

Presentation to the Oakland Public Works Committee  
September 24, 2019

*Seaport Air Quality 2020 and Beyond Plan –  
The Pathway to Zero Emissions*

*Adopted by the Board of Port Commissioners*

June 13, 2019



# Maritime Air Quality Improvement Plan FINAL

Approved by Board of Port Commissioners

April 2009



## Seaport Air Quality 2020 and Beyond Plan

The Pathway to Zero Emissions

West  
Oakland  
  
TRUCK  
MANAGEMENT  
PLAN

**DRAFT**  
PLAN for PUBLIC REVIEW  
November 16, 2018  
to  
January 4, 2019



An action-based plan  
designed to reduce  
the effects of transport  
trucks on local streets  
in West Oakland



Volume I: Main Plan and Appendices

# About the Port of Oakland



- Second port of call after the Ports of LA and Long Beach
- Last port of call for exports
- 80% trade with Asia (all containerized: wine, meat, waste products)
- Sources of Diesel Particulate Matter (DPM)
  - Ships - dock for about 24 hours plugged into shore power
  - Tugboats - assist ships to berth
  - Cargo handling equipment - lifts and moves containers in yards
  - Drayage trucks - move containers from yards to streets
  - Rail and trucks - move containers regionally

# Stakeholder Input

- Six Task Force Meetings from February 2018 to April 2019
- Bay Area Air Quality Management District (BAAQMD) and West Oakland Environmental Indicators Projects staff co-chairs
- Active participation from numerous stakeholders:
  - UC Berkeley Goldman School of Public Policy
  - CA Air Resources Board
  - BAAQMD
  - EarthJustice

## Plan Elements: Summary

- 1) Vision: zero-emissions seaport as the Board's long-term policy goal
- 2) Master Plan: planning framework to guide programs and projects
- 3) Scope: Equipment; Infrastructure; Operations; Funding
- 4) Near-Term Actions and Goals
- 5) Feasibility Analysis: Process with Task Force engagement
- 6) Workforce: Workforce Development Plan
- 7) Annual Progress Reports and 5-Year Update

# Near Term Actions

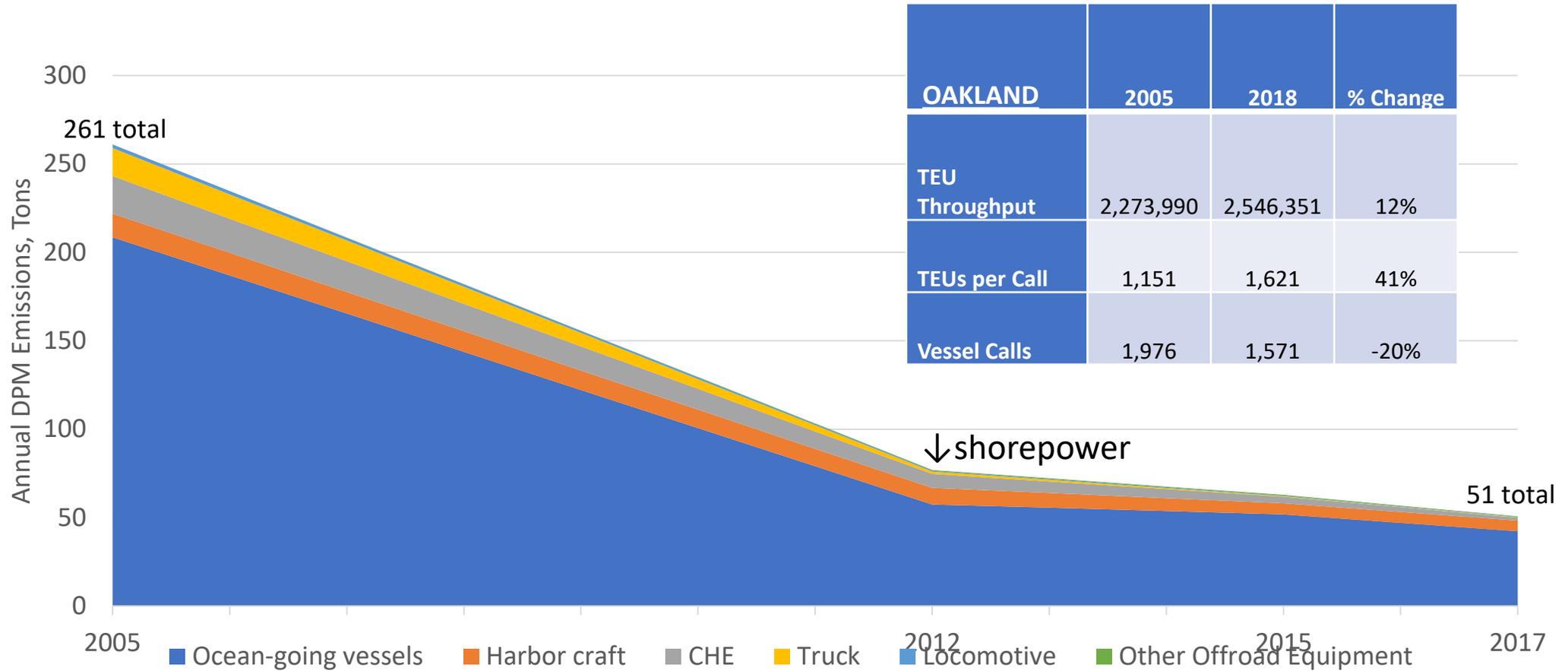
- Conduct field visits of seaport tenants
- Track equipment used by tenants and truckers
- Promote use of the cleanest equipment
- Staff environmental office hours weekly
- Obtain Low Carbon Fuel Standard credits
- Conduct emission inventories
- Switch Port fleet fuel to renewable diesel

5%/gallon price increase (Western States Oil)



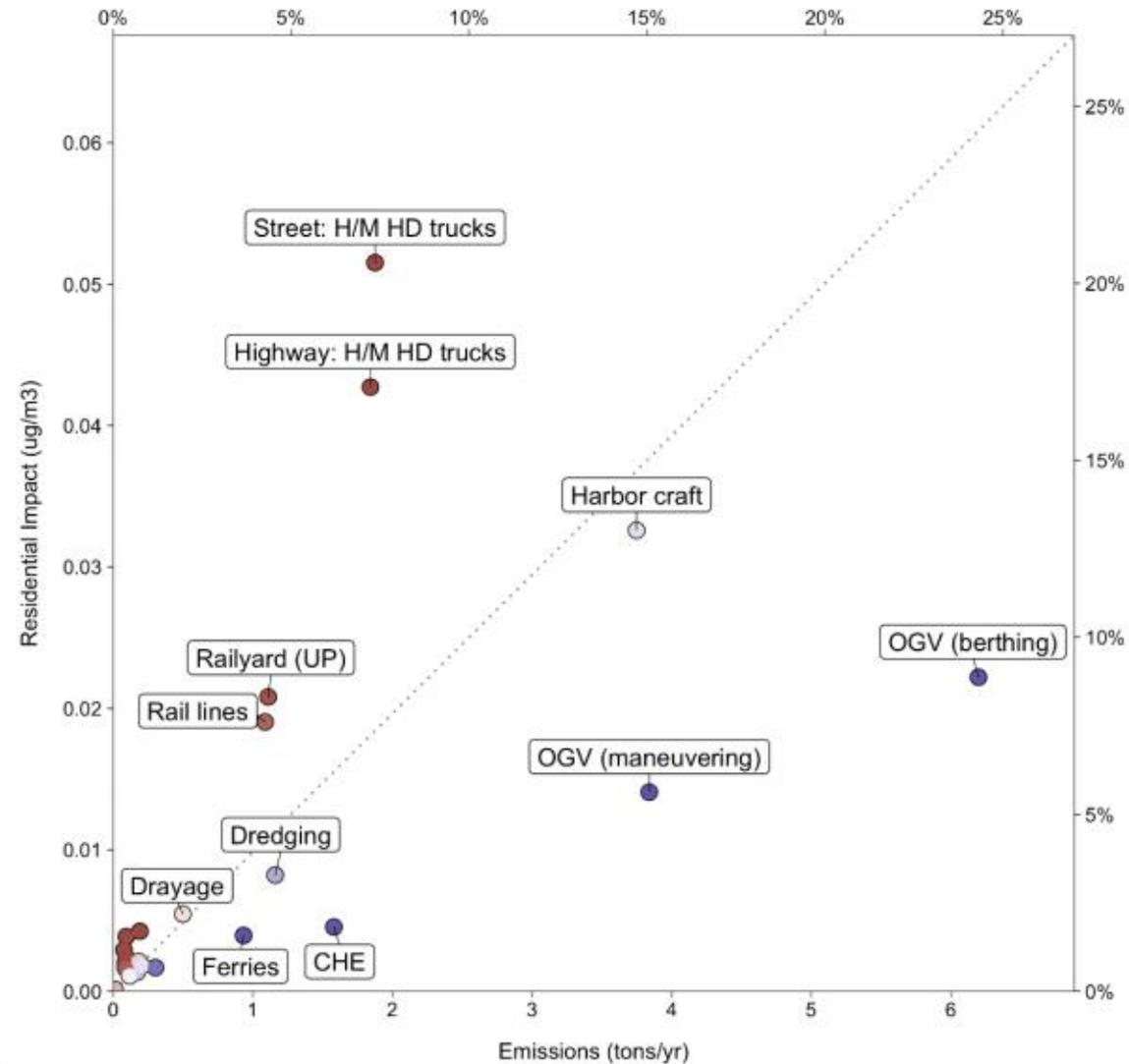
# Emission Inventories

80% reduction in Diesel PM since 2005



# DPM Emissions Versus Impact in West Oakland

Source: West Oakland Community Action Plan ( July 2019 draft)  
- 2017 emissions data



DRAFT 2019-07-08.

Figure 5-10. Impact per Ton of Emissions: Diesel PM in West Oakland (2017)

# ZE Equipment Goals

## **44 electric yard tractors on marine terminals (on dock) by 2025 (20%)**

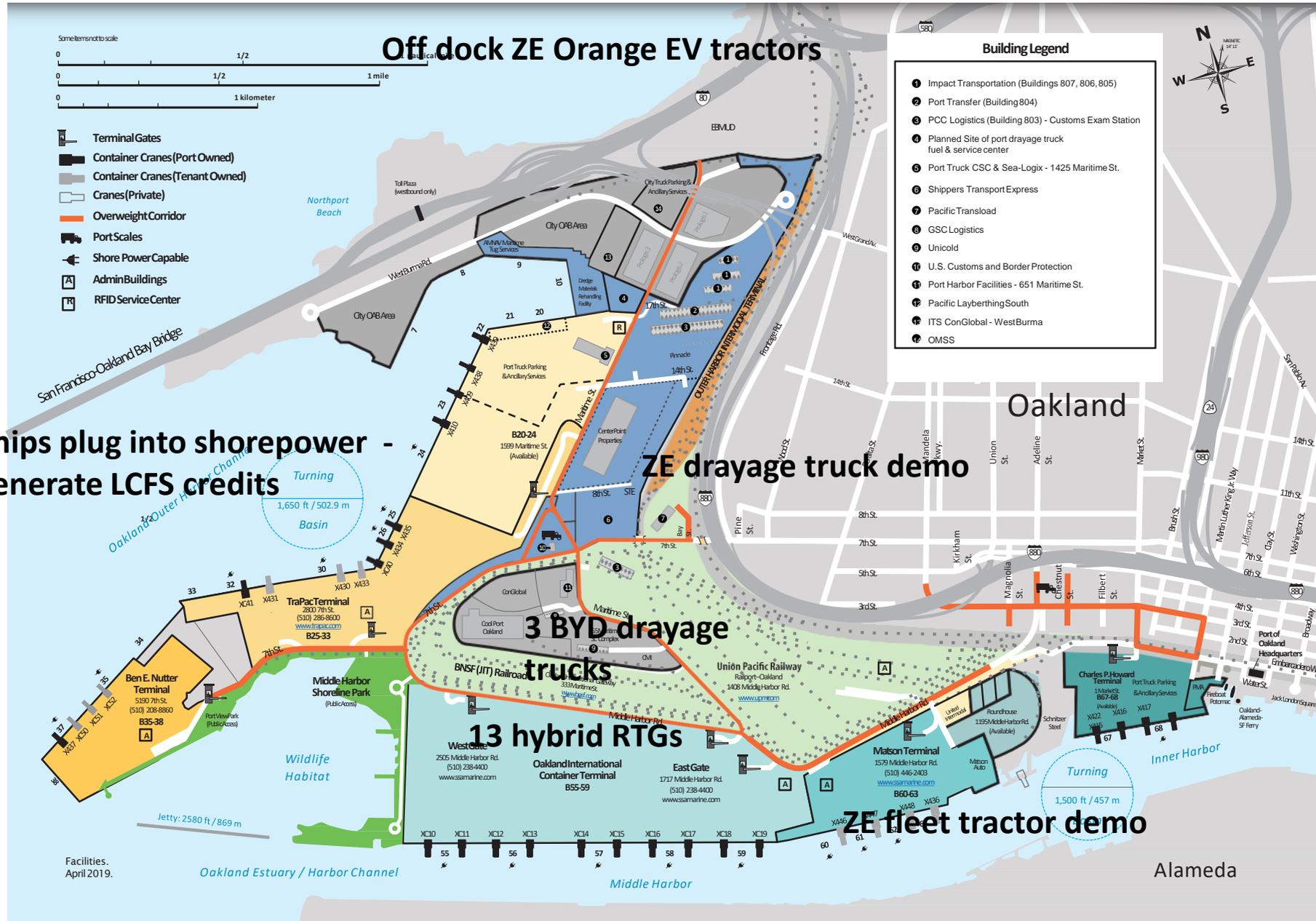
- A handful currently off dock at the Port and City (“Orange EV” eligible for state voucher incremental cost funding and LCFS credits)
- None on dock currently – mini fleet (5) demonstration planned at Matson Terminal (33 at Port of Long Beach) - 50% state grant

## **21 electric drayage trucks by 2027**

- Three BYD 8TT trucks at GSC (100% state grant to BYD, generate LCFS credits)
- Mini fleet (10) demonstration planned at STE – 50% state grant
- (notes: LCFS credits may pay for electricity costs  
About 33% electricity is from renewable sources)

# Additional actions from stakeholders required by Board Resolution

- In 6 months from June 2019:
  - Feasibility of 100% electric CHE; *feasibility of related goals and metrics*
  - Feasibility of 100% electric drayage trucks; *feasibility of related goals and metrics*
  - Electrical Capacity Study update
- In 12 months:
  - Outcome of AB617 *West Oakland Community Action Plan* and any potential related updates to 2020 Plan
- In 18 months:
  - 2019 emissions inventory for ships, tugs, rail & incentive programs for ships/rail
  - Cost and financing for 2020 Plan



### Off dock ZE Orange EV tractors

#### Building Legend

- 1 Impact Transportation (Buildings 807, 806, 805)
- 2 Port Transfer (Building 804)
- 3 PCC Logistics (Building 803) - Customs Exam Station
- 4 Planned Site of port drayage truck fuel & service center
- 5 Port Truck CSC & Sea-Logix - 1425 Maritime St.
- 6 Shippers Transport Express
- 7 Pacific Transload
- 8 GSC Logistics
- 9 Unicol
- 10 U.S. Customs and Border Protection
- 11 Port Harbor Facilities - 651 Maritime St.
- 12 Pacific Layingberthing South
- 13 ITS ConGlobal - WestBurma
- 14 OMSS



**Ships plug into shorepower - generate LCFS credits**

Turning Basin  
1,650 ft / 502.9 m

**ZE drayage truck demo**

**3 BYD drayage trucks**

**13 hybrid RTGs**

**ZE fleet tractor demo**

#### OCEAN CARRIER BY TERMINAL

##### TRAPACTERMINAL

- COSCO SHIPPING Lines
- Evergreen Line
- Hapag - Lloyd
- \* Ocean Network Express (ONE)
- Yang Ming Line

##### BENE. NUTTER TERMINAL

- American President Lines (APL)
- CMA CGM
- COSCO SHIPPING Lines
- \* Evergreen Line

##### OAKLAND INTERNATIONAL CONTAINER TERMINAL

- \* American President Lines (APL)
- \* ANL
- \* CMA CGM
- \* COSCO SHIPPING Lines
- Evergreen Line
- \* Hamburg Süd
- \* Hapag-Lloyd
- \* Hyundai Merchant Marine
- \* Maersk Line
- \* Mediterranean Shipping Company (MSC)
- \* Ocean Network Express (ONE)
- Orient Overseas Container Line (OOCL)
- \* Pacific International Line (PIL)
- \* Pasha
- \* Polynesia Line
- SeaLand
- \* Wan Hai Lines
- \* Yang Ming Line
- Zim

##### MATSON TERMINAL

- \* Matson

\* = denotes ocean carrier operating vessels at listed terminal

# Port of Oakland Contacts

## Plan Implementation

- Richard Sinkoff, Environmental Director
  - Diane Heinze, Environmental Supervisor
    - Tracy Fidell, Associate Environmental Planner/Scientist
    - Catherine Mukai, Associate Environmental Planner/Scientist

## Outreach and Workforce Development

- Amy Tharpe, Social Responsibility Director

## Infrastructure and Utilities

- Rob Andrews, Engineering Director (interim)