

# Community Air Initiatives

## San Bernardino, Muscoy Community Steering Committee Meeting #7

*Thursday, June 20, 2019  
San Bernardino, CA*

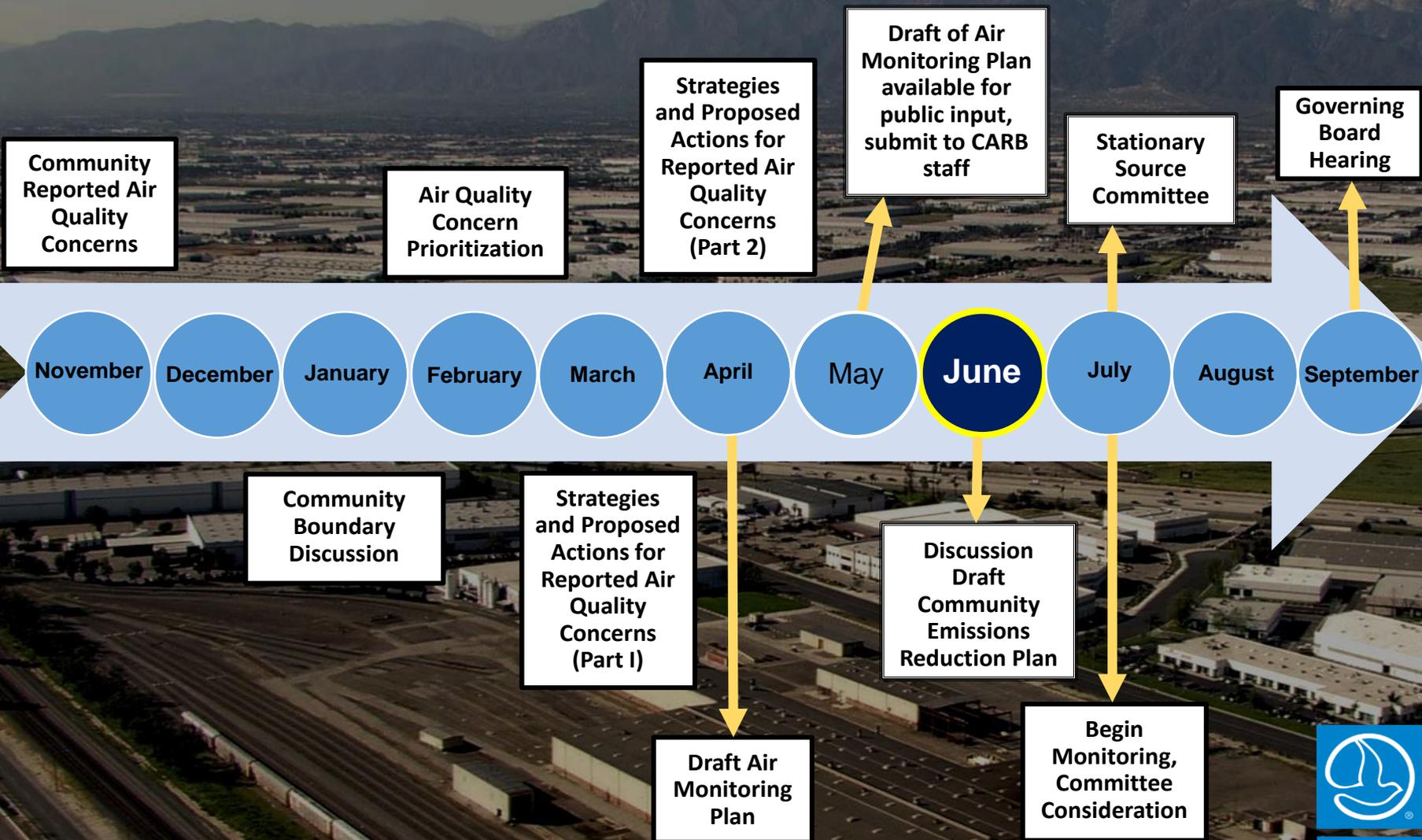


# Announcements

- Community Tour
  - Daniel Wong
  - [dwong@aqmd.gov](mailto:dwong@aqmd.gov)
  - (909) 396-3046
- Discussion Draft  
CERP Released
- Community  
Testimonials



# SBM Progress



# 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!

# BNSF Presentation



# AB 617 Community Steering Community - San Bernardino

JUNE 20, 2019

**LaDonna DiCamillo**

REGIONAL AVP GOVERNMENT AFFAIRS

**Amanda Marruffo**

SR. MANAGER ENVIRONMENTAL OPERATIONS



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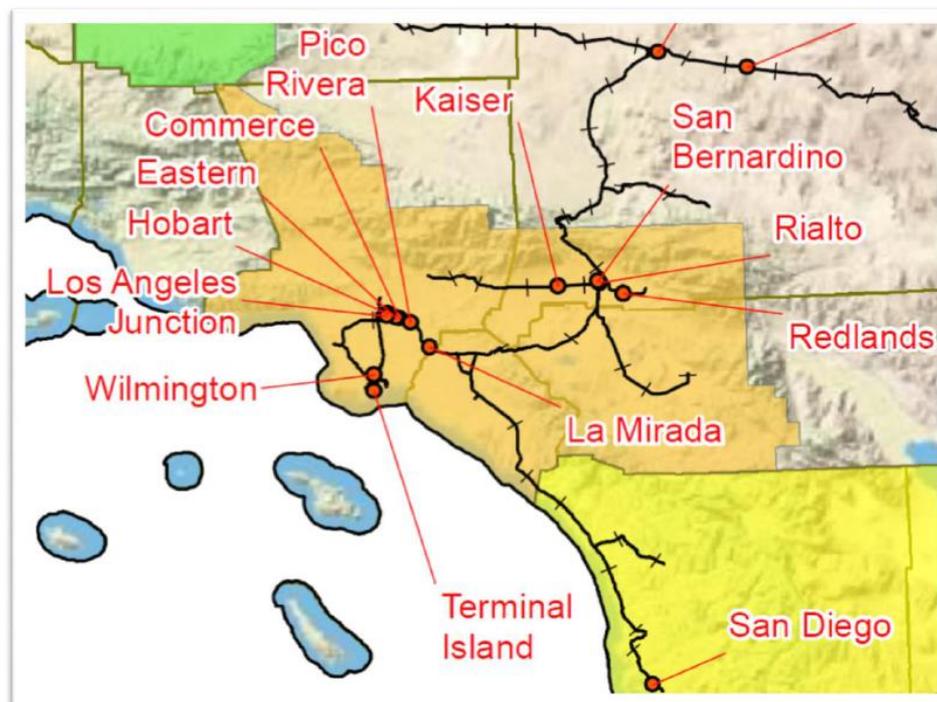
# About BNSF Railway

- Headquartered in Ft. Worth, TX
- 28 States and 3 Canadian Provinces
- 25 Intermodal Facilities Located in 14 States



# Overview

- Continuing Commitment to Environmental Improvement
- Environmental Improvements at San Bernardino Rail Yard
- Future Emission Reduction Efforts

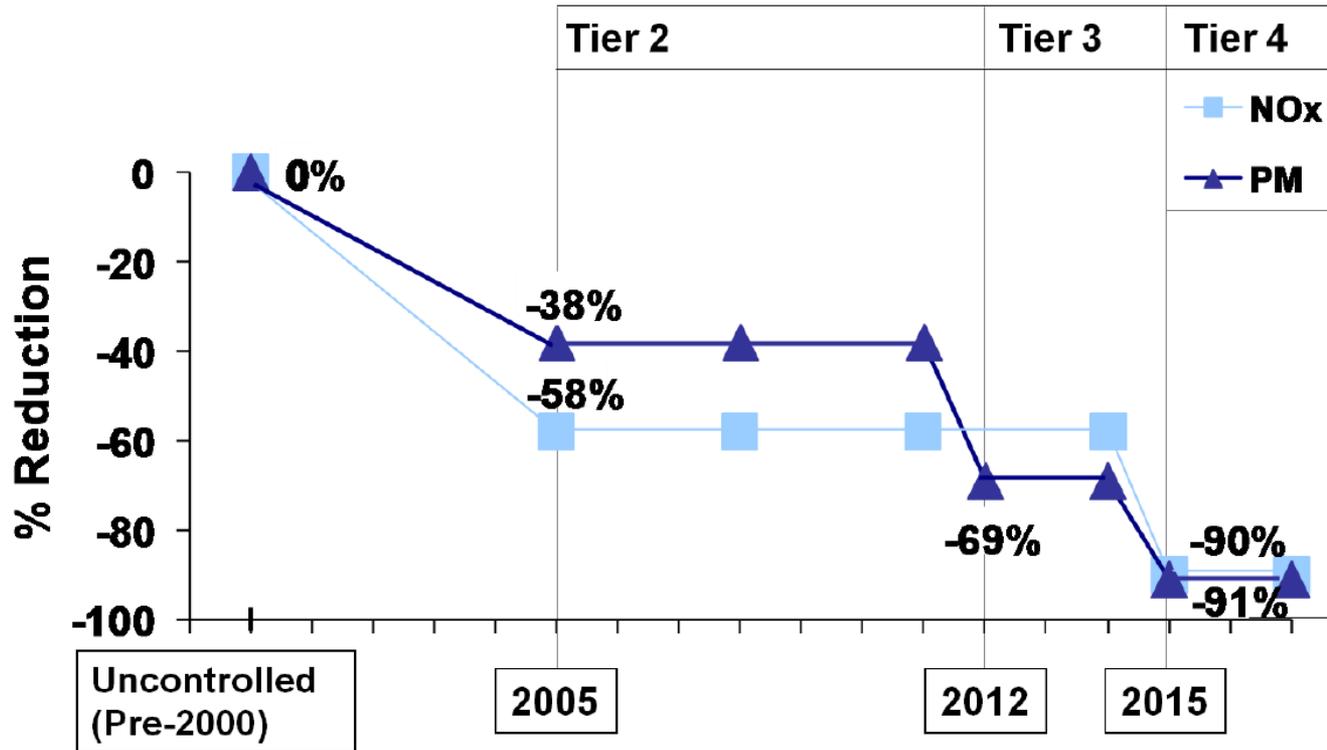


# BNSF Commitment to Environmental Improvement in California



- 1998** –Signed MOU with ARB to reduce NOx emissions by operating cleaner locomotives in Southern California by 2010. Program started in 2010 and continues today.
- 2005** –MOU with ARB to reduce particulate emissions at rail yards statewide by installing idle reduction technology, smoke testing, and using cleaner fuel. Completed in 2015.
- 2008** – Supported EPA’s more stringent standards for new and re-manufactured locomotives
- 2010 & 2011** – Implemented new technology low emission switcher (Gensets)
- 2014** – Implemented new technology low emission switchers (PR30Cs)
- 2017** – Ongoing Fuel efficiency Initiatives
- 2017** – 20 Tier 4 locomotives funded by Prop 1B
- 2017** – Started testing zero emissions yard hostlers.
- 2018** – BNSF awarded ZANZEFF grant for 5 pieces of equipment
- Pending/2019** – 6 Tier 4 locomotives funded in SCAQMD

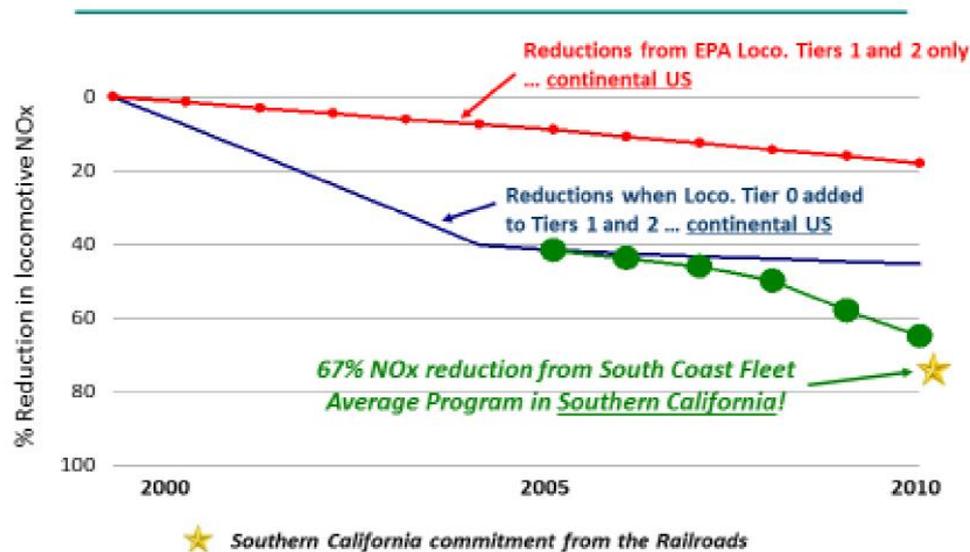
# EPA Line-haul Locomotive Standards (% Reduction from Uncontrolled Levels)



# 1998 Fleet Average – Benefits Ongoing



## South Coast Fleet Average from 1998 MOU



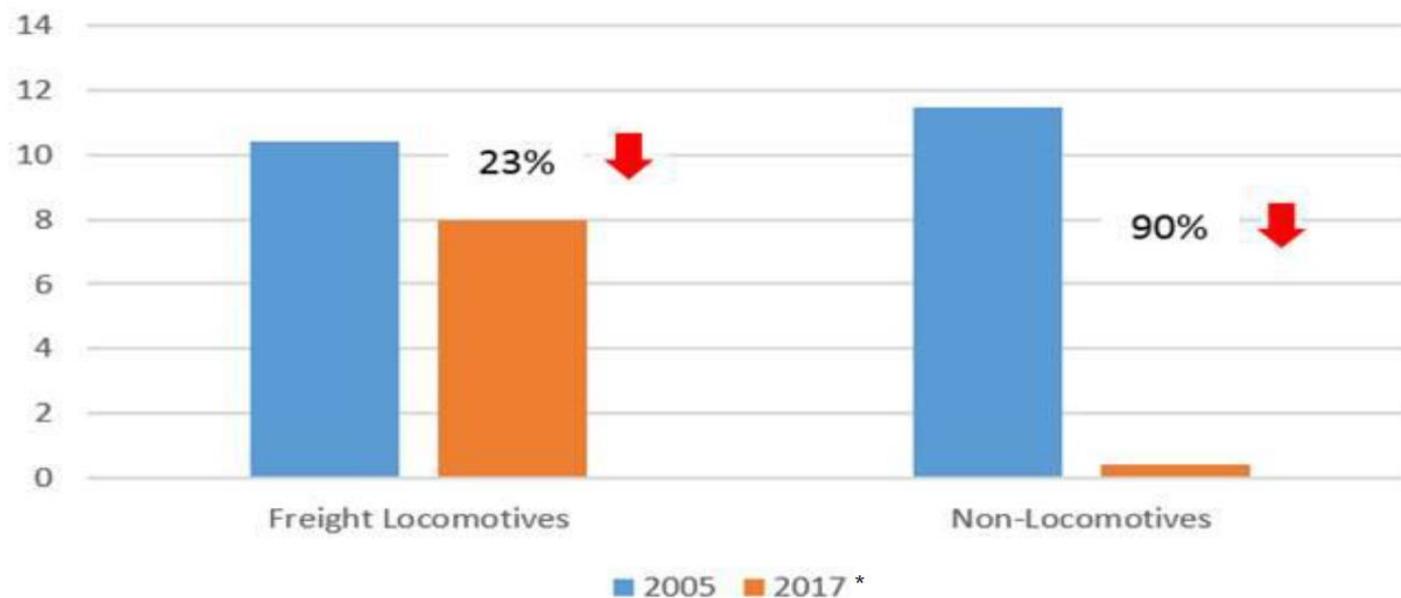
Status: Compliance ongoing, reports submitted to ARB

# San Bernardino Yard Emission Reductions



- We are in compliance with the 1998 MOU
- Full compliance with CARB rules for drayage trucks, cranes, hostlers, and refrigeration units.
  - As a note, the drayage trucks that come to the San Bernardino Yard are not owned or operated by BNSF
- We continue to test 6 low-emission switchers, which lowers NOx emissions by 80%, and DPM by 90% for each locomotive.
- We use low-sulfur diesel fuel (15 ppm sulfur)
- We reduced switch locomotive idling by 30% by installing AESS technology
  - Line haul idling was also reduced, and most line haul idling occurs outside the yards on the main lines.
- Our crew vans operate on propane
- We installed automated truck gates, resulting in 2/3 reduction in idling and 50% reduction in truck time at the yard
- We utilize RailPASS

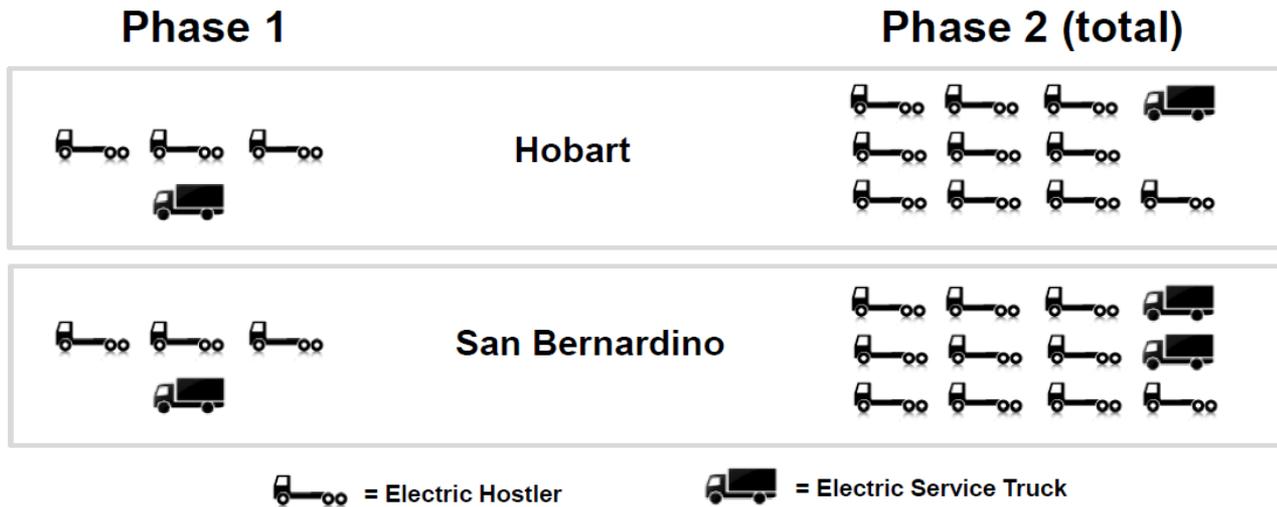
### DPM emissions (tons/yr)



\* 2017 emissions data still under review with SCAQMD Staff

- Work with manufacturers to improve zero-emission yard truck designs
  
- Other Technology (ZANZEFF)
  - Battery-Hybrid RTG Cranes
  - All-Electric Drayage trucks (not owned or operated by BNSF)
  - All-Electric Side Loaders
  - Battery Hybrid Locomotive in train consist

# Ongoing Zero-Emission Yard Truck (Hostler) Demonstration



**Phase 1 = 12-month time period (January 2018 – December 2018)**

**Phase 2 = 12-month time period (March 2019 – December 2019)**

# Proposed Technologies

*Developing flexible solutions to reduce emissions across multi-modes in the supply chain*

## Hybrid RTG Cranes (2) – SBD, Stockton



## Battery Electric Drayage Truck - SBD

## Battery Electric Side Loader - SBD



# Moving Forward – Electrification Policy Issues



- Reliable, Consistent, Cost-Effective Electricity is Essential
- Infrastructure Readiness Challenges
- Compatible and Consistent Charging Technology is Still Under Development
- New Technology Development Still Underway



# San Bernardino County Land Use Planning Presentation

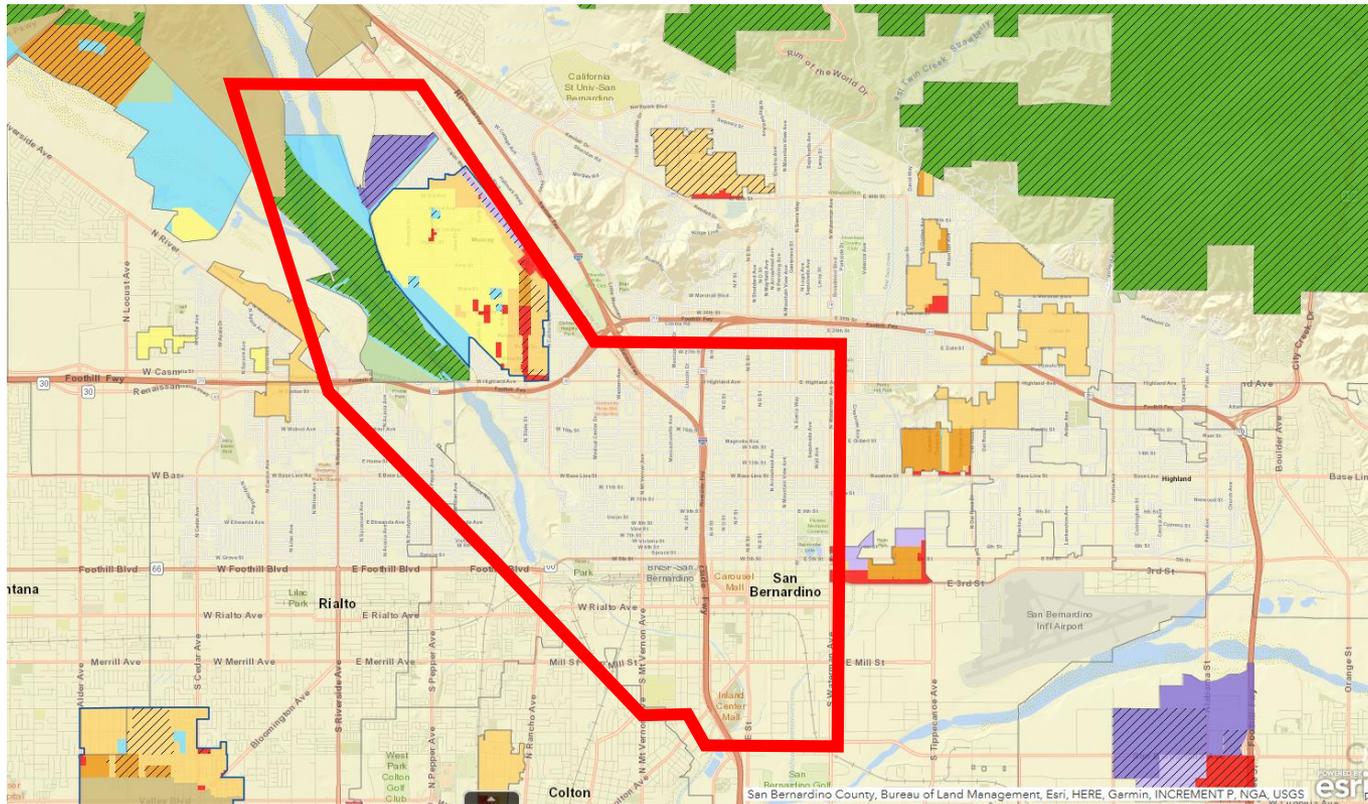


**Land Use Services Department**  
**Planning Division**

## Truck Parking and Routes

Suzanne Peterson  
Associate Planner  
June 20, 2019





## San Bernardino County Development Code

### 83.11.100 Commercial Vehicle Parking in Residential Areas

- Commercial vehicle parking is allowed in residential areas when the following 10 requirements are met:

1. <u>Owner and operator</u> is a resident of the home	6. <u>No dispensing of fuel</u> on-site in excess of 10 gallons
2. Off street parking, <u>behind front setback</u>	7. Property owner shall <u>minimize dust</u>
3. Vehicle <u>shall not idle</u> for more than 10 mins.	8. <u>Outdoor storage shall not be allowed</u>
4. Vehicle <u>shall not be loaded or unloaded</u>	9. <u>Maintenance and mechanical work shall not be done</u>
5. <u>Refrigeration unit shall not be operated</u> between the hours of 8:00 p.m. and 8:00 a.m.	10. Only <u>1 truck tractor</u> & semi-trailer may be parked on the owner/operator residential parcel if the parcel is at least 1 acre in size, or if vacant adjoin parcel is under the same ownership.

## San Bernardino County Development Code

### 83.11.100 Commercial Vehicle Parking in Residential Areas

Truck tractors may be parked in the driveway of the owner/operator's residential parcel of any size, provided the tractor is completely clear of public streets, sidewalks, and easements.

Code Enforcement  
may be reached  
Monday -Friday,  
8:00 am - 5:00 pm:  
(909) 884-4056



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## Code Enforcement

Code Enforcement administers programs designed to protect the public's safety, welfare, and property value through enforcement of San Bernardino County ordinances and State/Federal laws relating to land use, zoning, housing, public nuisances and vehicle abatement within the unincorporated areas of the County.

Code Enforcement may be reached at the following numbers, Monday through Friday, 8:00 am - 5:00 pm: (909) 884-4056 or (760) 995-8140

**Mountain Region Short Term Residential Rental 24/7 Complaint Line:** (888) 399-8591

If you would like to register a complaint, [please fill out our online complaint form](#).

Access the [Public Records Request form](#) [pdf].

Access the [Code Enforcement Fees](#) [pdf].

[Register a complaint online.](#)

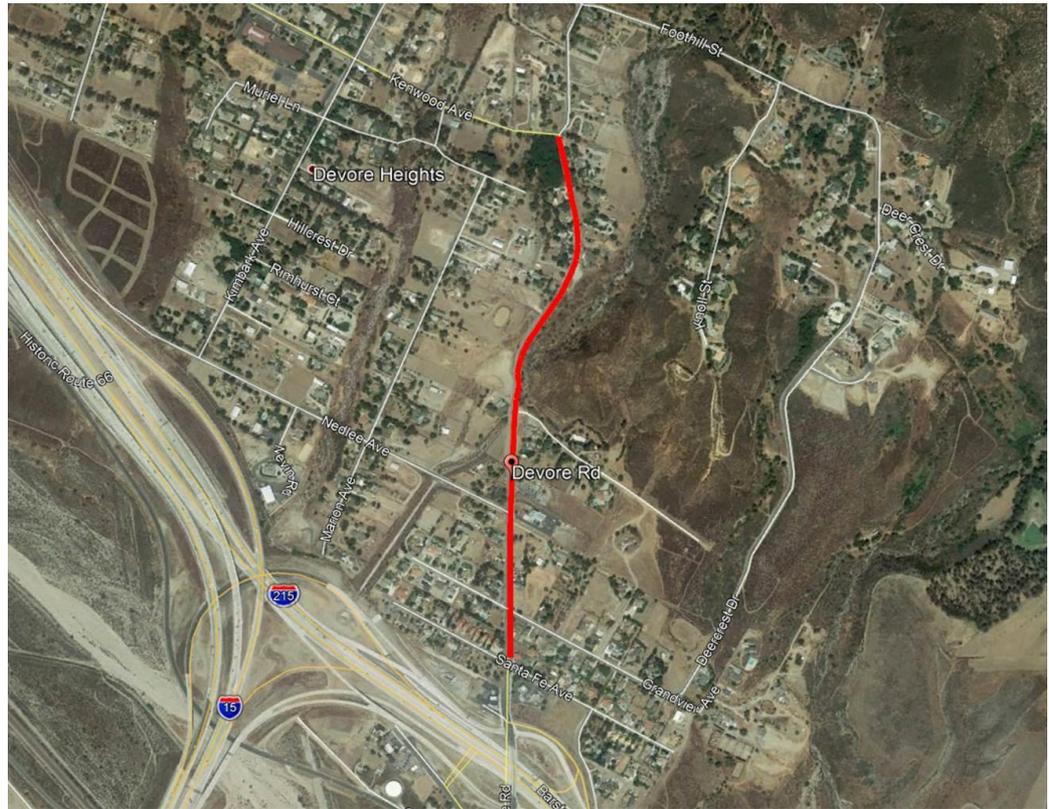
Policy TM-5.5 **Countywide truck routes.** We support SBCTA's establishment of regional truck routes that efficiently distribute regional truck traffic while minimizing impacts on residents. We support funding through the RTP to build adequate truck route infrastructure.

Policy TM-5.6 **Unincorporated truck routes.** We may establish local truck routes in unincorporated areas to efficiently funnel truck traffic to freeways while minimizing impacts on residents.

Policy HZ-3.1 **Cumulative health risk assessment.** We require a cumulative health risk assessment when a project potentially effects sensitive receptors in unincorporated environmental justice focus areas. We require such assessments to evaluate impacts of truck traffic from the project to freeways.

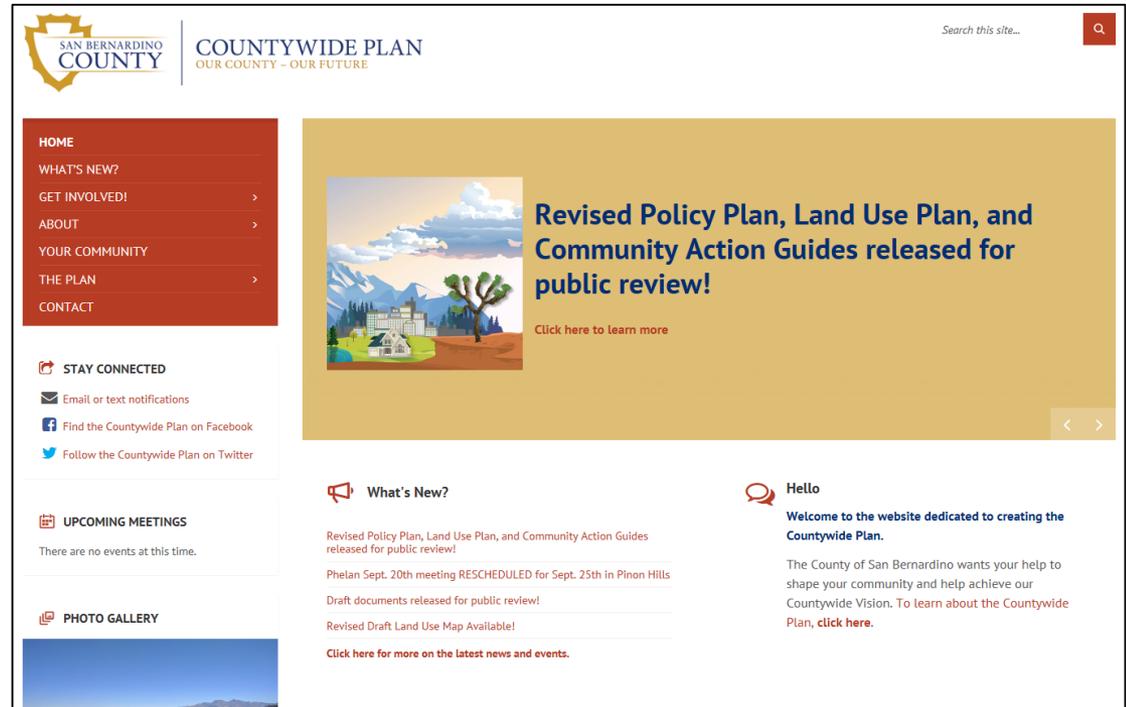
Policy HZ-3.2 **Studying and monitoring.** We coordinate with state and regional regulatory entities to monitor pollution exposure and identify solutions in unincorporated environmental justice focus areas. We work with state and regional regulatory entities to obtain grant funding to study cumulative health risks affecting such areas.

Devore Road from Cajon Blvd. North to Kenwood Ave.  
(outside the study area)



- Draft Policy Plan
- Draft Land Use Map
- Draft Program EIR
- Draft Muscoy Community Action Guide

<http://countywideplan.com/>



# Loma Linda University Presentation

# Air Quality and Health

## Findings from the LLU School of Public Health

Ryan G. Sinclair PhD, MPH : Associate Professor

Rhonda Spencer DrPH, MPH : Associate Professor

Darelle Amores MPH(c) : SBD resident and current SPH student



LOMA LINDA UNIVERSITY

School of Public Health

# Outline of Topics

- The ENRRICH study :
  - Proximity to the Goods Movement Network. Published 2015.
- Location of freight railyards and Asthma:
  - Association of major California freight railyards with asthma-related pediatric emergency department hospital visits. Published 01/2019.
  - Diesel Exhaust health effects
- Air Sensors:
  - Regulatory sensor locations and “low-cost” air sensor performance in San Bernardino and the Eastern Coachella Valley. White paper and other findings from 06/2019.
- The June Technical Advisory Group (TAG) Meeting.
  - Approval of the CAMP and our feedback

# The ENRRICH Study

## Living near a major railyard is associated with poor respiratory health in children.

This association exists even in an area already plagued with poor background air quality.

This finding is independent of the ambient air quality. Other studies have focused on ports and roadways.

### Peak Expiratory Flow: Significant

Significant: airway obstruction measured by PEF among children attending school near the railyard

PR = **1.41** 95% CI: 1.03-1.92

### Airway inflammation: Significant

Children at the ES exhibited higher airway inflammation measured by  $FE_{NO}$

PR=**1.44**, 95%CI: 1.02-2.02.

Also significant: Inhaler use, asthma, cough, wheezing, visit the ED

J Community Health  
DOI 10.1007/s10900-015-0026-0

ORIGINAL PAPER

**Respiratory Health Risks for Children Living Near a Major Railyard**

Rhonda Spencer-Hwang<sup>1</sup> · Sam Soret<sup>1</sup> · Synnove Knutsen<sup>1</sup> · David Shavlik<sup>1</sup> · Mark Ghamsary<sup>1</sup> · W. Lawrence Beeson<sup>1</sup> · Wonha Kim<sup>1,2</sup> · Susanne Montgomery<sup>3</sup>

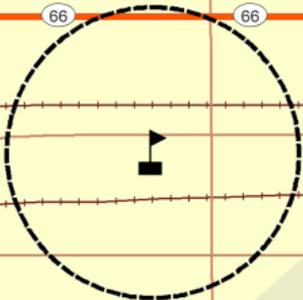
Accepted: 10 April 2015  
© Springer Science+Business Media New York 2015



Spencer-Hwang, Rhonda, Sam Soret, Synnove Knutsen, David Shavlik, Mark Ghamsary, W. Lawrence Beeson, Wonha Kim, and Susanne Montgomery. "Respiratory Health Risks for Children Living Near a Major Railyard." *Journal of Community Health* 40, no. 5 (October 2015): 1015–23. <https://doi.org/10.1007/s10900-015-0026-0>.



# ENRRICH



**Comparison School**

**Exposed School**

**65%**

**Railyard**

Study area, illustrating the location of the San Bernardino Railyard (SBR), and the two participating elementary schools in relation to the transportation infrastructure (railroads and roadways). The inset map displays the full geographic extent of the impact zones in relation to the study area (rectangle).



# Rail Yard-Generated Air Pollution

**Freight railyards are associated with much higher asthma related ER visits, especially for low income minority children.**

The strongest association was observed within the fully adjusted model for the category within 5- < 10 miles of the railyard (OR=1.47; 95% CI: 1.35–1.60).

There was a 25% increase in odds of asthma related ER visit between the 18 to the 5 railyard models for subjects observed living in the closest proximity to one of the top 5 most emitting railyards.

Preventive Medicine Reports 13 (2019) 73–79

Contents lists available at ScienceDirect

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Preventive Medicine Reports

journal homepage: [www.elsevier.com/locate/pmedr](http://www.elsevier.com/locate/pmedr)



Association of major California freight railyards with asthma-related pediatric emergency department hospital visits

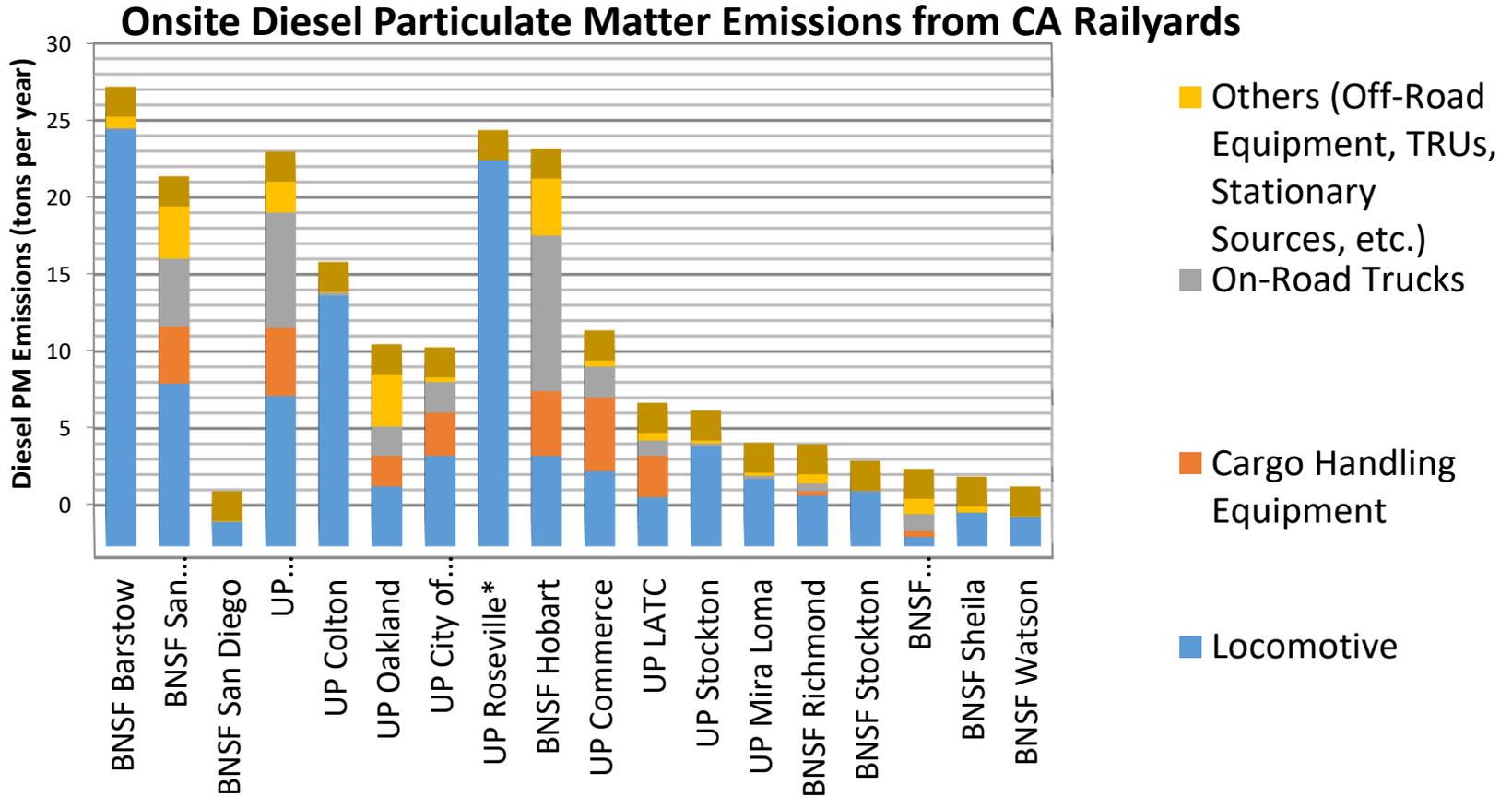
Spencer-Hwang R.<sup>a,\*</sup>, Pasco-Rubio M.<sup>a</sup>, Soret S.<sup>a,1</sup>, Ghamsary M.<sup>b,2</sup>, Sinclair R.<sup>a</sup>, Alhusseini N.<sup>a</sup>, Montgomery S.<sup>c</sup>

<sup>a</sup> School of Public Health, Loma Linda University, Loma Linda, CA, United States of America  
<sup>b</sup> Loma Linda University, Loma Linda, CA, United States of America  
<sup>c</sup> School of Behavioral Health, Loma Linda University, Loma Linda, CA, United States of America

Spencer-Hwang, R., M. Pasco-Rubio, S. Soret, M. Ghamsary, R. Sinclair, N. Alhusseini, and S. Montgomery. "Association of Major California Freight Railyards with Asthma-Related Pediatric Emergency Department Hospital Visits." *Preventive Medicine Reports* 13 (March 2019): 73–79. <https://doi.org/10.1016/j.pmedr.2018.11.001>.



# CA Railyards: Diesel PM Emissions



Source: Health Risk Assessments for CA Railyards, CARB. <http://www.arb.ca.gov/railyard/hra/hra.htm>

# Diesel Exhaust (DE) Exposure

**DE exposure is linked to causing inflammation, oxidative stress, and tissue damage.**

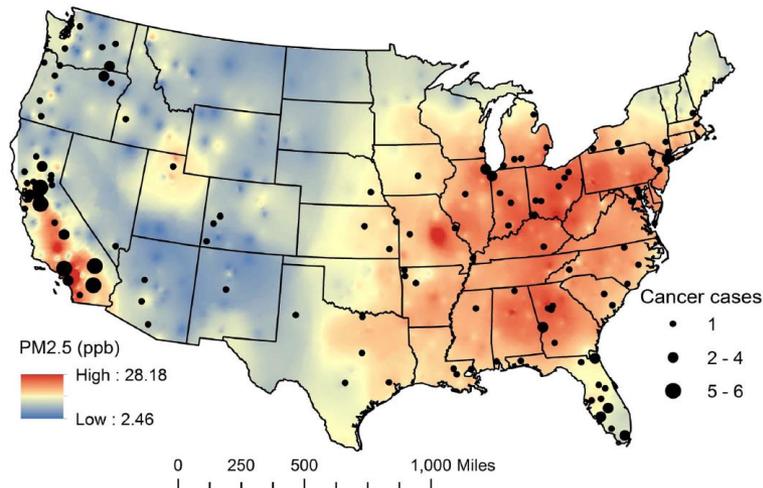


Fig. 2. PM and lung cancer. This figure demonstrates the incidence of lung adenocarcinoma cases associated with each  $10 \mu\text{g}/\text{m}^3$  increase in ambient PM2.5 concentration. Permission by Dr. Lila Gharibvand.

Environment International 114 (2018) 252–265

Contents lists available at ScienceDirect

**Environment International**

journal homepage: [www.elsevier.com/locate/envint](http://www.elsevier.com/locate/envint)

Review article

**Diesel exhaust exposure, its multi-system effects, and the effect of new technology diesel exhaust**

Haley Reis<sup>b,1</sup>, Cesar Reis<sup>a,b,c,1</sup>, Akbar Sharip<sup>c</sup>, Wenes Reis<sup>a</sup>, Yong Zhao<sup>d,e,f</sup>, Ryan Sinclair<sup>g</sup>, Lawrence Beeson<sup>b,\*,4</sup>

<sup>a</sup> Department of Preventive Medicine, Loma Linda University Medical Center, 24785 Stewart Street, Suite 204, Loma Linda, CA 92354, USA  
<sup>b</sup> Loma Linda University School of Medicine, 11175 Campus Street, Loma Linda, CA 92350, USA  
<sup>c</sup> Department of Occupational Medicine, Loma Linda University Medical Center, 328 East Commercial Road, Suite 101, San Bernardino, CA 92408, USA  
<sup>d</sup> School of Public Health and Management, Chongqing Medical University, Chongqing, China  
<sup>e</sup> Research Center for Medicine and Social Development, Chongqing Medical University, Chongqing, China  
<sup>f</sup> The Innovation Center for Social Risk Governance in Health, Chongqing Medical University, Chongqing, China  
<sup>g</sup> Center for Community Resilience, School of Public Health, Loma Linda University, Loma Linda, CA 92350, USA  
<sup>h</sup> Center for Nutrition, Healthy Lifestyle, and Disease Prevention, School of Public Health, Loma Linda University, Loma Linda, CA 92350, USA

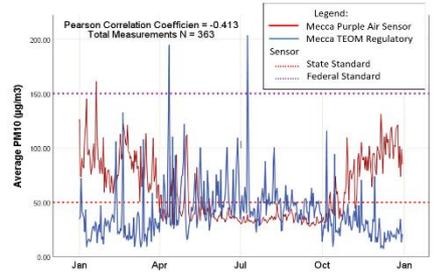
Reis, Haley, Cesar Reis, Akbar Sharip, Wenes Reis, Yong Zhao, Ryan Sinclair, and Lawrence Beeson. "Diesel Exhaust Exposure, Its Multi-System Effects, and the Effect of New Technology Diesel Exhaust." *Environment International* 114 (May 2018): 252–65. <https://doi.org/10.1016/j.envint.2018.02.042>.

# Low Cost Air Quality Sensors

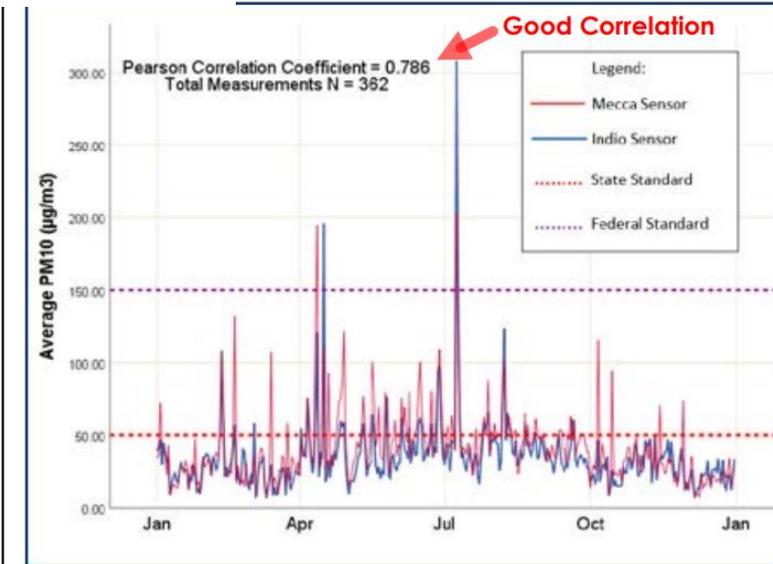
- More low-cost air quality sensors should be placed throughout the San Bernardino area to provide residents with localized real-time information.
- Low cost sensors should be coupled with regulatory grade sensors.
- Low cost sensors should be maintained and monitored by the SCAQMD.

[http://sph.wiki/ej/lib/exe/fetch.php?media=pdf air white paper.pdf](http://sph.wiki/ej/lib/exe/fetch.php?media=pdf_air_white_paper.pdf)

# Best Air Quality Sensors (PM10) in Achella (PurpleAir vs TEOM)

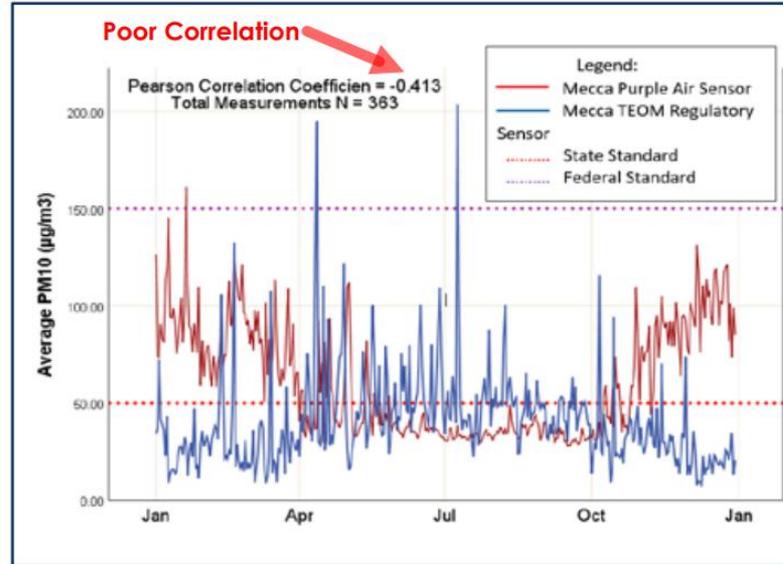


## REGULATORY SENSOR COMPARISON



## REGULATORY VS. REGULATORY

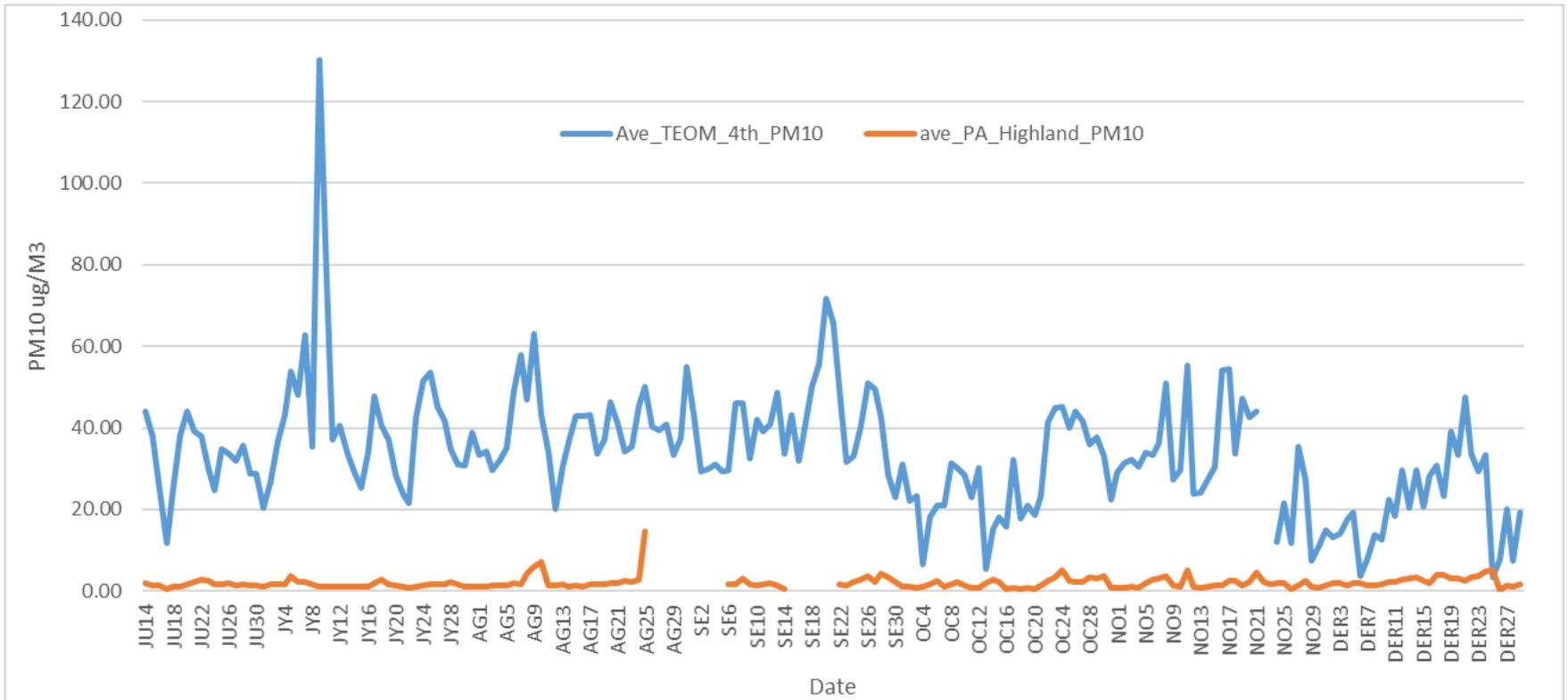
## PURPLEAIR SENSOR COMPARISON



## REGULATORY VS. PURPLEAIR

**FIGURE 4 GRAPHS SHOWING COMPARISON DATA FROM REGULATORY AND PURPLE AIR MONITORS FOR PM10**

# Low Cost Air Quality Sensors (PM10) From San Bernardino (PurpleAir II vs TEOM)





LOMA LINDA UNIVERSITY  
School of Public Health

# Thank you

Ryan G. Sinclair PhD, MPH  
rsinclair@llu.edu



# Where Does Air Pollution Come From?

## TAG Meeting Overview

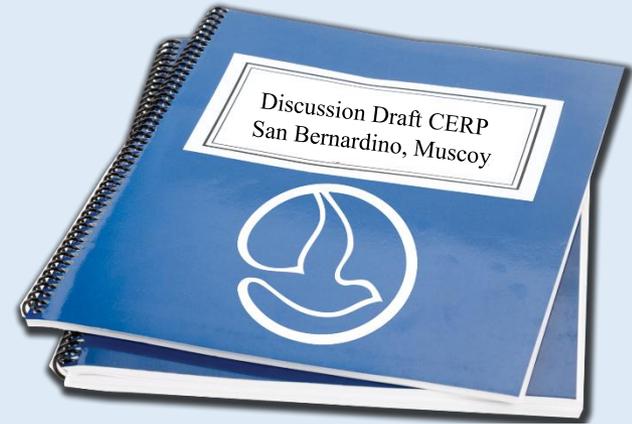
# Discussion Draft of the Community Emissions Reductions Plan (CERP) and Measuring Success: Goals

# Discussion Draft Community Emissions Reductions Plan (CERP)

- Main chapters released mid-June:

<http://www.aqmd.gov/nav/about/initiatives/environmental-justice/ab617-134/san-b/community-emissions-reduction-plan>

- Discussion draft – *not final*, can still receive comments and edit language
- Incorporated CSC input from meetings & one-on-ones



The Chapter where it's most critical to receive input/feedback/comments is:

## Chapter 5 – Actions to Reduce Community Air Pollution

In addition, the Technical Advisory Group will be discussing the Chapter 3 section on Source Attribution analysis at their next meeting

# CERP Discussion Draft Comment Period

- Today's discussion will be included as part of comments received
- In general, we will address comments after the end of the comment period for the Discussion Draft CERP
- Comments and responses will be posted online or as part of the CERP

**Submit Comments via online form by  
July 1<sup>st</sup>, 2019 for the next draft**

<https://onbase-pub.aqmd.gov/sAppNet/UnityForm.aspx?d1=AeY1eA%2bZITDEbyaxB3xDbBa9SJTSEufwoJZECTpDT6cWh%2blcmGA%2bLzCKPck3%2boLD0moeMZ8kd4hj6o%2fvYvlpq5dkKpYPRvIErVTNjBYumi%2bD74422vNCNq6sfZsOIGkmfZp%2fOggURXDnqhRHGczt2OCEBLn331X1PL6%2bfi%2fUAqlE7plqDCwal%2fYQc9leDZQINg%3d%3d&ufpreab617year1communities=San%20Bernardino%2C%20Muscoy&ufprehash=%2BDAYc%2Fa32GfVrjFEhGFiLOGE2su7tNKNqw83SxqnwrQ%3D>

# Chapter 5: Actions to Reduce Community Air Pollution

- Each air quality priority is listed as a subchapter, as seen below:

Chapter 5a – Actions to Reduce Air Pollution Emissions or Exposures – Overview	Discussion Draft - June 2019
Chapter 5b – Neighborhood truck traffic	Discussion Draft - June 2019
Chapter 5c – Warehouse on-site emissions	Discussion Draft - June 2019
Chapter 5d – OmniTrans bus yard	Discussion Draft - June 2019
Chapter 5e – Railyards	Discussion Draft - June 2019
Chapter 5f – Concrete batch plants, asphalt, and aggregate plants	Discussion Draft - June 2019
Chapter 5g – Exposure reduction for sensitive populations in schools, childcare centers, and homes	Discussion Draft - June 2019
Chapter 5h – Implementation Schedule	TBD
Chapter 5i – CEQA Analysis Summary	TBD

For more information: <http://www.aqmd.gov/nav/about/initiatives/environmental-justice/ab617-134/san-b>

# Using the Action Template (Example)

- 1
- 2
- 3
- 4
- 5
- 6
- 7

<b>Action 1: Reduce Fugitive Dust, Particulate Matter (PM10), and Odors from Cement Batch, Asphalt Batch, and Rock and Aggregate Plants</b>	
<b>Course of Action:</b>	
<ul style="list-style-type: none"> <li>• Provide public outreach information for the community on Rules 402, 403, 1155, and 1157 requirements, which address odors, fugitive dust, and PM10 emissions from aggregate and related operations.</li> <li>• Conduct focused air monitoring near the concrete batch, asphalt batch, and rock and aggregate plants to check for elevated any potential levels of emissions</li> <li>• If persistent elevated levels are detected at locations through air monitoring activities, conduct appropriate follow-up investigations (e.g., on site testing or other types of data review)</li> <li>• Conduct inspections to verify compliance with Rules 402, 403, 1155, and 1157</li> </ul>	
<b>Strategy:</b>	
<ul style="list-style-type: none"> <li>• Public Information and Outreach</li> <li>• Air Monitoring</li> <li>• Enforcement Goal</li> </ul>	
<b>Goal:</b>	
<ul style="list-style-type: none"> <li>• Hold public outreach events to explain the requirements of Rules 402, 403, 1155, and 1157 and the South Coast AQMD's complaint process</li> <li>• Respond to fugitive dust and odor complaints from the community</li> <li>• Provide the CSC quarterly or biannual updates on enforcement activities</li> <li>• Conduct air monitoring near ### of these types of facilities in one year</li> </ul>	
<b>Estimated Timeline:</b>	
<ul style="list-style-type: none"> <li>• Begin air monitoring activities by July 2019</li> <li>• Mid-2020, begin biannual updates to the CSC on outreach and enforcement activities, or if new information becomes available</li> </ul>	
<b>Implementing Agency, Organization, Business or Other Entity:</b>	
<b>Name:</b>	<b>Responsibility:</b>
South Coast AQMD	Conduct community outreach on Rules 402, 403, 1155, and 1157 and conduct monitoring and enforcement actions, as needed. Provide updates to CSC.
<b>References:</b>	
For more information:	

1. **Action**
  - What the Action will do
2. **Course of Action**
  - How the Action will be completed
3. **Strategy**
  - Type of involvement for the action (e.g., Exposure Reduction, Monitoring, Enforcement, Public Information and Outreach, Rules and Regulations, Incentives)
4. **Goal**
  - Achievements to address the Action
5. **Estimated Timeline**
  - When we are expected to begin
6. **Implementing Agency, Organization, Business, or Other Entity**
  - Who is responsible for the Action
7. **References**
  - Where more information can be found

# Goals: Measuring Success

## Action 1: Reduce Fugitive Dust, Particulate Matter (PM10), and Odors from Cement Batch, Asphalt Batch, and Rock and Aggregate Plants

### Course of Action:

- Provide public outreach information for the community on Rules 402, 403, 1155, and 1157 requirements, which address odors, fugitive dust, and PM10 emissions from aggregate and related operations.
- Conduct focused air monitoring near the concrete batch, asphalt batch, and rock and aggregate plants to check for elevated any potential levels of emissions
- If persistent elevated levels are detected at locations through air monitoring activities, conduct appropriate follow-up investigations (e on site testing or other types of data review)
- Conduct inspections to verify compliance with Rules 402, 403, 1155 1157

### Strategy:

- Public Information and Outreach
- Air Monitoring
- Enforcement Goal

### Goal:

- Hold public outreach events to explain the requirements of Rules 402, 403, 1155, and 1157 and the South Coast AQMD's complaint process
- Respond to fugitive dust and odor complaints from the community
- Provide the CSC quarterly or biannual updates on enforcement activities
- Conduct air monitoring near ### of these types of facilities in one year

### Estimated Timeline:

- Begin air monitoring activities by July 2019
- Mid-2020, begin biannual updates to the CSC on outreach and enforcement activities, or if new information becomes available

### Implementing Agency, Organization, Business or Other Entity:

Name:	Responsibility:
South Coast AQMD	Conduct community outreach on Rules 402, 403, 1155, and 1157 and conduct monitoring and enforcement actions, as needed. Provide updates to CSC.

### References:

For more information:

4

- **Goals** are achievements to address the Action
- Completing the goals are a measure of success
- CERP is a “living document”, in other words, we will retain some degree of flexibility but major adjustments need to be presented to the Governing Board for approval
- Goals can be adjusted as new information becomes available. For example, this may include:
  - Monitoring and emissions data
  - New technologies
  - New funding sources or programs
  - New collaborations or partnerships
  - New or amended rules

# Goals for Chapter 5b: Truck Idling and Truck

## Action 1: Reduce Emissions from Illegal Heavy- Duty Truck Idling in the Community

- Conduct [# amount of] focused inspections and targeted sweeps within a [insert proposed timeframe]
- Organize [# amount of] outreach events within a [insert proposed timeframe] to inform community members how to report idling trucks

## Action 2: Reduce Emissions from Heavy-Duty Trucks

- Organize [insert number] of incentive outreach events per year and provide biannual updates to the CSC
- Provide biannual updates on CARB's and South Coast AQMD's rule development for truck regulations, and seek community input on progress
- [CARB – CSC, please provide input to CARB regarding where enhanced enforcement should occur]

### Implementing Agency, Organization, Business, or Other Entity:

- South Coast AQMD
- CARB
- County of San Bernardino
- CSC members

# Goals for Chapter 5b: Truck Idling and Truck (cont'd)

## Action 3: Utilize Existing Traffic Information and New Technology to Identify Older Trucks for Incentive Programs

- Explore the possibility of using ALPR systems in this community and prioritize locations for deployment based on community input
- Once ALPR systems have been deployed, work with City and County to provide information about the overall results
- Provide quarterly or biannual updates to the CSC on progress made to collect and use data from these systems [*CARB – CSC, please provide input to CARB regarding what it would like CARB to do based on this data*]

### Implementing Agency, Organization, Business, or Other Entity:

- South Coast AQMD
- CSC
- County of San Bernardino
- CARB
- City of San Bernardino

# Goals for Chapter 5c: Warehouses (On-site emissions)

Action 1: Conduct Outreach to Local Governments to Encourage Avoidance of Air Quality Impacts from New Warehouse Development

Provide technical input to local land use agencies on reducing air quality impacts from warehouse land uses, for example, during general plan and community plan updates

Action 2: Develop Proposed Indirect Source Rule for Warehouses

Provide quarterly updates on rule development for warehouses and seek community input on progress

Action 3: Promote Installation of Infrastructure Needed to Support Zero-Emissions Vehicles and Equipment

South Coast AQMD and SCE identify at least **# potential new sites** (and project partners) and determine feasibility to install zero-emissions electric infrastructure, serving potential zero-emissions vehicles and/or equipment in the San Bernardino/Muscoy community

## Implementing Agency, Organization, Business, or Other Entity:

- City of San Bernardino
- County of San Bernardino
- South Coast AQMD
- SCE or other fueling providers

# Goals for Chapter 5d: Omnitrans Bus Yard

## Action 1: Conduct Air Monitoring to Identify the Composition and Level of Emissions Near the Omnitrans Bus Yard

- Conduct monitoring nearby OmniTrans to identify potential sources of emissions
- Updates the CSC quarterly or biannually on air monitoring data results and information collected

## Action 2: Support Omnitrans' Transition to Zero-Emission Buses

- Develop proposals and apply for grant opportunities that are designed to accelerate the deployment of zero-emission buses and electric vehicle chargers, in collaboration with Omnitrans

### Implementing Agency, Organization, Business, or Other Entity:

- South Coast AQMD
- Omnitrans

# Goals for Chapter 5e: Railyards

## Action 1: Reduce Emissions from Railyards

- Provide bi-annual updates and engage the CSC on new requirements being developed by CARB and South Coast AQMD
- Prioritize reducing air pollution from railyards located in environmental justice communities, such as, San Bernardino and Muscoy
- Replace diesel equipment at railyards through incentive funding programs

### Implementing Agency, Organization, Business, or Other Entity:

- South Coast AQMD
- CSC
- CARB

# Goals for Chapter 5f: Concrete Batch, Asphalt Batch, and Rock and Aggregate Plants

Action 1: Reduce Fugitive Dust, Particulate Matter (PM10), and Odors from Cement Batch, Asphalt Batch, and Rock and Aggregate Plants

- Hold public outreach events to explain the requirements of Rules 402, 403, 1155, and 1157 and the South Coast AQMD's complaint process
- Respond to fugitive dust and odor complaints from the community
- Provide the CSC quarterly or biannual updates on enforcement activities
- Conduct air monitoring near # of these types of facilities in one year

Implementing Agency, Organization, Business, or Other Entity:

- South Coast AQMD

# Goals for Chapter 5g: Schools, Hospitals, Parks and Community Centers

## Action 1: Reduce Exposure to Harmful Air Pollutants through Public Outreach

- Participate in [fill in number] public outreach events (e.g., health fairs, Earth week event) at schools or childcare centers on information relating to air quality and reducing exposure
- Provide [fill in number] childcare centers with information relating to air quality effects on young children and reducing exposure, prioritizing centers based on CSC input
- Implement CARE and Kids Making Sense programs at [fill in number] schools
- Collaborate with community-based organization (e.g., CCAEJ) and co-host outreach meetings
- Work with appropriate entities to negotiate access to conduct school-based air monitoring

## Action 2: Reduce Exposure to Harmful Air Pollutants at Schools, Childcare Centers, and Community Centers

Installation of air filtration systems in [insert number of filtration systems to be discussed by CSC members] schools, childcare centers, and community centers with priority given to [insert prioritizing criteria or schools, to be discussed by CSC members]

### Implementing Agency, Organization, Business, or Other Entity:

- South Coast AQMD
- Collaborating agencies
- Community-Based Organizations



# Goals for Chapter 5g: Schools, Childcare Centers, and Homes (Cont.)

## Action 3: Reduce Exposure to Harmful Air Pollutants at Homes

- Partner with other entities [insert collaborating entities] to determine new or existing programs that can provide home filtration systems
- If funding or programs become available, share information with CSC members

## Action 4: Increase Green Space in Areas Where People Spend Time

- Partner with other entities to determine new or existing sources or programs that can provide funding to coordinate tree planting
- If funding or programs become available, share information with CSC members

## Action 5: Replace Older School Buses

- Partner with other entities to determine new or existing sources or programs that can provide funding for near-zero or zero-emission school buses

### Implementing Agency, Organization, Business, or Other Entity:

- South Coast AQMD
- Other local entities

# Estimated Timelines

## 1 Action 1: Reduce Fugitive Dust, Particulate Matter (PM10), and Odors from Cement Batch, Asphalt Batch, and Rock and Aggregate Plants

### 2 Course of Action:

- Provide public outreach information for the community on Rules 402, 403, 1155, and 1157 requirements, which address odors, fugitive dust, and PM10 emissions from aggregate and related operations.
- Conduct focused air monitoring near the concrete batch, asphalt batch, and rock and aggregate plants to check for elevated any potential levels of emissions
- If persistent elevated levels are detected at locations through air monitoring activities, conduct appropriate follow-up investigations (e.g., on site testing or other types of data review)
- Conduct inspections to verify compliance with Rules 402, 403, 1155, and 1157

### 3 Strategy:

- Public Information and Outreach
- Air Monitoring
- Enforcement Goal

### 4 Goal:

- Hold public outreach events to explain the requirements of Rules 402, 403, 1155, and 1157 and the South Coast AQMD's complaint process
- Respond to fugitive dust and odor complaints from the community
- Provide the CSC quarterly or biannual updates on enforcement activities
- Conduct air monitoring near ### of these types of facilities in one year

### 5 Estimated Timeline:

- Begin air monitoring activities by July 2019
- Mid-2020, begin biannual updates to the CSC on outreach and enforcement activities, or if new information becomes available

### 6 Implementing Agency, Organization, Business or Other Entity:

Name:	Responsibility:
South Coast AQMD	Conduct community outreach on Rules 402, 403, 1155, and 1157 and conduct monitoring and enforcement actions, as needed. Provide updates to CSC.

### 7 References:

For more information:

## *Review Timelines and Send Comments through online form*

- Actions include providing updates to the CSC, some as early as Fall 2019
- Rulemaking or rule development process takes several months to years for adoption
  - Rulemaking cannot begin earlier than 2020
  - CARB's rule process is longer than South Coast AQMD's
- Some actions require obtaining equipment or devices which can affect the estimated implementation date
- Outreach efforts may begin as soon as incentive or emissions data information becomes available



# California Air Resource Board Enforcement Actions



# California Air Resources Board Enforcement Efforts in Your Community - Past, Present, an Future

June 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

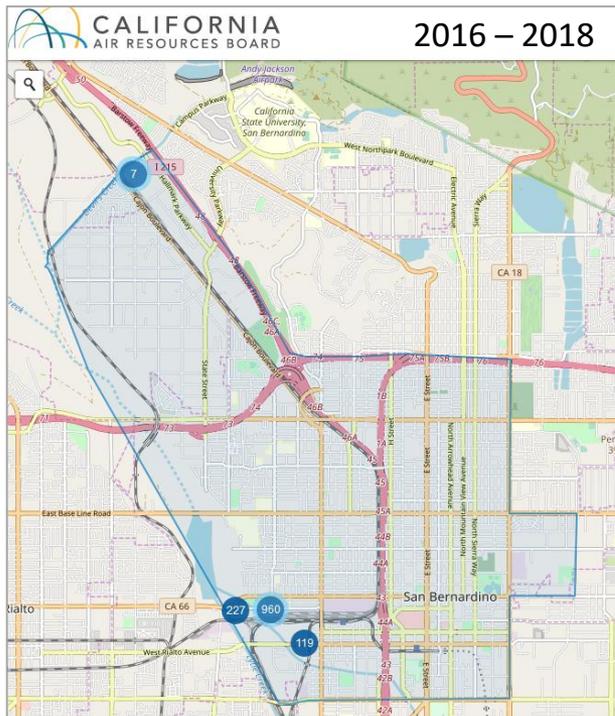


Consumer  
Products

# CARB Past Enforcement Actions in the San Bernardino - Muscoy Communities



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



1066 total inspections at BNSF in 2018

5 emissions violations

27 non-emissions violations



San Bernardino - Muscoy Communities

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

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%
<b>Total 2016 – 2018 Inspections</b>	<b>1499</b>	<b>249</b>	<b>17</b>	<b>37</b>	<b>112</b>	<b>4</b>	<b>5</b>	<b>1923</b>
<b>Total 2016 - 2018 Non-compliant</b>	<b>57</b>	<b>13</b>	<b>1</b>	<b>7</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>86</b>
<b>Total 2016 - 2018 % Compliance</b>	<b>96%</b>	<b>95%</b>	<b>94%</b>	<b>81%</b>	<b>93%</b>	<b>100%</b>	<b>100%</b>	<b>96%</b>

HDVIP covers emissions control labels (ECL), smoking and tampering; see CARB Resource Slides pg. 18 -22 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

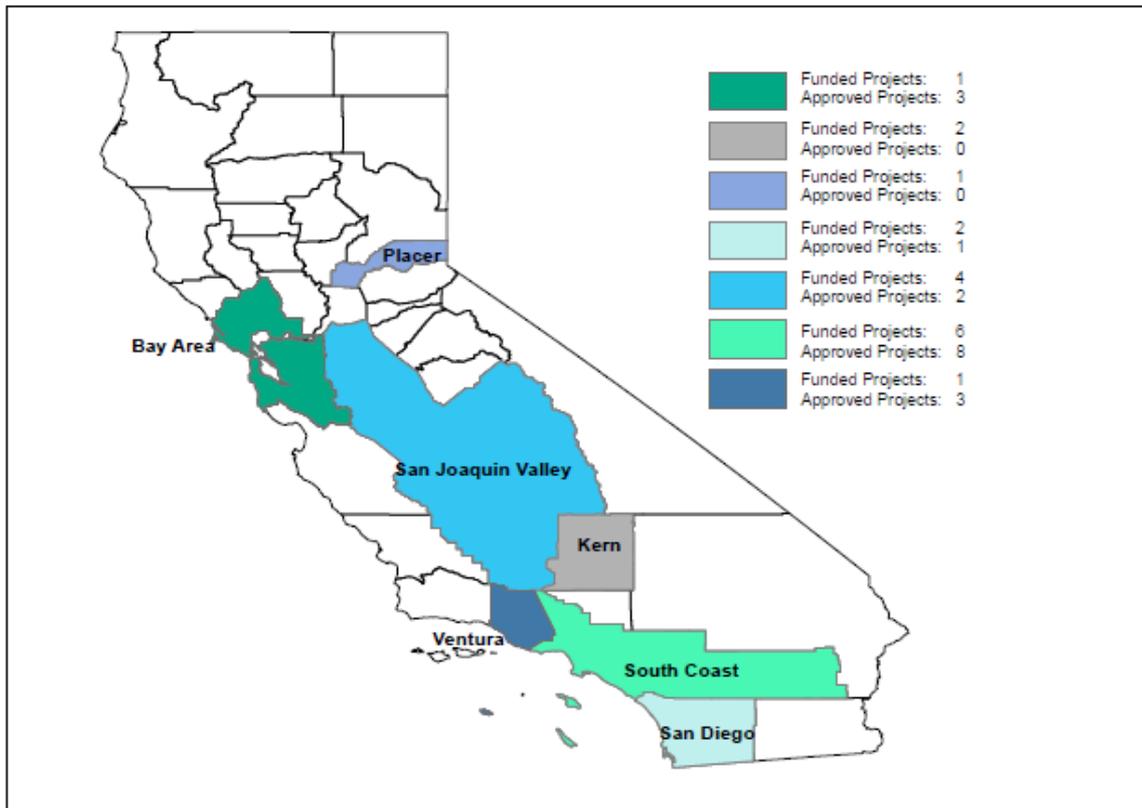
- Focused roadside and idling enforcement in and around your community in June/July 2019
- Focused enforcement in railyards for cargo handling equipment
- Settlement Agreement (SA) actions
- Supplemental Environmental Projects (SEPs) – Over \$400k school air filters in SCAQMD

# Supplemental Environmental Projects (SEPs)



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

# 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/>)

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



emissions or exposure to



Relate to the violation



Not benefit the violator



Go above and beyond regulatory requirements

# Possible CARB Enforcement Actions for your Community



Truck Idling Sweeps Coordinated with SCAQMD



Targeted Enforcement of our Regulations



Outreach/MOUs/Educational Material



Additional Consumer Products/Fuels Enforcement

# 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](http://www.arb.ca.gov/truckstop) or contact CARB's diesel hotline at 866-6DIESEL (866-634-3735) or email: [8666diesel@arb.ca.gov](mailto: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:**

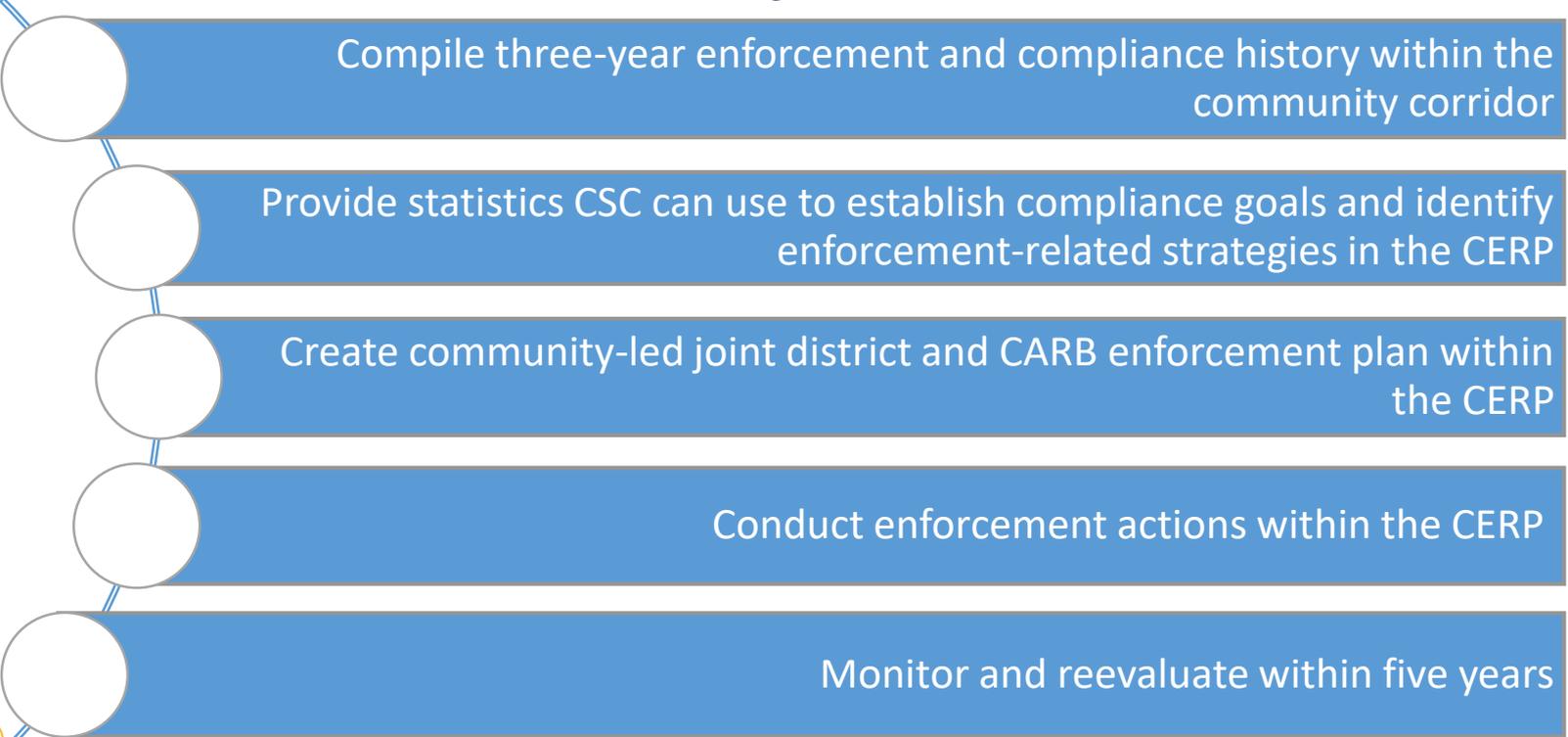
[COES@arb.ca.gov](mailto:COES@arb.ca.gov)

# CARB Enforcement Resource Slides

California Air Resources Board



# CARB Enforcement Role in San Bernardino - Muscoy CERP



Compile three-year enforcement and compliance history within the community corridor

Provide statistics CSC can use to establish compliance goals and identify enforcement-related strategies in the CERP

Create community-led joint district and CARB enforcement plan within the CERP

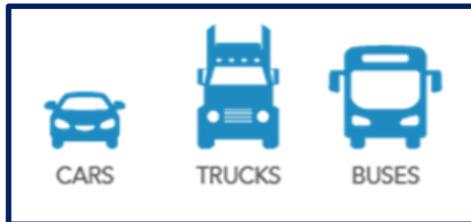
Conduct enforcement actions within the CERP

Monitor and reevaluate within five years

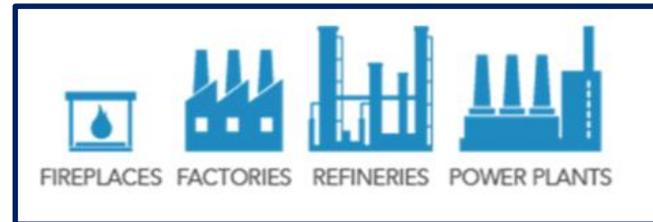
# CARB Responsibilities



**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:

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

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

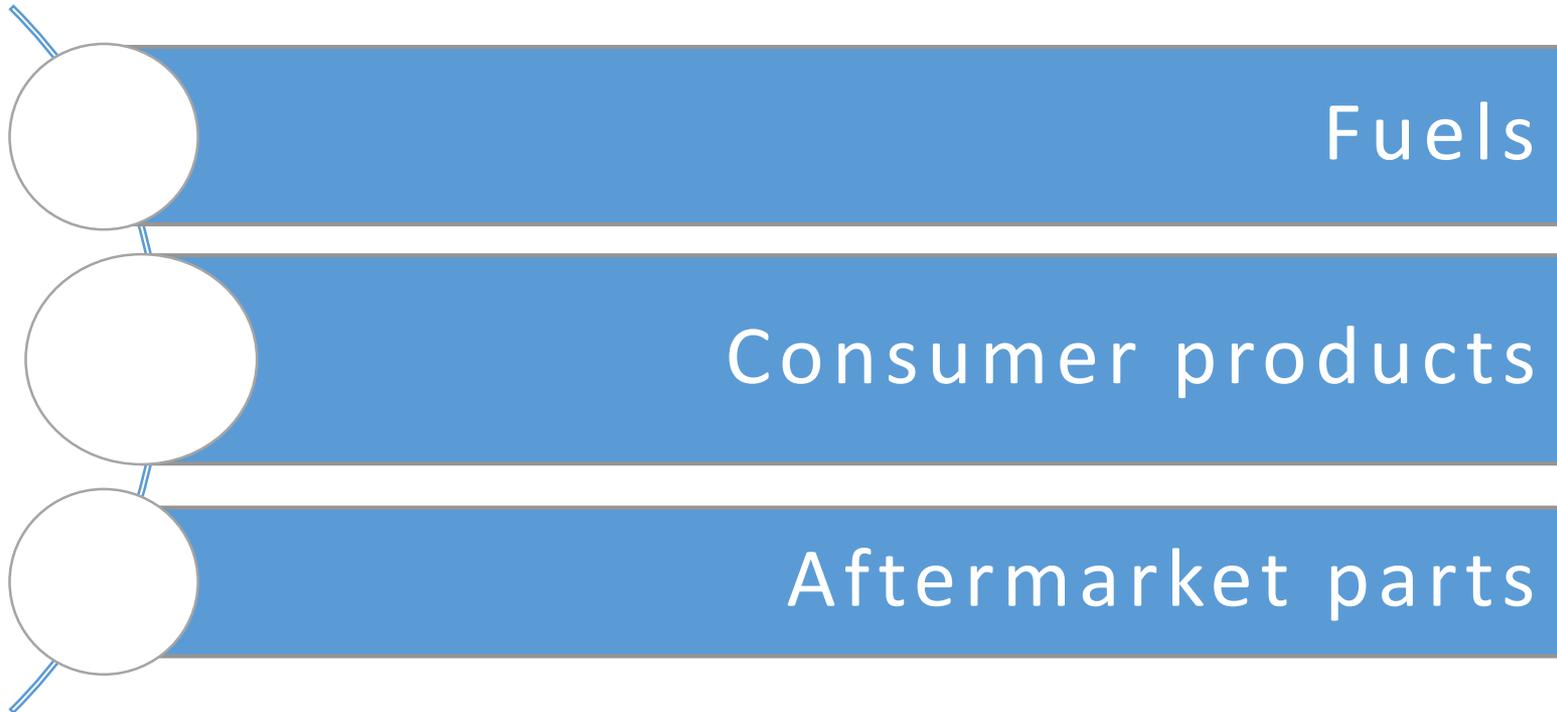
- **Off-Road:** Regulations aimed at cleaning up 'off-road' construction equipment such as bulldozers, graders, and backhoes. These requirements are in place to help ensure that diesel soot filters are installed on off-road equipment.  
<https://www.arb.ca.gov/msprog/ordiesel/documents/finalregorder-dec2011.pdf>
- **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](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>

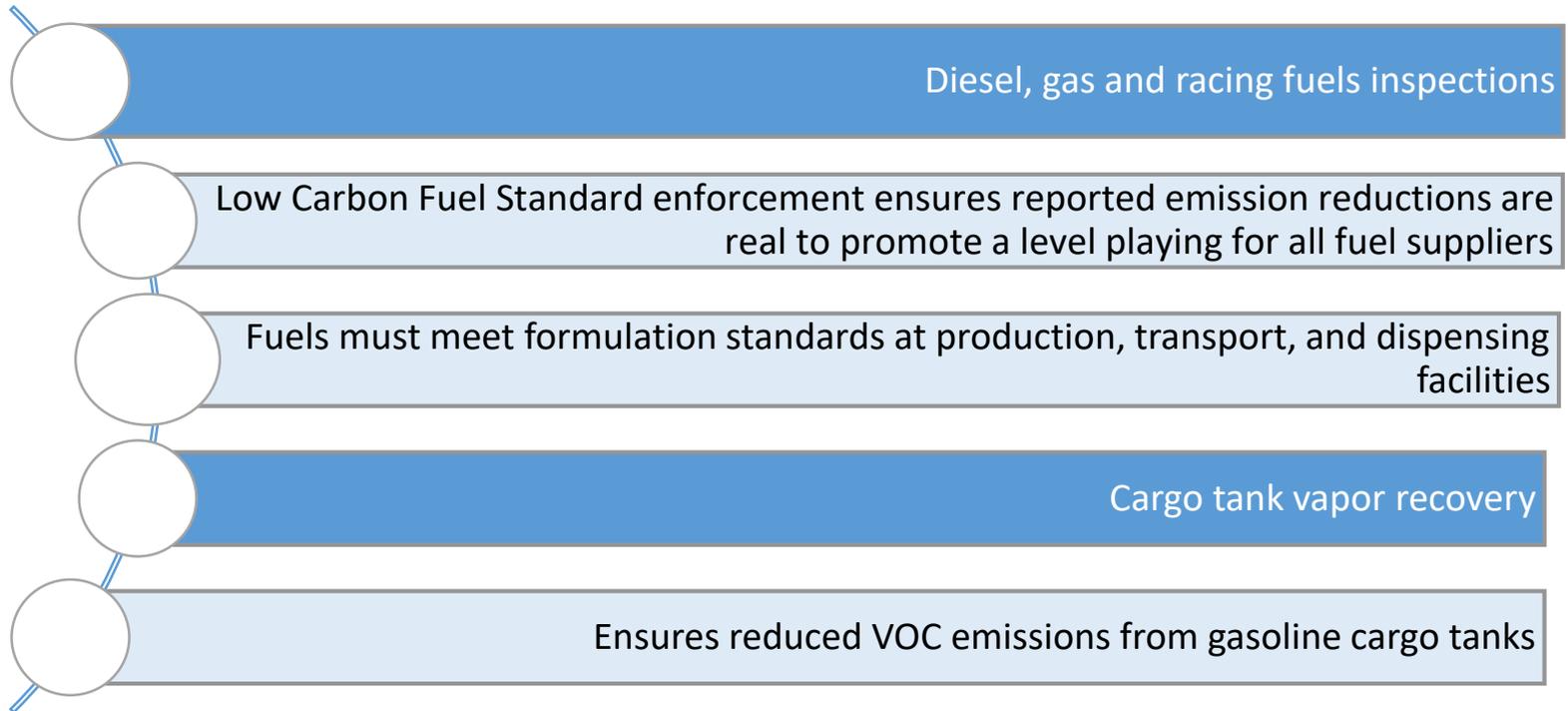
# Additional Enforcement Activities

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



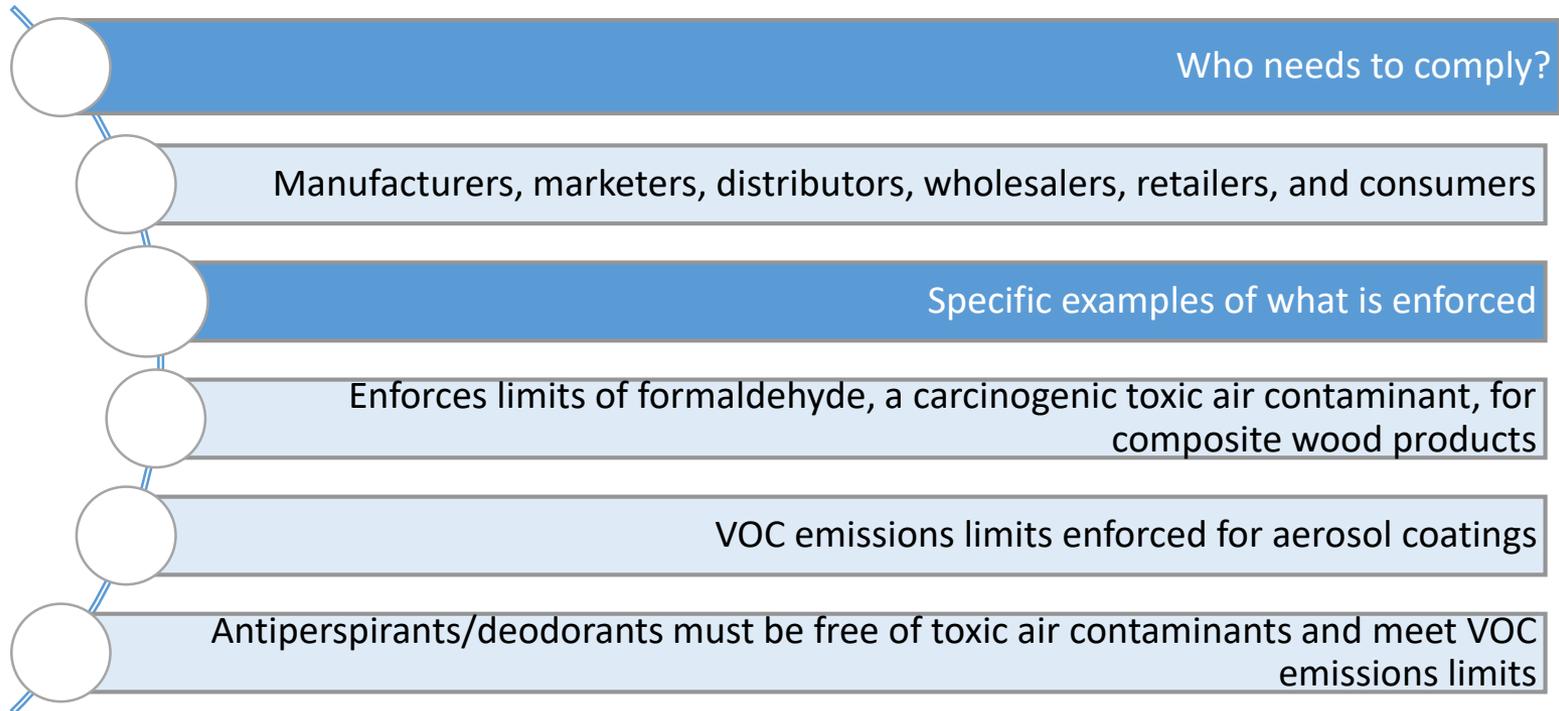
# Fuels Enforcement Criteria

Fuels enforcement activity focuses on inspections of fuels and storage tanks



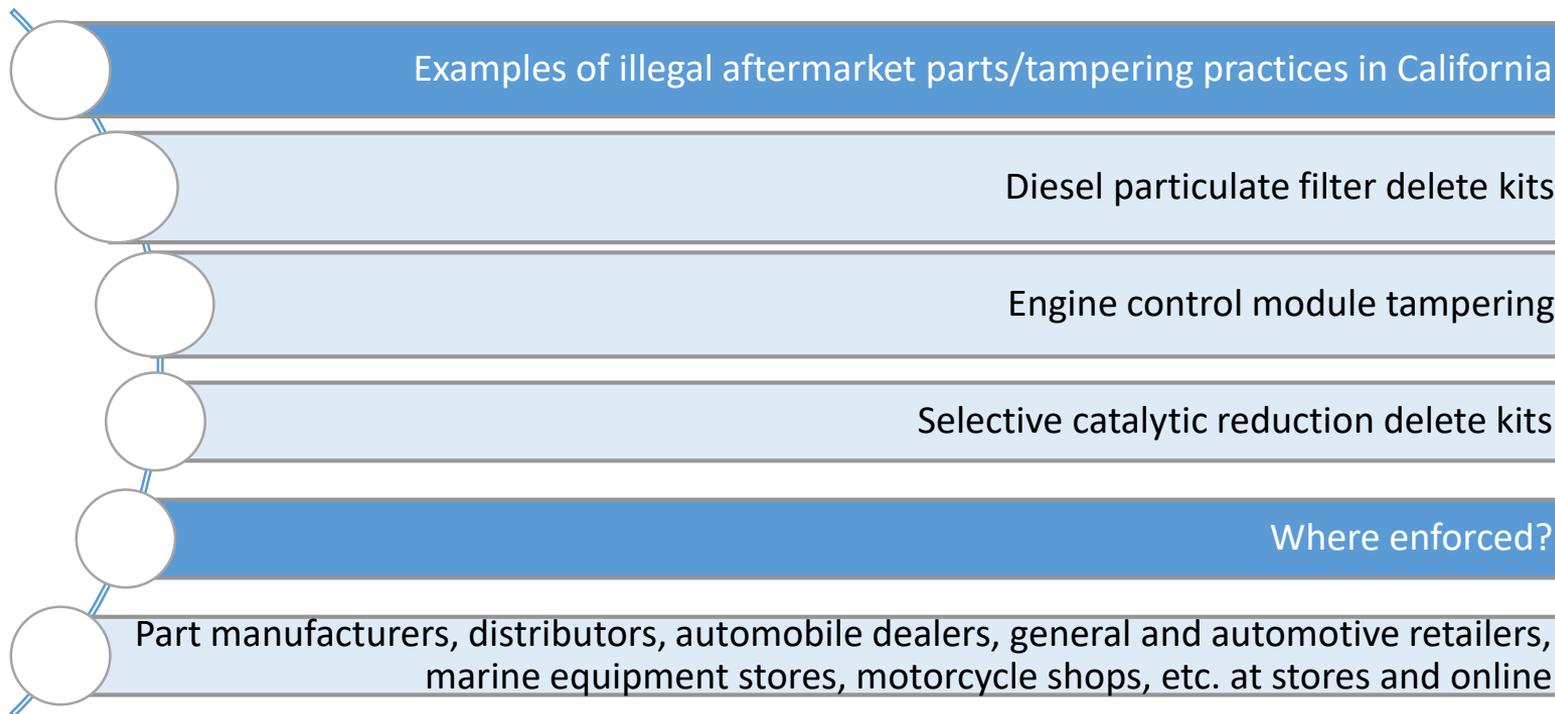
# Consumer Products Enforcement Criteria

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.





# Enforcement Process



# All of these are Potential Violations



# Reporting

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



**[alepa.ca.gov/enforcement/complaints](http://alepa.ca.gov/enforcement/complaints)**



**1 (800) END-SMOG**

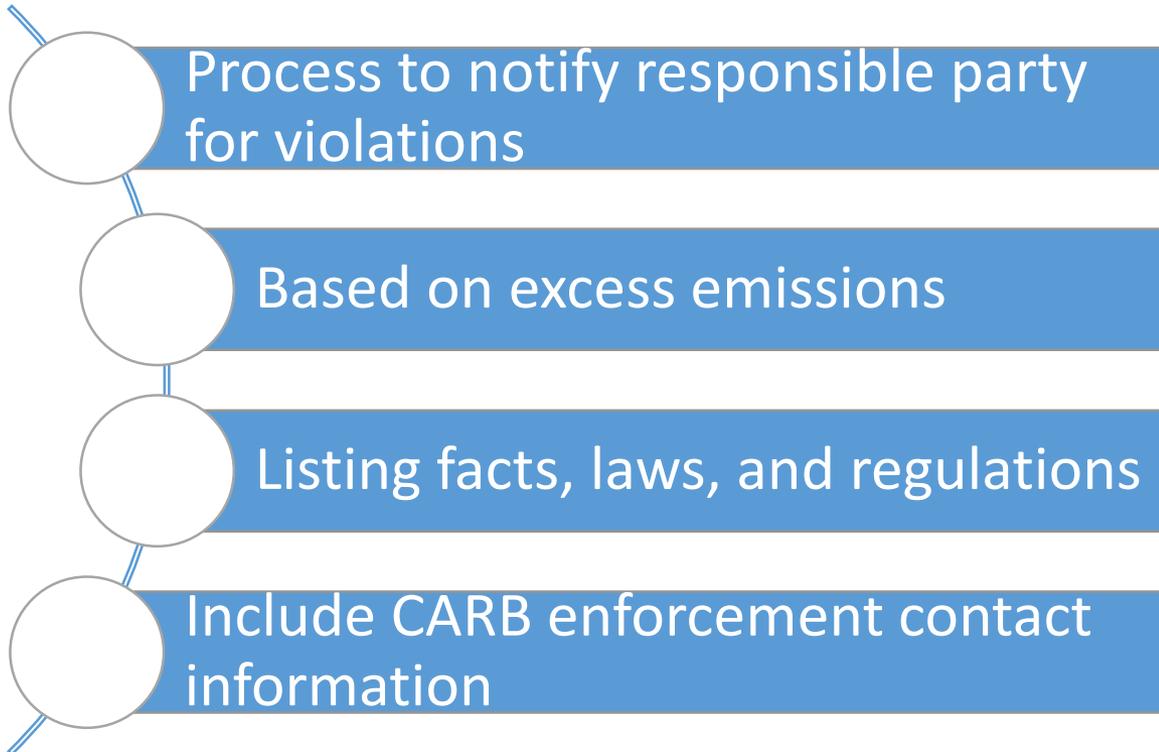


**1(800) CUT-SMOG**

# Evaluating Information



# Notice of Violation (NOV)/Citation



# Opportunity to Discuss

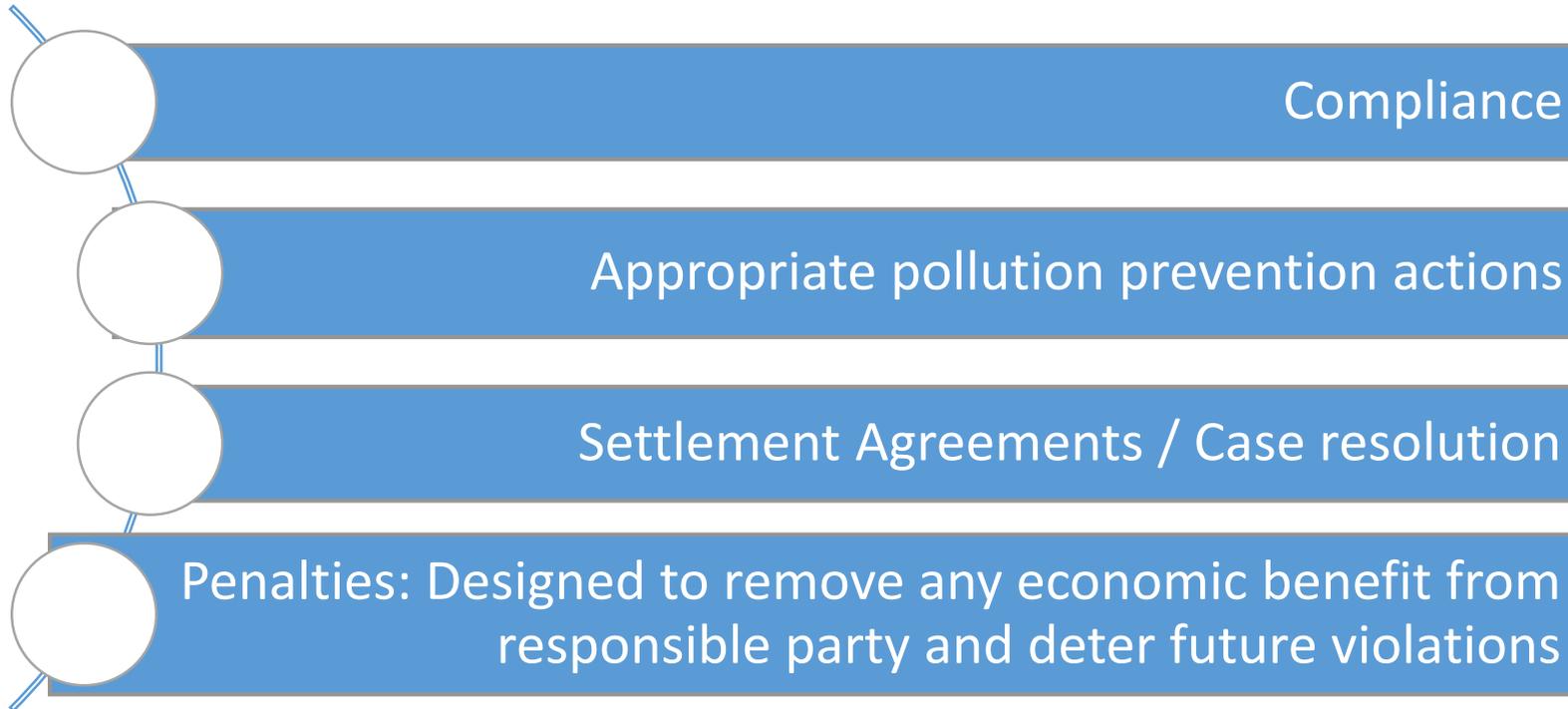


Responsible party may provide further facts for consideration by CARB regarding NOV



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

# Outcomes/Remedies



# 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



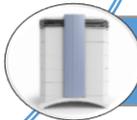
Community Voices on Health and the Environment will hire three community members to write monthly articles identifying environmental health hazards and community member resources in Wilmington



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

# Next steps and important reminders

## Future meeting dates and locations:

- CSC Meeting #8: July 18<sup>th</sup> (6:00 p.m. - 8:30 p.m.) at San Bernardino Valley College
  - We will have Workshop office hours from **5:30 to 6:00 p.m.** to answer questions about the CERP, CAMP and incentives

## Likely agenda items for CSC Meeting #8:

- Discuss comments received for CERP
- Implementation of the CAMP

Is the CSC okay with these topics?

Any additional topics?

## Stationary Source Committee

- July 26<sup>th</sup> at South Coast AQMD Headquarters
- Meeting will be webcast at:

<https://www.aqmd.gov/home/news-events/webcastz>

**Thank you  
for the hard work!**

**More information on AB 617:**

**[www.aqmd.gov/AB617](http://www.aqmd.gov/AB617)**

**Email: [AB617@aqmd.gov](mailto:AB617@aqmd.gov)**

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



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