enforcement Actions



California Air Resources Board Enforcement Efforts in Your Community

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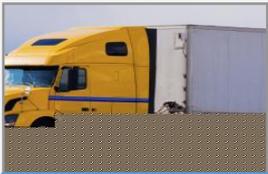
Past, Present, and Future

July 2019

San Bernardino - Muscoy

AB 617 Community Steering Committee Meeting

CARB Enforcement Programs



Statewide
Trucks &
Buses



Idling
Trucks &
Buses



Drayage
Vehicles



Ocean
Going
Vessels



Shore
Power



Comm-
ercial
Harbor
Craft



Cargo
Handling
Equipment



Heavy-duty
Vehicle
Inspection
Program



Off-Road



Transport-
ation
Refriger-
ation
Units



SmartWay



Solid
Waste
Collection
Vehicles

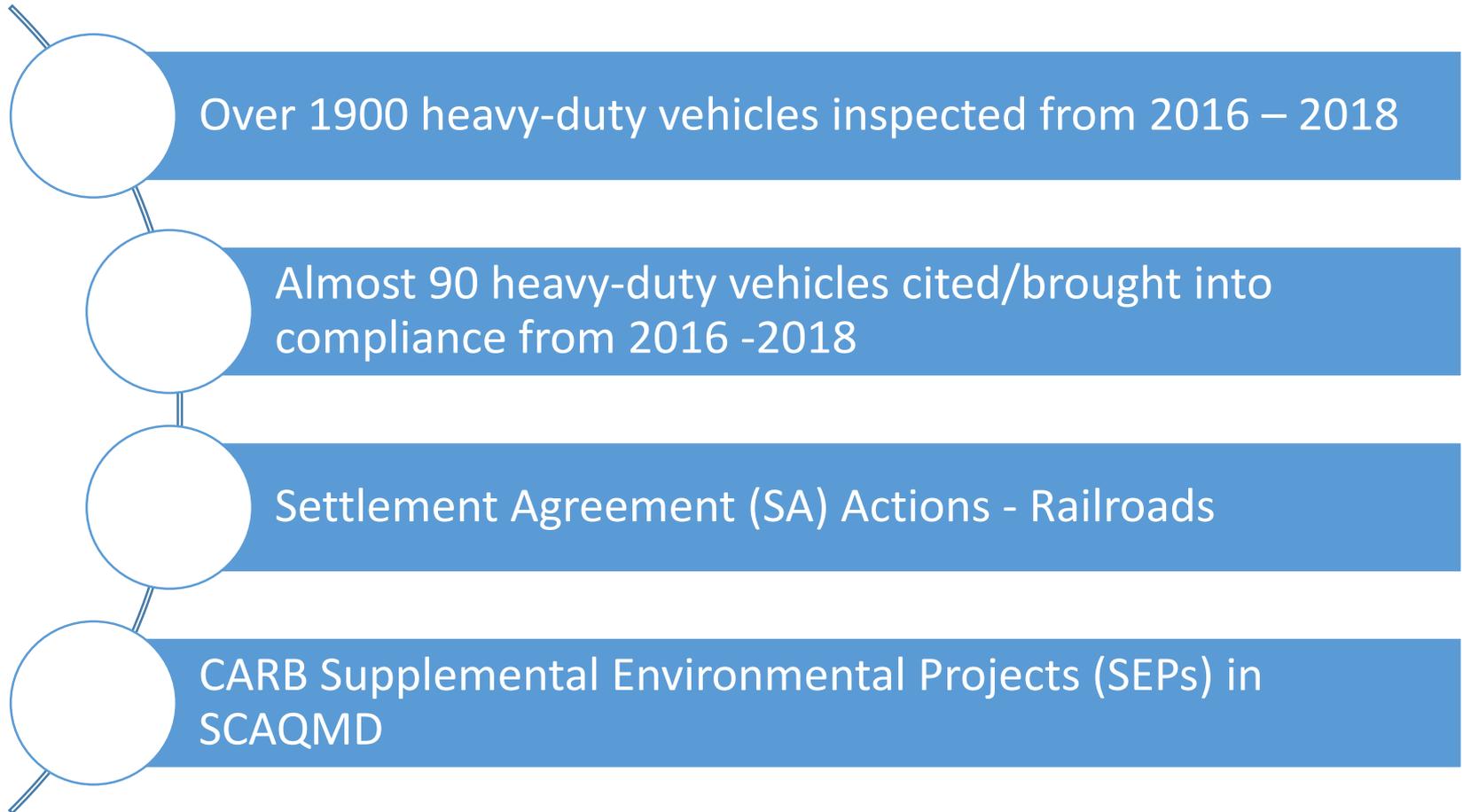


Fuels

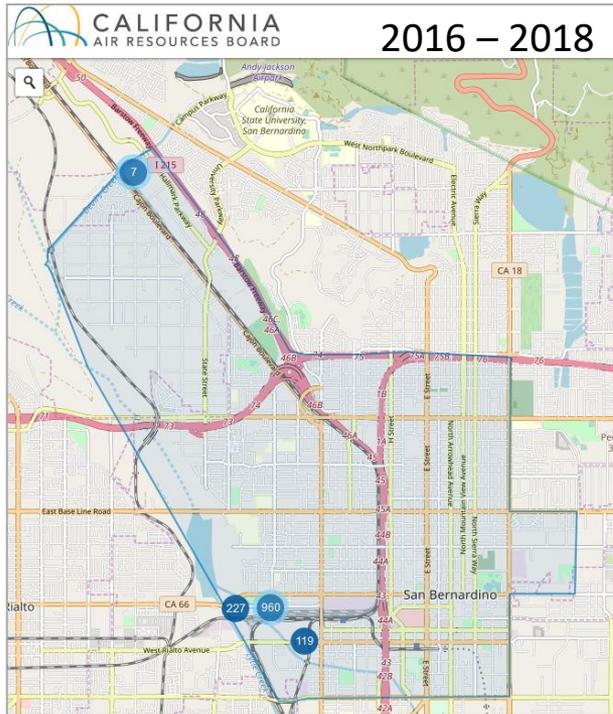


Consumer
Products

CARB Past Enforcement Actions in the San Bernardino - Muscoy Community



Map of Heavy – Duty Diesel Vehicle Enforcement Activities 2016 - 2018

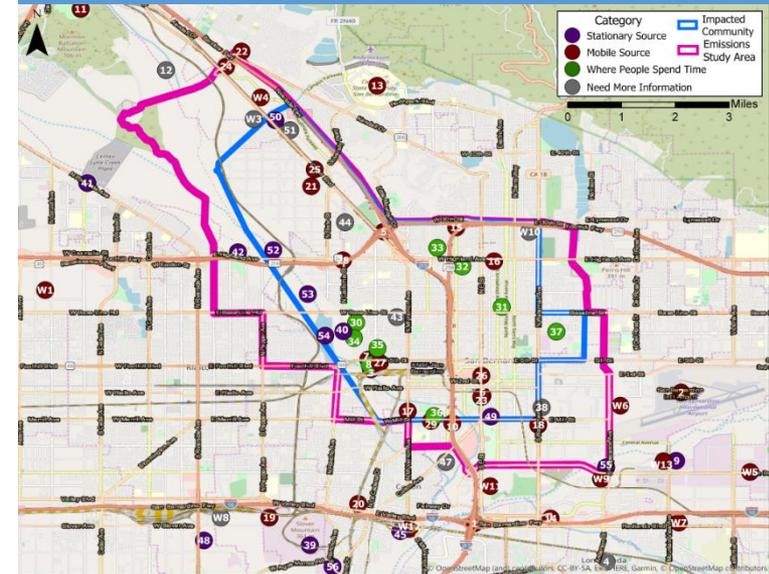


1066 total inspections at BNSF in 2018

5 emissions violations

27 non-emissions violations

Highest mobile source priorities: Truck and bus traffic and idling, railyard, warehouses, Omnitrans



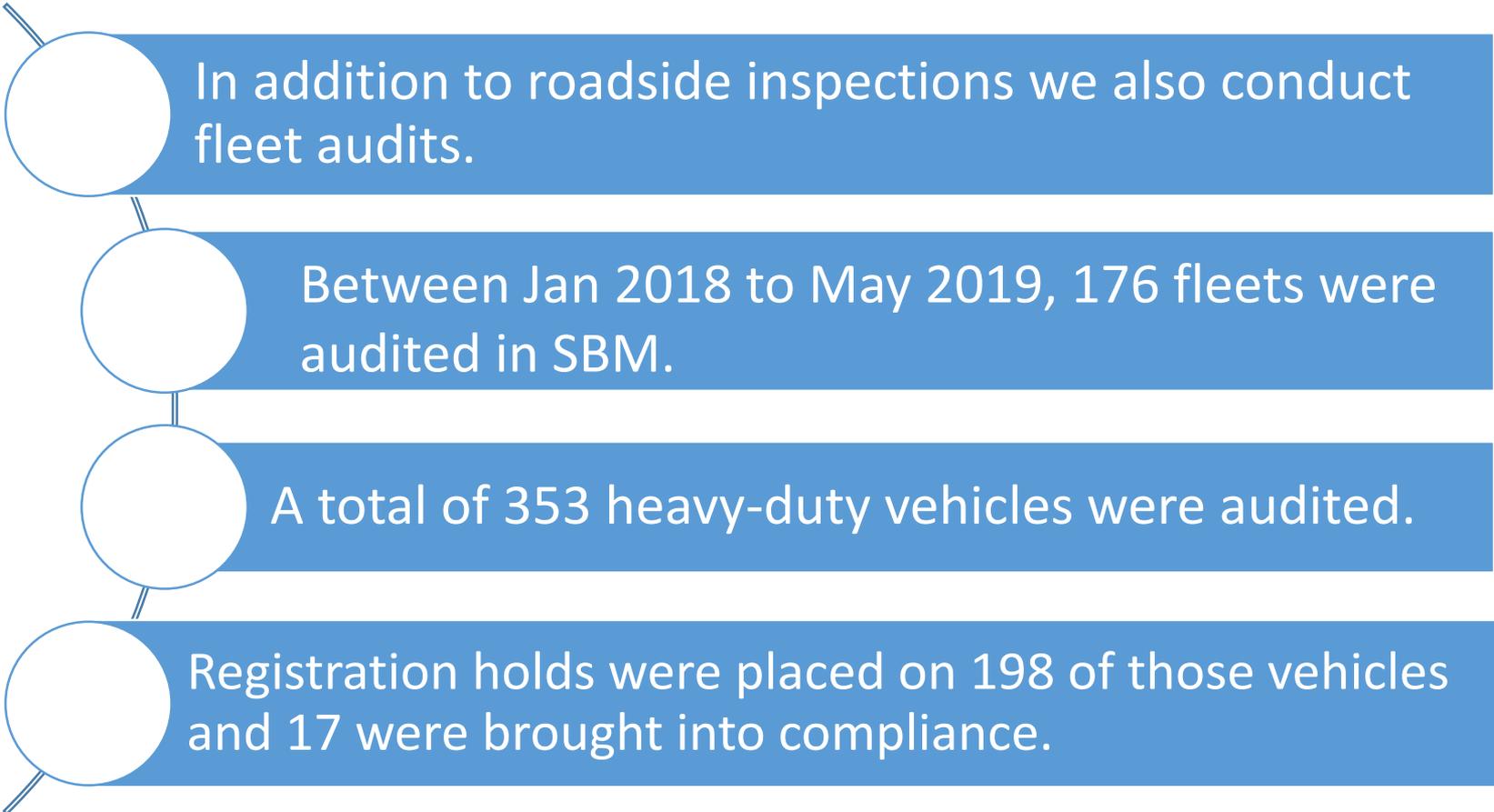
San Bernardino - Muscoy Community

CARB Three-Year Enforcement History 2016 - 2018 for the San Bernardino - Muscoy Community

Year/Type	Drayage	HDVIP	Idling	Off-Road	STB	Smart Way	TRU	Total
2016 Field Inspections	552	3	16	0	9	0	1	581
2016 Non-compliant	32	2	1	0	8	0	0	43
2016 % Compliance	94%	33%	94%	N/A	11%	N/A	100%	93%
2017 Field Inspections	178	0	1	37	60	0	0	276
2017 Non-compliant	4	0	0	7	0	0	0	11
2018 % Compliance	98%	N/A	100%	81%	100%	N/A	N/A	96%
2018 Field Inspections	769	246	0	0	43	4	4	1066
2018 Non-compliant	21	11	0	0	0	0	0	32
2018 % Compliance	97%	96%	N/A	N/A	100%	100%	100%	97%
Total 2016 – 2018 Inspections	1499	249	17	37	112	4	5	1923
Total 2016 - 2018 Non-compliant	57	13	1	7	8	0	0	86
Total 2016 - 2018 % Compliance	96%	95%	94%	81%	93%	100%	100%	96%

HDVIP covers emissions control labels (ECL), smoking and tampering; see CARB Resource Slides for total listing of program “Type” definitions.

Enhanced Enforcement: Additional Fleet Audits (STEP – Streamlined Truck Enforcement Program)



In addition to roadside inspections we also conduct fleet audits.

Between Jan 2018 to May 2019, 176 fleets were audited in SBM.

A total of 353 heavy-duty vehicles were audited.

Registration holds were placed on 198 of those vehicles and 17 were brought into compliance.

Upcoming and in Progress CARB Enforcement Actions in Your SBM Community

- Focused roadside and idling enforcement in and around your community in June/July 2019
- Focused enforcement in railyards for cargo handling equipment
- Settlement Agreement (SA) actions
- Supplemental Environmental Projects (SEPs) – Over \$400k school air filters in SCAQMD

Supplemental Environmental Projects (SEPs)

SEPs are community-based projects funded from a portion of the penalties received during CARB settlement of enforcement actions.



Improve public health



Reduce pollution

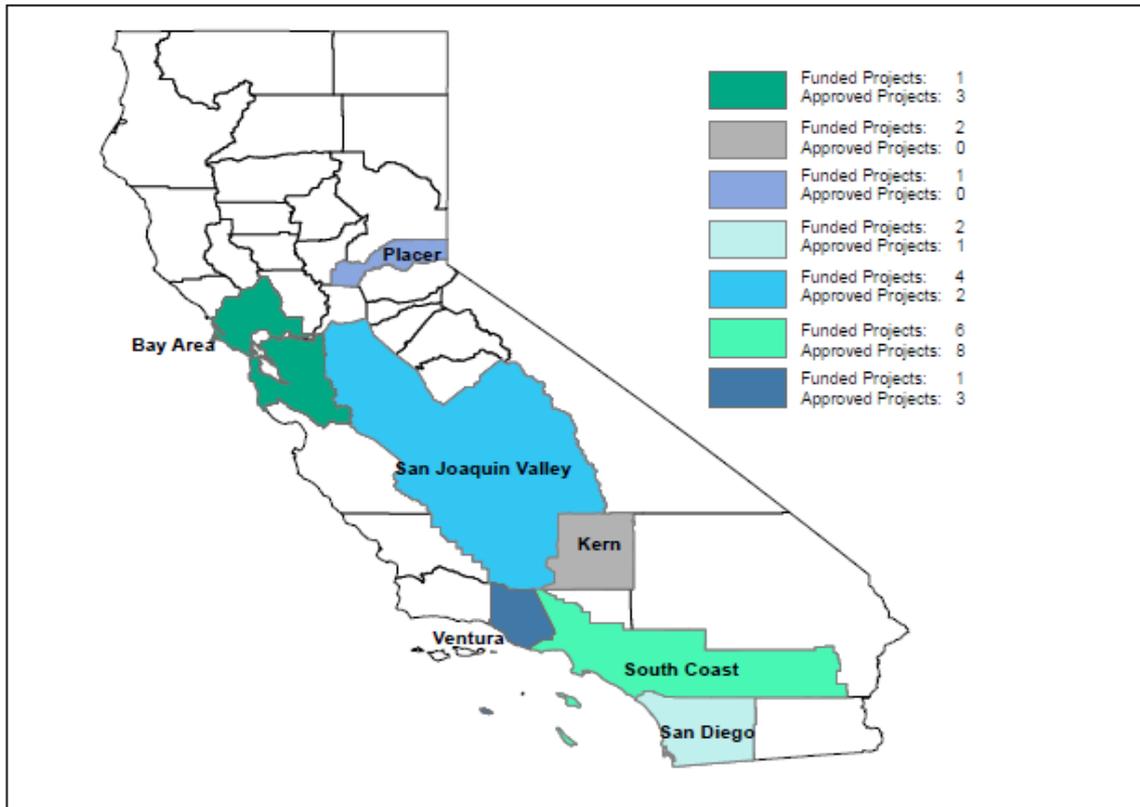


Increase environmental compliance



Bring public awareness

Six funded SEPs in SCAQMD

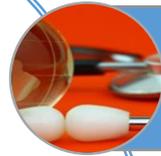


Examples of Projects:

- Paid environmental education internships
- Planting trees
- Writing articles to inform community about air pollution and resources
- Conducting research (e.g., air monitoring, truck traffic survey)
- School air quality education programs and filtration systems

More SEPs are Possible in Your Community by Submitting a Project Proposal

If project meets requirements to right:
Please submit a proposal by filling out a SEP Proposal Form (<https://calepa.ca.gov/sep-proposal-form/>)



Reduce direct/indirect air emissions or exposure to air pollution



Relate to the violation



Not benefit the violator



Go above and beyond regulatory requirements

Higher consideration given to projects within, or that benefit, disadvantaged communities.

Possible CARB Enforcement Actions for your Community



Questions, Input, Brainstorming

What do you want to know more about?

What efforts do you have input on?

What creative enforcement/outreach solutions can we explore together to improve air quality here?

CARB Enforcement Contacts

Visit the TruckStop for more detailed compliance info.:
www.arb.ca.gov/truckstop or contact CARB's diesel
hotline at 866-6DIESEL (866-634-3735) or email:
8666diesel@arb.ca.gov.

To report a violation to CARB:
Call 1-800-END-SMOG (288-7664) or report online at:
<https://calepa.ca.gov/enforcement/complaints>

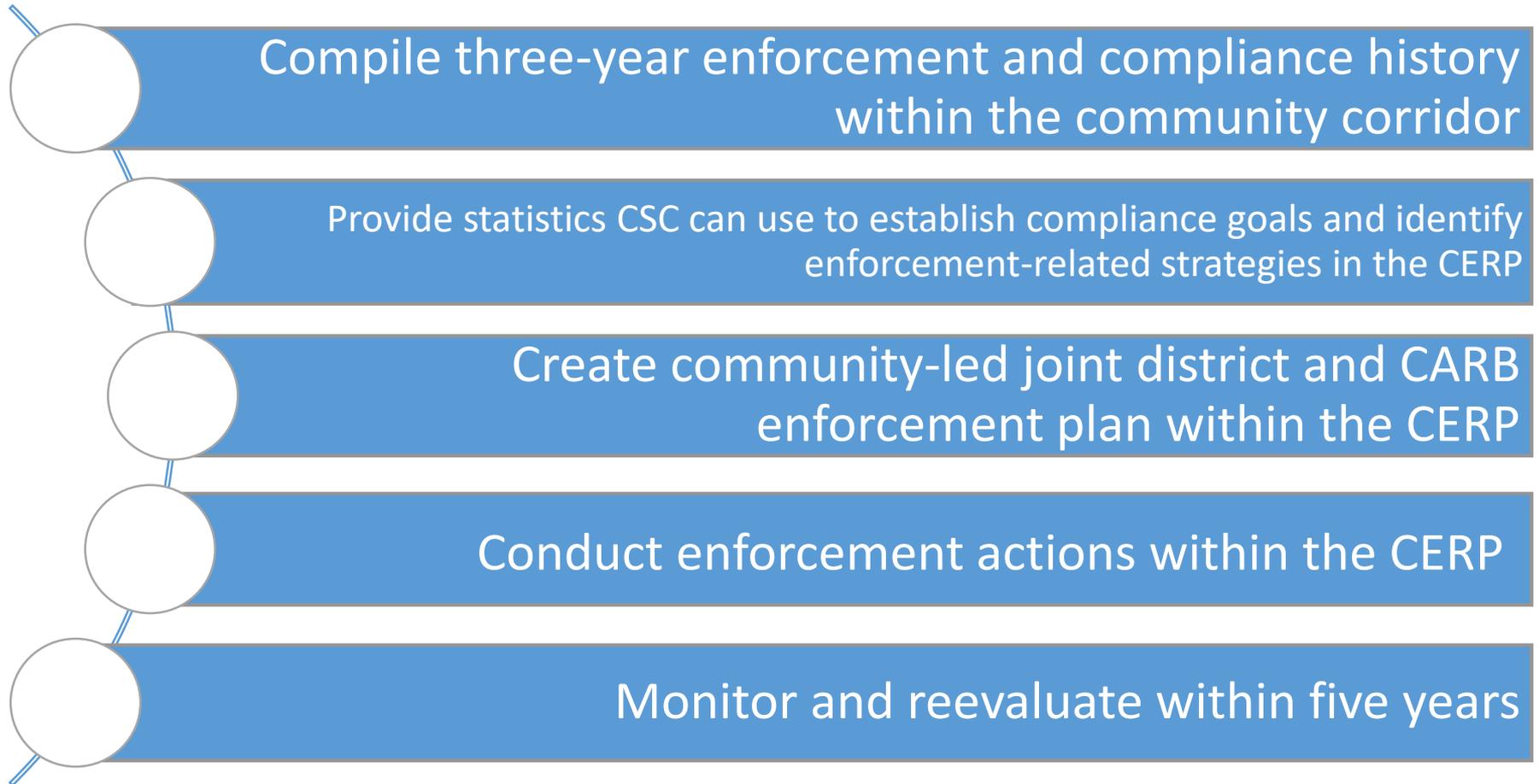
CARB Community Outreach and Enforcement Section:
COES@arb.ca.gov

CARB Enforcement Resource Slides

California Air Resources Board



CARB Enforcement Role in San Bernardino - Muscoy CERP



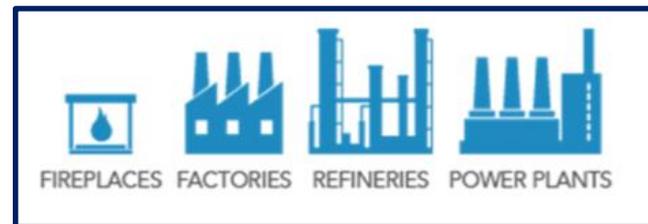
CARB Responsibilities



Protect public health from the harmful effects of air pollution and developing programs and actions to fight climate change.



Implement and enforce local, state and federal air pollution control laws and regulations applicable to stationary sources.



SB 1: Registration Requirements

Starting in 2020, in order to register a truck or bus subject to CARB's regulations with the California Department of Motor Vehicles (DMV), that vehicle needs to be in compliance according to the following schedule:

Heavier Vehicles (>26,000 pounds gross vehicle weight)	
Vehicle Model Year	DMV Begins Compliance Verification
2000 and older	January 1, 2020
2001 – 2005	January 1, 2021
2006 – 2007	January 1, 2022
2008 – 2010	January 1, 2023

Lighter Vehicles (14,001 – 26,000 pounds gross vehicle weight)	
Vehicle Model Year	DMV Begins Compliance Verification
2004 and older	January 1, 2020
2005 – 2007	January 1, 2021
2008 – 2010	January 1, 2023

Truck and Bus Rule and Idling Restrictions Enforcement

- **Statewide Trucks and Buses:** All vehicles with 2009 or older engines weighing over 14,000 pounds must reduce exhaust emissions by upgrading to 2010 or newer engines by 2023. SB 1 will deny DMV registration to non-compliant vehicles.
<https://www.arb.ca.gov/msprog/onrdiesel/documents/tbfinalreg.pdf>
- **Idling Trucks and Buses:** CARB conducts idling sweeps to ensure regulatory truck and bus idling limits are not exceeded. Those limits are:
 - Up to five minutes in areas other than schools and more than 100 feet from other restricted areas such as residential areas, hotels/motels, hospitals, and senior and child care facilities.
 - Newer engines (2008+) shut down automatically after five minutes of idling or are low NOx emissions DPM filtered exhaust engines.
 - Truck and bus idling is prohibited at schools with a few exceptions.
 - Truck and buses with *Clean Idle* stickers are exempt.

Ports and Railyards Enforcement Programs

We are in ports and railyards regularly enforcing these regulations:

- **Drayage:** Drayage vehicles move goods by certified heavy-duty diesel vehicles (HDV). HDV that enter a port or intermodal facility are required to be certified to meet clean emission standards.
<https://www.arb.ca.gov/msprog/onroad/porttruck/finalregdrayage.pdf>
- **Commercial Harbor Craft:** This regulation is intended to reduce diesel particulate matter and nitrogen oxides emissions from diesel engines used on commercial harbor craft operated in California waters located within 24 nautical miles of the California coast. The regulation includes requirements for new and in-use (existing) engines as well as monitoring, recordkeeping, and reporting requirements.
<https://ww2.arb.ca.gov/our-work/programs/commercial-harbor-craft>
- **Ocean Going Vessels:** This regulation is designed reduce particulate matter, nitrogen oxides, and sulfur oxide emissions from ocean-going vessels.
<https://www.arb.ca.gov/ports/marinevess/ogv/ogvrules.htm>
- **Shore Power:** The purpose of the At-Berth Regulation is to reduce emissions from diesel auxiliary engines on container ships, passenger ships, and refrigerated-cargo ships while berthing at a California Port. <https://www.arb.ca.gov/ports/shorepower/shorepower.htm>
- **Cargo Handling Equipment:** ARB staff investigates opportunities to reduce idling emissions from cargo handling equipment used at ports and intermodal rail yards.
<https://www.arb.ca.gov/ports/cargo/cargo.htm>

Heavy-duty Vehicle Inspection Program (HDVIP)

We conduct regular roadside heavy-duty vehicle inspections for the following:

- **HDVIP - Diesel Emission Fluid:** Diesel engines equipped with Selective Catalytic Reduction (SCR) all use a liquid urea solution as the reductant, known commonly as diesel exhaust fluid (DEF). This fluid is used in the SCR to reduce NOx emissions. <https://www.arb.ca.gov/msprog/onrdiesel/regulation.htm>
- **HDVIP – Emission Control Label:** Engine certification labeling requirements that certify that engines meet clean emission standards. <https://www.arb.ca.gov/enf/hdvp/bip/bip.htm>
- **HDVIP – Smoke/Tampering:** Requires heavy-duty trucks and buses to be inspected for excessive smoke and tampering. <https://www.arb.ca.gov/enf/hdvp/bip/finalreg.pdf>

Other Vehicle Enforcement Programs

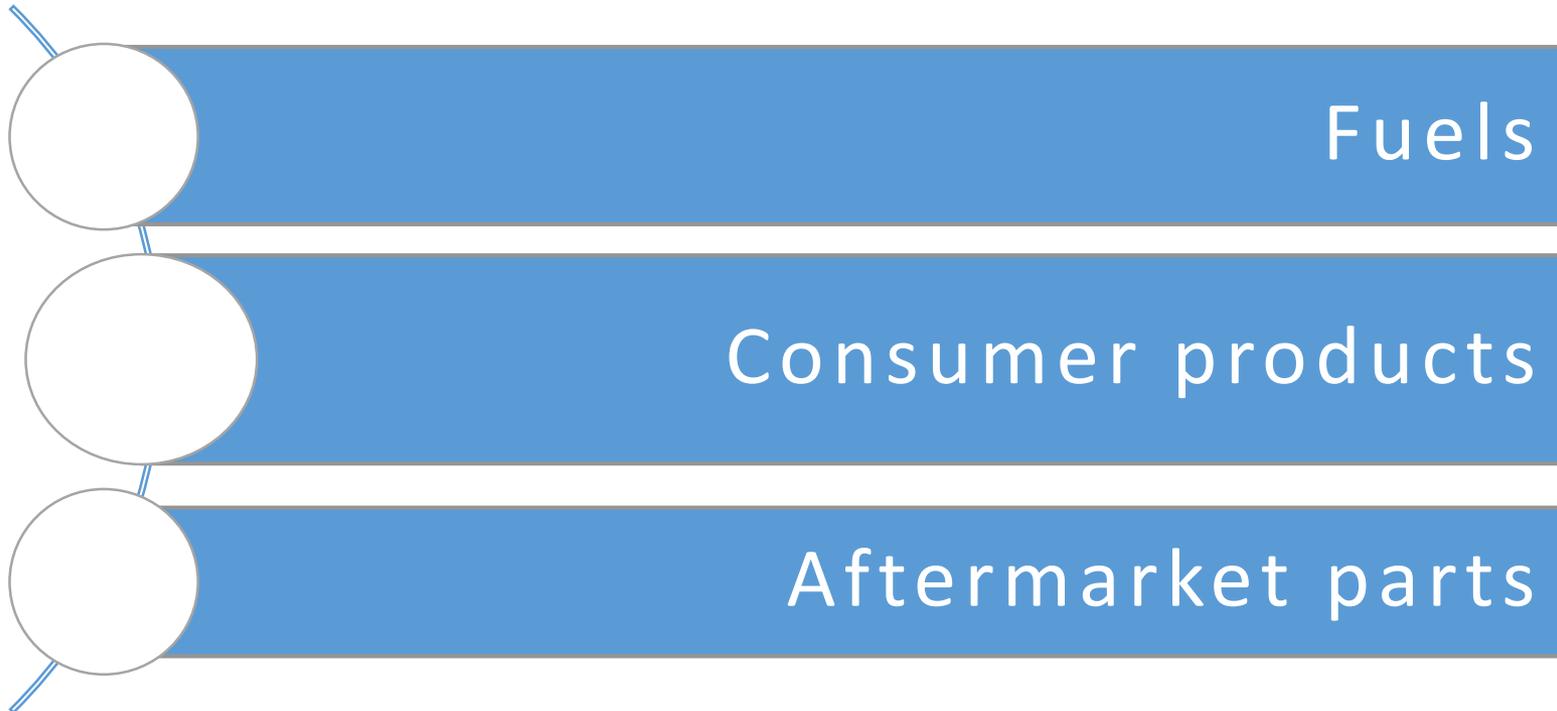
- **Off-Road:** Regulations aimed at cleaning up ‘off-road’ construction equipment such as bulldozers, graders, and backhoes. These requirements are in place to help ensure that diesel soot filters are installed on off-road equipment.
<https://www.arb.ca.gov/msprog/ordiesel/documents/finalregorder-dec2011.pdf>
- **SmartWay:** The Tractor-Trailer Greenhouse Gas Regulation requires 53-foot or longer dry van or refrigerated van trailers and the tractors that pull them on California highways to use certain equipment that the U.S. Environmental Protection Agency SmartWay program has verified or designated to meet their efficiency standards.
<https://arb.ca.gov/cc/hdghg/technologies.htm>
- **Transport Refrigeration Units:** Inspect secondary engines to ensure TRUs meet labeling and clean air requirements.
https://ww3.arb.ca.gov/diesel/tru/documents/fro_10-16-12.pdf
- **Solid Waste Collection Vehicles:** Fleet-based regulation requiring retrofit or purchase of cleaner engines to reduce diesel particulate matter emissions.
<https://www.arb.ca.gov/msprog/swcv/swcv.htm>

Other Enforcement Programs

- **Fuels:** CARB enforces our regulations related to gas, diesel, and racing fuels as well as storage of fuels from refineries through transportation to distribution at fuel service stations.
<https://www.arb.ca.gov/enf/fuels/fuels.htm>
- **Consumer Products:** Consumer Products – CARB enforces the regulatory requirements for chemically formulated consumer products, fuel containers, and indoor air cleaning products that emit volatile organic compounds, toxic air contaminants and greenhouse gases, and include the following products: cleaning compounds; composite wood products, floor finishes; cosmetics; personal care products; home, lawn, and garden products; aerosol paints; and automotive specialty products.
<https://www.arb.ca.gov/consprod/consprod.htm>;
<https://www.arb.ca.gov/enf/compwood.htm>

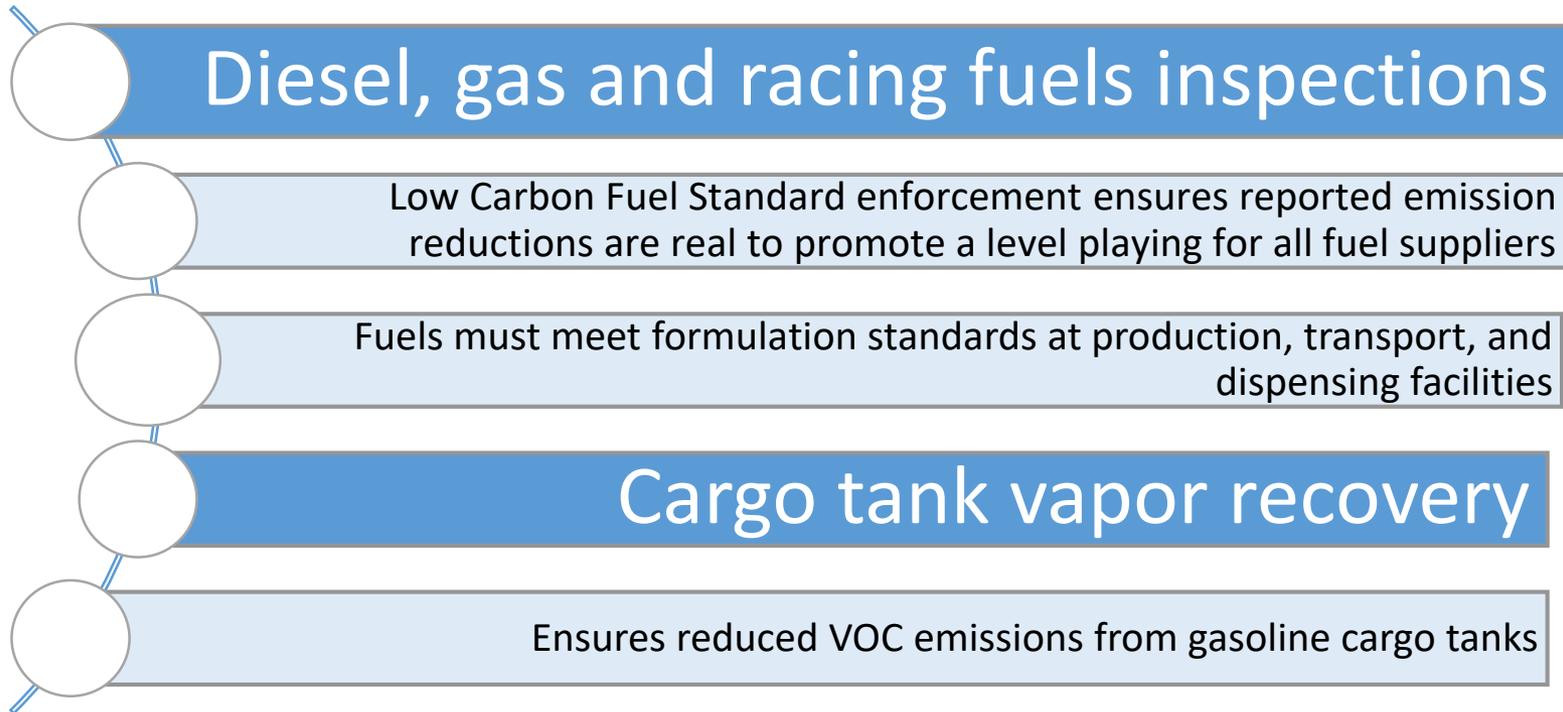
Additional Enforcement Activities

We are working on compiling complete enforcement activity for the CERP from 2016 – 2018. We have partial additional data for the following programs:



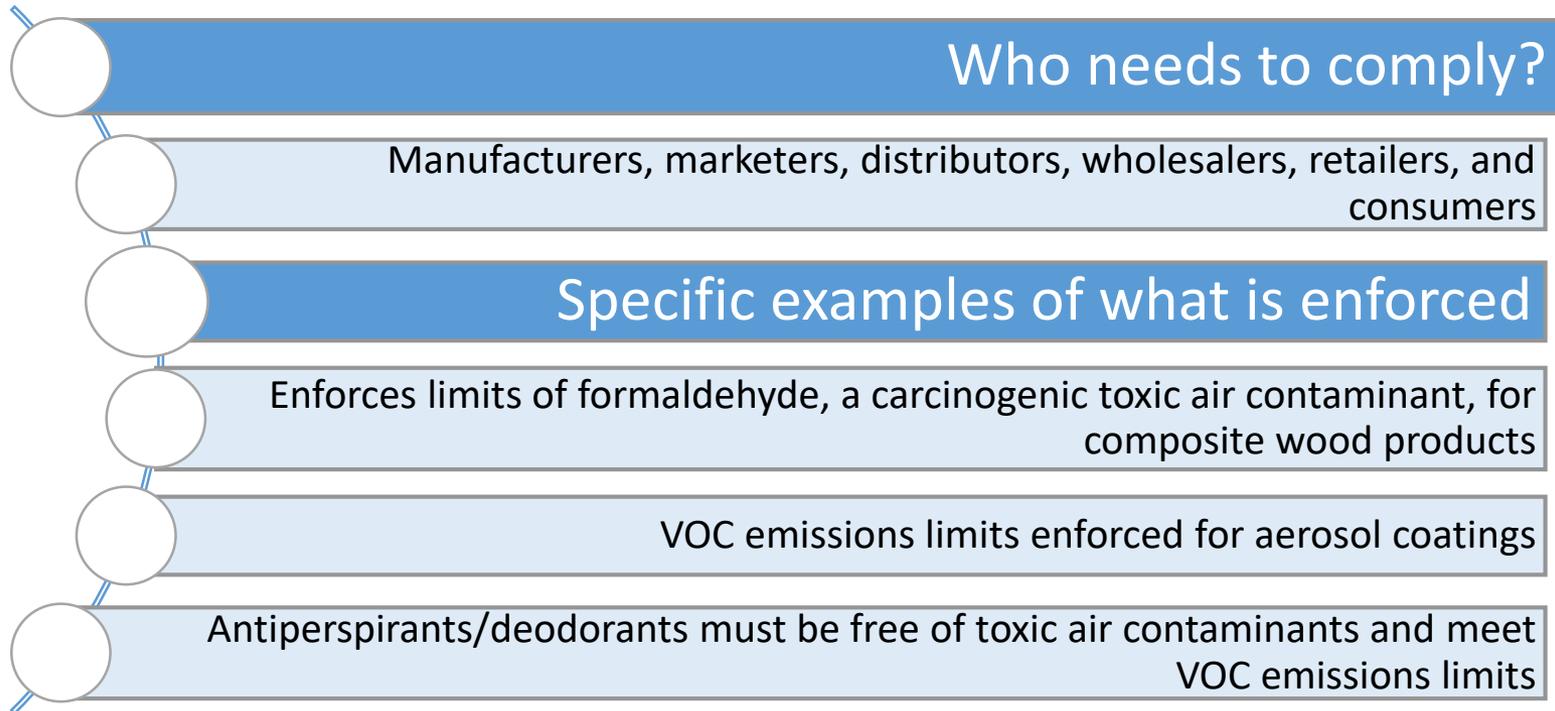
Fuels Enforcement Criteria

Fuels enforcement activity focuses on inspections of fuels and storage tanks



Consumer Products Enforcement Criteria

Account for over ten percent of VOC emissions that contribute to smog formation statewide and can also emit carcinogenic toxic air contaminants.



Aftermarket Parts Enforcement Activities

We ensure new add-on and modified aftermarket parts demonstrate that they do not adversely affect emissions or emission control systems.

Examples of illegal aftermarket parts/tampering practices in California

Diesel particulate filter delete kits

Engine control module tampering

Selective catalytic reduction delete kits

Where enforced?

Part manufacturers, distributors, automobile dealers, general and automotive retailers, marine equipment stores, motorcycle shops, etc. at stores and online



Enforcement Process

Identify and report a potential violation

Evaluate information

Notify responsible party

Opportunity to discuss

Outcomes, remedies & penalties

All of these are Potential Violations



Reporting

Reporting potential violations of air quality requirements can provide important information for enforcement:



calepa.ca.gov/enforcement/complaints

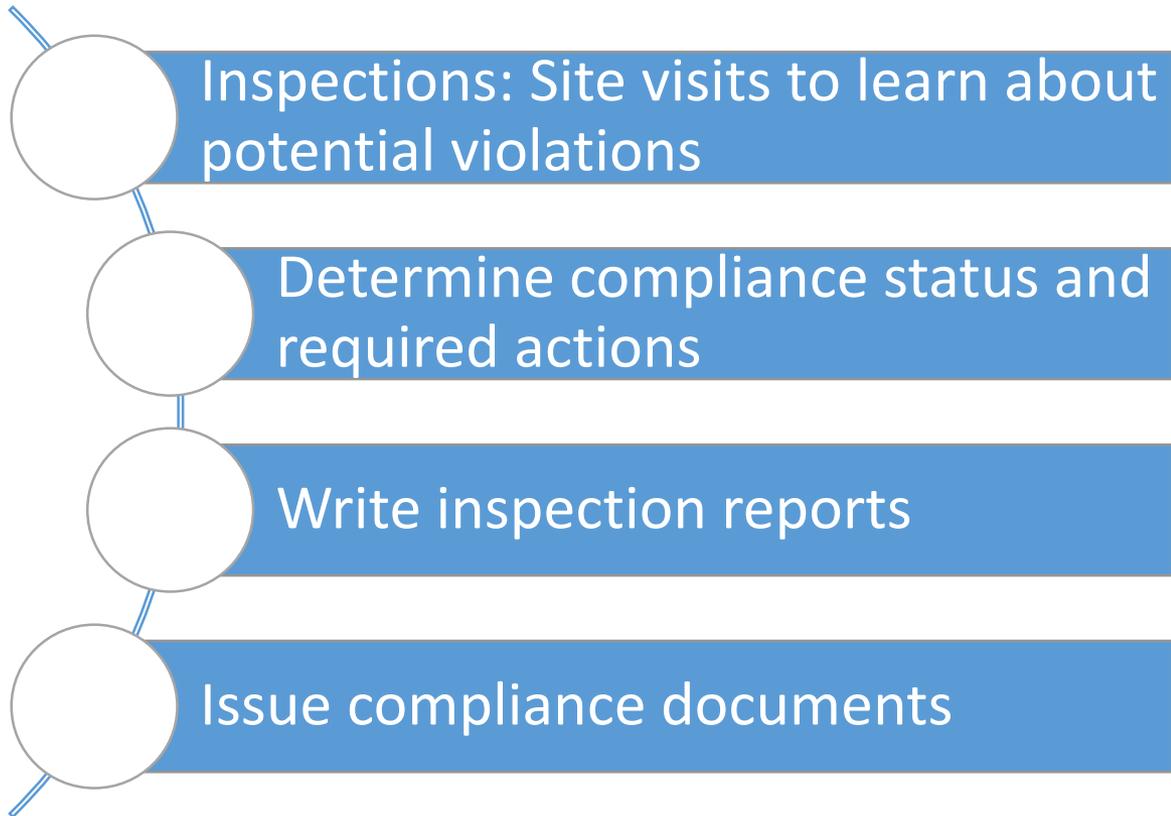


1 (800) END-SMOG

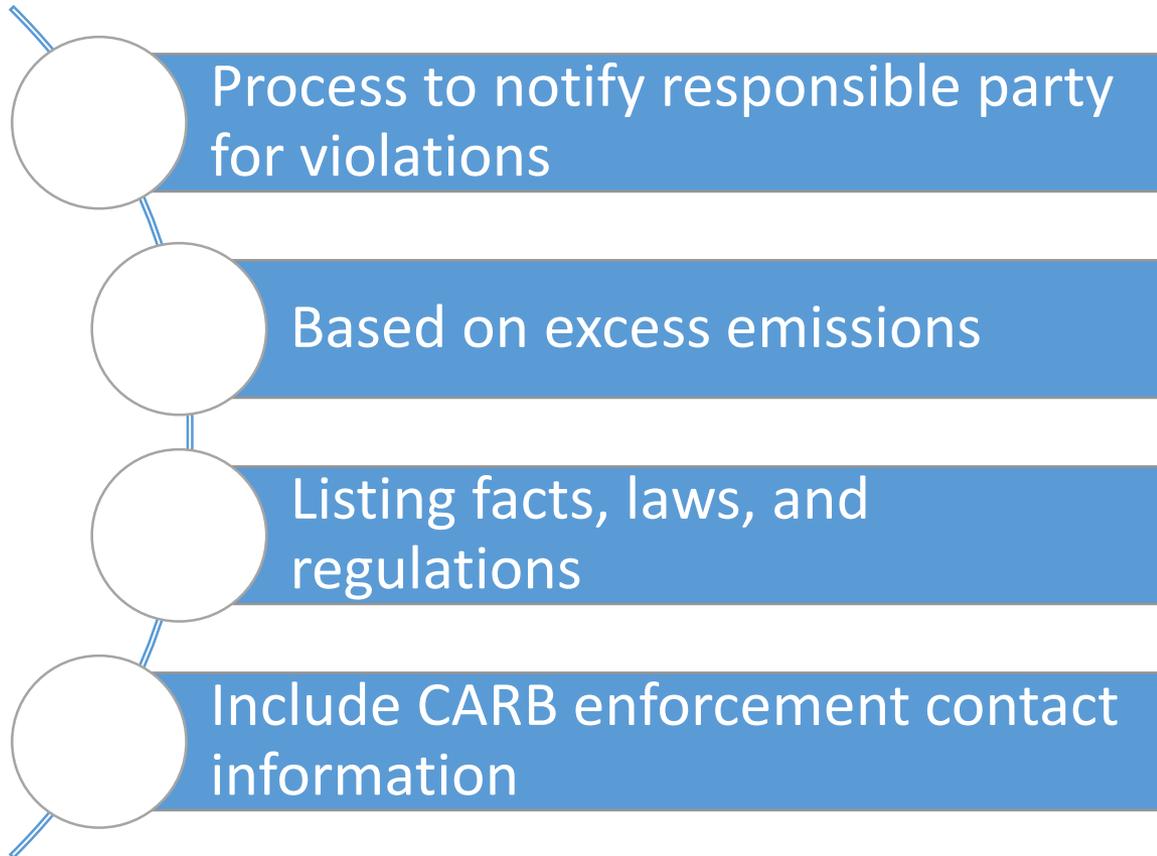


1(800) CUT-SMOG

Evaluating Information



Notice of Violation (NOV)/Citation



Opportunity to Discuss

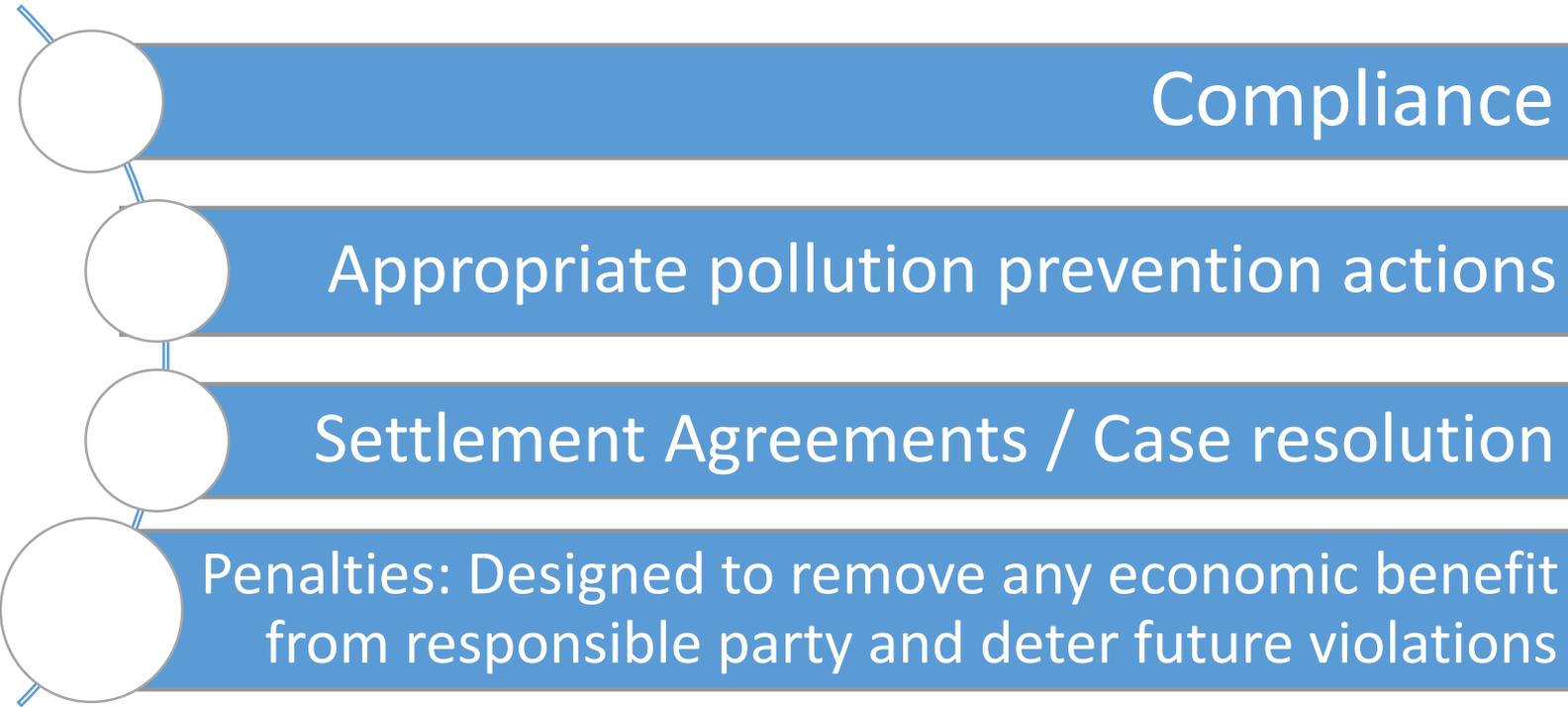


Responsible party may provide further facts for consideration by CARB regarding NOV



This discussion often becomes a negotiation between CARB and the responsible party

Outcomes/Remedies



Compliance

Appropriate pollution prevention actions

Settlement Agreements / Case resolution

Penalties: Designed to remove any economic benefit from responsible party and deter future violations

Examples of Settlement Agreements in SCAQMD

Railyard drayage truck violations

UP agreed to truck turn away program through 2020 and paid fines

BSNF instituted truck compliance Rail Pass reporting system and helped fund a local SEP through fines

Refinery tank fuel sampling exceeded limits

Paid fines

Ocean-going vessels exceeded fuel sulfur emissions within coastal waters

Paid fines

And many more...

See CARB annual enforcement reports for statewide enforcement efforts

<https://www.arb.ca.gov/enf/reports/reports.htm>

Summary of SEPs in SCAQMD



Community teen paid internship conducting hands-on climate change teaching and research projects for visitors at the California Science Center



South LA Urban Greening and Community Forestry Project will plant and maintain 300 trees over five years in public parkways with the help of local volunteers raising awareness and restoring ecosystem functions



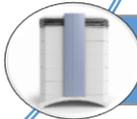
Community Voices on Health and the Environment will hire three community members to write monthly articles identifying environmental health hazards and community member resources in Wilmington



CFASE Survey of Freight Truck Transportation Corridors will gather data needed for community and government entities to develop future land use planning policy in Wilmington



Kids Making Sense air monitoring/improving air quality grades 6 -12 education and empowerment program offered at local schools, including Dana Middle School in San Pedro to help students and community members improve air quality and reduce their exposure to air pollution



School Air Filtration Systems SEP will install IQ Air filtration systems in schools throughout the South Coast Air Quality Management District in the second half of 2019

Committee Presenters

- AB 617 is a collaborative effort
- Seeking volunteer Community Steering Committee (CSC) members to present
- Highlight efforts within the San Bernardino, Muscoy (SBM) community that could be part of the AB 617 Community Emission Reduction Plan (CERP)
- Who would you like to hear from?
 - Let us know!

SBCTA Building the BRIDGE to Tomorrow's Transportation



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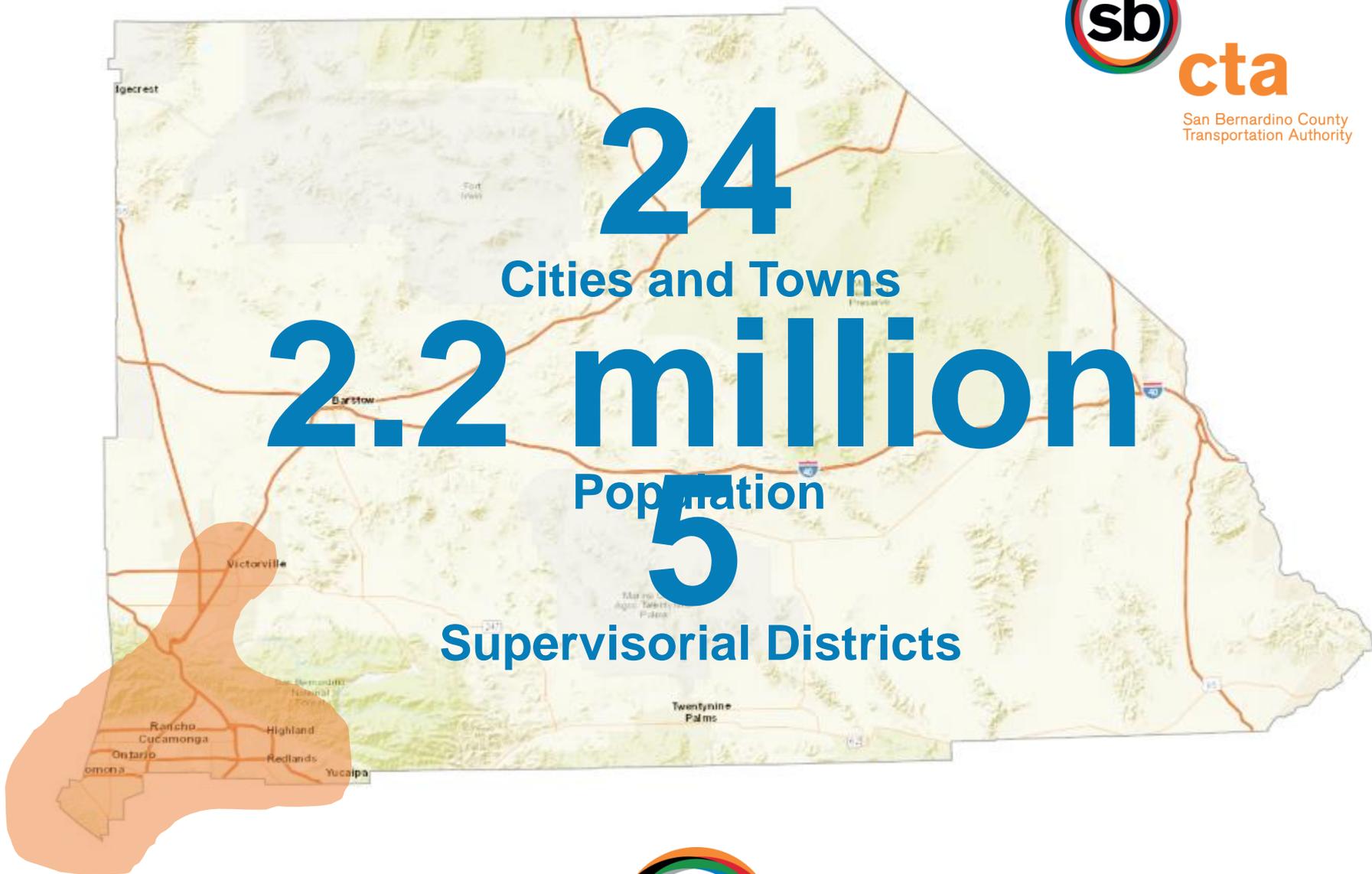
San Bernardino County
Transportation Authority

Otis Greer, Director of Legislative Affairs
Josh Lee, Chief of Planning



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San Bernardino County
Transportation Authority



Who We Are



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San Bernardino County
Transportation Authority

County Transportation Commission

Allocates and programs State and Federal funds for regional transportation projects throughout the county.

County Transportation Authority

Administers the voter-approved half-cent transportation sales tax and provides major transportation improvements within the county.

Congestion Management Agency

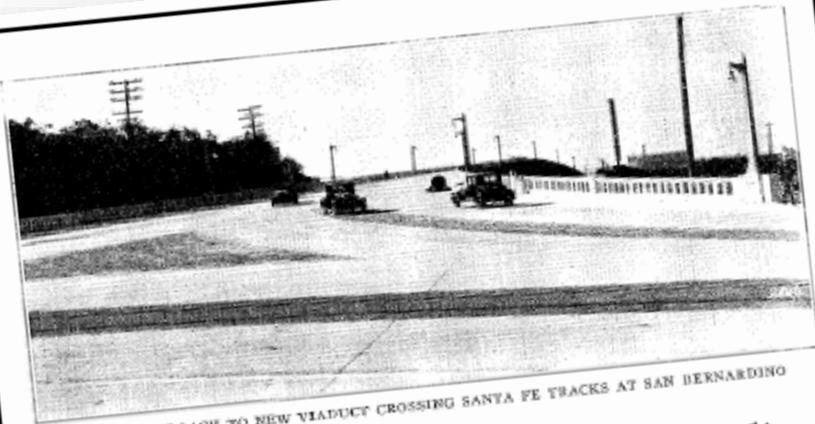
Implements the plan for addressing congestion and air quality related to transportation facilities throughout the county.

Service Authority for Freeway Emergencies

Manages the system of call boxes on major highways throughout the county.



Who We Are



SOUTH APPROACH TO NEW VIADUCT CROSSING SANTA FE TRACKS AT SAN BERNARDINO

Viaduct Over Yards At St. Bernardino Completed In June

By R. H. MACK

WITH appropriate dedicatory ceremonies, the new viaduct recently completed over the Santa Fe Railway yards in the city of San Bernardino, Cal., was opened to traffic on June 9, thus improving the western entrance to that city and eliminating the "death trap," as the old viaduct was sometimes called. This latter causeway was constructed in 1907 and was entirely inadequate for modern highway needs, being built only of steel floor beams and stringers, with a wooden floor surfaced with asphalt.

The new structure combines safety and durability with beauty of line. It has a forty-foot reinforced concrete roadway with a three-foot six-inch sidewalk on each side and an overall length of 1,016 feet. The flared approaches give easy access at either end. The project involved the relocation of the street railway tracks at an estimated cost of \$14,000 and yard changes by the Santa Fe Railway Company at an estimated cost of \$13,000. New street work cost \$58,000 and rights of way \$30,000.

The total cost of the entire improvement will aggregate some \$322,000, being financed from state and federal funds and the Santa

Fe Railway; the necessary rights of way being paid by the county of San Bernardino. The old viaduct was taken apart and incorporated in the new structure, so that very little was wasted. The additional size and strength of the new causeway is well illustrated by the fact that 405,000 pounds were salvaged from the old viaduct, but 1,315,000 pounds of structural steel had to be added to that salvaged from the old structure to make it of modern size and strength.

The structure itself contains:

- 2,500 cubic yards of structure excavation;
- 12,900 cubic yards of imported borrow (approaches);
- 5,975 cubic yards of cement concrete;
- 401,000 pounds of bar reinforcing steel;
- 405,000 pounds of existing structural steel (fabricated);
- 1,315,000 pounds of new structural steel;
- 14,330 lineal feet of treated Douglas fir piles.

The necessity of improving the western entrance to San Bernardino had been apparent for a number of years. Civic-minded citizens, backed by the Chamber of Com-



Award Design/Build Contract
Summer 2019

San Bernardino County
Transportation Authority

Demolition of the Bridge



Anticipated Re-open to Traffic
Mid to Late 2023



Mt. Vernon Viaduct



Mt. Vernon Viaduct



Mt. Vernon Viaduct



Mt. Vernon Viaduct



THE I-10 & I-15 CORRIDOR PROJECTS



Starts in Early 2020

GENERAL PURPOSE AUXILIARY SHOULDER



SB Express Lanes



I-215 BARTON ROAD INTERCHANGE

OVERVIEW



Opens in Early 2020



Area Projects



INTERSTATE 215 WIDENING PROJECT

\$700 MILLION



Recently Completed Projects

A photograph of the San Bernardino Transit Center at dusk. The building features a large, modern glass facade and a prominent, illuminated, cantilevered roof structure. The sky is a mix of blue and pink, and a bus is visible on the street in the background.

SAN BERNARDINO TRANSIT CENTER

\$30 MILLION



Recently Completed Projects

A photograph of a Metrolink train at a station platform. The train is blue and white with the number 908 on its front. Several people are walking on the platform to the left. The scene is brightly lit, suggesting a sunny day.

METROLINK EXTENSION TO DOWNTOWN

\$140 MILLION



Recently Completed Projects

FROM
DMU



TO
ZEMU



Next Generation of Transit

PLANNING AND SUSTAINABILITY



“We envision a sustainable system of high-quality education, community health, public safety, housing, retail, recreation, arts and culture, and infrastructure, in which development complements our natural resources and environment.”



Planning and Sustainability

TRANSPORTATION

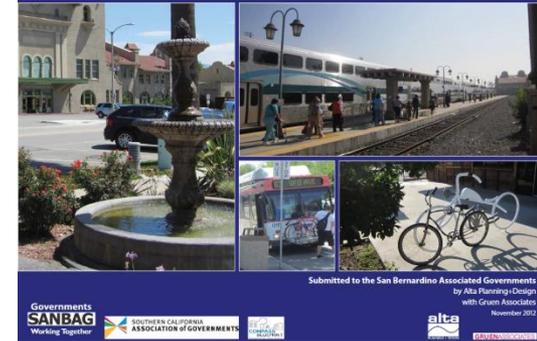
1. Active Transportation Program

- ❖ Countywide Active Transportation Plan
- ❖ Countywide Comprehensive Sidewalk Inventory
- ❖ Points of Interest Pedestrian Plan
- ❖ Safe Routes School Plan (Countywide)
- ❖ Metrolink and RPRP Accessibility Plan and Program (First/Last Mile Plans)
- ❖ Grants, Project Delivery, Workshops, and Training
- ❖ Open Streets Events and Safety Events

2. Multi-Modal Program

- ❖ Customer-Focused, Technology-Enabled Multi-Modal Action Plan
- ❖ Inland Empire Comprehensive Multimodal Corridor Plans
- ❖ Long Range Transit Plan
- ❖ Open Data Initiative
- ❖ Freeway Service Patrol (FSP)

Improvement to Transit Access for Cyclists and Pedestrians
Final Report



LAND USE

1. Countywide Growth Projections

- ❖ RTP/SCS Socio-Economic Data Local Input Process
- ❖ SBTAM Modelling Efforts with Countywide Growth Forecast
- ❖ Assist with RHNA, AHSC, and Housing Elements

2. Transportation and Land Use Integration

- ❖ Advanced Regional Rail Integrated Vision – East (ARRIVE) Study with TOD Strategies
- ❖ Countywide VMT Reduction Study (SB 743)
- ❖ Complete Streets Strategies
- ❖ Public and Transportation Infrastructure Art



CLIMATE & GHG

1. Emission Reduction

- ❖ Regional Greenhouse Gas Reduction Plan and EIR (AB 32/SB 32)
- ❖ Zero-Emission Vehicle Readiness and Implementation Plan
- ❖ San Bernardino Regional Energy Partnership
- ❖ Regional Energy Network
- ❖ Partnerships on Clean Freight
- ❖ IE Commuter Rideshare and Vanpool Program
- ❖ Resilient IE – Regional Climate Adaptation Plan (Phase I & II)

San Bernardino County
Regional Greenhouse Gas Reduction Plan

Final | March 2014



Planning and Sustainability

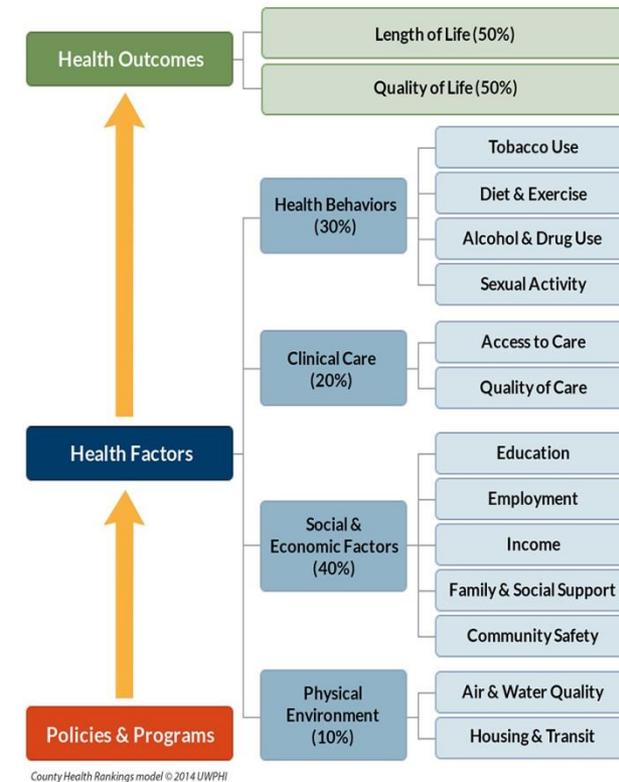
HEALTH & HABITAT

1. Wellness Element Group

- ❖ Healthy Communities Program Coordination
- ❖ Health and Built-Environment Implementation Toolkit
- ❖ Safe Routes to School Program
- ❖ Summer Meals Program Coordination
- ❖ Community Transformation Plan
- ❖ Disadvantaged Communities and Equity Toolkit (SB 1000)
- ❖ Healthy Development Checklist

2. Environment Element Group

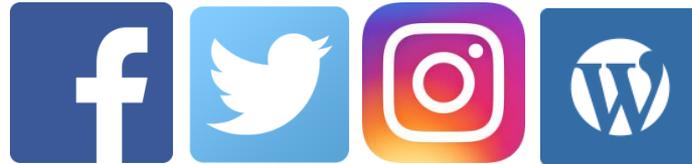
- ❖ Regional Conservation Investment Strategy (RCIS) – Alternative Conservation Plan
- ❖ RCIS – Climate Adaptation Strategies on Focal Species



Plan. Build. Move.

www.goSBCTA.com

909.884.8276



@goSBCTA



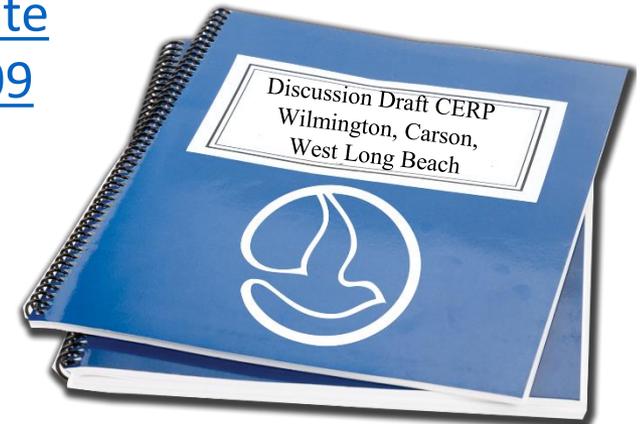
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San Bernardino County
Transportation Authority

Discussion Draft of the Community Emissions Reductions Plan (CERP) Comments Received

Discussion Draft CERP Comments Received and Comment Process

- Submitted comments may be viewed here:
http://onbase-pub.aqmd.gov/publicaccess/DatasourceTemplateParameter.aspx?MyQueryID=257&OBKey_1409_1=SBM
- Comments considered for Stationary Source Committee
 - CSC Meeting #7 CERP Discussion, June 20, 2019
 - Comments received by July 1, 2019
- Expected release of next Draft: **July 19, 2019 for Stationary Source Committee**
- Ongoing comment period until **August 2, 2019**



Examples of General Comments Received for Discussion Draft CERP

Summary of Comment	Response
<p>Identify an emissions baseline and establish emission reduction targets in the CERP</p>	<p>The Draft CERP will be available on July 19, 2019, including:</p> <ul style="list-style-type: none"> • Source attribution data, • Preliminary emission reduction targets (e.g., based on AB 617 funding levels), and • Methods for tracking emission reductions
<p>CERP should go above and beyond what is already required</p>	<p>In anticipation of AB 617, staff prioritized specific rule development projects to address potential air quality concerns to ensure earlier implementation dates. CERP actions focus on prioritizing these Year 1 communities (e.g., targeted outreach, focused enforcement)</p>
<p>Support ideas, goals, and actions outside of South Coast AQMD jurisdiction (e.g., land use agencies) that advocate for reducing air pollution</p>	<p>The Discussion Draft CERP includes collaborations with land use agencies and other community based organizations to reduce emissions and exposures in the community</p>

Additional comments were received, and staff are working to address them in Draft CERP

Examples of General Comments Received for Discussion Draft CERP (continued)

Summary of Comment	Response
<p>Perform a community health assessment to measure the existing health standards baseline in order to have quantifiable goals and targets</p>	<p>Our objective is to achieve air quality improvements to benefit public health. Staff is interested in partnering with health agencies and organizations to identify additional actions to improve public health (e.g., asthma interventions). These actions will have greater direct benefits to public health than an assessment, which is costly and may not be able to show short-term health benefits. Staff will work to identify funding resources and partners for public health interventions that have a nexus to air quality improvements (e.g., Breathmobiles).</p>

Examples of asthma intervention programs (e.g., Akron Children’s Hospital, Regional Asthma Management & Prevention, and American Lung Association):

Additional comments were received, and staff are working to address them in Draft CERP

Examples of General Comments Received for Discussion Draft CERP (continued)

Summary of Comment	Response
<p>Discuss funds allocated to date, how investments will achieve quantifiable results and community benefits, and how groups can support sustained funding</p>	<ul style="list-style-type: none"> • AB 134 funded projects shown in CSC Meeting #1 <p>South Coast AQMD staff is:</p> <ul style="list-style-type: none"> • Identifying options for distribution of funds among communities • Quantifying potential emission reductions targets based on funding levels • Seeking public input on path forward
<p>Provide an effectiveness analysis for enforcement and outreach activities</p>	<ul style="list-style-type: none"> • The Discussion Draft CERP includes provisions for South Coast AQMD staff updates at future CSC meetings on enforcement activities (e.g., truck idling) • Other enforcement agencies, such as CARB, the City or County may also provide enforcement updates to the CSC
<p>Continue to support the accelerated adoption and prioritization of zero-emission technology and a robust, clean electric infrastructure</p>	<p>The Draft CERP will include provisions that prioritize zero-emission technologies based on certain criteria such as availability, cost, etc. Incentive dollars can be used toward infrastructure projects</p>

Additional comments were received, and staff are working to address them in Draft CERP

Examples of Comments Received for Chapter 5 of the Discussion Draft CERP

Summary of Comment	Response
<ul style="list-style-type: none"> • Increase incentives to replace older trucks • Learn where the oldest trucks operate in sensitive communities to direct existing resources more effectively 	<ul style="list-style-type: none"> • Staff is reviewing opportunities to improve funding programs to accelerate implementation of cleaner vehicles • Staff will explore the feasibility of using the Automated License Plate Reader (ALPR) for targeted outreach on incentives for trucks (see Chapter 5B, Action 3)
<p>Approve and implement the Facility Based Measures and Indirect Source Rules (ISR) for warehouses and railyards</p>	<ul style="list-style-type: none"> • Staff is continuing to develop ISR and other facility based mobile source measures for warehouses and railyards. As rule development continues, staff will continue to reach out for CSC input • Staff will incorporate the concerns expressed by CSC's into the rule concepts brought to the Board for its decision. For example, staff will look to ensure that any rule concept will include measures to emphasize localized emission reductions around these facilities.

Additional comments were received, and staff are working to address them in Draft CERP



Updates on Community Air Monitoring in SBM

Payam Pakbin, PhD
Program Supervisor

Community Air Monitoring Updates



Fixed Monitoring



Mobile Monitoring



Flight-Based Measurements



Community Air Monitoring Website



Community Air Monitoring Data Display

Fixed Monitoring

Baseline

Purpose: to provide information about general air quality conditions in this community and track progress

Continuous, real-time monitors:

- CO, NO_x, O₃, black carbon (BC), ultrafine particles (UFP)

24 hr time-integrated samples (1 in 3 days):

- PM_{2.5}

24 hr time-integrated samples (1 in 6 days):

- Lead
- PM₁₀

24 hr time-integrated samples (1 in 12 days):

- Volatile Organic Compounds (VOCs)

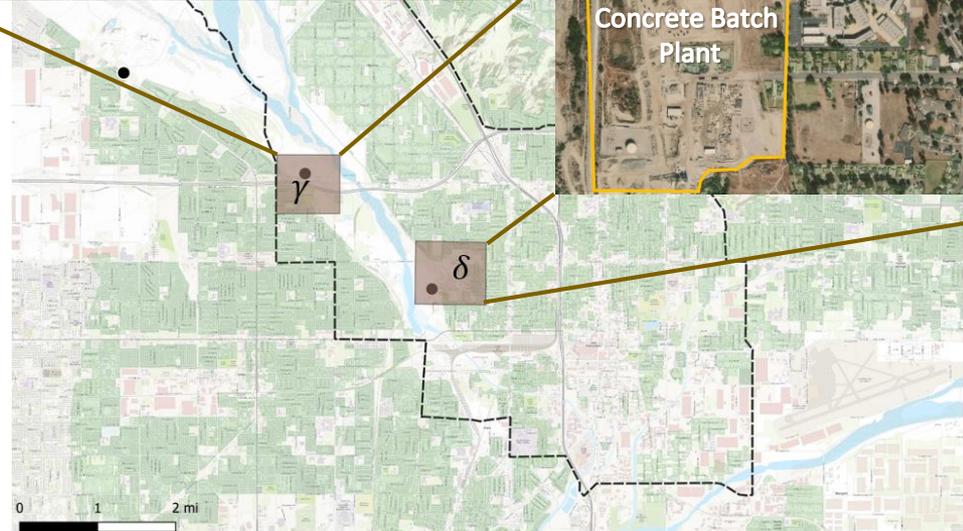


Fixed Monitoring

Source Monitoring

Purpose: to identify activities that may cause high levels of air pollution and to measure levels of pollutants near these sources

- Facilities that handle cement have the potential to emit PM containing hexavalent chromium from operational activities and fugitive dust
- Currently surveying the facilities and nearby communities to identify monitoring locations



Mobile Monitoring

- Mobile measurements began in June 2019
- 2019 schedule is ongoing
- Multiple purposes:
 - **Surveys**: Wide area monitoring to identify potential “hotspots”
 - **Source Identification**: “Chasing” pollution plumes to identify specific source(s) of air pollution
 - **Source Characterization**: To better understand the composition and variability of known emissions sources
 - **Compliance Support**: To provide data to support more robust monitoring, investigation activities, and enforcement actions

Mobile Monitoring: Platform 1 Example



Target Pollutants:
Diesel exhaust
NO₂, CO, O₃
Particulate Matter

Target Air Quality Priority:

- Railyard, Truck traffic, Warehouses

Purpose:

- Identify diesel PM hotspots
- Assess exposure impact of transportation corridors and idling spots
- Track progress of targeted emission reduction strategies

Mobile Monitoring Concept
Results to be Added...

Mobile Monitoring: Platform 2 Example

Target Pollutants:

VOCs , particulate matter mass and composition

Target Air Quality Priority:

- OmniTrans Bus Yard

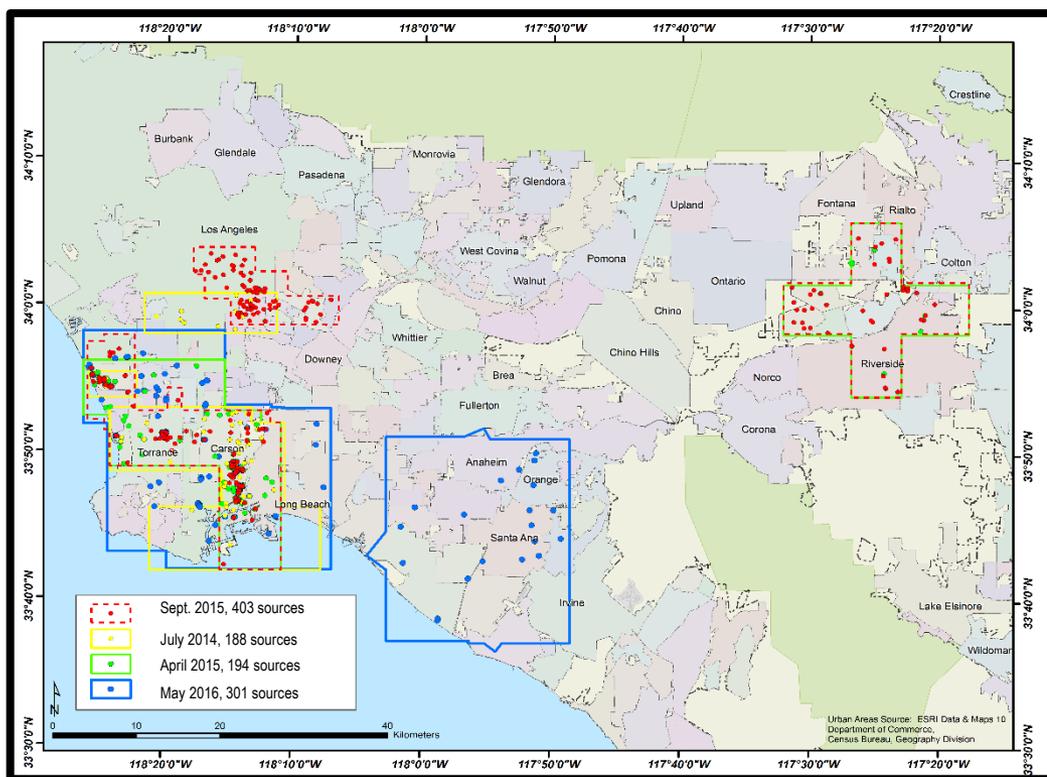
Purpose:

- Leak detection
- Response to odor complaints
- Characterize facility-wide emissions
- Assess community exposure to air toxics

- Mobile measurements were conducted at and around OmniTrans Bus Yard with highly sensitive monitors
- Data are being analyzed and a report will be available soon



Flight-Based Air Toxics Measurements



Purpose:

- Survey large areas
- Detect plumes and emissions
- Identify hotspots and unknown sources
- Focus ground-based efforts

Target Pollutants:

VOCs and other gaseous air pollutants

Community Air Monitoring Website

Language F.L.N.D. About Contact Grants & Bids Online Services I'm Looking For Sign Up Search

AIR QUALITY RULES & COMPLIANCE INCENTIVES & PROGRAMS PERMITS NEWS, WEBCASTS, & CALENDAR TECHNOLOGY ADVANCEMENT RESOURCES MEETING AGENDAS & MINUTES

South Coast AQMD

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Home / About / Initiatives / Community Efforts / Environmental Justice / AB 617 & AB 134 / AB 617 Community Air Monitoring

AB 617 Community Air Monitoring

Air monitoring can provide valuable information about sources of air pollution, types of pollutants, and air quality impacts in the community. Information that is collected from air monitoring can be used to track air quality improvements.

AB 617 Community Air Monitoring

- Communities**
 - Wilmington, Carson, West Long Beach Community
 - San Bernardino, Muscoy Community
 - East Los Angeles, Boyle Heights, West Commerce Community
- Resources**
- Pollutants of Interest**
- FAQs**
- Disclaimer**
- Contact**

Recently added/updated:

- NEW!** AB 617 Community Air Monitoring webpages and air quality maps are online! - posted 7/1/19

Click on the map below to be transferred to the Air Monitoring Data Display

South Coast AQMD - AB 617 Community Air Monitoring

Access to community pages for data summaries and reports

Access to the Data Display tool



Data Display and Access

New functions will be added to the Data Display tool over time

Would like CSC feedback

ppakbin@aqmd.gov

Access to Data Reports and Summaries: Mobile monitoring results, special projects

South Coast AQMD - AB 617 Community Air Monitoring

Air Quality Concerns Data Summary & Reports

SAN BERNARDINO, MUSCOY COMMUNITY (SBM)

This Inland Empire community is an area with significant public health burdens, and socioeconomic disadvantages. This community includes a major rail. [read more...](#)

MONITORING STATION INFO

San Bernardino Air Monitoring Station
Central San Bernardino Valley

[Historical Search](#)

Carbon Monoxide (CO)		
0.3 ppm	Average Previous Hour State Standard - 20 ppm Federal Standard - 35 ppm	Data
0.2 ppm	Average Previous 24 Hours State Standard - N/A Federal Standard - N/A	Data

Nitric Oxide (NO)		
10 ppb	Average Previous Hour State Standard - N/A Federal Standard - N/A	Data
2 ppb	Average Previous 24 Hours State Standard - N/A Federal Standard - N/A	Data

Nitrogen Dioxide (NO2)		
22	Average Previous Hour	Data

24-hr time-integrated data are available several days to weeks after sampling and can be accessed through "Historical Search" button

All continuous air monitoring data are displayed in near real-time

<http://xapprod.aqmd.gov/AB617CommunityAirMonitoring/Home/Index/SBM>





Questions & Discussion

Truck Technologies: Develop, Demonstrate & Commercialize

Community Air Initiatives
Community Steering Committee Meeting #8

July 18, 2019

Joseph Impullitti
Technology Demonstration Manager
South Coast AQMD



Technology Advancement Office

- Established in 1988
- Co-Funds Projects to Develop, Demonstrate, and Commercialize Clean Air Technologies
- Program Organization:

Tech. Implementation



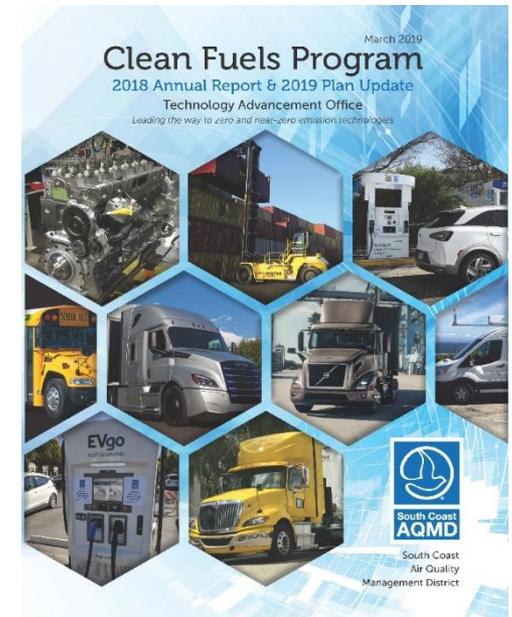
- Incentives
- Commercial Tech.
- Contact: Vicki White (vwhite@aqmd.gov)

Tech. Demonstrations

- Research
- Development >100 on-going projects
- Demonstration Contact: Joseph Impullitti (jimpullitti@aqmd.gov)
- Deployment

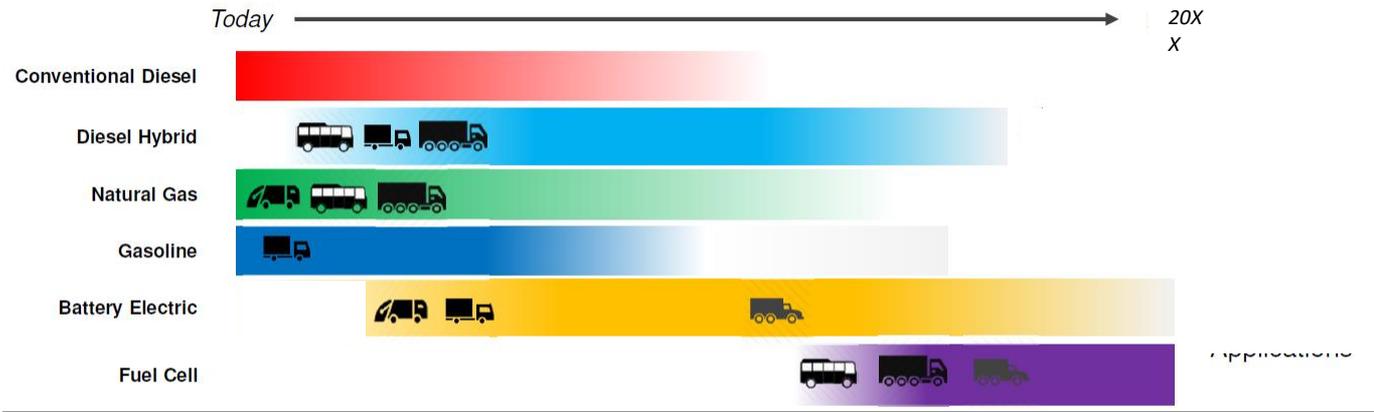
Clean Fuels Program

- Established in 1988
- \$1 fee on Department of Motor Vehicles registrations (\$~13 million/year)
- Stationary source fee (~\$400,000/year)
- Co-Funds projects to research, develop, demonstrate, and deploy (*RDD&D*) clean technologies



Vehicle Technologies Readiness & Challenges

Commercial Vehicle: Zero Emissions Roadmap



Diesel

- Long term emission capability (NOx, CO2)
- Rising cost & complexity

Natural Gas

- Long term emissions capability
- Infrastructure
- Vehicle Cost

Gasoline

- Long term emissions capability
- Market Acceptance
- Limited global solution

Hybrid

- Battery Cost
- Energy Density
- Optimized ICE

Battery Electric

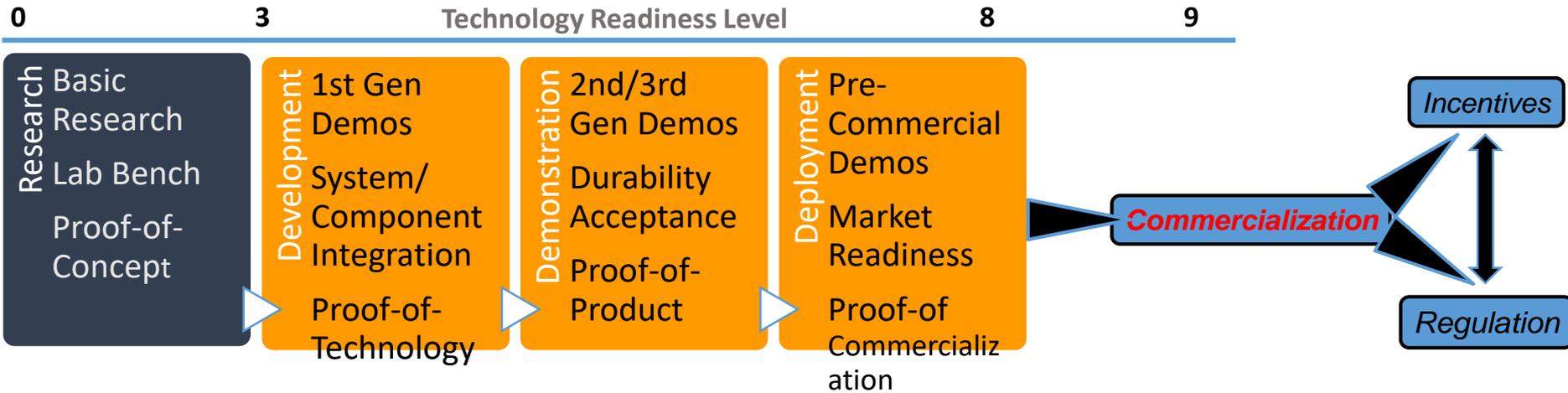
- Infrastructure
- Battery Cost
- Charge Time
- Energy Density

Fuel Cell

- Infrastructure
- Technology Maturity

Challenges

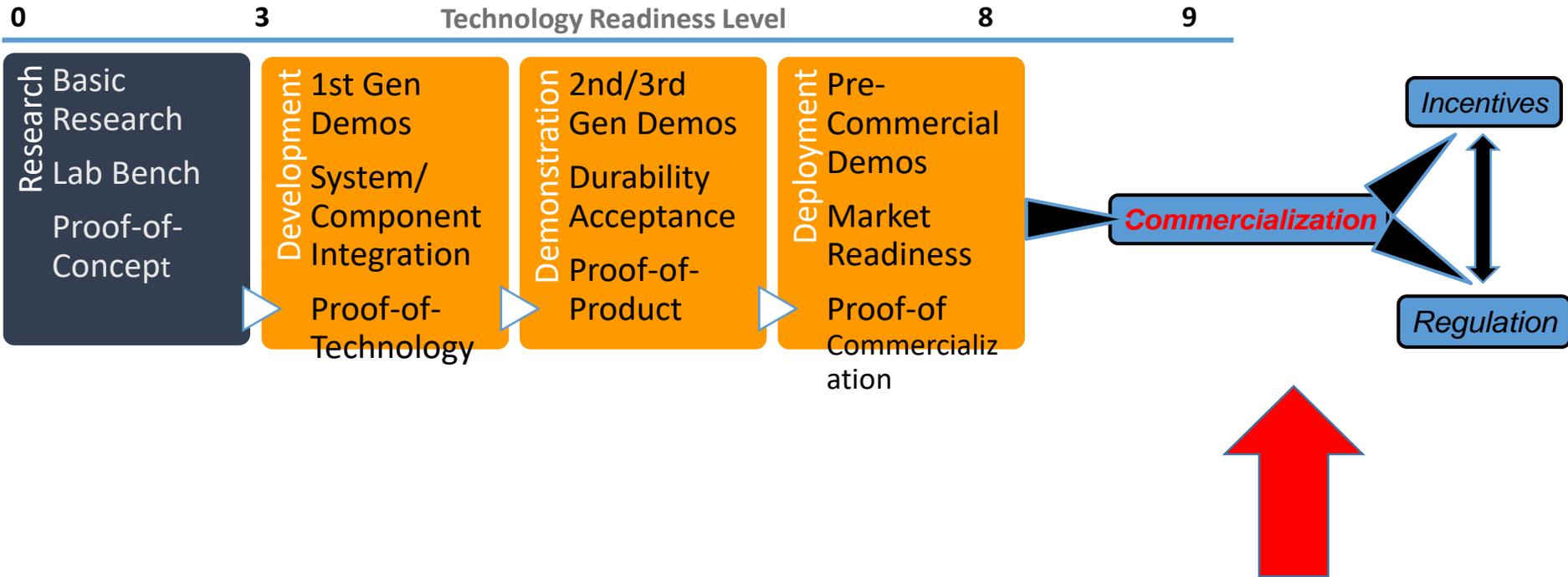
Technology Readiness



Commercial Availability Assessment – Ports CAAP

Commercialization Criteria	Base Considerations	Assessment of Criteria Achievement in 2018 by Leading ZE and NZE Fuel-Technology Drayage Truck Platforms				
		ZE Battery-Electric	ZE Fuel Cell	NZE Hybrid Electric	NZE NG ICE	NZE Diesel ICE
Production and Sales with Major OEM Involvement	Production and full certification by either a major Class 8 truck OEM, or by a proven technology provider that has partnered with the major OEM.					
Proven Network / Capabilities for Sales, Support and Warranty	Demonstrated existing (or near-term planned) network of sufficient dealerships to sell, service, warranty and provide parts for all commercially deployed drayage trucks.					
Sufficient Means and Timeline for Production	Demonstrated capability to manufacture sufficient numbers of Class 8 trucks (suitable for drayage) within timeline to meet existing or expected demand.					
Existence of Current and/or Near-Term Equipment Orders	Demonstrated backlog of orders, or credible expression of interest from prospective customers to submit near-term orders.					
Legend: Commercial Availability (2018)  Little/No Achievement Fully Achieved						
Source of Ratings: based on OEM survey responses, OEM product information, various government sources, and consultant's industry knowledge.						

CNG Low Nox Engine Technology



Key CNG Projects

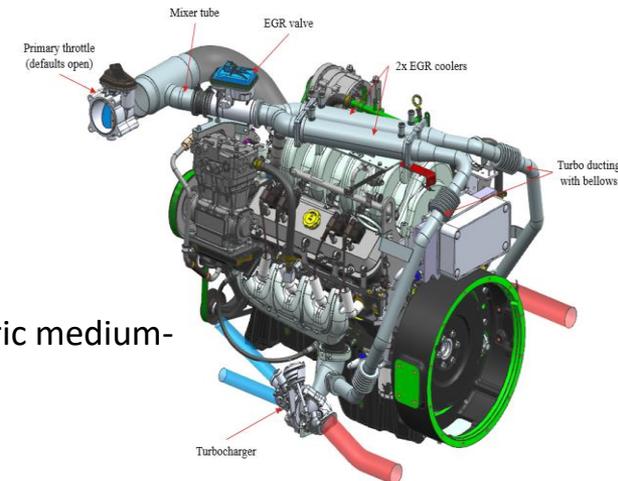
In Production

- CWI: 9-liter and 12-liter certified low NOx engine
- Agility: 6-liter low NOx engine – for Class 4-6 trucks
- Commercialized in Class 7-8 trucks, including refuse trucks, and buses



2018 Department of Energy Solicitation through NREL

- Partnership with California Energy Commission & SoCalGas Company
- **Nearly \$27 million awarded**
 - **Cummins:** 12L-15L CNG engine technology efficiency improvement
 - **US Hybrid:** Plug-in Hybrid Electric truck with low Nox engine
 - **GTI:** Higher efficiency 5.4L CNG Isuzu low NOx Engine
 - **Southwest Research:** 5.4L CNG Isuzu engine demonstrated in a hybrid electric medium-duty truck



Incentives: Near Zero Engines/Vehicles

Encouraging the use of Renewable Natural Gas



CWI L9N

\$50 MM

587 Vehicles

- 228.3 tpy NOx



Agility's 366NG

\$15.2 MM

175 Vehicles

- 18 tpy NOx



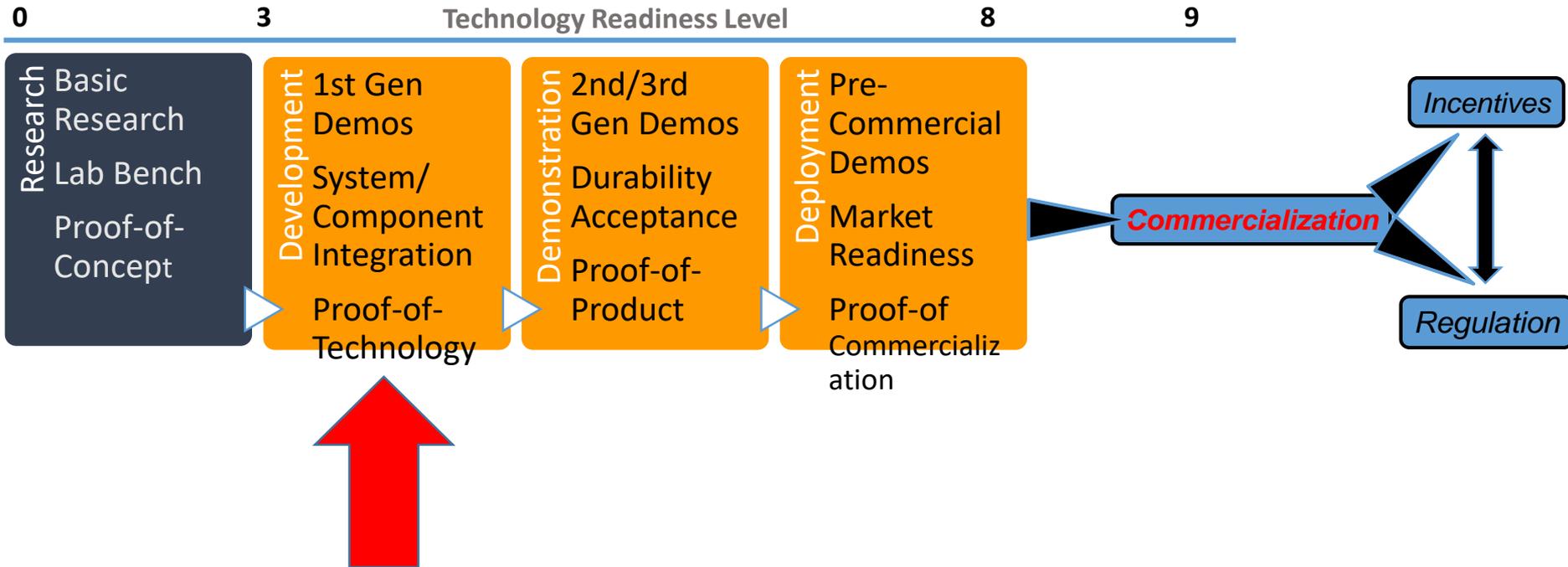
CWI ISX12N

\$32.4 MM

383 Vehicles

- 173.8 tpy NOx

Fuel Cell Electric Truck Technology

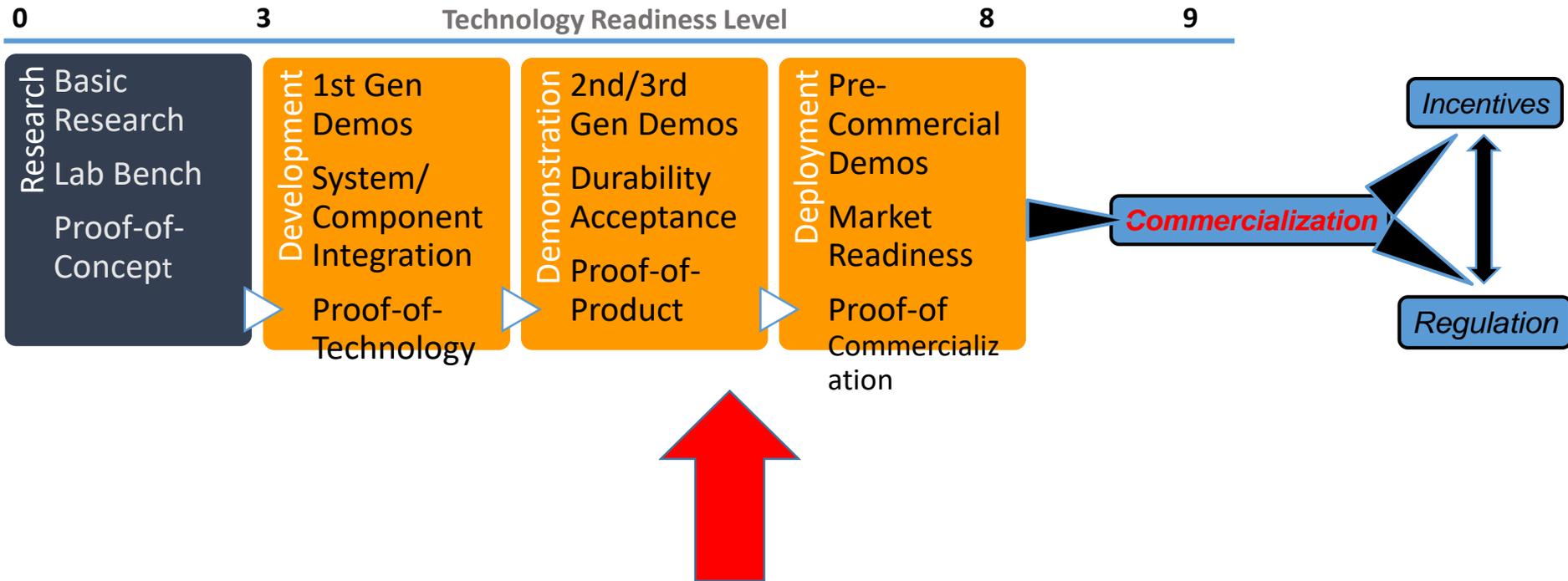


Zero Emission Cargo Transport Fuel Cell Drayage Trucks Project

- Demonstration of 7 Drayage Trucks – 6 Fuel Cell & 1 CNG Hybrid
- Six of seven vehicle designs and integration are complete – 4 trucks currently in demonstration
- Temporary hydrogen fueling is being used
- Funding: \$10M Award from DOE + \$10M from SCAQMD and Funding Partners, Total: \$20M



Battery Electric & Hybrid Truck Technology



Zero Emission Drayage Truck Project



- Develop and demonstrate zero and near-zero emission drayage trucks
- Total of 43 Drayage Trucks
 - 25 Battery Electrics from BYD
 - 12 Battery Electrics from Peterbilt
 - 4 CNG Hybrids from Kenworth
 - 3 Diesel Hybrids from Volvo
- Vehicle demonstration:
 - Port of Oakland
 - Port of Los Angeles
 - Port of Long Beach
 - Port of San Diego
- Funding: \$23.6M Award from CCI, \$10.4M State Air Districts, \$6M In Kind – Total of \$40.1M



Battery Electric Trucks and EV Infrastructure Project

- Daimler Trucks North America (DTNA) is the largest truck OEM in North America
- DTNA will develop 20 battery-electric heavy-duty Freightliner trucks
- 5 Class 6 eM2 trucks (GVWR 26,000 lbs)
- 15 Class 8 eCascadia trucks (GVWR 80,000 lbs)
- The project will include charging infrastructure for heavy-duty trucks:
 - Level 2 and DC Fast Charge
 - Battery Energy Storage
- Funding: SCAQMD and partners \$15.7M, DTNA \$15.7M – Total = \$31.4M

DAIMLER



Volvo LIGHTS



- Volvo LIGHTS (Low Impact Green Heavy Transport Solution)
- Reduce environmental footprint by integrating zero-emission equipment, renewable solar energy, and battery storage technologies into the freight mobility network
- Truck Rollout Plan:
 - Three chassis configurations for 8 demo and 15 commercial & pre-commercial trucks
- Funding: \$44.8M from CCI, \$4M from SCAQMD \$41.6M from Volvo & Partners – Total: \$90.4M



Summary

- Develop, Demonstrate:
 - Volvo and Daimler are expected to have limited number of battery electric trucks for commercial deployment in 2021-22 timeframe
 - BYD's Class 8 drayage truck is in development on our Zero emission Drayage Truck project
 - Improvements from that development will result in a better product for fleets
 - Hydrogen fuel cell technologies are still in early development
- Commercialize:
 - Near-zero emission technology is available now and supported by incentive programs – Achieves 90% NOx and significant GHG reductions
 - Volvo and Daimler will apply for CARB zero emission certification to be eligible for incentives in 2021
- Parting shot: A closer look at the Volvo LIGHTS project (<http://learn.lightsproject.com/updates>)



Next steps and important reminders

Future meeting dates and locations:

- CSC Meeting #8: August 15th (6:00 - 8:30 p.m.) at San Bernardino Valley College

Likely agenda items for CSC Meeting #8:

- Stationary Source Committee Recap
- Draft Final CERP
- Governing Board Process Overview
- Community Air Monitoring Update

Is the CSC okay with these topics?

Any additional topics?

Next steps and important reminders

Upcoming meeting of interest:

- **Stationary Source Committee**
 - **Friday, July 26th** at 10:30 a.m. at South Coast AQMD Headquarters
 - Meeting will be webcast:
<https://www.aqmd.gov/home/news-events/webcast>

Important Dates and Deadlines:

- Expected release of next Draft CERP: **July 19, 2019**
- Next CERP comment period ends **August 2, 2019**
- Draft Final CERP to be submitted to Governing Board September 6, 2019

Roster changes:

- Request CSC to replace Ericka Flores with Andrea Vidaurre as a CCAEJ primary member

**Thank you
for the hard work!**

More information on AB 617:

www.aqmd.gov/AB617

Email: AB617@aqmd.gov

Follow us [@SouthCoastAQMD](https://www.instagram.com/SouthCoastAQMD)



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