

Port of Oakland
Maritime Air Quality Improvement Plan
2015 Seaport Emissions Inventory



Presentation to the Alameda County Transportation Commission
Monday, January 9, 2017



Port Air Quality Commitment

2008-Adopted the Maritime Air Quality Policy Statement, establishing a goal to reduce excess community cancer health risk related to exposure to diesel particulate matter (DPM) emissions from the Port's maritime operations by 85% from 2005 to 2020.

2009-Approved the Maritime Air Quality Improvement Plan (MAQIP) to guide the Port's efforts and meet the goal.

Key mechanism to track MAQIP implementation is through periodic updates to the seaport emissions inventory.



Emissions Inventory Results (2015 vs. 2005)

2015 Inventory	ROG	CO	NO _x	PM ₁₀	DPM	SO _x
Ocean-going vessels	182	259	2,715	58.7	51.8	141.2
Harbor craft	23	97	166	6.6	6.2	0.1
CHE	43	253	332	3.9	3.7	0.6
Trucks	6.0	20	87	1.2	0.4	0.2
Locomotives	0.2	2	14	0.2	0.2	0.01
Other Off-road Equipment	1.0	12	11	0.6	0.6	0.01
Total	255	642	3,324	71	63	142

2005 Inventory	ROG	CO	NO _x	PM ₁₀	DPM	SO _x
Ocean-going vessels	117	235	2,484	219.5	208.5	1,413
Harbor craft	22	83	345	13.4	13.4	2.85
CHE	53	408	766	21.7	21.2	7
Trucks	49	149	334	15.9	15.9	2.2
Locomotives	7	11	76	2.0	2.0	2
Other Off-road Equipment	N/A	N/A	N/A	N/A	N/A	N/A
Total	248	886	4,005	272	261	1,427

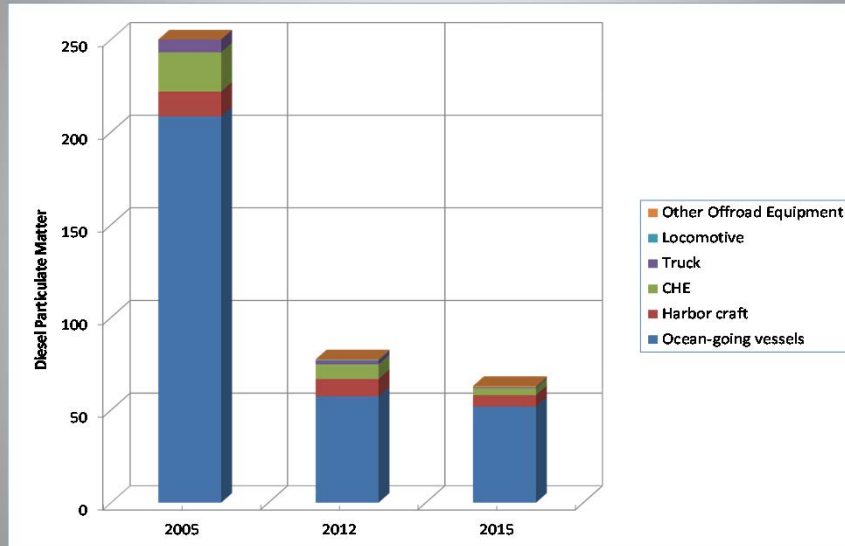


Emissions Inventory Results (2005 to 2015 % Change)

% Change from 2005	ROG	CO	NO _x	PM	DPM	SO _x
Ocean-going vessels	56%	10%	9%	-73%	-75%	-90%
Harbor craft	4%	17%	-52%	-51%	-53%	-95%
CHE	-19%	-38%	-57%	-82%	-82%	-92%
Trucks	-88%	-87%	-74%	-92%	-98%	-91%
Locomotives	-97%	-85%	-82%	-89%	-89%	-100%
Other Off-road Equipment	N/A	N/A	N/A	N/A	N/A	N/A
Total	3%	-28%	-17%	-74%	-76%	-90%

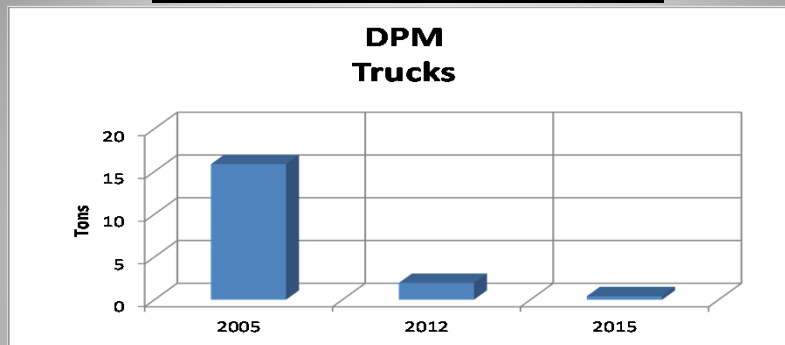


Emission Inventory Results (DPM)



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Truck DPM Reductions



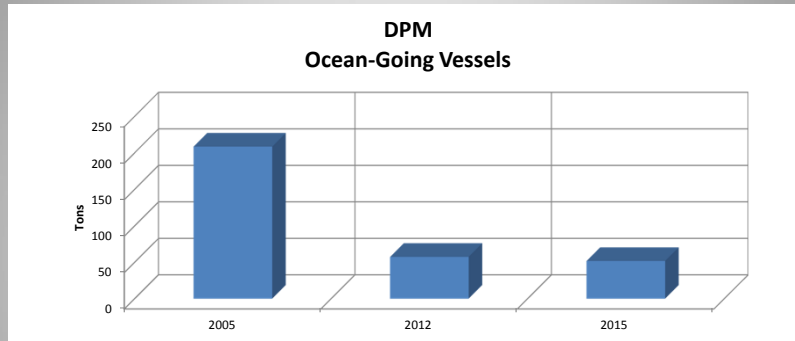
Key Projects

- \$38 million grant program to upgrade and replace old drayage trucks
- Port truck ban on trucks not meeting state emissions requirements



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Ship DPM Reductions



Key Projects

- Use of cleaner-fuel globally
- \$60 million in shore power infrastructure to plug-in ships



Next Steps

- Continue to implement MAQIP emissions reductions programs and projects, including demonstration projects (hybrid, emissions capture, electric, etc.)
- Track and report progress through continued updates to the seaport emissions inventory.

