DRAFT – FOR DISCUSSION PURPOSES ONLY

MSTRS Ports Workgroup

Update for MSTRS

Long Beach, CA

December 3, 2015





Agenda

- The purpose and MSTRS charge
- Organizing to address the issues
- Major components:
  - Technology implementation, barriers
  - Federal and other governmental coordination
  - Inventory and metrics
  - Community engagement

- Program design – Work in progress:
  - Concepts for the voluntary initiative
  - Ongoing discussions

- Next steps

Purpose - Ports Workgroup presentation to MSTRS

- Update on progress in developing recommendations
  - Ideally consensus recommendations

- Request input on some of the more challenging issues
  - MSTRS will need to approve the Work Group report for transmission to CAAAC and the Administrator

Why Ports?

- At least 13 million people live near ports and rail yards (USEPA, 2003)
  - Disproportionate number of low-income households, African-Americans, and Hispanics
- Trade is growing, and port expansion projects are underway.
- Emission reduction technologies and strategies have been slow in implementation

MSTRS Ports Workgroup

Co-chairs:	Lee Kindberg, Maersk Line, and Mike Geller US EPA
Ports:	Baltimore, Charleston, Long Beach, New Orleans, Virginia
Terminals:	Ports America
Shippers:	Cargill, Walmart
Equipment:	Caterpillar, Manufacturers of Emission Controls Association
Rail:	Burlington Northern Santa Fe
Trucking:	Evans Delivery
Port Communities:	East Yard Communities for Environmental Justice, Greater Southeast Development Corporation, Steps Coalition
Tribes:	Fond du Lac Environmental Air Program
NGOs:	Environmental Defense Fund, Natural Resources Defense Council
Research and analysis:	International Council on Clean Transportation
Regulators:	New Jersey DEP, SC DHEC, EPA, MARAD, CMTS
Non-voting:	American Association of Port Authorities, Bruce Anderson

Charge for MSTRS Ports Initiative Workgroup

EPA asked MSTRS for recommendations on:

- Development of an EPA-led voluntary environmental port initiative
- How to effectively measure air quality and GHG performance of ports and/or terminals within ports

The workgroup should consider:

- Past MSTRS and other recommendations
- Existing port environmental improvement programs
- Ports in the context of the broader transportation supply chain
- Information from EPA's Assessments as available

Overarching Questions

- What do you see as the most important metrics for ports on air quality performance?
  - How should reductions from voluntary programs be included in inventories and SIP plans?
- How can we best encourage and measure port-community engagement?
- What would encourage each type of Port participant and stakeholder to be part of such a program, voluntarily reduce emissions, and share data to quantify the results?

Workgroup Process

Subgroups took on responsibility for developing needs and recommendations in the following areas:

- Definition/Scope of a Port
- Technology Implementation and Barriers
- Federal Agency Coordination
- Port Inventories and Metrics
- Strategies for Community-Port Engagement
- Program Design/Structure

Definition/Scope of a Port

- The scope of the EPA voluntary ports initiative is maritime activities directly related to the movement of cargo, products or people including those associated with either state/local public port facilities or private terminals and federal facilities as appropriate.

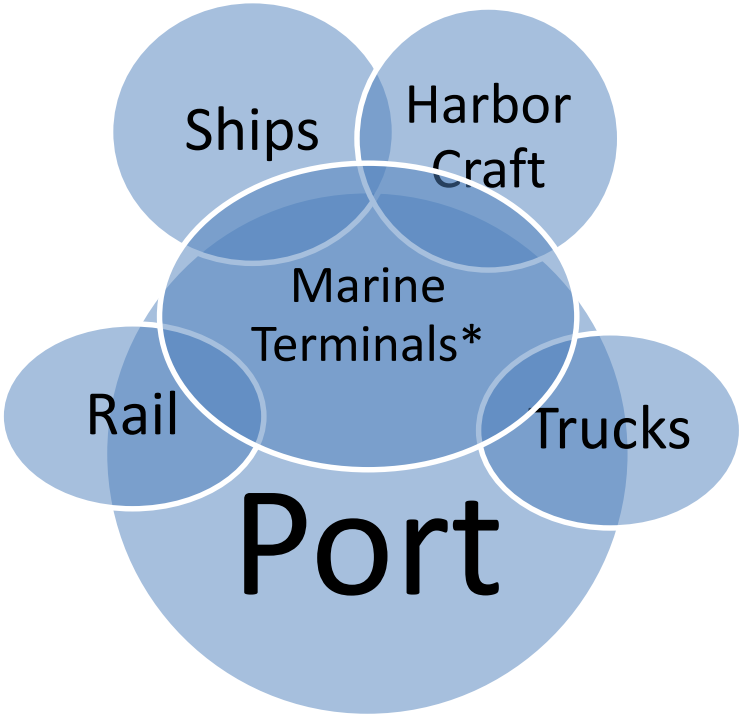
- These activities include operation of vessels, cargo handling equipment, rail, truck/vehicles and storage/warehousing directly related to the transportation of maritime cargo or passengers.

- Activities can be related to infrastructure development and maintenance.

Program goal: Reduced air emissions from port-related operations

Flexible

Solution Oriented



Scalable

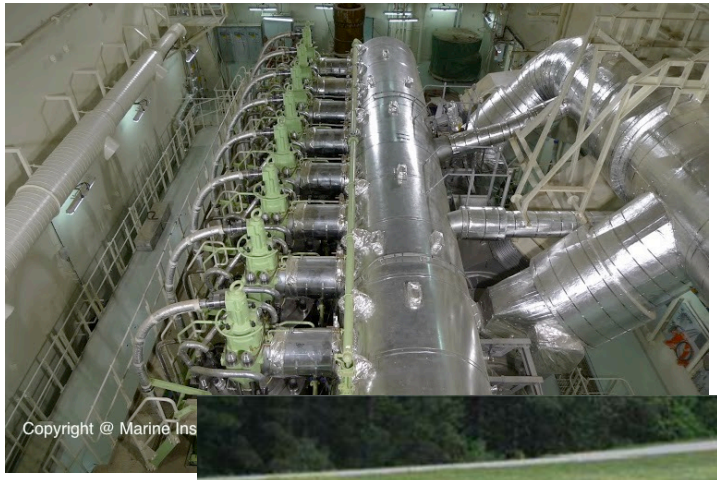
Effective

Transparent

Tiered

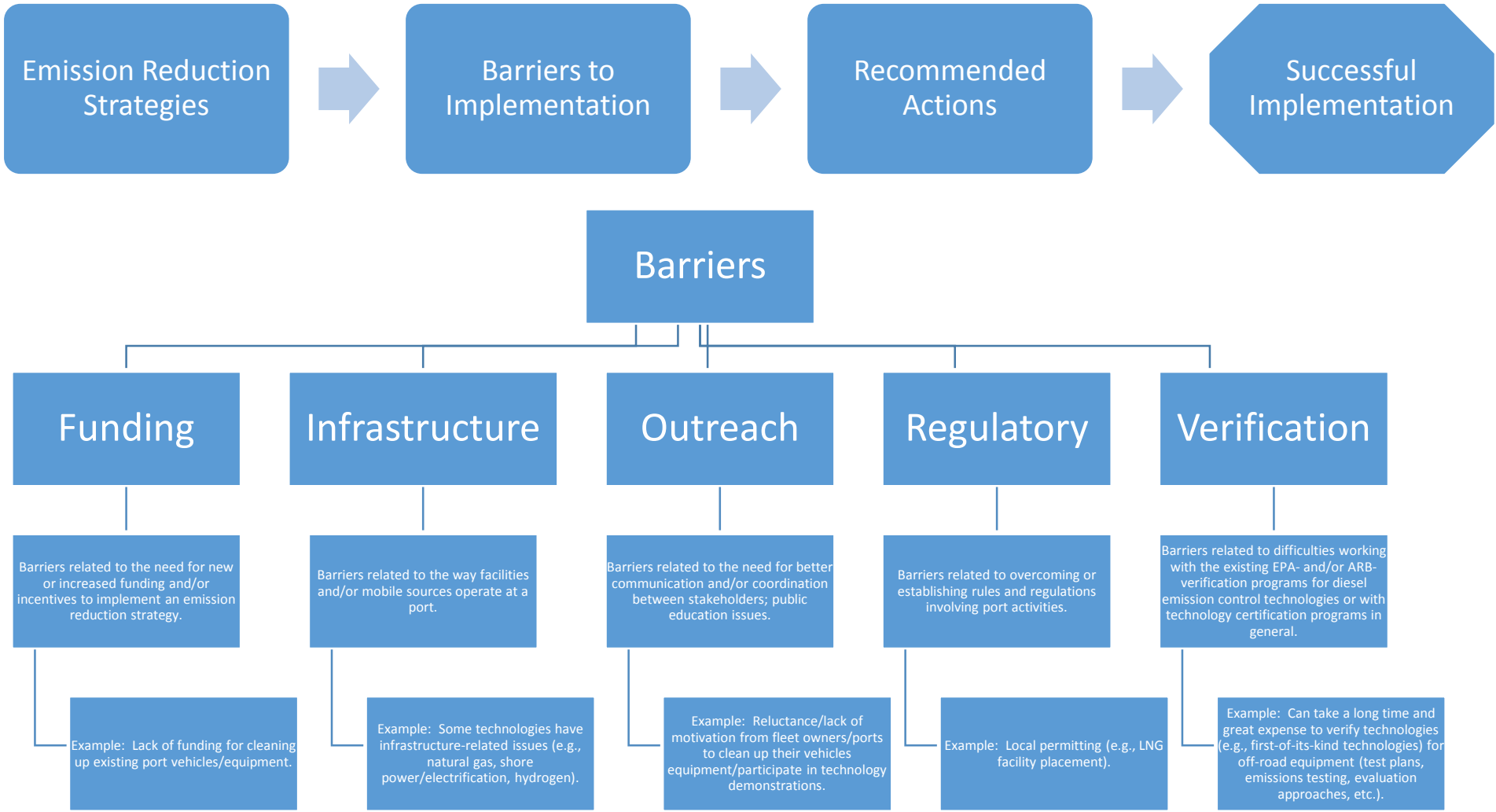
*Including Cargo Handling Equipment

Technology Implementation, Barriers and Federal Agency Coordination



<u>Technology Implementation</u>:
Identify barriers to implementation of technology for reduction of air emissions associated with movement of goods around ports and harbors and identify solutions for overcoming the barriers.

<u>Federal Coordination</u>:
Identify areas where coordination of federal agencies and departments should be enhanced and solutions for achieving this.


Emission Reduction Strategies
Barriers to Implementation
Recommended Actions
Successful Implementation
Barriers
Funding
Infrastructure
Outreach
Regulatory
Verification
Barriers related to the need for new or increased funding and/or incentives to implement an emission reduction strategy.
Barriers related to the way facilities and/or mobile sources operate at a port.
Barriers related to the need for better communication and/or coordination between stakeholders; public education issues.
Barriers related to overcoming or establishing rules and regulations involving port activities.
Barriers related to difficulties working with the existing EPA- and/or ARB-verification programs for diesel emission control technologies or with technology certification programs in general.
Example: Lack of funding for cleaning up existing port vehicles/equipment.
Example: Some technologies have infrastructure-related issues (e.g., natural gas, shore power/electrification, hydrogen).
Example: Reluctance/lack of motivation from fleet owners/ports to clean up their vehicles equipment/participate in technology demonstrations.
Example: Local permitting (e.g., LNG facility placement).
Example: Can take a long time and great expense to verify technologies (e.g., first-of-its-kind technologies) for off-road equipment (test plans, emissions testing, evaluation approaches, etc.).

Educational Matrix of the Federal Marine Transportation System

FEDERAL INTEREST	MAJOR CATEGORIES	USDA	DOC	DoD	DOE	DOI	DOJ	DOL	DHS	DOS	DOT	Treasury	FMC	NTSB	EPA
Enhance Safety	Safety		X	X		X	X	X	X		X			X	X
Protect the Environment	Environmental Protection	X	X	X	X	X	X		X	x	X				X
Facilitate Commerce	Trade Facilitation	X	X			X	X		X	x	X	X	X		
	Trade Promotion	X	X								X	X	X		X
	Vessel Construction								X		X	X			
	Vessel Operations		X			X	X		X		X				X
	Federal Channels, Waterways, and Sea Lanes		X	X	X	X	X		X	X	X	X			X
	Port/Modal Transfer Infrastructure		X	X	X				X		X	X			X
Ensure National Security	Security		X	X	X	X	X		X	X	X				
Cross-Cutting	Research & Development		X	X	X	X			X		X	X			X
	Human Resources		X	X		X	X		X		X				X

United States Department of Agriculture (USDA)
United States Department of Commerce (DOC)
United States Department of Defense (DOD)
United States Department of Energy (DOE)
United States Department of the Interior (DOI)
United States Department of Justice (DOJ)
United States Department of Labor (DOL)

CMTS

United States Department of Homeland Security (DHS)
United States Department of State (DOS)
United States Department of Transportation (DOT)
Department of Treasury (Treasury)
Federal Maritime Commission (FMC)
National Transportation Safety Board (NTSB)
Environmental Protection Agency (EPA)

Technology Implementation, Barriers and Federal Agency Coordination

Category: Funding

DRAFT Recommendations:

1. The Technology Implementation and Barriers Subgroup applauds the success of the U.S. EPA's **DERA program** and urges Congress to continue to fund this important and effective program in FY 2016 and beyond.
2. EPA should **work with the FHWA** to provide better guidance and education (e.g., workshops) for state DOTs/MPOs to access **CMAQ funding** for PM2.5 emission reduction projects, especially for projects at high PM-exposure areas such as ports. In addition, EPA should work with the FHWA to better publicize the availability of CMAQ funding for PM2.5 emission reduction projects, so that ports, state environmental agencies, and other interested stakeholders are more aware of this funding opportunity.

Technology Implementation, Barriers and Federal Agency Coordination

Category: Funding recommendations, continued

3. As part of EPA settlements, where possible, the agency should encourage defendants to consider the use of **Supplemental Environmental Projects (SEPs)** that reduce emissions from port-related vehicles and equipment.
4. EPA should work with federal agencies (e.g., MARAD, CMTS), ports, shipping companies, and other stakeholders to **identify new sources of sustainable funding** to help pay for projects to reduce emissions at ports.

Technology Implementation, Barriers and Federal Agency Coordination

Category: Information Clearinghouse

DRAFT Recommendations:

5. EPA should facilitate the development of a **clearinghouse/database of successful emission reduction strategies** (technology and operational strategies) that have been implemented at ports and other related areas (e.g., intermodal freight facilities, warehouses, rail yards) in the U.S. and in other countries for trucks, cargo-handling equipment, harbor craft, ocean-going vessels, and locomotives. EPA could use this clearinghouse as the centerpiece of an overall communications strategy **for sharing information with other federal agencies and port-related stakeholders** on relevant products, funding, methodologies/guidance, technology, and pertinent studies.

   This clearinghouse would be posted on a website (to be determined) and made available to the public.

Technology Implementation, Barriers and Federal Agency Coordination

Category: Methodologies and Guidance

DRAFT Recommendation:

6. Recognizing that the EPA and ARB **technology verification processes** may be challenging in terms of time and resources, EPA should develop **a conditional verification process** that allows a technology provider to build some commercial experience for an innovative emission control technology (e.g., devices to reduce idling emissions from marine vessels) while they finish the full verification process; and/or EPA should develop a program that provides funding for the demonstration of advanced technology vehicles, equipment, or emission controls that are not yet commercialized.

To this end, EPA should review existing conditional verification-type processes and existing demonstration funding programs.

Technology Implementation, Barriers and Federal Agency Coordination

Category: Methodologies and Guidance, continued

7. To make sure port-related vehicles and equipment are **operating as intended in-use** (drayage trucks in particular), EPA should engage in discussions with ports, vehicle owners, and other stakeholders to explore ways to identify high-emitting vehicles. EPA should also work with state environmental agencies to develop a methodology for measuring the emission benefits of state I/M programs for heavy-duty trucks, as well as encourage states to implement more stringent heavy-duty I/M programs. EPA should provide guidance to ports on how to incorporate **clean construction specifications** and best practices into port-related construction projects.

Technology Implementation, Barriers and Federal Agency Coordination

Category: Coordination with other programs

DRAFT Recommendations:

8. EPA should further **expand the SmartWay Program** to other mobile sources that operate at ports, in particular marine vessels involved in goods movement. In addition, EPA should revisit the recommendations made by the **MSTRS SmartWay Legacy Fleet Workgroup** for ocean/marine cargo and other port-related vehicles/equipment in their April 2014 report.

9. EPA should consider the EPA Ports Program as a potential **resource for other programs** being implemented by ports, where applicable

Work in progress – input requested

- Funding
  - Sustainable funding for DERA, Ports programs and incentives
  - Expand DERA to inventories and community planning
  - Should participants have priority in funding decisions?
- Verification
  - Conditional verification
  - Third party verification
- Should requirements be consistent across the US for verification?
- Should EPA set standards for port-related operations or equipment as part of this program?

Port Inventories and Metrics:

How to effectively measure air quality and GHG performance of ports operations

Port Inventories and Metrics

Initial considerations were varied:

- Develop **common vocabulary and definitions** related to emissions inventories and metrics.
- Develop **common methodologies**. Consider **productivity improvements** and show how we account for **efficiencies.**
- Consider how **monitoring** fits in and clarify difference between monitoring and inventories and metrics.
- Stakeholders need to be more integrated into **SIP process.**
- Be mindful of **inventory methods** ports currently use and try to be consistent. Pros and cons of standardizing inventories. Remember that different types of inventories have different purposes.
- Emissions inventories should be **useful to the port operators, terminal operators, state air quality regulators.**
- Think about **comparisons of inventories** (year over year and challenges of comparing two different inventories).
- Need to incorporate **forecasting** into inventories, which is very complicated.

Port Inventories and Metrics

Category: Inventory development

DRAFT Recommendations:

10. EPA should update its port emissions **inventory guidance** and clarify types of inventories, levels and quality of data, strengths/weaknesses of methods, etc. in cooperation with key stakeholders
11. When proposing **new guidance**, methods or models relating to port inventories, EPA should **highlight specific portions relating to ports and potential port impacts,** consider user capacity and available resources, and provide a phase-in period

Port Inventories and Metrics

Category: Inventory Communications

DRAFT Recommendation:

12. EPA should…
    - ✓ Support communications of what inventories are & **how to understand results**
    - ✓ Clarify **how to compare the various inventory types**
    - ✓ Clarify the **differences between air monitoring and modeling of inventories**, etc.
    - ✓ Catalogue **best practices**
    - ✓ Guidance on communicating **strengths & limitations**

Port Inventories and Metrics

Category: Metrics

DRAFT Recommendation:

13. EPA should…
    - ✓ Clarify/document a **common vocabulary relating to metrics** related to air emissions & ports
    - ✓ Develop guidance, definitions, and key metrics in conjunction **with key stakeholders**
    - ✓ Clarify uses, **strengths & weaknesses** of the various metrics
    - ✓ **Catalogue port-related metrics**
    - ✓ Document **common methodologies**

Port Inventories and Metrics

Category: Metrics

DRAFT Recommendation:

14. EPA should…
    - ✓ Collect information on **how ports are engaging their communities**.
    - ✓ Identify **specific metrics** or **best practices to inform communities of impacts**. These metrics could include freight transport through communities, queue time for trucks outside the gate to the port, amount of idling by locomotives in freight terminals supporting ports, number of buses/taxis/private vehicles transporting cruise passengers moving through or adjacent to communities, etc.

Work in progress – input requested

- Are standard definitions of Port boundaries needed for inventories?
- Should EPA publish industry performance and emissions averages?
- What parts of SIP guidance should be modified to better incorporate Port activities and voluntary reductions?
- What goals should be set for inventory development at additional ports?

Community-Port Engagement

Setting the stage:

- Community engagement is foundational to an effective port environmental program.
- Defining all the stakeholders
- Having transparency and building trust before controversy arises
- Democratizing planning
- Respecting the community's time
- Two-way dialogue, not just "outreach"
- Understand issues and governance unique to tribes

Community-Port Engagement

The group reviewed/provided feedback on tools EPA is developing in conjunction with stakeholders, and supports the two reviewed to date:

- Draft *Ports Primer for Communities*
- Draft *Community Action Roadmap*

A third tool is now under development by EPA (not yet available for review):

- Draft Environmental Justice Primer for Ports

The group felt strongly that all three components should be piloted together.

Community-Port Engagement

This subgroup is discussing development of customized Principles of Engagement Guidance

- Identify existing publications to serve as basis from which the community-port customized product would be developed
- Identify port-development best practices guidance tools

Community-Port Engagement

- The team surveyed Ports through AAPA
  - Potential development of a matrix listing port activities on a community engagements and environmental improvement.
- Considered a survey for port communities, but did not implement this approach.
- Clear link with the Port Inventories and Metrics work

Work in progress – input requested

- Should EPA identify communities most impacted by freight and other port activity (cruise)? If so, what methods are appropriate?
  - How can this be communicated?
  - How should mitigation measures be prioritized?
  - Should declines in pollution and health outcomes in these communities be a tracking metric in the new program?
  - What resources should be dedicated to this work?

Program Design

Program intent: Identify and encourage environmental improvements, dialogue and understanding in the maritime ports and their nearby and affected communities.

Building Blocks		
Voluntary	Identifying Environmental Impacts	Technologies
Executive Buy-In	Confirm Results	Reduction Strategies
BCO Leadership and Buy-In	Systematic Program Assessment/Update	Funding and Resources
Community and Stakeholder Impacts, Education, Engagement	Characteristics: Flexible, Scalable, Transparent, Tiered, effective and Solution-oriented	Tools, Resources, Training for Achieving Improvements

Program designs considered range from "members only" to "open resource" initiative.

- Some work group members strongly believe the opportunity for a membership program is past, since several such programs now exist.
  - SmartWay, Green Marine, and initiatives by Cities and Governors reviewed.
  - Voluntary goal registry
- Clear need for more focused resources, information, coordination, measures, and goals to reduce emissions
  - What would incentivize ports and port operators to set goals or use resources?

Necessary Program Components:

- Information and tool resources
  - Standardized methodologies and metrics and inventory guidance -- clear and accessible.
  - A well-designed web portal to access a variety of tools and information.
  - Clearinghouse on technologies, verification and barriers to technology implementation.
  - Ombudsman function for assistance and expertise
  - Coordination across multiple agencies
- Funding sources are vital to accelerating future progress
  - DERA should be reauthorized, sustainable and fully funded.
  - Add a planning / seed grant option.
  - Coordination of funding from a variety of agencies
  - Sustainable funding source
- Port community & stakeholder resources, outreach and communications
- Coordination with other EPA programs, Federal agencies/organizations

Work in progress – input requested

- Cargo-owner and passenger engagement and communications
- Program engagement mechanisms
  - Provide a way to make public commitments and track progress
  - Acknowledge participation in other programs (SmartWay, CCWG, Green Marine)
  - Earning “Port Stars” or other tiers of achievement?
- Benefits for engagement (DRAFT document developed)
  - Advantage in grant applications?
  - Recognition
  - Networking opportunities
- Specific key metrics (DRAFT document developed)
- Tracking and accountability

Next Steps

- Addressing gaps
- Finalizing the program design
- Feedback from key stakeholders (AAPA, CCWG, others)
- Targeting presentation of draft Workgroup recommendations to full MSTRS in spring 2016
- Work Group membership is open to MSTRS members

Thank you