



**PORT OF OAKLAND  
SEAPORT**

Task Force Meeting – 7/10/20  
Air Quality 2020 & Beyond Plan

# Agenda

- Welcome from Co-Chairs
- Items from 6/26/20 meeting
  - Advanced Clean Truck Reg, CEC/CARB Grant Opportunity
  - Infrastructure Planning
- Recap of Evaluation Results
- Emissions & Impact from WOCAP Health Risk Study
- Tug Upgrade: Discussion
- Permanent Truck Parking: Discussion
- Discussion of Remaining Actions
- Next Steps

# ACT Regulation & CEC/CARB Grant

## Advanced Clean Truck Reg.

- 5% of new Class 8 truck sales starting in 2024 must be zero-emissions
  - Battery electric *or* hydrogen
- Percentage increases annually up to 40% by 2035
- Fleet requirement to follow
- Port is tracking this closely

## CEC/CARB grant

- Two ~\$20M grants (\$10M from CARB for truck purchases + \$10M from CEC for infrastructure)
- Requires >50 zero-emissions trucks, all refueling or charging in same location
- Requires 50% match
- Port interested to hear from Project proponent

# Infrastructure in the NTAP

Near-Term Action Plan includes 8 infrastructure items

1. Replace electrical infrastructure beyond service life
2. Reliability and capacity upgrades to grid
3. Install charging infrastructure at Harbor Facilities
4. Install charging infrastructure at Impact Transportation
5. Study maritime capacity for terminal electrification
6. Install charging infrastructure for Port's fleet
7. Track tenant purchases and respond to tenant needs
8. Write infrastructure guide for tenants, available here:  
<https://www.portofoakland.com/business/bids-rfps/bid-engineering/permits/>

# How Infrastructure is Implemented

From 2020 & Beyond Plan Response to Comments (Vol II), four factors govern infrastructure planning:

1. Port planning studies for electrical infrastructure
2. Respond to tenants' needs
3. Availability of grants or incentive funding; and
4. Regulatory requirements.

*Implementation of all projects follows the Ports standard project management process.*

# Issues raised 6/26/20

- Readiness
- Adequate power and transmission infrastructure
- Micro-grid
- Greening the power supply
- Demonstration projects
- Electric rates
- Grants and incentive funding opportunities
- Long-term planning; timing of implementation
- Other?



# Infrastructure Planning Underway

- 2019 Port Utility provided 65% carbon free energy. State law requires 30%. We plan to stay well above state law. The additional carbon free energy did not cost Port tenants any added costs from previous years. Currently Port Utility is about 20% less than PG&E.
- Current/Active projects:
  - Solar+Storage+EV Chargers study for construction at 1 location
  - EV load control module installed and collecting data
  - Predictive EV charging currently installed and collecting data
- Projects being investigated for deployment right now:
  - “Movable + Scalable” solar+storage EV chargers
  - LED+Solar on poles
  - E-TRU expansion to displace diesel generation
  - Hydrogen Fuel Cell as backup and primary generation
- In Q1 of 2022 a new Port invested solar array comes online (not within territory)
- More shore power plugs in 2021/22
- 3 Solar projects within the Port forecasted for 2022-23

# Evaluation Process & Criteria

## Process

- 138 Actions
- 6 Groups
- Group 1: (17) Port-related strategies from AB 617 West Oakland Community Action Plan (WOCAP) and 3 additional high-interest actions
- 7 Feasibility Criteria in Plan

- |  |  |
|--|--|
| <ul style="list-style-type: none"><li>• <b>Exposure Reduction</b></li><li>• <b>Affordability</b></li><li>• <b>Cost Effectiveness</b></li></ul> | <ul style="list-style-type: none"><li>• <b>Commercial Availability</b></li><li>• <b>Operational Feasibility</b></li><li>• <b>Acceptability</b></li><li>• <b>Need</b></li></ul> |
|--|--|



- Rate each action None/Low/Moderate/High on each criterion
- Quantitative analysis in 4 Technical Memos



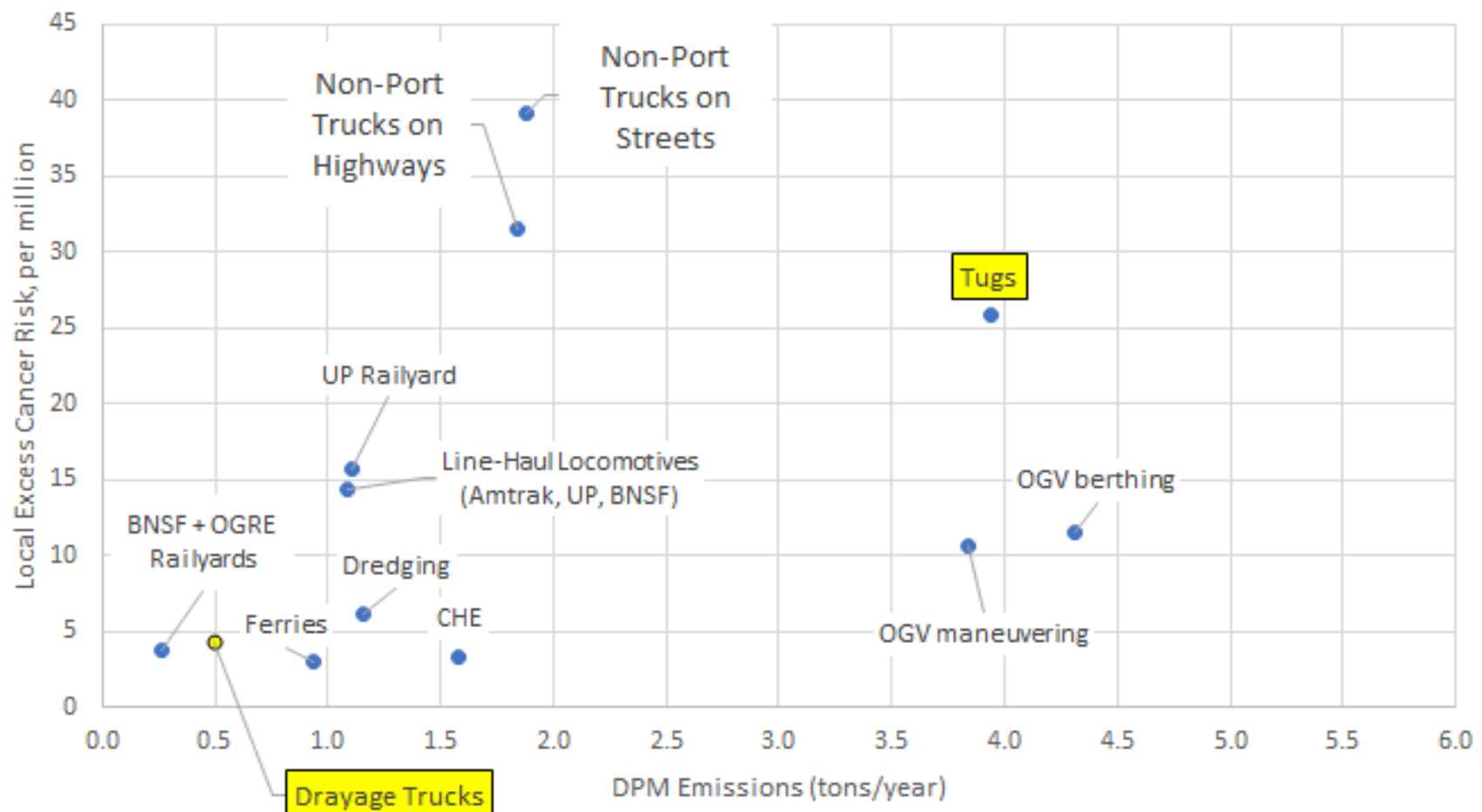
# Evaluation Results

Table 4. Summary of Evaluation and Prioritization Results for Group 1 Actions

Action No.	Name of Suggested Action	Qualitative or Quantitative Evaluation?	1 - Exposure Reduction	2 - Affordability	3 - Cost Effectiveness	4 - Commercial Availability	5 - Operational Feasibility	6 - Acceptability	7 - Need
198	Use Air District Incentives to Upgrade Tugs and Barges	Quantitative	H	M	M	H	M	H	H
188	Establish Permanent Truck Parking & Container Staging in Logistics Area	Qualitative	L	M	N/A	N/A	H	H	M
217	Low Sulfur Diesel Fuel in Ocean-Going Vessels	Quantitative	H	L	L	H	M	L	H
186	Adopt Electrical Infrastructure Plan Incorporating Trucks	Qualitative	N/A	M	N/A	N/A	M	M	M
192	Develop Investment Plan to Support Port Infrastructure for Truck Charging	Qualitative	N/A	M	N/A	N/A	M	M	M
193	Study Favorable Time-of-Day Electricity Rate Structure for Truckers	Qualitative	N/A	M	N/A	N/A	M	M	M
195	Study Effects of Larger Vessels on Truck Traffic	Qualitative	N/A	M	N/A	N/A	M	M	L
280	Pursue a Hydrogen Fuel Cell Demonstration Project	Qualitative	L	Unk.	L	L	L	H	H
194	Award Long-Term Lease for Trucker Services Center	Qualitative	N/A	L	N/A	N/A	M	L	M
197	Study of Efficiency Gains from Increased Truck Double-Cycling	Qualitative	N/A	M	N/A	N/A	M	L	L
201	Study Feasibility of Electric Switchers at BNSF, OGRE	Qualitative	N/A	M	N/A	N/A	M	L	L
183	Provide Common Drayage Truck Charging Infrastructure	Qualitative	N/A	L	N/A	L	L	M	M
282	Retrofit Tugs with Diesel Particulate Filters (DPFs)	Quantitative	L	L	L	L	L	L	M
200	Implement a Clean Locomotive (Tier 4 Locomotive) Program	Quantitative	L	Unk.	L	H	L	L	L
187	Create Sustainable Freight Advisory Committee	Qualitative	N/A	N/A	N/A	N/A	L	L	L
189	Set Interim Targets for Zero Emissions Trucks	Qualitative	N/A	N/A	N/A	N/A	L	L	L
199	Implement a Clean Ship (Tier 3 Vessel) Program	Quantitative	L	L	L	L	L	L	L
190	Commercialization Effort for ZE Trucks	Qualitative	L	L	L	N/A	L	None	M
196	Study Feasibility of Off-Dock Yard Using ZE Trucks	Quantitative	L	L	L	N/A	M	None	L
191	Increase Weight Limit for Single Axle Zero-Emissions Trucks	Qualitative	N/A	L	L	N/A	L	None	L

# Emissions and Health Impact

Diesel Particulate Matter Emissions vs. Impact 2017  
BAAQMD Health Risk Analysis for WOCAP



# Status of Tug Upgrades

2019 Tug Assist Activity, Port of Oakland						
Company	Tug	# of Ship assists	% Share	EPA Engine Tier, 2019	EPA Engine Tier, AQMD Grant	Note
AMNAV	REVOLUTION	775	12%	Tier 3	Tier 3	Repowered in 2018
STARLIGHT	AHBRA FRANCO	642	10%	Tier 3		
AMNAV	DR. HANK KAPLAN	604	10%	Tier 3		
AMNAV	SANDRA HUGH	572	9%	Tier 3	Tier 3	Repowered in 2018
STARLIGHT	Z_THREE	430	7%	Tier 2	Tier 3	Repower by 2022
STARLIGHT	Z FOUR	401	6%	Tier 2	Tier 3	Repower by 2022
AMNAV	LIBERTY	396	6%	Tier 2		
STARLIGHT	Z FIVE	388	6%	Tier 2	Tier 3	Repower by 2022
AMNAV	PATRICIA ANN	329	5%	Tier 2	Tier 3	Repower by 2022
Bay Delta	TUG VIGILANT	275	4%	Tier 2	Tier 4	Repower by 2022
CROWLEY	VALOR	244	4%	Tier 2	Tier 4	Repower by 2022
FOSS	DELTA LINDSEY	213	3%	Tier 2		
AMNAV	INDEPENDENCE	201	3%	Tier 2		
FOSS	CADEN FOSS	195	3%	Tier 4		
FOSS	SARAH	169	3%	NA		
BAYDELTA	DELTA BILLIE	155	2%	Tier 2		
BAYDELTA	DELTA CATHRYN	118	2%	Tier 2		
AMNAV	PATRIOT	63	1%	Tier 1		
FOSS	POINT FERMIN	44	1%	Tier 1		
BRUSCO	TERESA BRUSCO	38	1%	NA		
AMNAV	AMNAV LIBERTY	8	0%	Tier 2		
FOSS	KEEGAN FOSS	5	0%	Tier 2	Tier 4	Repower by 2022
WESTAR	SAGITTARIAN	1	0%	NA		

Sources: Marine Exchange of the San Francisco Bay Region, BAAQMD

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# Discussion of Action 198: Upgrade Tugs

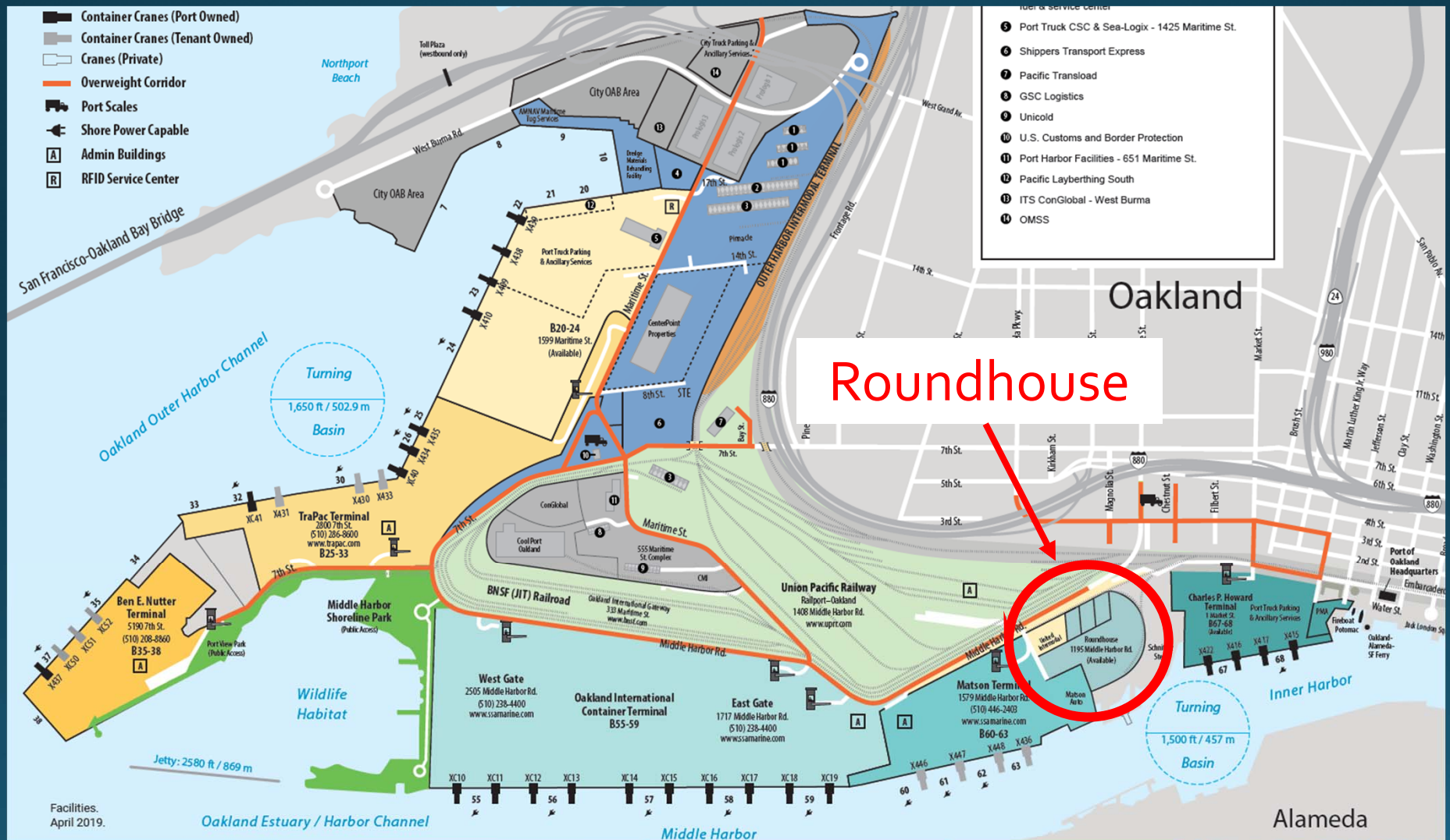


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# Discussion of Action 188: Establish Dedicated Truck Parking





# Dedicated Truck Parking

- Port currently provides approximately 50 acres
- Operation moving from OHT to Roundhouse
  - Reduction to approximately 40 acres (End of 2020)
  - Eventually, down to 15 acres (30 Acres total including City obligation)
  - 2019 work by Tioga Group supports 15 acre Port requirement
- Efforts to focus Depot operations “core” purposes/uses
  - Overnight parking for tractors
  - Staging of containers-chassis
  - Marine terminal efficiency
  - Reduction of tractor/chassis parking in neighborhoods
- Smart Parking App
  - FITS component
  - Leverage technology to enhance operational efficiencies

# Remaining Actions – Feedback from Task Force

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189	Set Interim Targets for Zero Emissions Trucks	Qualitative	N/A	N/A	N/A	N/A	L	L	L
199	Implement a Clean Ship (Tier 3 Vessel) Program	Quantitative	L	L	L	L	L	L	L
190	Commercialization Effort for ZE Trucks	Qualitative	L	L	L	N/A	L	None	M
196	Study Feasibility of Off-Dock Yard Using ZE Trucks	Quantitative	L	L	L	N/A	M	None	L
191	Increase Weight Limit for Single Axle Zero-Emissions Trucks	Qualitative	N/A	L	L	N/A	L	None	L

# Questions for Breakout Sessions

1. From the list and what you have heard this morning, what are your top priorities?
2. What resources can you bring to this process?  
Some examples of resources are funding, skills set, expertise and knowledge, etc.

# Next Steps

- Board Meeting
  - July 23, 2020
  - Progress Report
  - Recommendations
- Quarterly Task Force meetings
- Task Force member charter
- Re-commitment to Task Force engagement
- Meeting notes from June 26 and July 10 will be posted
- All technical reports on Port website

# Thank you!

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