

Overview of EPA's Ports Initiative

*Advancing Cleaner Technologies
and Planning Practices at Ports*

Mike Moltzen and Sarah Froman, EPA
NACAA Webinar
December 16, 2020



Funding

Helping Ports
Capitalize on
Funding for Clean
Technologies



Technical Resources

Providing Tools
to Help Identify
Smart Infrastructure
Investments



Collaboration

Promoting
Port Community
Collaboration
for Effective Planning



Coordination

Increasing
Efficiency in Federal
Government and
Port Operations

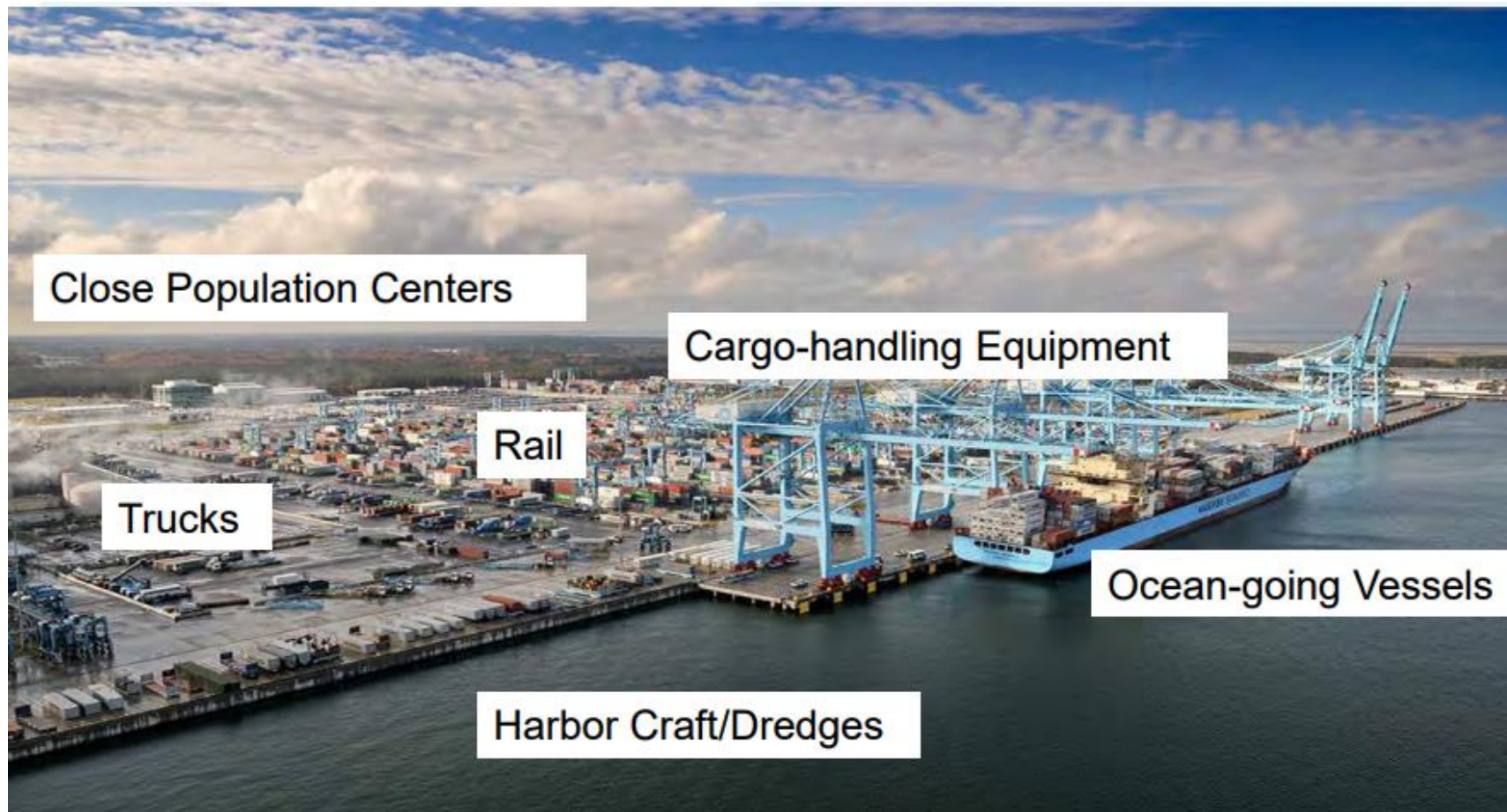


Communications

Creating a Knowledge Clearinghouse



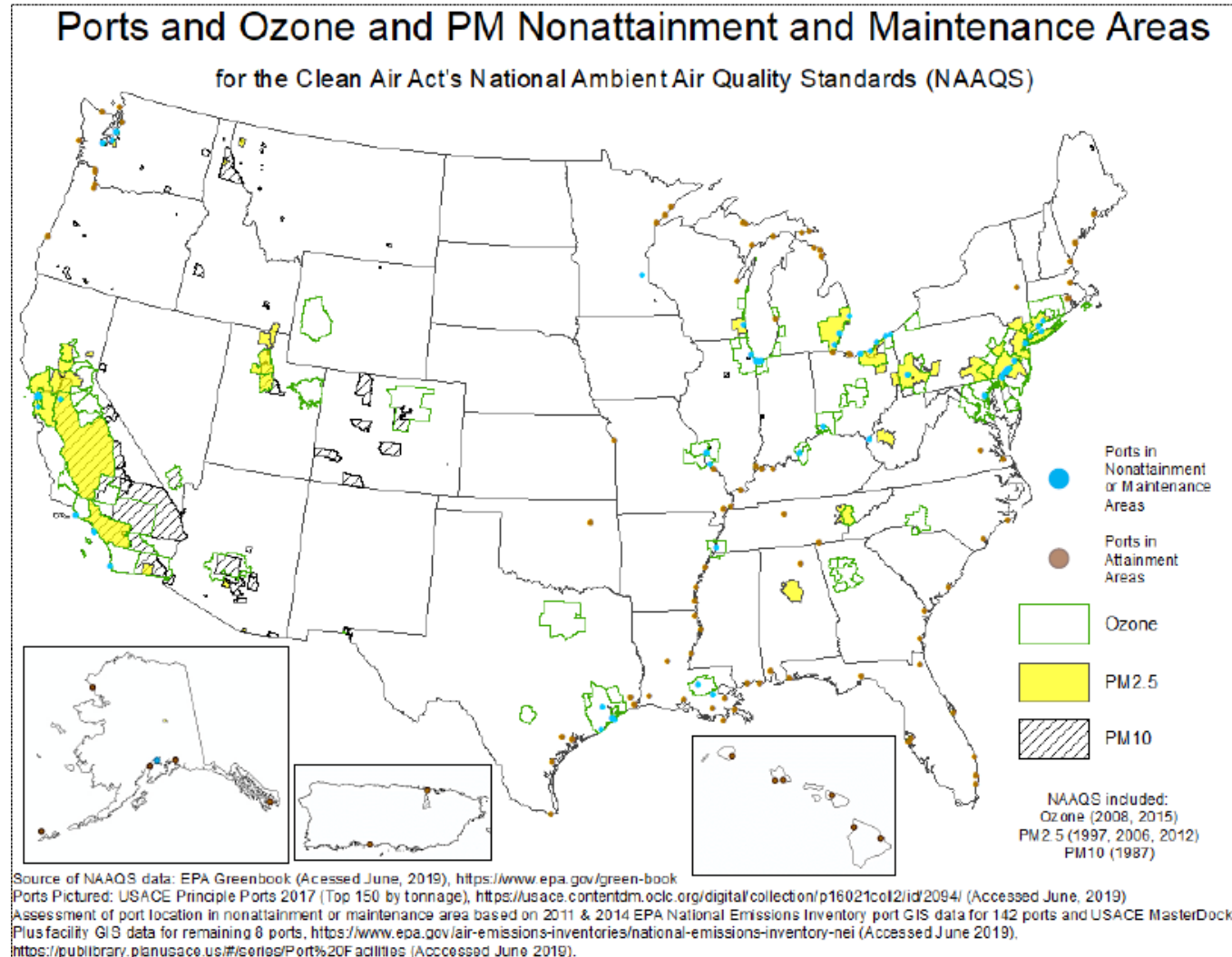
Overview of Ports



Seaport cargo activity supports over 30 million U.S. jobs and accounts for over a quarter of the U.S. economy.

Source: *National Economic Impact of the U.S. Coastal Ports System*, American Association of Port Authorities (2018).

40% of top 150 ports are located in NAAQS nonattainment or maintenance areas



Millions of people in the U.S. currently live in close proximity to ports.



Photo source: Angelo Logan, East Yards Communities for Environmental Justice presentation on 1/14/14 EPA webinar: "A National Conversation on the State of US Ports"

American Association of Port Authorities estimates \$66 billion needed for port-related infrastructure over the next 10 years.



Source: American Association of Port Authorities (2018).

Promoting clean air best practices at ports

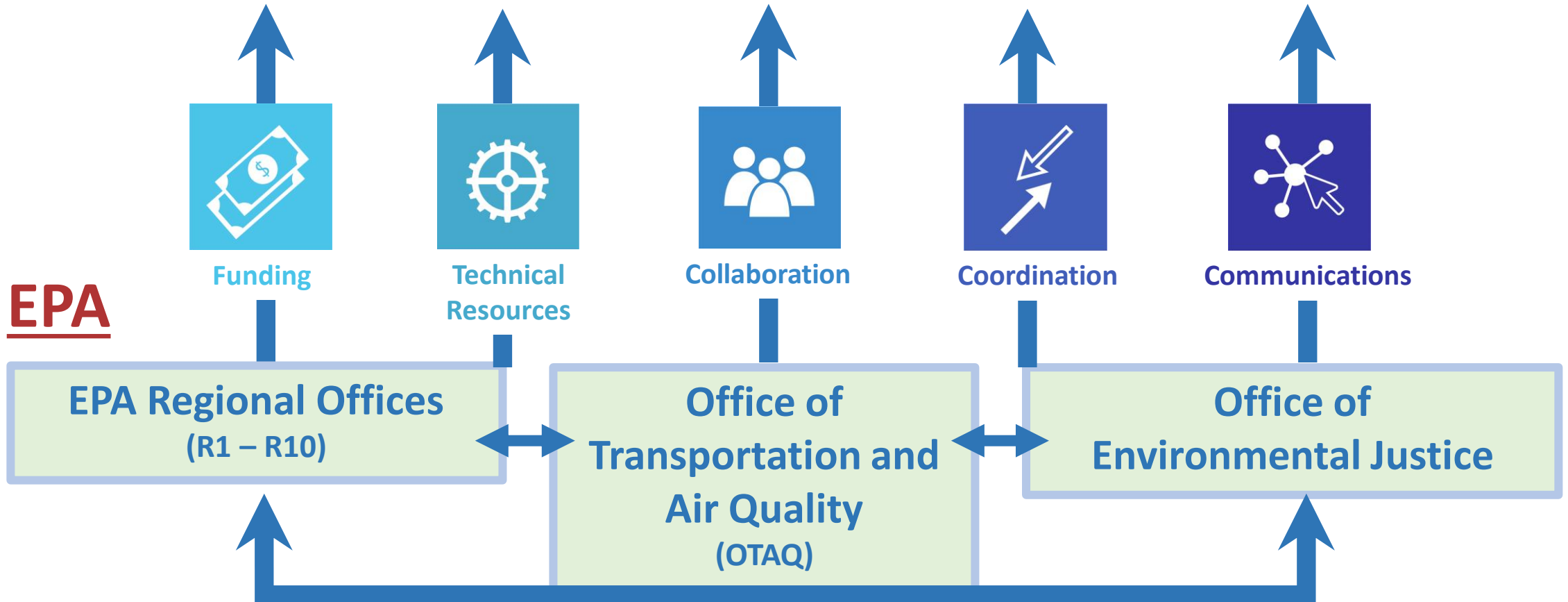


Through EPA tools and assistance in the five program areas, we aim to accelerate adoption of:

- **Cleaner technologies and other strategies**
- **Clean air planning practices** (emissions inventories, clean air plans, community engagement) that inform strategic clean air investments

External Stakeholders

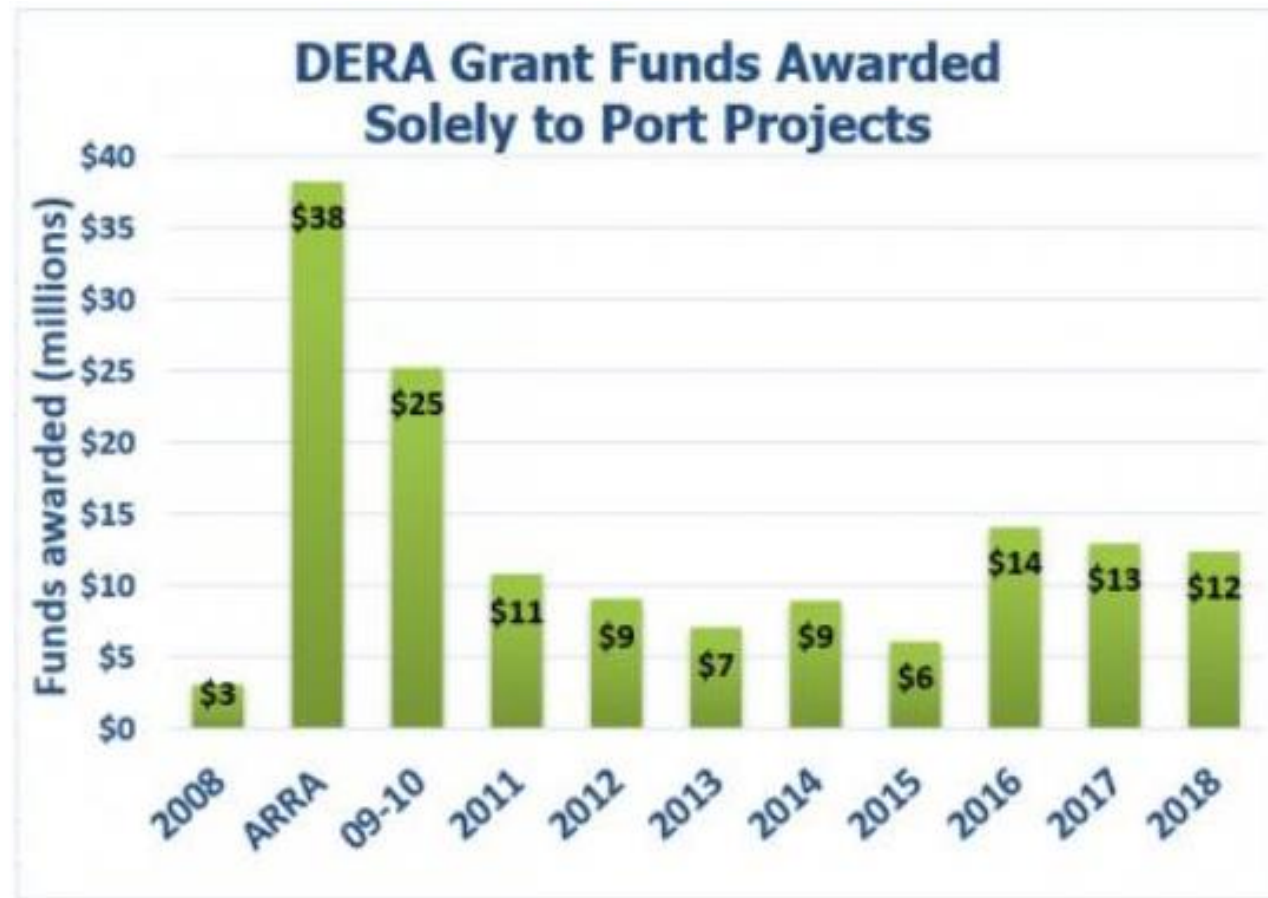
- Port industry
- Local/state/federal agencies
- Community groups
- Environmental NGOs
- And more!



Helping ports capitalize on funding for clean technologies



- DERA
 - Priority for port and other goods movement projects.
 - Extra points for inventories, clean air plans, community engagement.
- VW beneficiaries demonstrating interest in local port projects.
- EPA Regional staff helping to make connections to other funding sources.

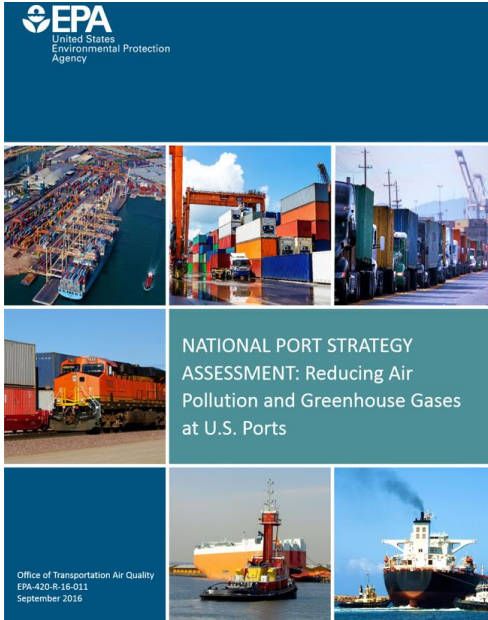


- Searchable table of local, state, federal, and other funding opportunities on our website:

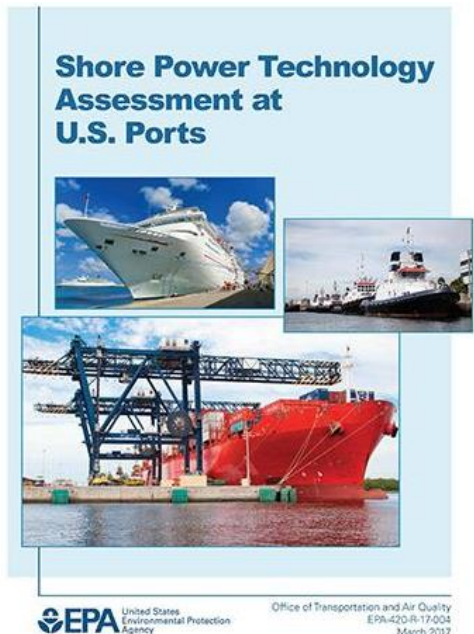
www.epa.gov/ports-initiative/funding-opportunities-ports-and-near-port-communities



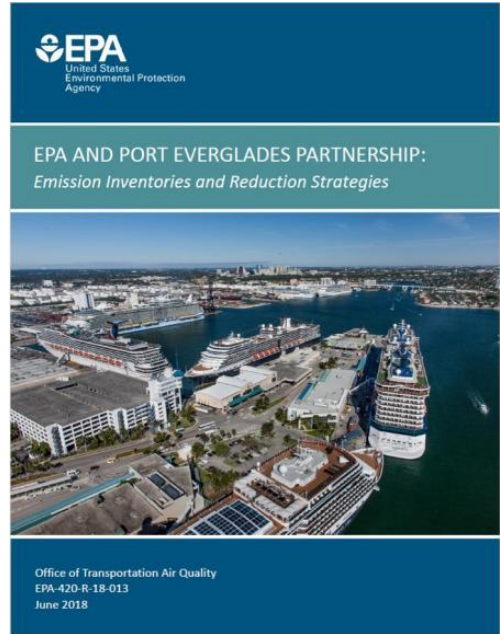
Providing tools to help identify smart infrastructure investments



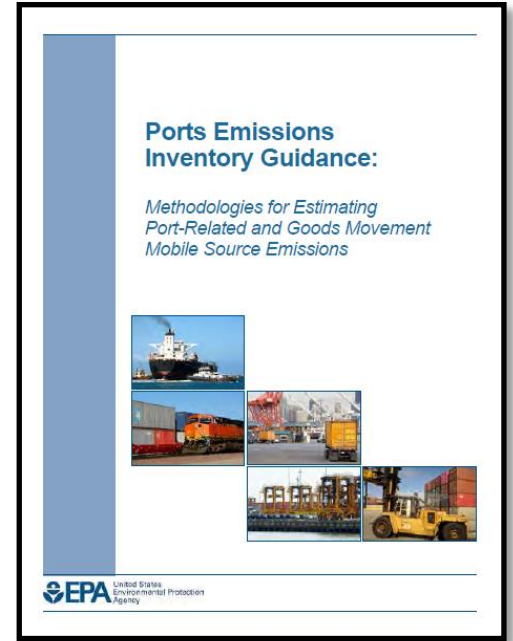
National Port Strategy Assessment: Reducing Air Pollution and Greenhouse Gases at U.S. Ports
September 2016
www.epa.gov/ports-initiative/national-port-strategy-assessment-reducing-air-pollution-and-greenhouse-gases-us



Shore Power Technology Assessment at U.S. Ports
April 2017
www.epa.gov/ports-initiative/shore-power-technology-assessment-us-ports



EPA, Port Everglades Report Shines Light on New Methods for Analyzing Potential Air Pollution Reductions
June 2018
www.epa.gov/ports-initiative/epa-and-port-everglades-partnership-emission-inventories-and-reduction-strategies



Port Emissions Inventory Guidance: Methodologies for Estimating Port-Related and Goods Movement Mobile Source Emissions, September 2020
<https://www.epa.gov/ports-initiative/port-and-goods-movement-emission-inventories>



Stay tuned: Upcoming Technical Resources



Factsheets on operational strategies that can reduce emissions and increase efficiency such as vessel speed reduction and gate management



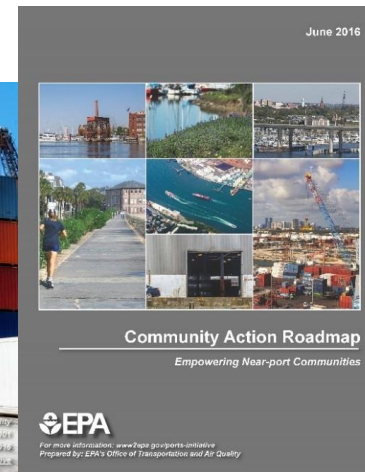
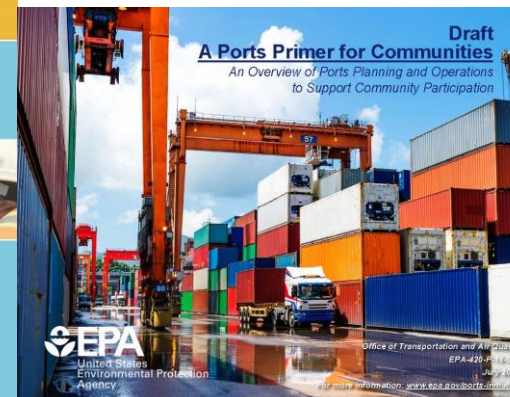
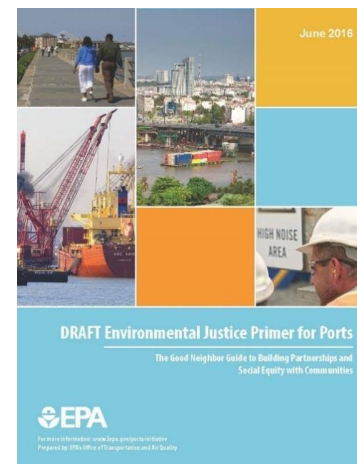
Assessment of fuel cell applications at ports



Promoting community-port collaboration for effective planning

- EPA completed pilot projects where we convened stakeholder dialogues, delivered technical assistance, and tested three tools.
 - Toolkit: Ports Primer for Communities, Community Action Roadmap, and EJ Primer for Ports
 - Pilot locations: Savannah, GA; New Orleans, LA; Seattle, WA; and Providence, RI
- Tools are now updated and posted on web along with pilot case studies and related training modules.

www.epa.gov/community-port-collaboration



Port of Savannah Tour

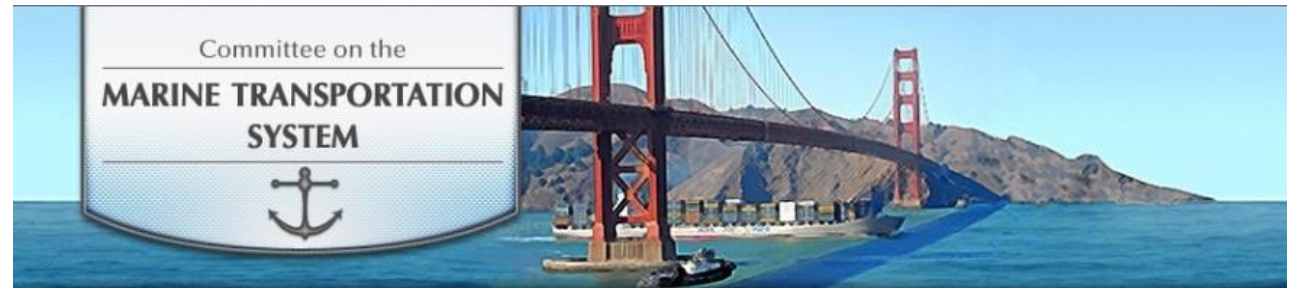


Collaboration Training

Increasing efficiency in federal government and port operations

Coordination

- Federal coordination to support clean air projects as part of major federal infrastructure projects.
 - Including coordination with FHWA, MARAD, BTS, Committee on Marine Transportation System
- Coordination with other EPA offices to amplify efforts and ensure effective implementation of activities.



ONE  EPA Workplace



Creating a Knowledge Clearinghouse

HQ and Regions developing web resources, hosting public events, and engaging stakeholders to promote clean air projects.

Examples:

- Updated website, enhancements ongoing.
- Real-world examples/snapshots.
- Regular e-newsletters.

www.epa.gov/ports-initiative



March 2019 (Vol. 4, Ed. 3)

Events & Activities

[AWMA Freight & Environment: Ports of Entry Conference - Newark, NJ - Abstracts Due March 29](#)

[GREENTECH 2019 - Cleveland, OH - June 5-7](#)

[ITS MARAD Truck Staging Program - FHWA Talking Freight Webinar - March 20](#)

[EPA Awards Funding to Reduce Diesel Emissions at the Alabama State Port Authority in Mobile](#)

[PortMiami Terminal Makes Emissions History](#)

[EPA to Provide \\$2M in Grants to Replace Older Trucks at PANYNJ](#)

[Port of Oakland Reports More Ships Than Ever Plugging Into the Grid](#)

[South Carolina Ports Authority Improves Its Eco Rating](#)

[Port of Baltimore Receives \\$2.4 Million From EPA to Help Promote Clean Air](#)

[Hydrogen Fuel Cell Truck Trial for Ports of Los Angeles and San Diego](#)

EPA Ports Initiative Newsletter

Featured News

This newsletter highlights a railyard project that reduced costs and emissions significantly, and the National Diesel Emissions Reduction Act (DERA) funding opportunity.

- [Railyard Reduces Costs and Idling Emissions](#)
- [Deadline Extended: 2019 DERA Clean Diesel National Grants Funding Opportunity](#)

Please add TalkAboutPorts@epa.gov to your address book and let us know your thoughts.

Did You Know?

You can find out more about best practices at ports, technical and funding resources to support cost-cutting clean air projects, community-port collaboration, and the latest port news at the [EPA Ports Initiative](#) website.

Missoula Railyard Reduces Costs and Idling Emissions

A 2009 Diesel Emissions Reduction Act (DERA) grant partially funded the installation of auxiliary power units (APUs) on eight 50+ year old switcher locomotives at the Montana Rail Link (MRL) Railyard in Missoula, Montana.

Additionally, MRL changed the mandatory idling policy for colder months to better fit daily temperature conditions resulting in significant fuel savings. The policy change and APU installation resulted in significant fuel savings and emission reduction.



Montana Rail Link Locomotive Missoula, MT Railyard. Photo Credit: Tom Danneman, © 2018 Kalmbach Media Co.

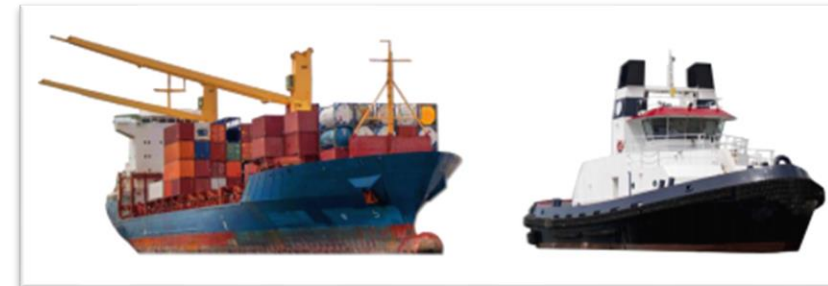
Talk About Ports





Stay Tuned: Best Practices Web Area Update

- Best clean air practices generally and for each mobile source sector:
 - Port-wide planning
 - Linking to interactive map
 - Drayage Truck
 - Rail
 - Ocean Going Vessels
 - Cargo Handling Equipment
 - Harbor Craft
- Information:
 - Overview of practice
 - Technical resources
 - Tips on performance targets and data collection
 - Real world examples





Stay Tuned: Interactive Map

- Highlighting clean air practices in place at U.S. ports in an interactive web application
- Initial Scope:
 - Top 25 container, tonnage, and dry bulk ports
 - These are the same 49 U.S. ports featured in Bureau of Transportation Statistics Port Performance and Freight Statistics Program*
 - Key practices we're promoting in the project sustainability section of the DERA RFA
 - Emissions inventories
 - Emission reduction targets
 - Current or planned emissions reductions activities
 - Community engagement
 - Clear point of contact for community members
 - Forum for public comments
 - Policy or process to get community input
 - DERA awards
 - Publicly available information

* The FAST Act requires that DOT provides nationally consistent measures of performance for the Nation's top 25 ports by tonnage, TEU, and dry bulk (49 USC § 6314)



Keep in touch

EPA's Ports Initiative website and newsletter sign-up:

www.epa.gov/ports-initiative



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Montana Rail Link Locomotive
Missoula, MT Railyard.
Photo Credit: Tom Danneman,
© 2018 Kalmbach Media Co.



Keep in touch

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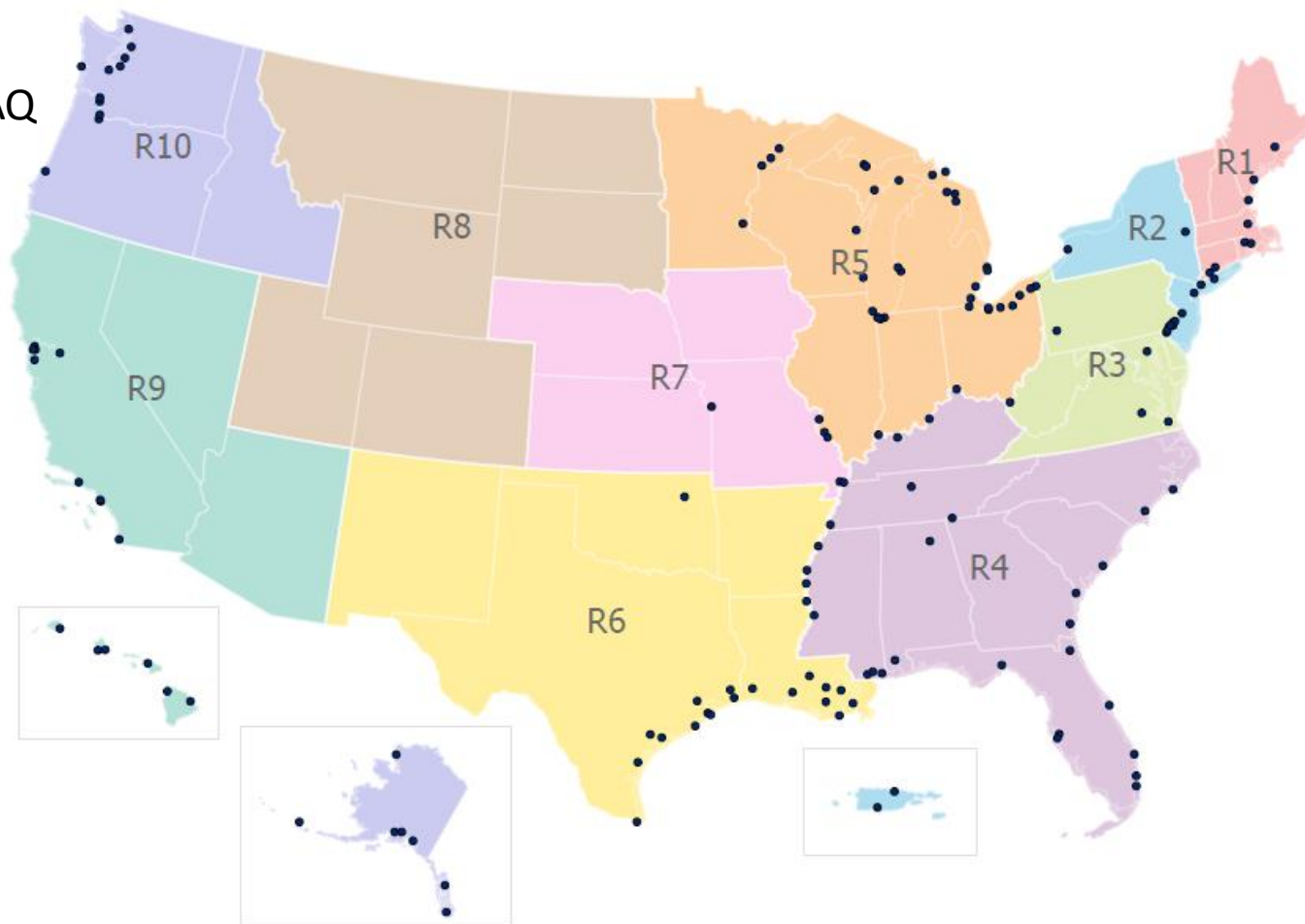
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Army Corps “Principal Ports” and EPA Regions



Appendix

DOT projects freight tonnage moving through U.S. will grow by 40% over next 30 years.

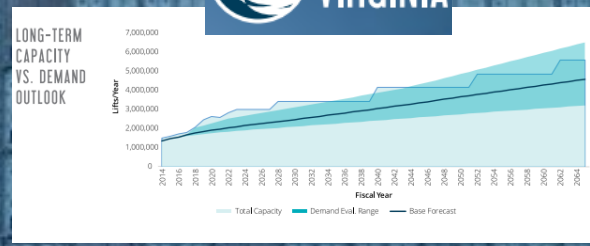
PortMiami's Cargo Services continue to expand

April 05, 2016



Army Corps expanding Houston channel to allow larger ships

JOC Jan 30, 2017
.COM



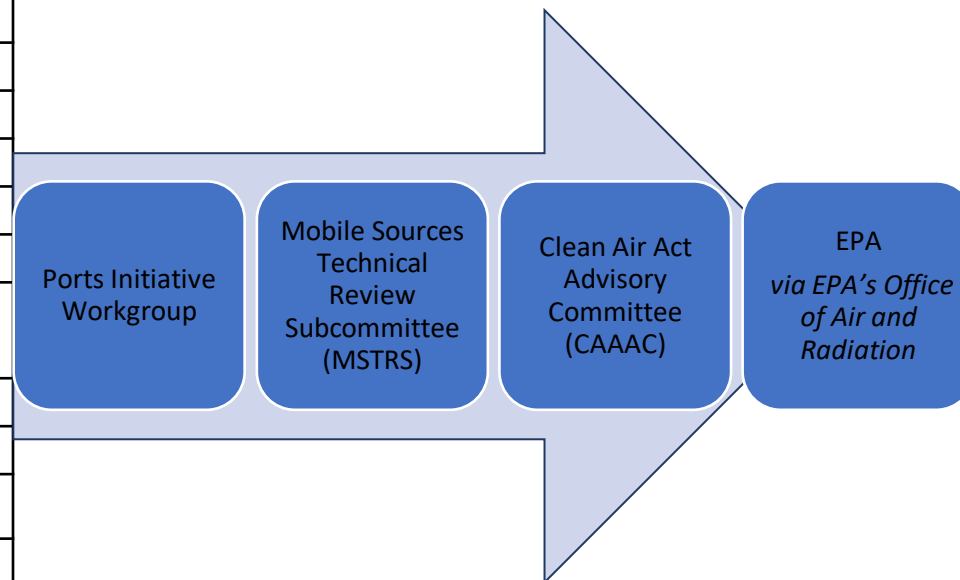
Port of Savannah to double container cargo by 2028

ATLANTA BUSINESS CHRONICLE Feb 5, 2018

Launched MSTRS Ports Initiative Workgroup

May 2014

Ports:	Maryland, Charleston, Long Beach, New Orleans, Virginia
Terminals:	Ports America
Shippers:	Cargill, Walmart, HP
Equipment:	Caterpillar, Manufacturers of Emission Controls Association
Marine:	Maersk Line
Rail:	Burlington Northern Santa Fe
Trucking:	Evans Delivery
Port Community Advocates:	East Yard Communities for Environmental Justice, Southeast CARE Coalition, Steps Coalition
Tribes:	Fond du Lac Air Program
NGOs:	Environmental Defense Fund, Natural Resources Defense Council
Research/analysis:	International Council on Clean Transportation
Government:	New Jersey DEP, South Carolina DHEC, MARAD, CMTS
Non-voting:	American Association of Port Authorities, StarCrest
EPA support:	Office of Transportation Air Quality , Office of Environmental Justice, Office of Water, Region 1, Region 2, Region 6, Region 9

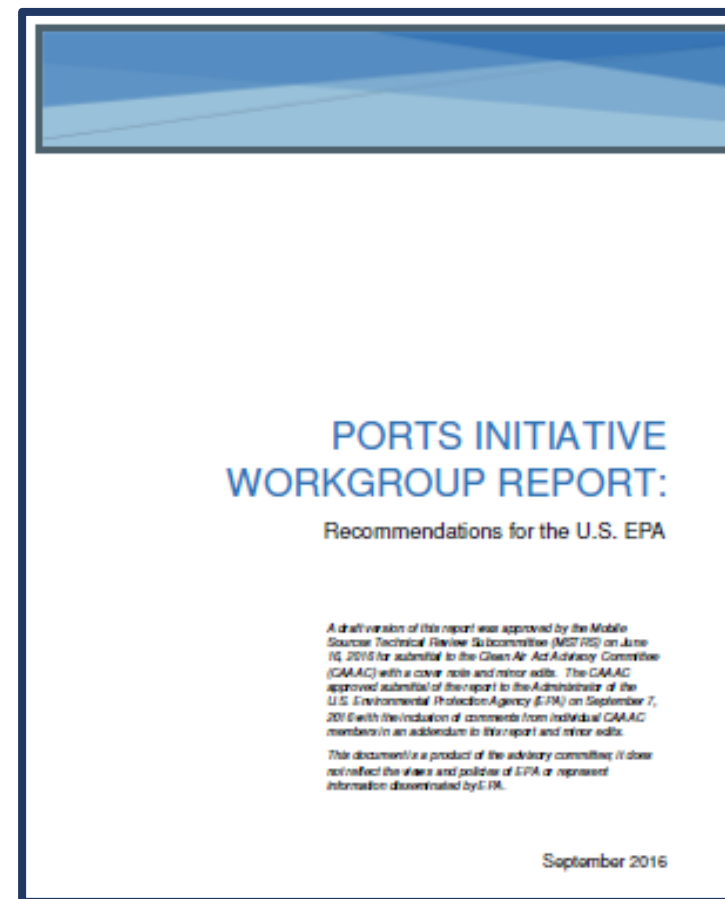


Received recommendations September 2016

Overarching recommendation: provide funding, technical resources, and expertise to enable and encourage environmental improvements.

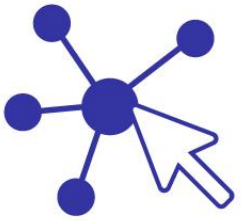
Focal Areas

- Increasing and Targeting Funding
- Community-Port Engagement
- Guidance on Inventories and Metrics
- Guidance on Emission Reduction Strategies
- Coordinating Relevant Government Programs
- Information Clearinghouse and Communications

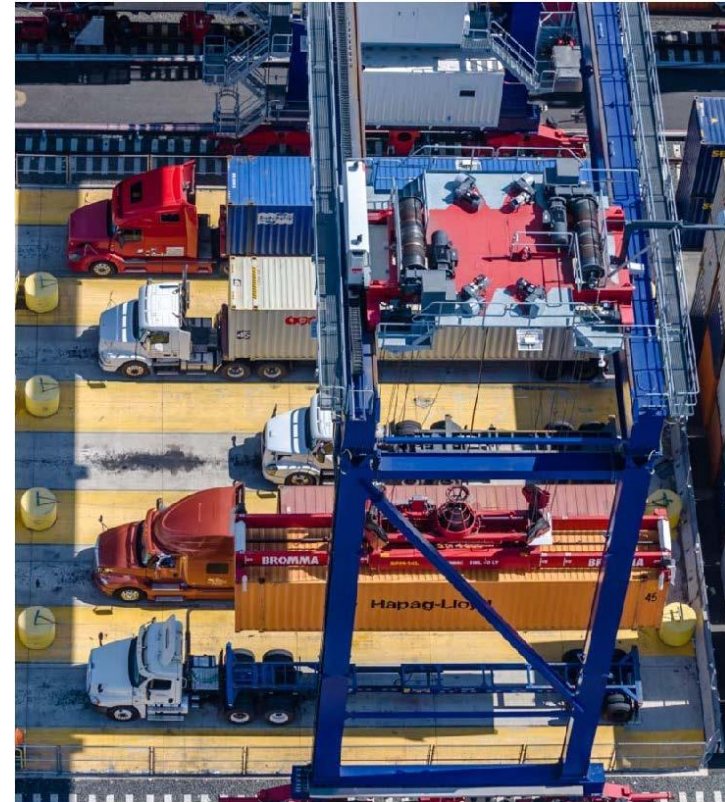




Truck Appointment System at GCT Bayonne Terminal

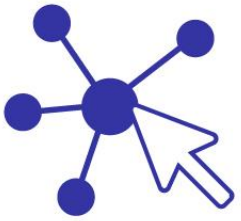


- Example of a terminal at large port (PANYNJ) that took initiative to save costs and improve the environment
- Dray truck appointments from 06:00-13:00 hours implemented to reduce congestion and idling emissions
- In addition to significant emissions savings, GCT estimates fuel cost savings of \$5.3 million/year





Port of Los Angeles Electric Crane Project

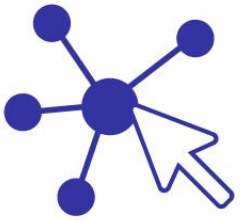


- All-electric crane replaced older diesel crane through DERA grant
- Will substantially reduce criteria and GHG emissions over life of project
 - PM reductions equivalent to taking 3400 heavy duty trucks off the road for a year
- Example of public/private partnership, part of comprehensive plan counted on towards attainment goals in Southern CA





New York City Locomotive Repowers



- CSX Transportation, Inc. replacement & repower with Single-Engine Low-Emission Locomotive technology
 - 34% NO_x and 81% PM_{2.5}
- Waste Management of NY, LLC repower of unregulated 1,200-hp locomotive with a Knoxville Locomotive Works Near Zero Emissions Tier 4, 2,300-hp mother-slug locomotive combination
 - 99% PM_{2.5} and NO_x reductions

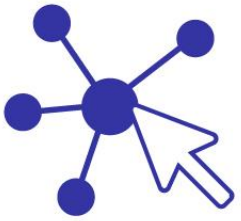


www.epa.gov/ports-initiative/new-york-city-locomotive-repowers-collaborative-efforts-improve-air-quality



REAL-WORLD
EXAMPLES

Georgia Ports Authority Clean Air Projects



Communications

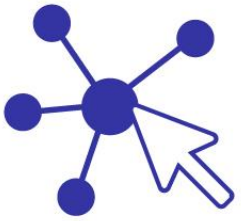
- Drayage truck replacement
- Switching from diesel to propane forklifts and to electric RTG and STS cranes, refrigerated racks
- Infrastructure improvements to enhance operational efficiency
- Community-port collaboration



<https://www.epa.gov/ports-initiative/georgia-ports-authority-reduces-diesel-emissions-improves-efficiency-and-saves>



Additional Examples



- Virginia Port Authority hybrid shuttle carrier projects
www.epa.gov/ports-initiative/virginia-port-authority-hybrid-shuttle-carriers-reduce-costs-and-air-emissions
- MassPort emission reduction efforts
www.epa.gov/ports-initiative/massport-air-emission-reduction-efforts-and-community-enhancement-projects
- Missoula railyard idle policy and APU project
www.epa.gov/ports-initiative/missoula-railyard-reduces-costs-and-idling-emissions
- Northwest ports emission reduction efforts
www.epa.gov/ports-initiative/northwest-ports-achievements-reducing-emissions-and-improving-performance
- *Stay tuned – in the works:* case study on San Pedro Bay Ports' Clean Air Action Plan