



# Environmental Management Systems (EMS): an On-ramp to Port Sustainability

Northeast Diesel Collaborative  
March 21st, 2007 teleconference

# Purpose of Presentation

- Present and discuss why EMSs make sense for ports.
  - What do ‘sustainability’ and ‘environmental stewardship’ mean?
  - What are Environmental Management Systems (EMSs) & how are they helping ports address air quality & become sustainable?
  - What are some progressive green practices?
  - Why is it important to engage stakeholders, including local communities?

# What does sustainability mean?

- “The ability to meet today’s global economic, environmental and social needs without compromising the opportunity for future generations to meet theirs.”
  - Brundtland Commission, 1987
- 3 Ps - Profit/Prosperity, Planet, People
- 3 Es – Economy, Environment, Social Equity

# Sustainability and Ports

- A sustainable port community is economically viable, environmentally and socially responsible, safe and secure. -  
Working definition of Kathleen Bailey, EPA Port Sector Liaison
- The American Association of Port Authorities (AAPA) has recently formed a Sustainability Task Force.

# Environmental stewardship is critical for sustainability.

- EPA's vision for Environmental Stewardship – *“where all parts of society actively take responsibility to improve environmental quality and achieve **sustainable results.**”*
  - A value – a core value & a way to create business value
  - A behavior – doing more than reg. compliance

# What are progressive ports doing to become better environmental stewards?

- Developing environmental management systems (EMSs) for existing and new facilities, e.g Ports EMS Assistance Project.
- Measuring and reporting on continuous improvement in environmental performance, via the EMS.
- Paying more attention to community concerns.

# Overview of Environmental Management Systems (EMS)

- What is an EMS?
- Why create an EMS?
- Basic EMS Elements
- Port Benefits from EMS

# What is an EMS?

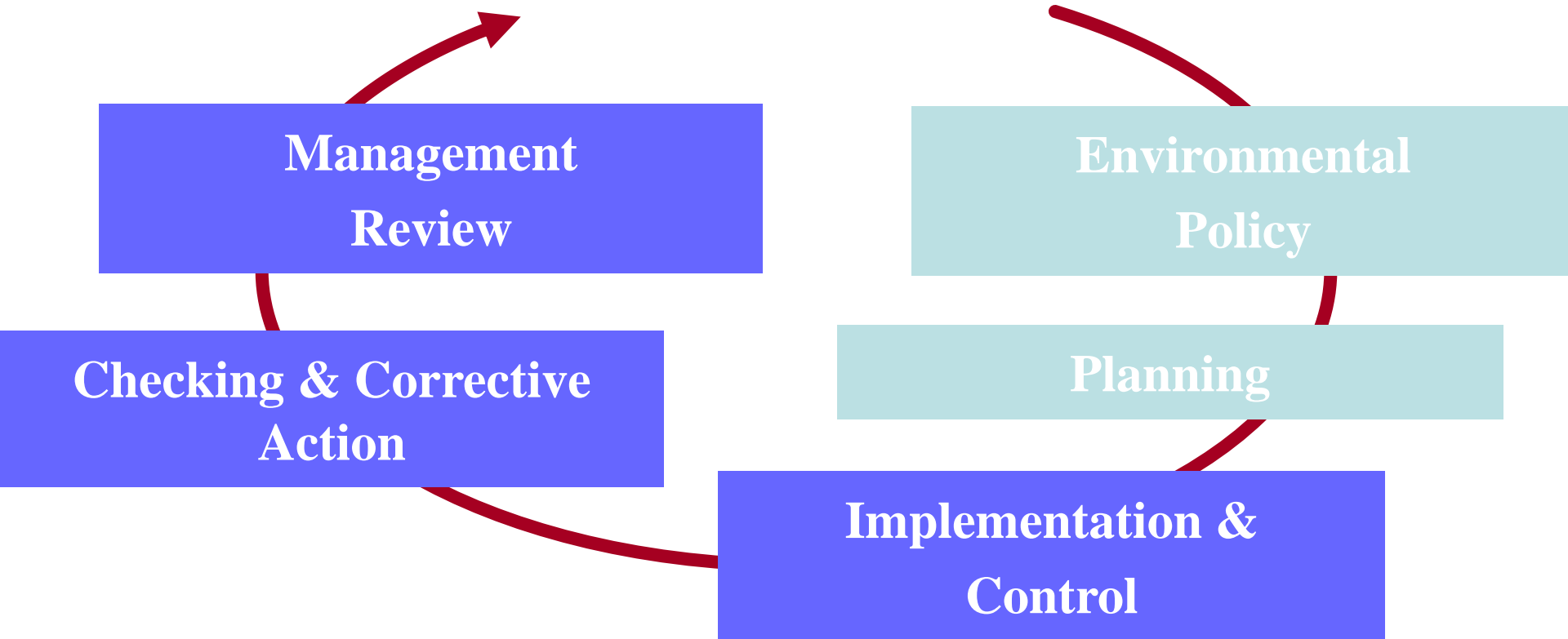
- An EMS is a formal system for managing the environmental footprint of a Port.
  - Incorporates environmental considerations into day-to-day operations and strategic planning.
  - Provides a structured framework designed to achieve continual environmental improvement.



# EMS

## Plan-Do-Check-Act

### Continual Improvement



# Addressing Air Quality via an EMS

- Planning: Look at all the environmental **aspects**, i.e elements of facility activities, products or services, that have the environmental **impact** of degrading air quality. Air emissions from tug boat is an example of an env. aspect.
  - Doing an emissions inventory will help determine env. aspects.
  - Then select significant aspects and develop a Strategy/Action Plan with objectives and targets for reducing emissions in daily operations (and in future expansion).
- Implementing: Implement the Strategy/Action Plan.
- Checking and corrective action: Measure and report progress; Reassess & refine strategy/plan over time.
- Management Review: Provides support and allocation of resources.

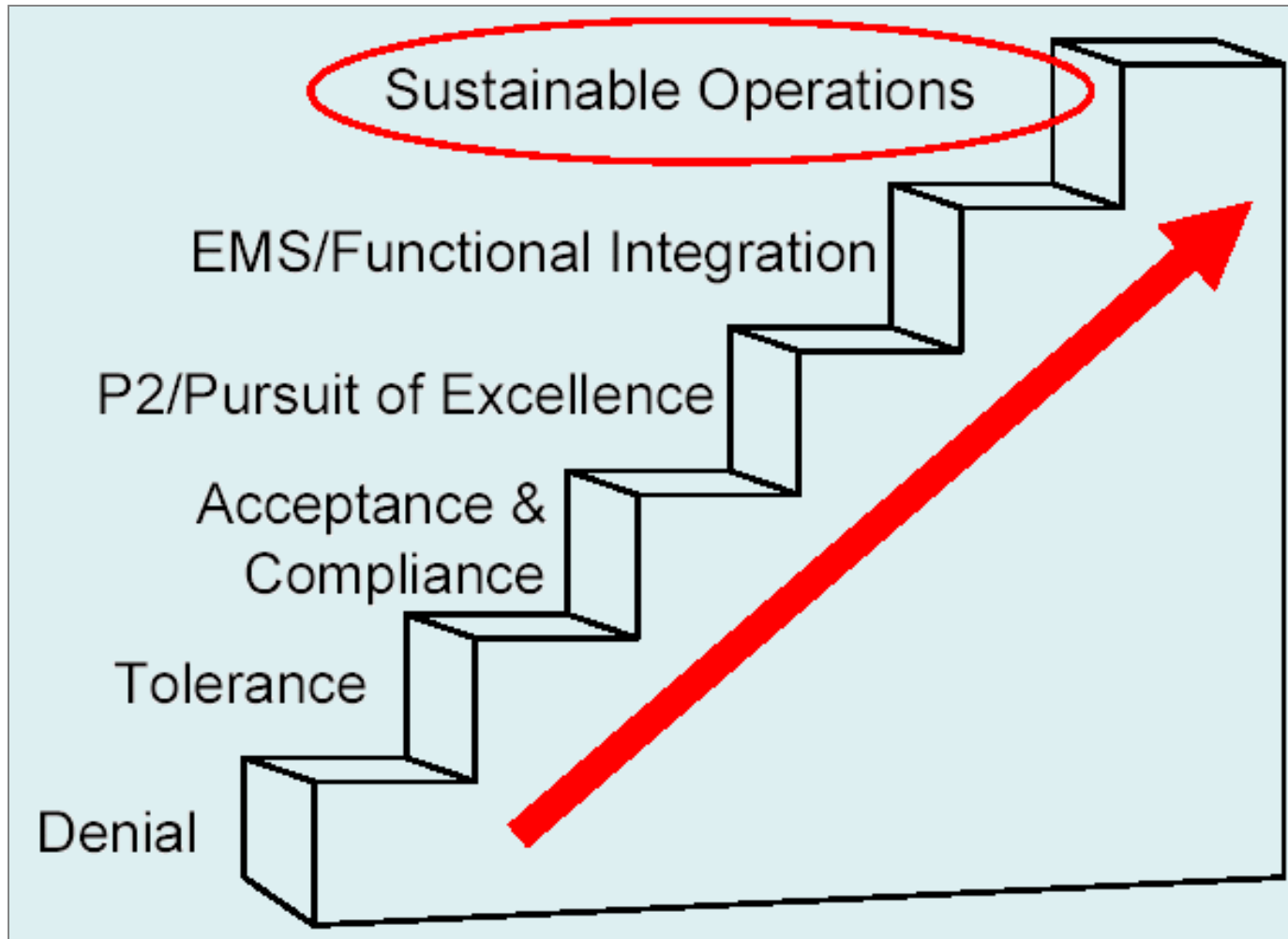
# Why create an EMS?

- Key drivers as identified by 9 ports in the 1<sup>st</sup> Ports EMS Assistance Project:
  - Improve environmental awareness.
  - Improve organizational efficiency & effectiveness.
  - Improve environmental performance.
  - Improve public awareness and confidence.

# Ports' Benefits from EMS

- Virginia – Cargo handling equipment purchasing program reduced air emissions by 30% over 3 yr; rec'd AAPA award
- Portland – Reduced idling by 79%; 5% marine electric power from windmills.
- Corpus Christi – saved \$27K, reduced 134K lbs of waste; rec'd local conservation award.
- NY/NJ – conserved 134 million gal. of potable water in '05 by fixing leaks, & saved \$655,000

# Organizational Evolution



# Progressive Green Practices

- Examples of what some ports are doing
- Linking operational efficiency and environmental protection, e.g. gate systems, chassis pools
- Air Toxics: Inventorying current and projected emissions; Creating and implementing reduction strategies, e.g. off peak truck trips; creating regional performance measures.
- Pro-active integration of land use & transportation plng.
- Applying the EMS “systems approach” to security (Houston, Long Beach, Corpus Christi, NY/NJ, Portland)
- Green procurement practices; LEED building standards
- Water: Installing permeable asphalt where appropriate
- Renewable Energy: Wind and Solar power; Hybrid engines; Energy Star computers

Why is it important to engage stakeholders, including local communities.

- **LICENSE TO OPERATE & GROW.**

# What communities sometimes fear or don't like about ports

- Air and water pollution, and potential health effects
- Road congestion
- Destruction of wetlands, habitat
- Noise during construction and operation
- Night lighting and glare
- Dust
- Visual impacts, e.g. 'ugly' cranes
- Competition with recreational uses of water/land
- Disturbance of cultural resources



# What communities want from ports, besides jobs and goods:

- A say in decisions that affect their lives.

## **Public Involvement Spectrum:**

**Inform, Consult, Engage, Collaborate, Empower**

- A transparent decision-making process, especially for new projects.
- Monitoring and reporting on environmental issues., e.g. ambient air and water quality monitoring, and (EMS) objectives/targets for continuous improvement in environmental performance.

# EPA document under development on EMS and the pursuit of port sustainability

- **Port Authority Reviewers wanted** for this 25 page document in early April.
- If you are interested in being a reviewer, please contact me:

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# Other Resources

- <http://www.epa.gov/sectors/ports>
- <http://www.epa.gov/ems>
- <http://www.peercenter.net/ewebeditpro/items/073F8587.pdf>