

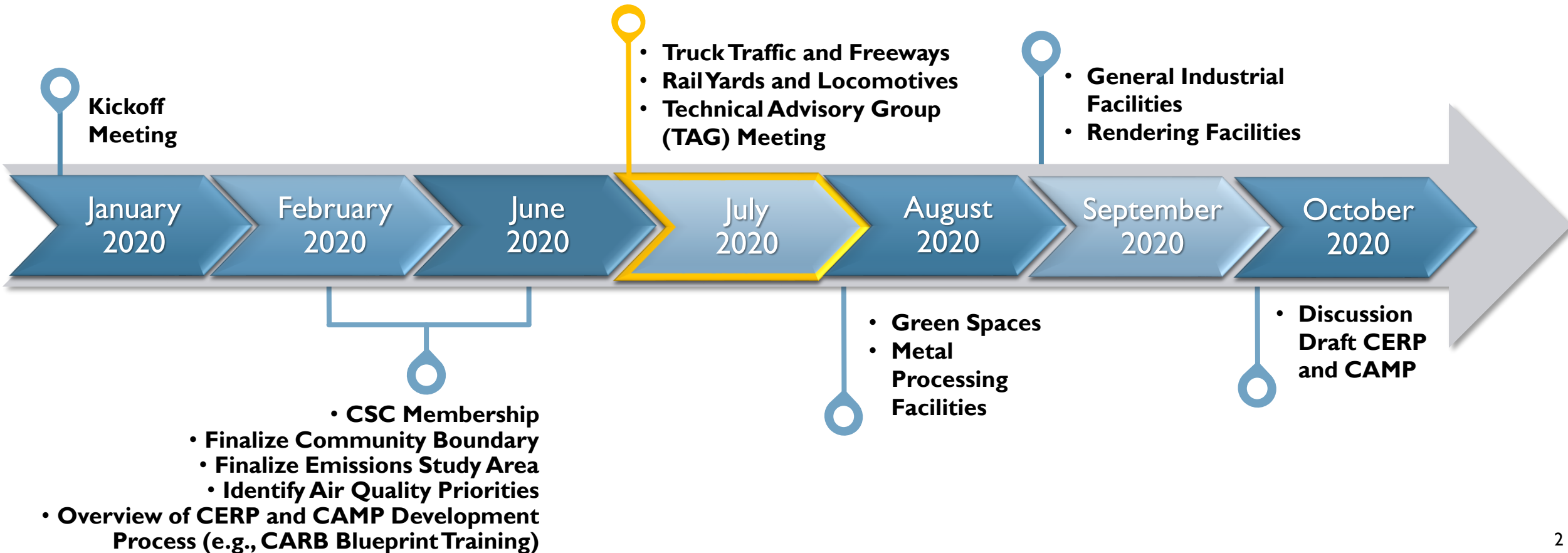
# TRUCK TRAFFIC AND FREEWAYS RAIL YARDS AND LOCOMOTIVES

SOUTHEAST LOS ANGELES CSC MEETING AND WORKSHOP #4  
JULY 23, 2020



Dianne Sanchez, Ph.D. - Air Quality Specialist

# CERP AND CAMP TIMELINE





**AIR QUALITY PRIORITY –  
TRUCK TRAFFIC AND FREEWAYS**

# TRUCK TRAFFIC AND FREEWAYS – AIR QUALITY PRIORITY OVERVIEW



- CSC identified truck traffic and freeways as a top air quality priority
- Community members concerned about emissions from:
  - The I-710 Freeway
  - Heavy-duty trucks idling near storage yards and fueling stations
  - General neighborhood traffic congestion
  - Future large warehouses and fulfillment centers



# TRUCK TRAFFIC AND FREEWAYS – EMISSIONS



## Medium-Heavy Duty Trucks

- Classes 4 – 6
- Gross vehicle weight rating (GVWR) of 14,000 - 33,000 lbs.
- Examples: Box and delivery trucks, school buses



## Heavy-Heavy Duty Trucks



- Classes 7 - 8
- GVWR over 33,000 lbs.
- Examples: city transit buses, garbage trucks, big rigs



# TRUCK TRAFFIC AND FREEWAYS – EMISSIONS (CONTINUED)



Heavy-duty trucks contribute to over 90% of diesel particulate matter (DPM) emissions in SELA

Medium-Heavy Duty Trucks	Pollutant	Tons per Year
	Diesel Particulate Matter (DPM)	5
	Fine Particulate Matter (PM2.5)	8
	Volatile Organic Compounds (VOCs)	17
	Nitrogen Oxides (NOx)	209
Heavy-Heavy Duty Trucks	Pollutant	Tons per Year
	Diesel Particulate Matter (DPM)	6
	Fine Particulate Matter (PM2.5)	8
	Volatile Organic Compounds (VOCs)	26
	Nitrogen Oxides (NOx)	493

\* Data from 2018 base year for SELA community boundary and emission study area

# TRUCK TRAFFIC AND FREEWAYS – AGENCY OVERVIEW (WHO DOES WHAT?)



## Federal and State U.S. EPA and CARB



### Regulatory

- Primary authority over mobile sources including motor vehicles emissions standards (e.g., tailpipe emissions)

### Incentives

- Provide incentives to reduce mobile source emissions (e.g., CARB's Hybrid and Zero-Emission Truck and Bus VIP program)

## Regional

## South Coast AQMD



### Regulatory

- Primary authority over stationary sources with some mobile source authority (e.g., indirect source rules)

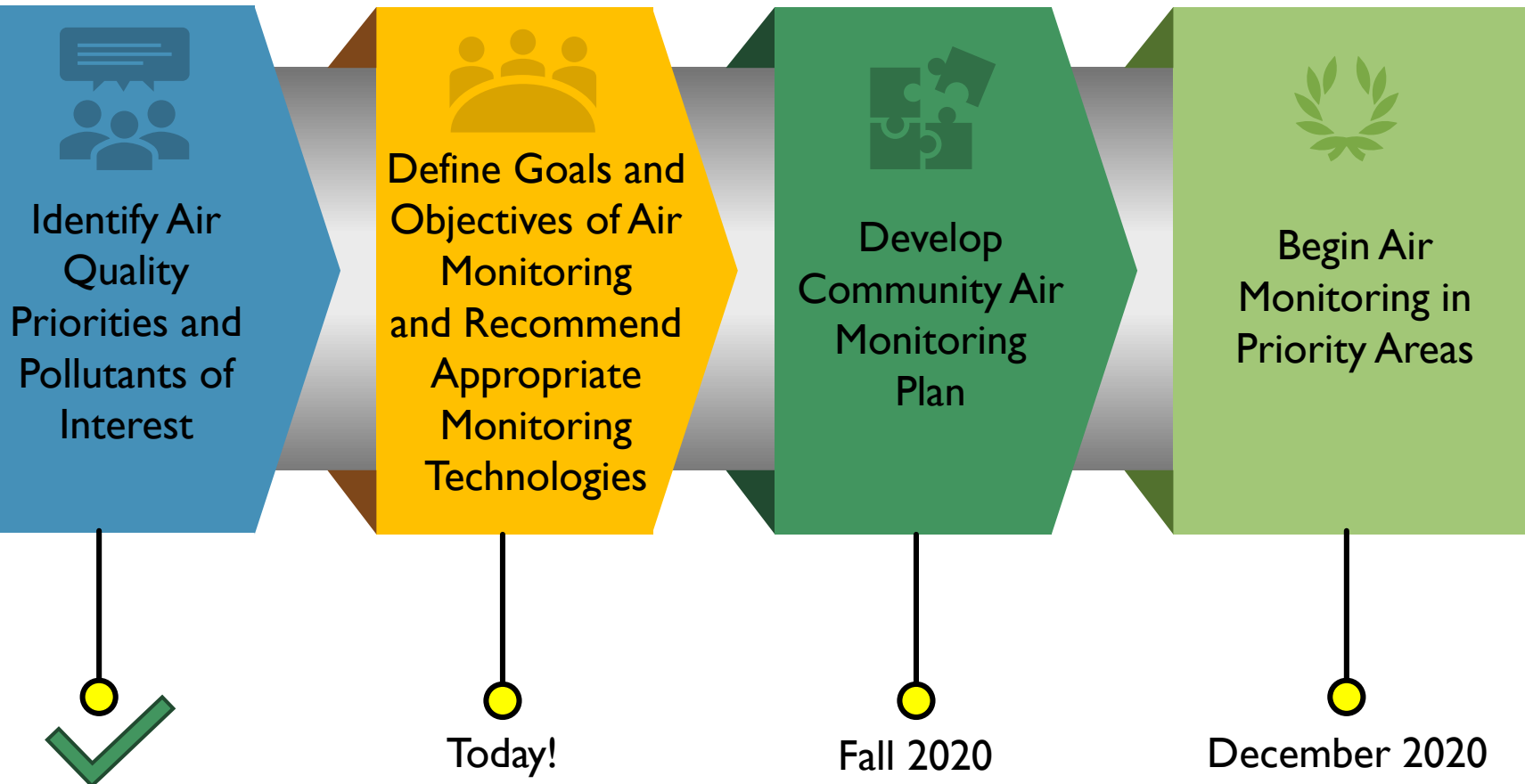
### Incentives

- Provide incentives to reduce mobile source emissions (e.g., Prop 1B, Carl Moyer, VIP)

### Air Monitoring

- Provides information about sources of air pollution, types of pollutants, and air quality impacts

# TRUCK TRAFFIC AND FREEWAYS – WORKING WITH THE CSC TO DEVELOP AIR MONITORING PLAN





# TRUCK TRAFFIC AND FREEWAYS – EXAMPLES OF AIR MONITORING GOALS AND STRATEGIES



## How Air Monitoring Can Help

- Identify areas with high air pollution levels
- Support emission reduction strategies
- Help assess community impact



**Fixed air monitoring** stations can provide real-time data reporting and help track the progress of emission reduction strategies

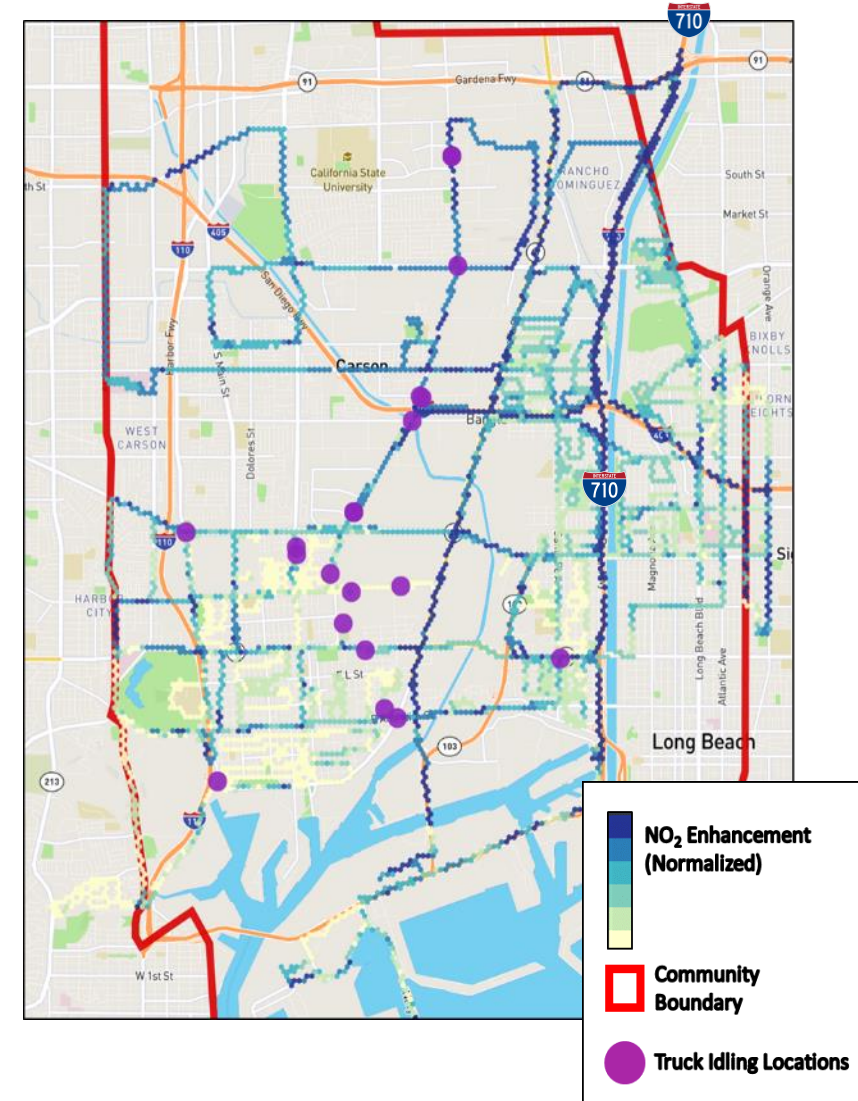


**Mobile monitoring** can help identify pollution hotspots and support CERP actions



# EXAMPLE OF AIR MONITORING TO ADDRESS TRUCK TRAFFIC CONCERN IN WILMINGTON, CARSON, WEST LONG BEACH COMMUNITY

- Target Air Pollutants
  - Particulate Matter (PM), Black Carbon, NO<sub>x</sub>, Ultrafine PM
- Purpose of Air Monitoring
  - Identify Pollution Hotspots
  - Support implementation of CERP





# **Regulatory Actions and Truck Enforcement History**

July 23, 2020

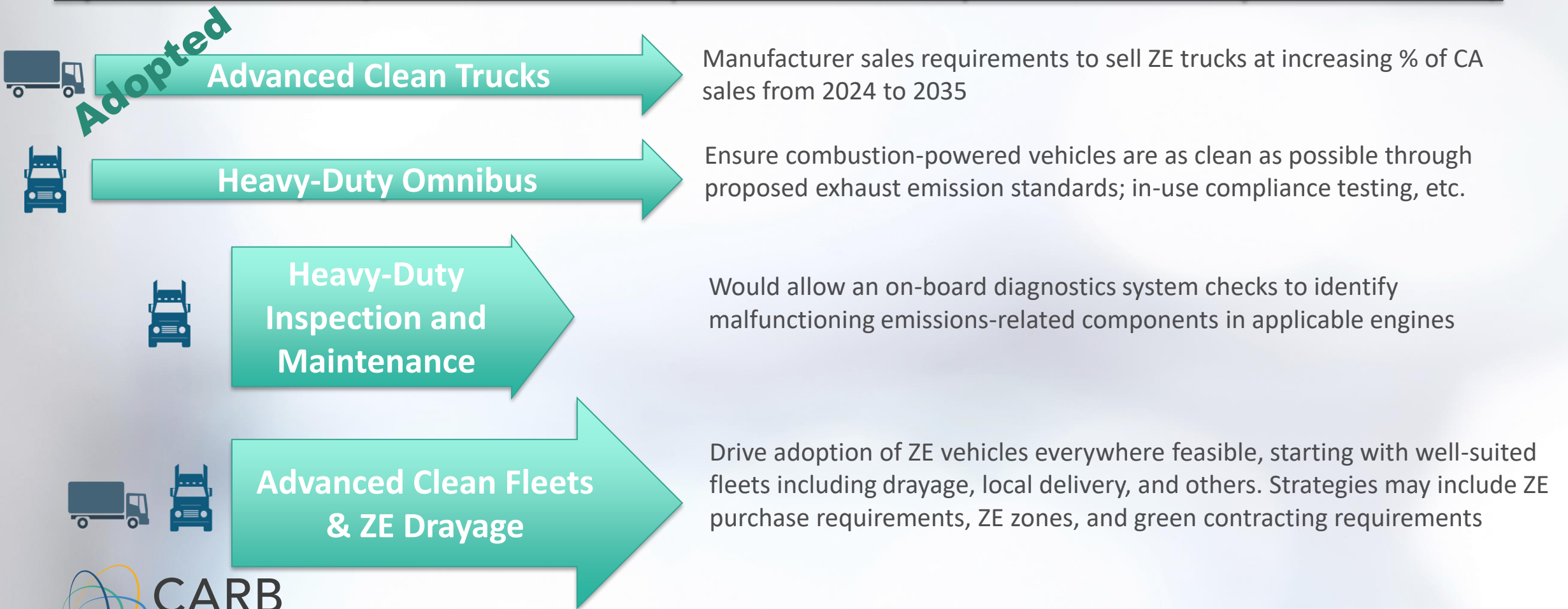
South East Los Angeles (SELA)

AB 617 Community Steering Committee Meeting

Bruce Tuter and Crystal Reul-Chen

# New Truck Regulations

Estimated Board consideration/adoption – Implementation Begins

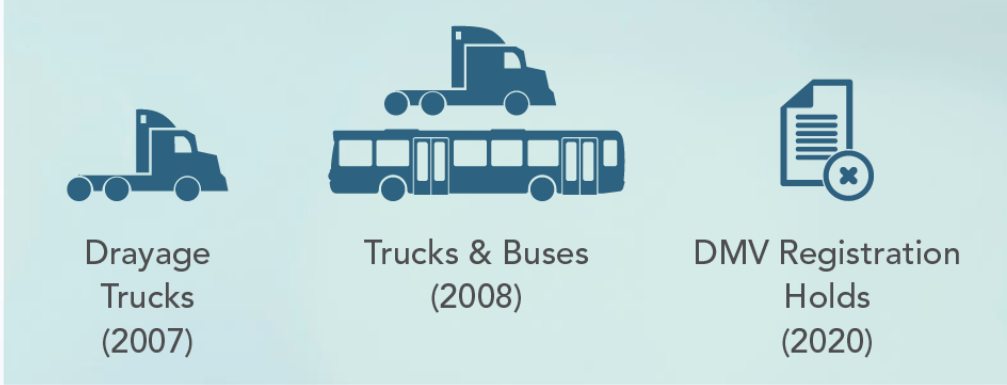
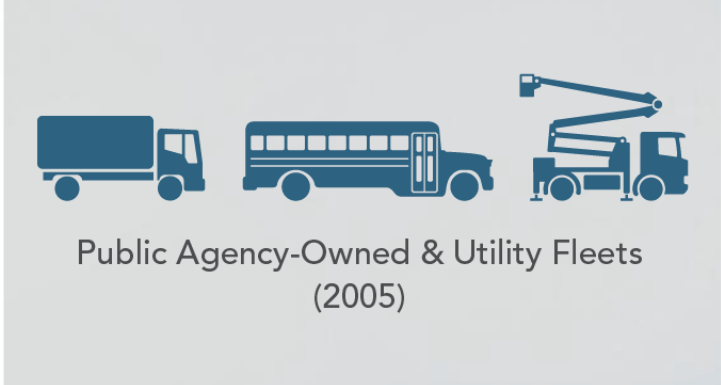




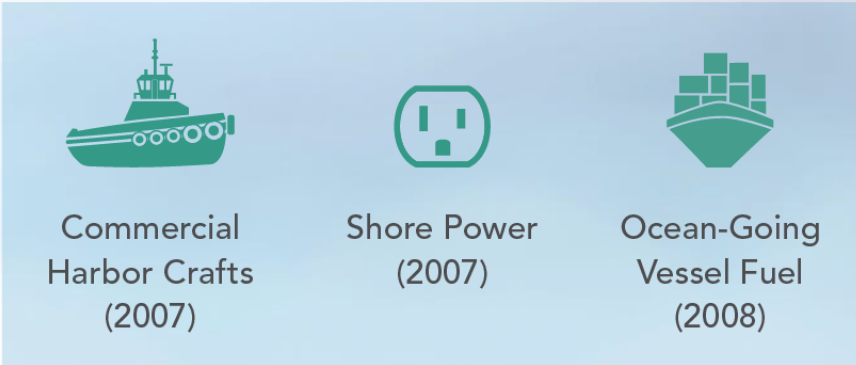


# WHAT PROGRAMS DOES CARB ENFORCE?

Diesel particulate matter  
classified as a toxic air  
contaminant  
(1998)



Most of these trucks & buses must have "Clean Idle" certified 2010 or newer model year engines to legally operate in California (2023)





# CARB Enforcement Highlights 2017 - 2019



**Total program inspections:** Almost 2,000 heavy-duty diesel vehicles and equipment within the emission study boundary of the SELA community



**Citations issued/brought into compliance:** Almost 230 heavy-duty vehicles for emissions violations and 90 for non-emissions violations



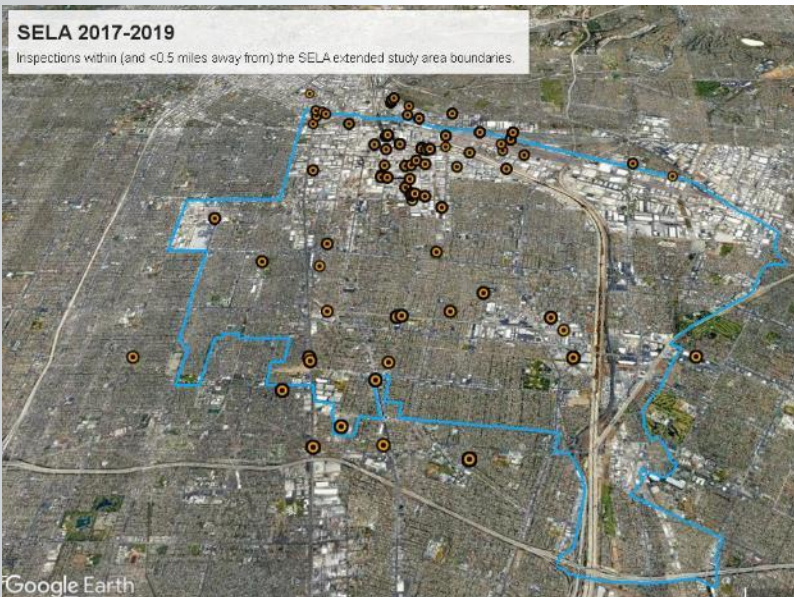
**T&B registration holds:** 3,325 of 4,084 heavy-duty trucks and buses registered in SELA in compliance (October 2019)

Total registration holds from 2018 – 2019  354



**Idling:** 97% compliance rate for 1,025 trucks, buses, off-road equipment inspected

# Enforcement History 2017 -2019 by Program



Type	Dray-age	HDVIP (all)	Off-Road	TRU	T&B	CHE	Total
Inspections	45	868	128	306	416	208	1971
Emissions violations	1	5	0	132	77	0	215
Non-emissions violations	1	30	37	21	0	0	89
Compliance	96%	96%	71%	50%	81%	100%	85%

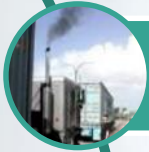
Notes: Heavy Duty Vehicle Inspection Program (HDVIP) covers emissions control labels (ECL), smoking and tampering. See SCAQMD green paper for listing of program “Type” definitions.

Compliance rates may not reflect overall compliance because of the way inspections are conducted.

# Previous CARB Enforcement CERP Actions



Truck idling sweeps coordinated with SCAQMD



Targeted enforcement of our regulations



MOUs with other enforcement agencies



Outreach/educational material



Supplemental Environmental Projects ([SEP@arb.ca.gov](mailto:SEP@arb.ca.gov))



What is best for your community? CERP enforcement plan?

# TRUCK TRAFFIC AND FREEWAYS – CERP POLICY EXAMPLES



- Focused enforcement for CARB's truck regulations



- Incentive funding for cleaner heavy-duty trucks
- Incentive funds for small businesses or independent owner/operators



- Outreach to truck owners/operators about incentive programs, community ordinances, restricted truck routes, and trucking regulations



- Air monitoring to support implementation of emission reduction strategies



- Regulate indirect sources, or facilities that attract mobile sources in order to reduce emissions (e.g., Warehouse ISR)



# DISCUSSION



COMMENTS AND QUESTIONS?





# AIR QUALITY PRIORITY – RAILYARDS AND LOCOMOTIVES

# RAILYARDS AND LOCOMOTIVES— AIR QUALITY PRIORITY OVERVIEW



- CSC identified Railyards and Locomotives as a top air quality priority
- Community members concerned about emissions from:
  - Older equipment
  - Idling locomotives
  - Violations of rules (i.e. compliance)

# RAILYARDS AND LOCOMOTIVES—EMISSION SOURCES AND DATA

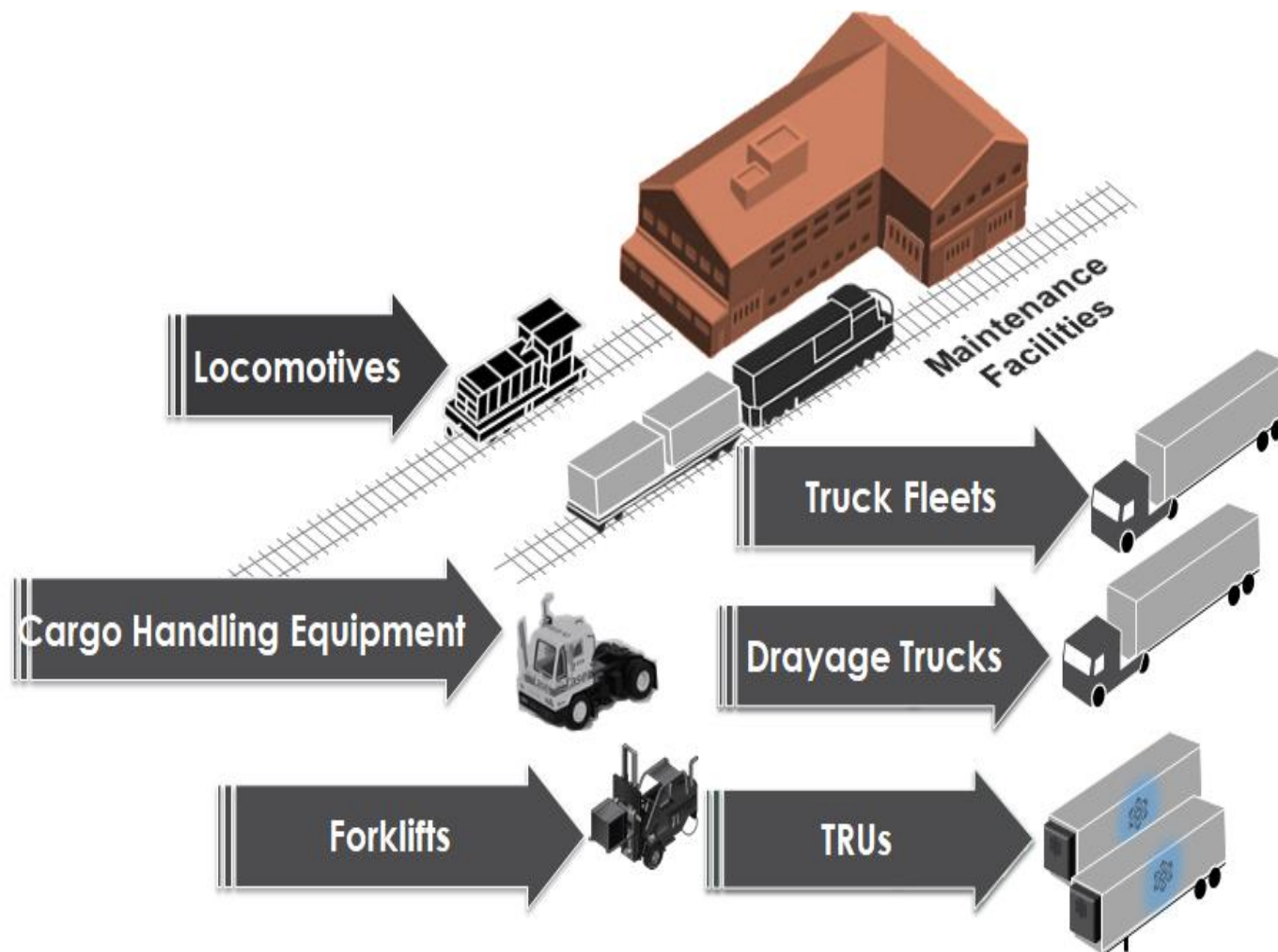


## Locomotives

- **Line haul locomotives**
  - Large, high horsepower
  - Travel throughout the country
  - Difficult to incentivize
- **Switchers**
  - Small, lower horsepower
  - Typically older, generally stay local
  - State incentives available

## Cargo Handling Equipment

- Motorized vehicles used to handle cargo or perform routine maintenance activities at the rail yards
- Examples: yard trucks, container handlers, forklifts





# RAILYARDS AND LOCOMOTIVES— EMISSION SOURCES AND DATA (LOCOMOTIVES)



## Locomotive emissions include:

- Hauling locomotives
- Switching locomotives
- Metrolink
- Passenger trains

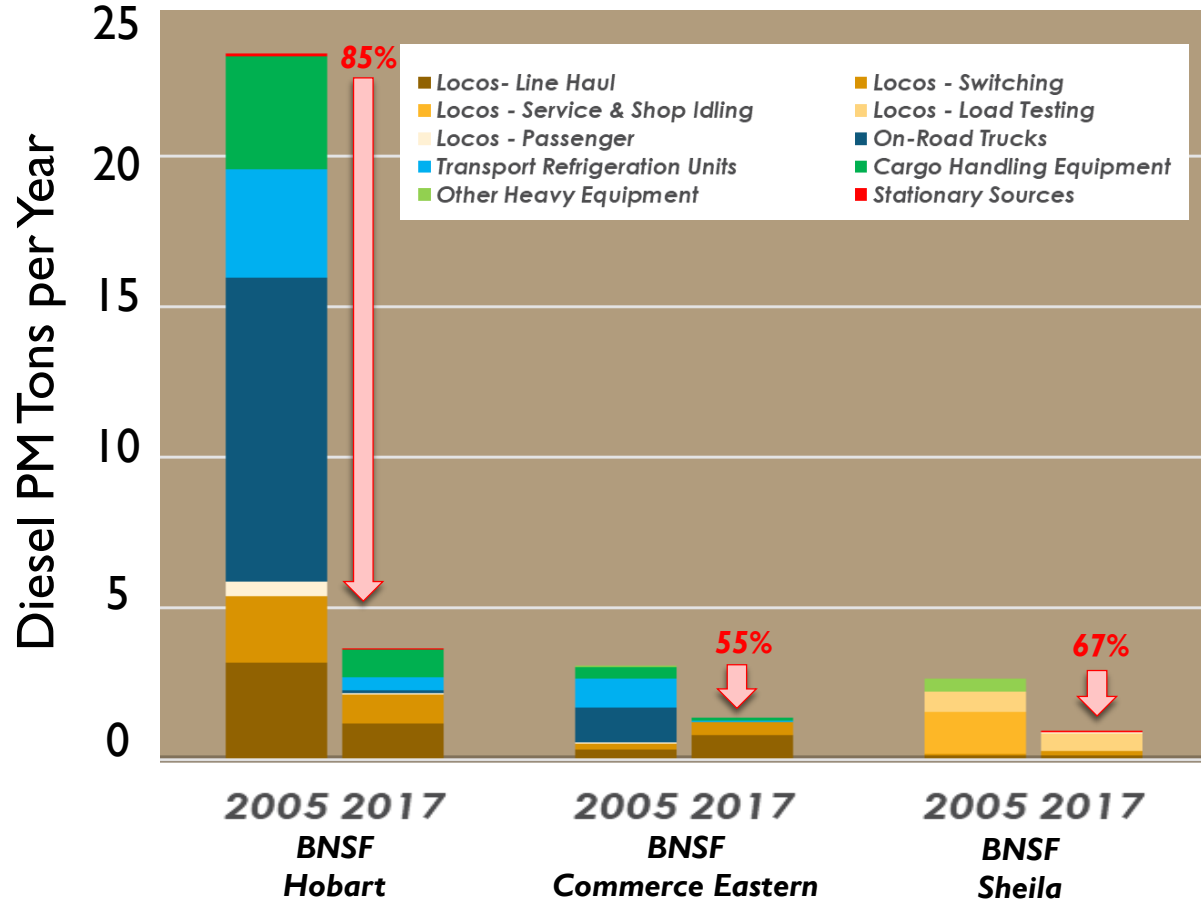
Pollutant	Tons per Year
Diesel Particulate Matter (DPM)	6
Fine Particulate Matter (PM2.5)	6
Volatile Organic Compounds (VOCs)	20
Nitrogen Oxides (NOx)	367



# RAILYARDS AND LOCOMOTIVES – EMISSION SOURCES AND DATA (CARGO HANDLING EQUIPMENT)



## RAILROAD SELF-REPORTED ONSITE\* RAIL YARD EMISSIONS INVENTORIES



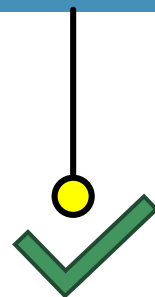
\*Analysis prepared by railroads undergoing review by CARB & South Coast AQMD. Total NOx emissions in 2017 & 2018 from these railyards and regional locomotive travel is 13% of air basin's carrying capacity to meet federal standards in 2031



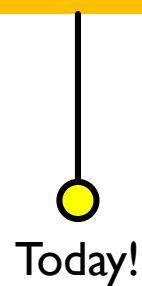
# RAILYARDS AND LOCOMOTIVES— WORKING WITH THE CSC TO DEVELOP AIR MONITORING PLAN



Identify Air Quality  
Priorities and  
Pollutants of  
Interest



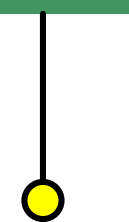
Define Goals and  
Objectives of Air  
Monitoring  
and Recommend  
Appropriate  
Monitoring  
Technologies



Today!



Develop  
Community Air  
Monitoring  
Plan



Fall 2020



Begin Air  
Monitoring in  
Priority Areas



December 2020

# RAILYARDS AND LOCOMOTIVES— EXAMPLES OF AIR MONITORING GOALS AND STRATEGIES



## How Air Monitoring Can Help

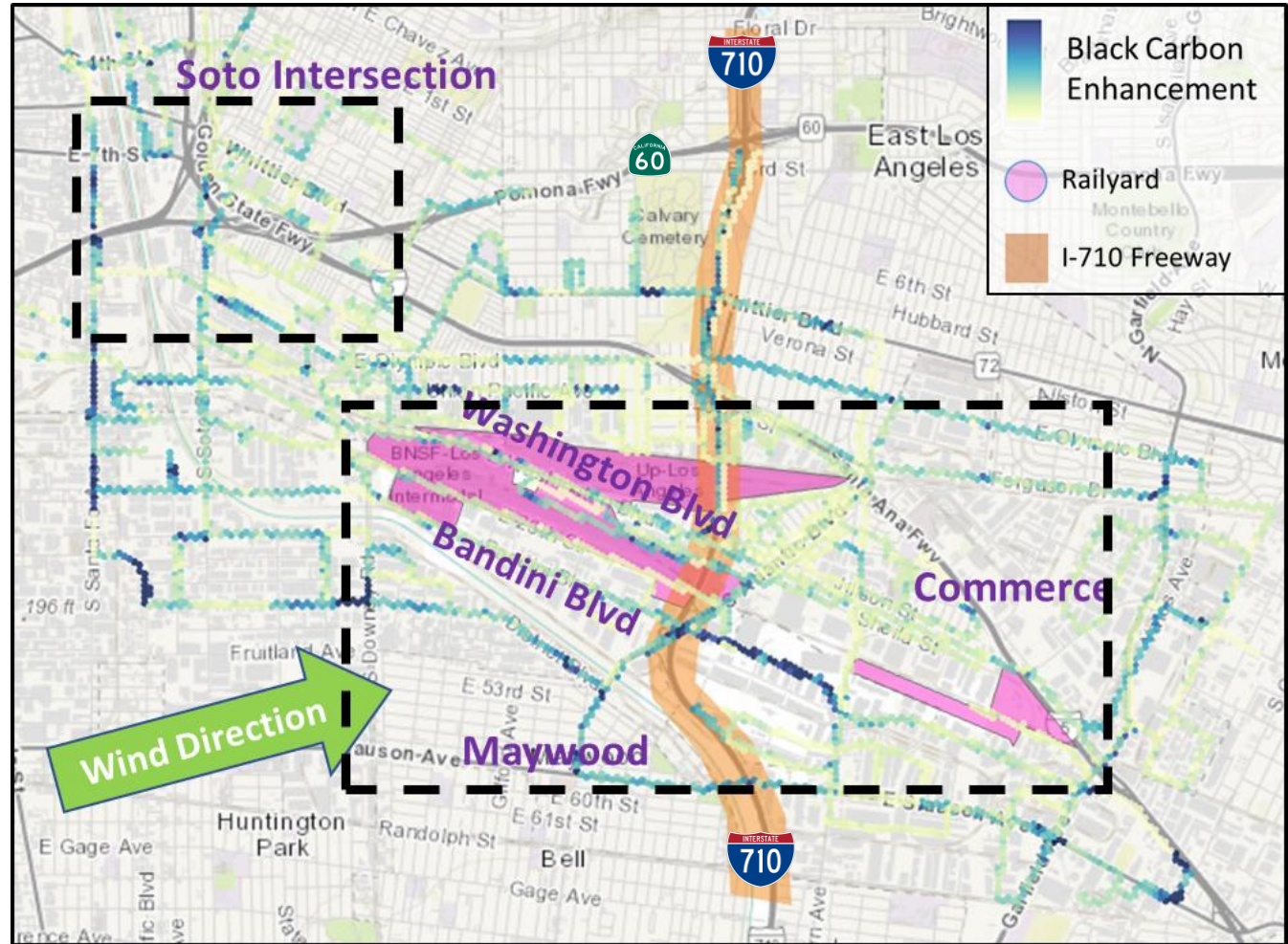
- Look for specific emission sources
- Support emission reduction strategies
- Determine locations for potential fixed monitoring, if appropriate



**Mobile monitoring** can help identify activities that may lead to increase in emissions



EXAMPLE OF AIR MONITORING TO ADDRESS RAILYARDS AND TRUCK TRAFFIC CONCERN IN EAST LOS ANGELES, BOYLE HEIGHTS, WEST COMMERCE COMMUNITY

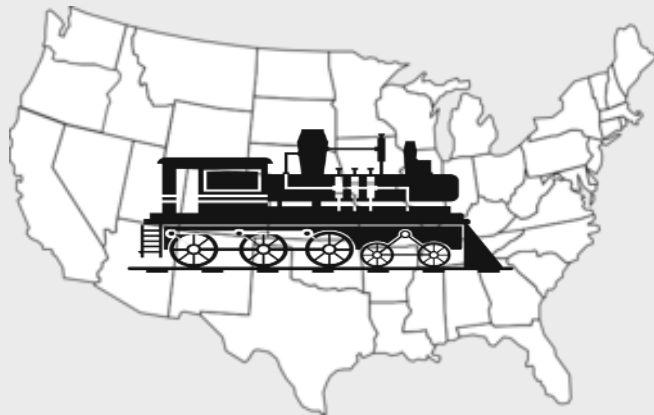


# RAILYARDS AND LOCOMOTIVES— AGENCY OVERVIEW (WHO DOES WHAT?)



## Federal Government U.S. EPA

- Stationary and Mobile Source Authority
- Regulate locomotive emissions standards



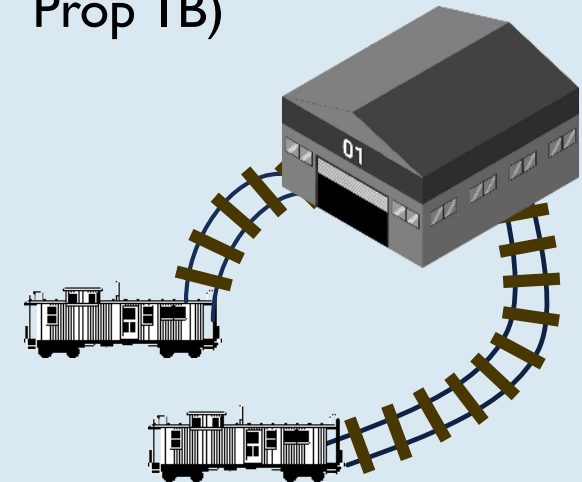
## State CARB

- Primary mobile source authority
- Regulate locomotive activity
- Incentives (e.g., CORE Project)



## Regional South Coast AQMD

- Primary stationary and indirect source authority\*
- Regulate rail yard emissions
- Incentives (e.g., Carl Moyer, Prop 1B)



\* Federal preemption limits may apply





# Regulatory and Enforcement Efforts for Rail Related Concerns

July 23, 2020  
South East Los Angeles  
AB 617 Community Steering Committee Meeting  
Shannon Downey and Mae Colcord

# CARB Background on Rail

## **1998 South Coast Agreement (sunset 2030)**

- Average Tier 2 NOx emissions standard
- Railroads report activity
- Credits provided for early technology adoption

## **2005 Statewide Railyard Agreement (sunset 2015)**

- Idle reduction, repair and reporting effort
- Use of cleaner diesel fuel
- 17 railyard health risk assessments

# 1. Establish a Locomotive Emissions Reduction Spending Account

**3** Railroad uses accumulated charges for cleaner locomotives, with reporting.

**1** Assess charge to Railroads for locomotives based on emissions level and amount of work performed in CA.

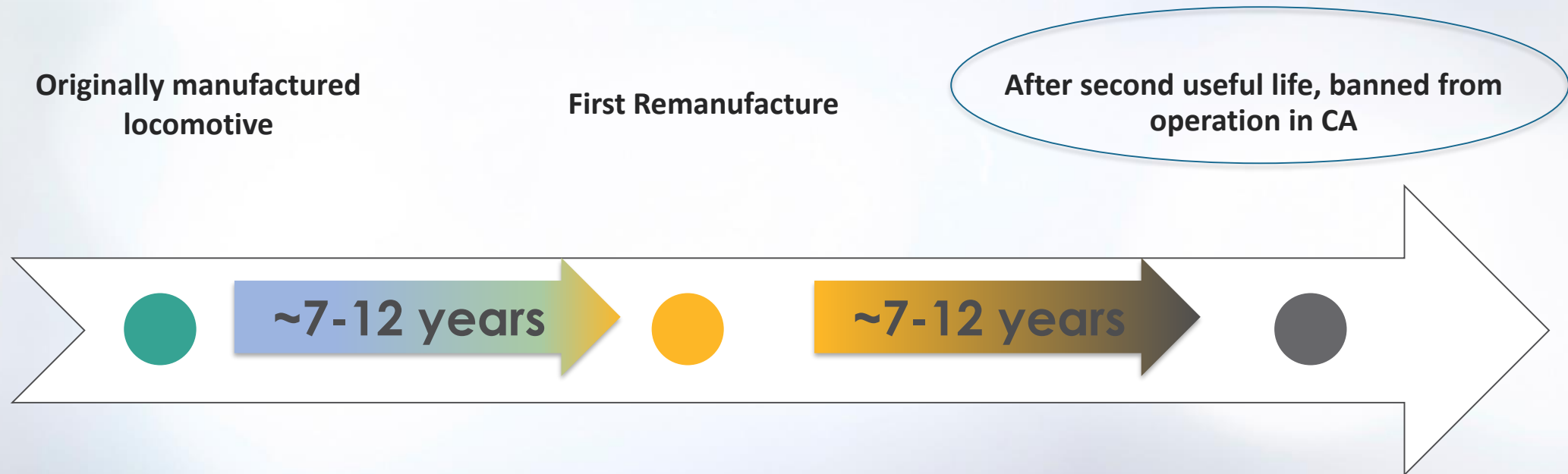
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**2** Charges held in the individual Railroads' trust, with annual public reporting of locomotive usage and funds deposited.



## 2. In-Use Locomotive Remanufacture Limit



- Railroads currently have no limit how many times they can remanufacture
  - Remanufacture only needs to be as-built or “plus” standard
- When implemented, any locomotive already remanufactured more than once would be banned from California
  - Alternative: remanufacture to Tier 4 and continue California operation



# 3. Adopt U.S. EPA 30 Minute Idling Limit

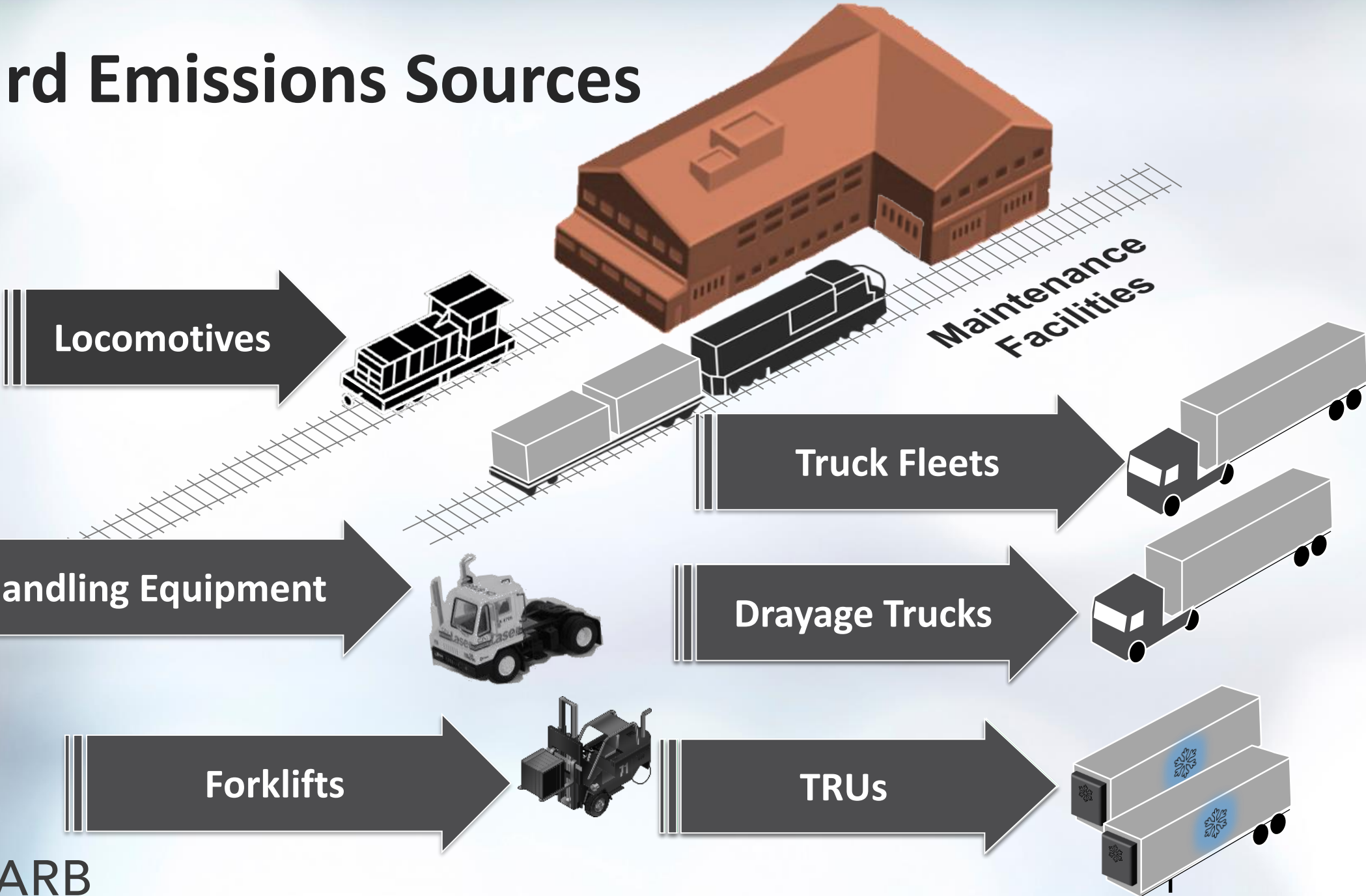
- Incorporates Federal requirements in California SIP
- Makes the rule CARB enforceable
- Enforcement by Air Districts possible through enforcement MOU



# Next Steps

- Next CARB locomotive outreach in fall 2020
- CARB locomotive Board Meeting late 2021

# Railyard Emissions Sources



# Railyard Enforcement

- Cargo Handling Equipment (CHE)
  - 100% in-use compliance at intermodal railyards statewide
  - Prioritizing AB 617 Communities for enforcement activities
- Transportation Refrigeration Units (TRUs)
  - 100% compliance of TRU gen sets and refrigerated railcars at intermodal railyards statewide
- Locomotive Idling
  - Working with U.S. EPA to resolve idling complaints
- Drayage Trucks
  - Case settlement with UP and BNSF

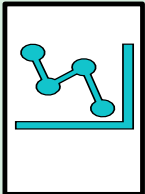




# RAILYARDS AND LOCOMOTIVES— CERP POLICY EXAMPLES



- Local utilities and state agencies to encourage the installation of infrastructure for zero-emission vehicles and equipment, and onsite equipment
- Work with the railyards to replace diesel-fueled equipment with cleaner technologies



- Conduct air monitoring around railyards to identify activities that may cause increased levels of air pollution
- Air monitoring to support implementation of emission reduction strategies



- Regulate indirect sources, or facilities that attract mobile sources in order to reduce emissions (e.g., Railyard ISR)

# DISCUSSION



QUESTIONS AND COMMENTS?

# CARB AND SOUTH COAST AQMD CONTACTS

Topic	Name	Number/Email	Agency
SELA Community Liaison	Gina Triviso	<a href="mailto:gtriviso@aqmd.gov">gtriviso@aqmd.gov</a>	South Coast AQMD
SELA CERP Lead	Dr. Dianne Sanchez	<a href="mailto:dsanchez@aqmd.gov">dsanchez@aqmd.gov</a>	South Coast AQMD
Air Monitoring	Dr. Payam Pakbin	<a href="mailto:ppakbin@aqmd.gov">ppakbin@aqmd.gov</a>	South Coast AQMD
CARB Community Liaison	Liliana Nuñez	<a href="mailto:liliana.nunez@arb.ca.gov">liliana.nunez@arb.ca.gov</a>	CARB
CARB Enforcement Liaison	Dr. Crystal Reul-Chen	<a href="mailto:Crystal.Reul-Chen@arb.ca.gov">Crystal.Reul-Chen@arb.ca.gov</a>	CARB

# AB 617 – 2020 COMMUNITY STEERING COMMITTEE SCHEDULE (SELA)

<b>January 9, 2020</b>	<b>Community Kick-off Meeting</b> Salt Lake Park (Huntington Park) 6:00 – 8:30 pm	<b>July 23, 2020</b>	<b>Workshop and Community Steering Committee Meeting</b> Virtual Meeting 4:00 – 6:00 pm
<b>February 6, 2020</b>	<b>Community Steering Committee Meeting</b> Ross Hall at Veterans Park (Bell Gardens) 6:00 – 8:30 pm	<b>August 27, 2020</b>	<b>Workshop and Community Steering Committee Meeting</b> Virtual Meeting 4:00 – 6:00 pm
<b>March 12, 2020 and April 9, 2020</b>	<b>Community Steering Committee Meetings –</b> <b>Postponed</b>	<b>September 17, 2020</b>	<b>Workshop and Community Steering Committee Meeting</b> Virtual Meeting 4:00 – 6:00 pm
<b>May 7, 2020</b>	<b>Community Steering Committee Meeting</b> Virtual Meeting 4:00 – 6:00 pm	<b>October 8, 2020</b>	<b>Community Steering Committee Meeting</b> Virtual Meeting 4:00 – 6:00 pm
<b>June 11, 2020</b>	<b>Community Steering Committee Meeting</b> Virtual Meeting 4:00 – 6:00 pm	<b>November 5, 2020</b>	<b>Community Steering Committee Meeting</b> Virtual Meeting 4:00 – 6:00 pm