



Maryland Port Administration DERA Projects



Northern Transportation and Air Quality Summit

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Discussion Topics

- About the Maryland Port Administration & EcoLogix
- Environmental Commitment
- Improving Air Quality
- Air Quality Projects and Programs





About EcoLogix Group

- Environmental Strategy firm helping clients achieve challenging organizational and project goals.
- Specialize in managing impacts of physical development projects, helping to incorporate solutions that appropriately respond to concerns about project impacts in ways that save our clients time and money while producing better project outcomes.
- Experience in project management, facilitation, regulatory analysis and legislative processes



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EcoLogix Group – Role with the MPA

- Provide outreach and coordination support with stakeholders
- Technical assistance with project development, grant and proposal writing and program implementation and management
- Staff support for key outreach mechanisms such as the Harbor Options Team and the Baltimore Port Alliance



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Maryland Port Administration

Mission

“To stimulate the flow of waterborne commerce through the State of Maryland in a manner that provides economic benefit to the citizens of the State.”

Environmental Policy

Maryland Port Administration (MPA) believes that stewardship and sustainability of the environment and protection of human health are essential elements of its mission.



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Role of the MPA

- Facilitate maritime business through the Port of Baltimore
- Promote the various stakeholders including private terminals
- Educate interested parties of the various capabilities
- Provide and maintain facilities to handle the needs of the industry
- Act as the local sponsor to the Army Corps of Engineers for the Port's dredging program.



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Port of Baltimore MIX of Public & Private Terminals



- Forest Products
- Sugar, Salt, Fertilizers
- Autos
- Containers
- Forest Products
- Farming, Mining & Construction

- The Port has over 45 miles of waterfront facilities and industries.
- There are 20+ private facilities, in addition to shipyards, chandlers, etc.
- MPA's six public cargo terminals handle 90% of the general cargo.
- The Port is a complex and healthy mix of Private, Federal, State and Local agencies and facilities.



Moving Diverse Cargo





MPA Terminals for Diverse Cargo



Dundalk MT



South Locust MT



Auto Terminal
of Baltimore



Seagirt MT

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Types of Vessels at POB



Greenport
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Before Containerization 14 men = one pallet

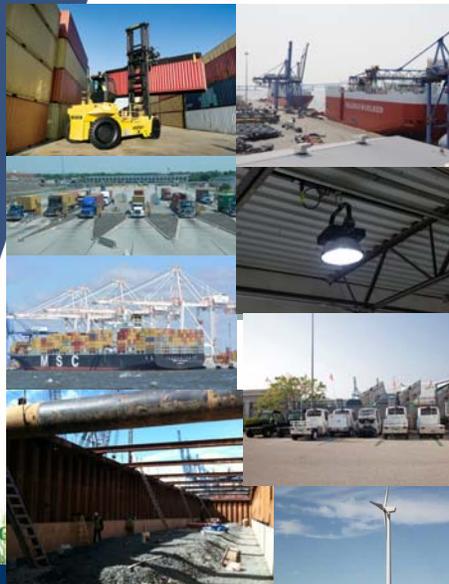


GreenPort
of Baltimore

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Environmental Improvements Tenant Highlights



- Tier 4 Cargo Handling Equipment
- Improved Productivity
- Improved Gate Efficiencies – RFID
- SW Vault SMT
- ECA 0.10% sulfur
- LED Lighting in Shed
- Windmill at DMT
- Electric Vehicles with Solar

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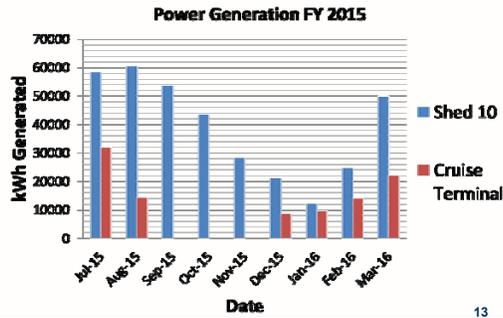
Air Quality & Energy Reduction

More than 20 energy conservation measures:

- Lighting upgrades & occupancy sensors
- Solar panels – Cruise terminal and Shed 10 SLPMT
- Programmable thermostats
- Remote controls for high mast lighting on marine terminals
- HVAC system upgrades (conversion to natural gas)



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Tree Planting

Hawkins Point 15 Acres

Masonville Cove 12 Acres



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Innovative Technologies



Algal Turf Scrubber Demonstration Project



Floating Wetland at Colgate Creek



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Improving Air Quality



Newer Trucks



Hybrid Vehicles



Modern Tugs



State-of-the-Art Equipment



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Importance of Improving Air Quality

EPA National Ports Initiative Goals

- encouraging environmental progress at ports and reducing climate risk;
- supporting operational and technological improvements to increase efficiency;
- improving community health and air quality; and
- encouraging sustainable economic development that supports our economy and jobs.

MPA Environmental Strategy for Air Quality

- determine baseline emission data;
- evaluate emission reduction strategies, both technological and operational; and
- work collaboratively with tenants, communities, and regulators to develop and implement strategies.



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Voluntary Air Agreement

Air and Radiation Management Administration of the Maryland
Department of the Environment
and
Maryland Port Administration of the Maryland Department of
Transportation

- work cooperatively to identify, develop and when appropriate, implement new, cost-effective, voluntary programs to reduce emissions and increase energy efficiency;
- identify and assist MPA in applying for federal and State grants for these purposes;
- meet in a workgroup and, where appropriate, form new ones on specific areas, including, but not limited to, developing a current emissions inventory, identifying opportunities where MPA can reduce emissions, and pursuing grant/funding opportunities to implement projects; and
- meet periodically to discuss the ongoing efforts and plans for the future.



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Diesel Emission Reduction Projects

Year	Air Quality Improvement	Source of Direct Funding
2008	Retrofit 16 pieces of heavy equipment, off road	EPA, MPA
2009	Retrofit - DOCs on 12 RTG cranes, 1 STS crane, & 8 heavy duty trucks	MDE, EPA & MPA
2009	Retrofit, repower, replace 79 pieces of equipment (42 CHE, 24 dray, 10 locomotives, 3 harbor crafts)	EPA (ARRA)
2012	Replaced 82 dray trucks –Mid-Atlantic Dray Truck Replacement program	EPA, MDE, MPA, MDOT
2014	Funds to replace at least 22 dray trucks /23 replaced	EPA
2015	Funds to replace another 22 dray trucks	CMAQ, MDOT, MPA
2015	Funds to replace additional 3 dray trucks /3 replaced	MDE, MPA
2015	Funds to replace additional 25 dray trucks/ 24 replaced	EPA
2016	Funds to replace 20 pieces of cargo handling equipment	EPA
2016	Funds to replace additional 4 dray trucks	MDE, MPA



Port of Baltimore Dray Truck Replacement Program

Federal and State Match Truckers for New Truck Replacement

	Total Number of Trucks	Average Model Year of Replaced Trucks	Average Model Year of New Trucks
Total/Average	151 (est.)	1998	2010

Lifetime Tons Reduced			
NOx	PM2.5	HC	CO
2141.66	84.30	77.52	535.31





Clean Air Recognition and Grants Opportunities (CARGO)

EPA 2016

- Replace 20 pieces of Cargo Handling Equipment (CHE) with Tier 4 non-road replacements.
- Provide rebates for replacements with a match by equipment owners.
- Install idle reduction technologies on 5 unregulated switcher locomotive



Dray Truck Scrap Video





Air Quality Improvement Opportunities



- Dray trucks – more trucks, alternative fuel (CNG)
- Non-road equipment – cargo handling, sweepers, top picks, terminal tractors
- Marine vessels – tugs
- Operations/infrastructure – solar, electrification, algal technologies
- Rail – switchers, idle reductions, electric shuttles, electric layover systems

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Funding Opportunities

- Diesel Emission Reduction Act
- Congestion Mitigation and Air Quality
- RGGI
- TIGER
- US Department of Energy
- Maryland Energy Administration
- MARAD
- Fuels tax credits
- Settlement funding (VW)

- Foundation support
- Non-profit and community group
- Private sector contributions and match



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Thank you!

Web links

- Maryland Port Administration - <http://www.mpa.maryland.gov/>
- Baltimore Green Port - <http://www.mpa.maryland.gov/greenport/index.php>
- Dray Truck Replacement Program - <http://www.portofbaltimoredraytruckreplacementprogram.info>

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