

Marine Vessels & Air Quality DOT & MARAD Activities



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DOT & MARAD ACTIVITIES

- DOT Center For Global Climate Change and Environmental Forecasting
- Marine Transportation Air Quality Program
- Marine Transportation System
- Short Sea Shipping Initiative

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DOT Center for Climate Change and Environmental Forecasting (CCCEF)

Overview

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- History
 - 27% of GHG emissions in US from transportation
 - In May 1999, DOT announced the formation of the CCCEF
- Mission
 - Serve as the focal point within the DOT for transportation and climate change issues
 - Provide strategic research, policy analysis, and outreach

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Organization



CCCEF Activities

- Research and Analysis
- Outreach, Partnerships, and Communications
- Strategic Planning and Operations
- Policy Assessment and Leadership

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Research and Analysis

- CCCEF sponsored DOT-wide projects
 - GHG reduction through state and local planning
 - Modeling of advanced technologies
 - Fuel options for reducing GHG emissions from motor vehicles
- CCCEF sponsored MARAD projects
 - Highway - ferry integration study
 - Marine vessel emission inventory
 - Large diesel engine retrofit program

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Marine Transportation Air Quality Program

Overview



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Objective

- Accelerate the use of economical, energy efficient low air emission marine power plants in U.S. ports and waterways
- Investigate and demonstrate the potential for new technologies and fuels to improve marine power plant efficiency and improve emissions
- Use spatial and statistical tools to aid analyses (i.e. GIS)

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HOW?

Technology

- Evaluate technology transfer to marine applications
- Demonstrate and assess technology with a focus on maritime specific limitations such as safety, vessel design, crewing/training, economics
- In-situ vessel operation emissions data

Environmental policy

- Evaluate current policy mechanisms for marine application
- Design mechanisms that incorporate future regulations

Partnering w/ Federal agencies, academia, etc...

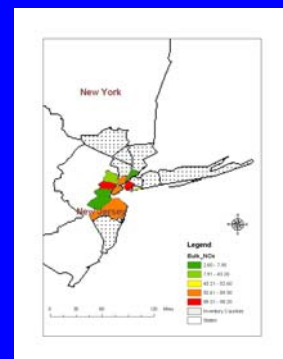
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Geographic Information System (GIS)

- How can MARAD fully utilize GIS
 - Predictive vs. static vs. real time scenarios
 - Delineation of transportation modes characteristics (i.e. air pollution)
 - Transportation route modeling
 - Facilitate decision making
- Participation/data sharing with the Geospatial OneStop

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GIS Example



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Marine Transportation System Initiative

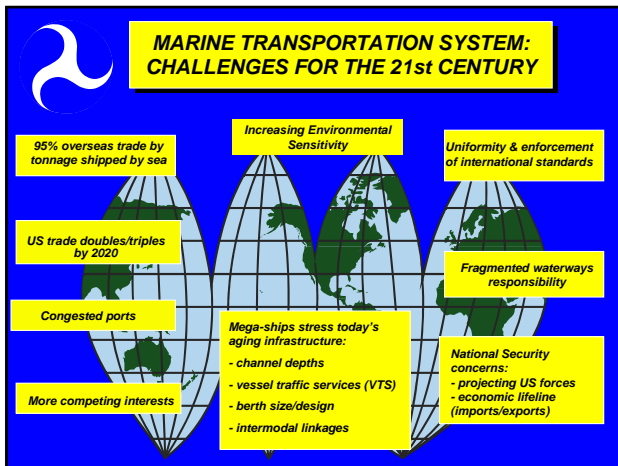
- Overview

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MTS Goals

- To ensure a safe and environmentally sound transportation system
- Form a system that improves global competitiveness
- Improve national security

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MTS National Advisory Council

- In 2001, the Marine Transportation System National Advisory Council (MSTNAC) was established
 - Consists of industry leaders
 - Advises SEC DOT on issues/policies
 - Established of 5 Council Teams:
 - Awareness
 - Infrastructure
 - Safety and Environment
 - Information Technology
 - Research and Development

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Interagency Committee for the Marine Transportation System (ICMTS)

- Serves as national coordinating body for all federal agencies
- 17 federal agencies have signed a Memorandum of Understanding
- Six subcommittees created
 - Security
 - Safety and Environmental Protection
 - Strategic Planning
 - Resources
 - Research and Development and Technology Application
 - Ferryboats

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U.S. Marine Transportation System



Visit MTS Website:
www.dot.gov/mts

Short Sea Shipping Initiative

- Overview

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Issues

- US global maritime trade expected to double by 2020
- Projected increase of 10,000 more trucks/day on the I-95 Corridor
- Cost of expanding US highways is significant

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Basics of Short Sea Shipping (SSS)

- Congestion mitigation initiative to shift from landside cargo transportation to waterway routes
- Must provide service reliability, frequency, and competitive pricing
- Is already being used in Northern Europe

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Efficiency of Water Transportation

- 25,000 miles of inland and coastal waterways
- Waterway connections to 152,000 miles of rail
- Waterway links to 460,000 miles of pipeline
- Port connections to 45,000 of interstate highways

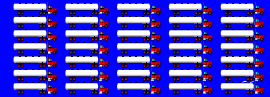
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Efficiency of Water Transportation

- ONE barge is equivalent to...



...58 large (26 ton) semis



Program Objectives

- Improve freight flow
- Provide modal alternatives
- Mitigate congestion
- Improve air quality
- Improve public safety
- Accelerate adoption and utilization of SSS
- Support introduction of innovative SSS programs
- Complement DOD requirements

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MARAD's Progress

- Formed a Short Sea Shipping Cooperative Program w/ industry partners
- Formed an internal task force to develop and execute Short Sea Shipping
- Received a grant from the I-95 Corridor Coalition to pursue Short Sea Shipping
- Data and information sharing with Canada, Mexico, Europe, and others

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- Questions?

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