



U.S. Committee on the Marine Transportation System

**ACTIONS &
ACCOMPLISHMENTS OF
THE CMTS**

JULY 1, 2013 - JUNE 30, 2014

EXECUTIVE SUMMARY

This Report documents the work accomplished by The Committee on the Marine Transportation System (CMTS) during the period July 1, 2013 through June 30, 2014, under the Chairmanship of Rear Admiral Joseph Servidio, United States Coast Guard. Substantial progress has been made on many of the CMTS multi-year projects such as the future of navigation, “MTS Assessment Report to Congress,” an update of the MTS national strategy, and inter-agency coordination on issues like maritime infrastructure investment. Recognizing that, in addition to required CMTS activities and multi-year existing projects some parts of the Maritime Transportation System were undergoing rapid and dynamic changes, CMTS priority was given to maritime infrastructure, maritime resiliency, and maritime energy initiatives. Listed below are some of the more notable completed projects and “new starts” undertaken by the CMTS.

Completed Actions

- Report on “U.S. Arctic Marine Transportation System: Overview and Priorities for Action,” was completed. The report was approved by Secretary Foxx and forwarded to the President in July 2013, had high visibility and wide dissemination. Many of the recommendations were included in the White House National Strategy for the Arctic Region Implementation Plan.
- The Infrastructure Investment Integrated Action Team (IAT) developed Infrastructure Investment Decision Criteria for Federal Agencies, and beta-tested the criteria using the TIGER V grant process.
- NOAA’s PORTS (Physical, Oceanographic Real Time System) was modified to allow transmission of AIS data.
- The S-100 Universal Hydrographic Data Model was adopted by the CMTS Coordinating Board as the preferred data framework for the dissemination and exchange of digital marine safety information.
- A Marine Energy Task Team was established during the reporting period. The Task Team developed a compendium and matrix of Federal maritime energy activities.
- A CMTS Communication Plan, including an updated MTS Fact Sheet, Congressional Talking Points, and Congressional table drop were developed and approved.
- CMTS, in partnership with the Transportation Research Board, hosted the 3rd Biennial Research & Development Conference, with the theme of “Innovative Technologies for a Resilient Marine Transportation System.”

New Starts

- Marine Mammal Commission was approved as a new member of the Coordinating Board.

- U.S. Treasury conducted an interagency infrastructure investment roundtable, and the Infrastructure Investment IAT began work on an alternate financing tool kit and case study.
- The Environmental Stewardship Subcommittee and Marine Energy Task Team were established.

TABLE OF CONTENTS

FUTURE OF NAVIGATION INTEGRATED ACTION TEAM.....PAGE 4

RESEARCH AND DEVELOPMENT INTEGRATED ACTION TEAM.....PAGE 6

ARCTIC MARINE TRANSPORTATION INTEGRATED ACTION TEAM.....PAGE 8

INFRASTRUCTURE INVESTMENT INTEGRATED TASK TEAM.....PAGE 10

ENVIRONMENTAL STEWARDSHIP SUBCOMMITTEE.....PAGE 12

OTHER SIGNIFICANT ACTIONS.....PAGE 14

ACCOMPLISHMENT

FUTURE OF NAVIGATION INTEGRATED ACTION TEAM

SUMMARY

The Future of Navigation IAT has coordinated multi-agency efforts on projects focused on improving navigational safety and efficiency in three ways:

- Improving delivery of navigational information,
- Improving accuracy of navigational products, and
- Improving efficiency by enabling agencies to better share information of navigational value.

Outcome(s): As these projects are completed, Mariners can expect significant improvements to navigational safety, as well as enhanced efficiency in the use of our waterways.

Team Leads: National Oceanic and Atmospheric Administration (NOAA)
U.S. Army Corps of Engineers (USACE)
U.S. Coast Guard (USCG)

BACKGROUND

The Navigation Technology IAT was established in October 2006 by the CMTS Coordinating Board to assist CMTS member agencies with coordination and integration of their technologies, data, and services to enhance navigational safety and efficiency.

During the current period, the USACE, NOAA, Coast Guard and CMTS members ramped-up the federal effort in facilitating safe and efficient operations on America's waterways. They approved a name change from the "e-Navigation Integrated Action Team" to the "Future of Navigation Integrated Action Team" to better reflect waterway user priorities and agreed to leverage existing and emerging technology to maximize mariner situational awareness through eMSI (marine safety information) while optimizing the balance between electronic and physical aids to navigation (ATON).

PARTICIPATING CMTS MEMBERS

- National Oceanic and Atmospheric Administration (Co-Lead)
- U.S. Army Corps of Engineers (Co-Lead)
- U.S. Coast Guard (Co-Lead)
- National Geospatial-Intelligence Agency
- National Transportation Safety Board
- Oceanographer of the Navy

STATUS

- **June 2014:** The Coordinating Board approved a resolution adopting the International Hydrographic Organization's (IHO) S-100 Universal Hydrographic Data Model as the preferred framework for product specifications for marine-based data in the United States.

Adoption of S-100 will facilitate the dissemination and exchange of digital marine safety information and related MTS data collection requirements.

- **May-July, 2014:** Conducted nationwide listening sessions to gather data and analysis to see what the mariner needs to navigate from their pilothouse to ensure data-driven decisions are used in optimization of the current ATON constellation.
- **Jan-Present, 2014:** Established a Technology Task Team under the IAT to develop and initiate an eMSI project for which an outline of ideas was generated, resulting in the decision to establish a web-based platform for multi-agency Notice to Mariner information.

BENEFITS TO THE MTS

“America’s waterways are the economic engine that drives national prosperity.” The federal effort in facilitating the safe and efficient operations of these waters must be an accelerant, rather than a brake, on this economic engine. To this end, the “Future of Navigation” IAT will leverage technology, initiate management improvements, redefine levels of service, develop data driven analysis, and provide regulatory changes to improve safety and efficiency on America’s waterways.

ACCOMPLISHMENT

RESEARCH AND DEVELOPMENT INTEGRATED ACTION TEAM

SUMMARY

The CMTS Coordinating Board established the Research and Development IAT in March 2009 with a charge to provide a strategic capability to identify, develop, and implement innovative research and development to address the pressing challenges identified in the National *Strategy for the Marine Transportation System. The Strategy: A Framework for Action* (July 2008). The IAT also serves as a crosscutting function among all CMTS IATs. The R&D IAT developed a Strategic R&D Action Plan in 2010 that address the challenges identified in the CMTS National Strategy. It identifies and updates research priorities through a collaborative biennial R&D conference with the Transportation Research Board. The IAT leads several multi-agency collaborative research initiatives and has been very productive with several innovative products being used by CMTS agencies.

BACKGROUND

The R&D IAT has been working together since 2009 conducting collaborative research, creating new products for CMTS use, maturing emerging and innovative concepts into new CMTS IATs or Teams, supporting other IATs technology needs, and partnering with the Transportation Research Board of the National Academy of Sciences to hold a biennial R&D conference. Numerous CMTS agencies have participated and contributed knowledge, data, tools, and expertise to these many activities. The IAT has also been very successful in outreach to academia and the private sector to ensure its research is inclusive, addressing Federal and National needs.

STATUS

- The Transportation Research Board of the National Academy of Sciences and the CMTS R&D IAT co-sponsored the third biennial R&D Conference — “Innovative Technologies for a Resilient Marine Transportation System” — June 24-26, 2014, in Washington, DC.
- Over 100 participants attended twelve Technical Breakout Sessions, three Panel Sessions, and heard four Plenary and Keynote speakers from Academia, Industry, and Government.
- The R&D IAT Team is preparing a report of the conference that summarizes the current state of knowledge, identifies gaps in our research, and provides an action plan to address identified gaps. Preliminary take-away items centered around the following topics:
 - Primary disturbances (current and future) to the MTS
 - Defining what resilience means to the MTS
 - Promising new and emerging technologies presented at the conference
 - R&D gaps and how R&D can contribute to MTS resilience to Prepare, Resist, Recover, and Adapt
 - Opportunities to “co-produce” with academia, private entities, NGOs, etc.
- The R&D IAT continued work to establish agreed-upon performance indicators for the MTS. Building from the recommendations of the 2012 joint conference with TRB on performance indicators, draft indicators have been specified and peer-reviewed by the DOT freight analysis team. Additionally, a collaborative effort was completed integrating a detailed

surface transportation network with the marine freight network to show county-level freight movement between the two networks. This integrated network forms the foundation for future research looking at the MTS in the context of the overall national supply chain and freight flow. A draft report was completed during the performance period. A web site under the CMTS will provide access to the performance indicators.

PARTICIPATING CMTS MEMBERS

- U.S. Army Corps of Engineers (Lead)
- National Oceanic and Atmospheric Administration
- Oak Ridge National Lab (DOE)
- Oceanographer of the Navy
- Research and Innovative Technology Administration
- U.S. Coast Guard
- U.S. Maritime Administration
- The Volpe Center (DOT)

BENEFITS TO THE MTS

The conference served as a forum to examine the use of emerging and innovative technologies and practices in marine transportation and waterways management. The conference was designed to help foster partnerships between federal, state, private, and academic institutions that have a shared interest in technological innovations and improved performance of the Marine Transportation System.

ACCOMPLISHMENT

U.S. ARCTIC MARINE TRANSPORTATION INTEGRATED ACTION TEAM

SUMMARY

The U. S. Coast Guard Authorization Act of 2010 required the CMTS to coordinate domestic transportation policy for the Arctic. The CMTS U.S. Arctic Marine Transportation Integrated Action Team was established by the Coordinating Board in January of 2010. The intent of the IAT is to identify opportunities for member agencies to work together to address the needs, both current and future, for providing for safe, and environmentally sound navigation in the U.S. Arctic as the waterways become more accessible to use for navigation and other activities.

Team Leads: Maritime Administration (MARAD)
National Oceanic and Atmospheric Administration (NOAA)
U.S. Coast Guard (USCG)

BACKGROUND:

The U.S. Arctic Marine Transportation Integrated Action Team (Arctic IAT) was tasked to identify opportunities for interagency collaboration to improve the marine transportation system in U.S. Arctic waters as well as to provide recommendations to coordinate transportation policies concerning maritime shipping safety, environmental protection and security, and associated impacts for existing and likely increases in Arctic marine traffic in the U.S. Arctic Region.

PARTICIPATING CMTS MEMBERS:

- U.S. Maritime Administration (Co-Lead)
- National Oceanic and Atmospheric Administration (Co-Lead)
- U.S. Coast Guard (Co-Lead)
- Interior Department, Bureau of Ocean Energy Management
- Interior Department, Bureau of Safety and Environmental Enforcement
- Office of the Oceanographer of the Navy
- U.S. Army Corps of Engineers
- U.S. Department of State
- U.S. Transportation Command
- Office of Science and Technology Policy

STATUS

- Report on “U.S. Arctic Marine Transportation System: Overview and Priorities for Action,” was completed. The report was approved by DOT Secretary Foxx and forwarded to the President on July 30, 2014. The report received high visibility and wide dissemination and many of the recommendations were included in the National Strategy for the Arctic Region Implementation Plan, and the Integrated Arctic Management Plan.
- At the request of the White House National Security Staff, the Secretary of Transportation directed the CMTS Executive Secretariat to complete a 10-year projection of maritime activity in the U.S. Arctic in support of the National Strategy for the Arctic Region Implementation Plan. Review of existing sources, including the GAO report on Arctic infrastructure of May 2014, was completed during the reporting period. A scope of work to

complete the projection report received interagency approval for execution in the next reporting period.

- The CMTS U.S. Arctic MTS report contributed to “Managing for the future in a rapidly changing Arctic. A report to the President” by the Interagency Working Group on Coordination of Domestic Energy Development and Permitting in Alaska.
- The IAT completed a “side-by-side-by-side” of Federal Arctic MTS-related recommendations to compare the CMTS proposed actions to those in the implementation plans for the National Ocean Policy and the National Strategy for the Arctic Region. The CMTS recommended actions to improve the U.S. Arctic MTS in 16 issue areas. Three of the issue areas - Places of Refuge, Aids to Navigation, and Crew Standards and Training - are not included in the other reports. The IAT will monitor and report on the status of those MTS-related recommendations.

BENEFITS TO THE MTS

This seminal document on the U.S. Arctic MTS has become an invaluable resource for multiple federal agency and state initiated efforts to coordinate interagency response and planning for Marine Transportation in the Arctic to enhance safety and ensure environmental viability.

Anticipated benefits include improved marine and navigational information, and emergency response support for vessel activity in the U.S. Arctic, providing for enhanced maritime shipping safety and reduced risk to the environment.

ACCOMPLISHMENT

INFRASTRUCTURE INVESTMENT INTEGRATED ACTION TEAM

SUMMARY

The Infrastructure Investment Integrated Action Team (IAT) was established to facilitate the development of broad evaluation and decision criteria that can be used across Government programs for informing Federal infrastructure investment.

The IAT also hosted an Infrastructure Investment Roundtable at the Department of Treasury to educate the Coordinating Board on the ongoing efforts of the IAT to develop useful tools.

Team Leads: U.S. Dept. of Transportation – Office of the Secretary;
U.S. Army Corps of Engineers;
U.S. Dept. of the Treasury – Office of Economic Policy

BACKGROUND

- The Administration's Task Force on Ports noted that, "Nearly 80 percent of the volume of international trade passes through our nation's ports. Maintaining these ports, and making targeted investments in their improvement where appropriate, can lower shipping costs for U.S exports and imports."
- The IAT was stood up at the request of the Secretary of Transportation in 2012 to broaden the conversation of how the Federal Government prioritizes and invests in needed MTS infrastructure, building on the memorandum of understanding between DOT and Army in March 2012.
- The products in the IAT's work plan included a Data Funding Map; a Handbook of Federal MTS-related Infrastructure Funding sources; a set of decision criteria to be used cross-government to review investment decisions; an Alternative Funding Tool Kit; and a Case Study of how the Federal Government coordinates investments decisions to capture lessons learned and exploit early synergies of collaboration to leverage multiple investments.

PARTICIPATING CMTS MEMBERS

- U.S. Department of Transportation – Office of the Secretary (Co-Lead)
- U.S. Army Corps of Engineers (Co-Lead)
- U.S. Department of Treasury (Co-Lead)
- U.S. Maritime Administration
- Federal Highway Administration
- National Oceanic and Atmospheric Administration
- Federal Maritime Commission
- U.S. Department of Commerce
- U.S. Office of Management and Budget
- U.S. Transportation Command
- International Trade Administration
- U.S. Coast Guard
- Federal Railroad Administration

- Environmental Protection Agency

STATUS

- **December 2013:** Developed Infrastructure Investment Decision Criteria for Federal Agencies and beta tested under TIGER V
- **February 2014:** The IAT hosted an infrastructure roundtable at the Department of Treasury. Future action items identified by the participants include the development of a case study, development of a pilot project, development of an Alternative Financing Tool Kit, and revisiting the decision criteria to develop a more readily useable tool.
- **June 2014:** Building from the CMTS Investment Map, the IAT developed a matrix of possible case study areas. The team began outlining a site visit to the Port of New York and New Jersey. The location was determined because of mutli-agency investments and local site visit support capabilities. The site visit will be held in the next reporting period.
- The IAT initiated communication with the DOT Build America Transportation Investment Center that was launched as part of the President’s Build America Investment Initiative, a government-wide initiative to increase infrastructure investment and economic growth.

BENEFITS TO THE MTS

- Decision support tools for infrastructure investment will be used by decision-makers to better align Federal infrastructure investment across agencies, allowing for the leveraging of limited resources and enabling a safer, more efficient, and resilient marine transportation system for the movement of our Nation’s people and goods.
- The IAT has developed products that assist local and state partners in infrastructure planning and investment.

ACCOMPLISHMENT

ENVIRONMENTAL STEWARDSHIP SUBCOMMITTEE AND MARINE ENERGY TASK FORCE

SUMMARY

The purpose of the Environmental Stewardship Committee is to facilitate networking and information sharing for the advancement of knowledge regarding environmental issues, rules and practices relevant to the marine transportation system.

Team Lead: CMTS Executive Secretariat

The purpose of the Marine Energy Task Force is to examine MTS issues related to alternative fuel

Team Leads: U.S. Department of Energy
U.S. Maritime Administration

BACKGROUND

Since environmental topics impact the MTS in many ways, individual issues have often been addressed by CMTS Action Groups on an ad hoc basis. New maritime environmental standards, both domestic as well as international, increased waterway demands, Environmental Justice issues and other environmental drivers raised interest in establishing a dedicated CMTS group to consider environmental issues. Additionally, dramatic changes in energy development, maritime energy flows, and opportunities for alternative marine fuels necessitated greater CMTS collaboration. During this period two groups were established:

- The Environmental Stewardship Subcommittee which serves as a sounding board and networking opportunity for member agencies to stay abreast of environmental issues relevant to the MTS.
- The Marine Energy Task Force, which focuses on alternative fuels, including liquefied natural gas (LNG), compressed natural gas (CNG), biofuels, and fuel cells.

PARTICIPATING CMTS MEMBERS

- CMTS Secretariat (Lead - Environmental Stewardship Subcommittee)
- U.S. Department of Energy (Co-Lead – Marine Energy Task Force)
- U.S. Maritime Administration (Co-Lead – Marine Energy Task Force)
- U.S. Coast Guard
- National Oceanic and Atmospheric Administration
- Bureau of Ocean Energy Management
- Bureau of Safety and Environmental Enforcement
- Oceanographer of the Navy
- U.S. Army Corps of Engineers
- U.S. Department of State
- U.S. Transportation Command
- Marine Mammal Commission
- Environmental Protection Agency
- Office of Science and Technology Policy
- Federal Maritime Commission

STATUS

- **March 2014:** An environmental scoping team identified four environmental issues for further discussion: MTS impact on ecosystems; sea level rise and resilience; human health; and alternative fuels. Rather than recommending the establishment of an environmental IAT, the scoping group recommending the establishment of two groups: a subcommittee to continue discussion on environmental issues impacting the MTS to determine what, if any, additional CMTS actions should be taken and a task team to address alternative fuels both of which were accepted by the CB.
- **The Maritime Energy Task Team** membership includes thirteen CMTS member agencies, and has held five monthly meetings, the most recent being July 22, 2014. Meetings have included presentations on the Navy's Great Green Fleet Program, MARAD's Biofuels, LNG, and Fuel Cell projects, USDA's Farm-to-Fleet Program, and NOAA's Dual-Fuel Project. In addition, guest presentations on LNG have been given by the Port of Pittsburgh, Port of Jacksonville, and the Great Lakes Maritime Research Institute.
- **June 2014:** The Maritime Energy Task Team developed a Compendium and Matrix of relevant agency activities which was accepted by the Coordinating Board. This document describes many of the alternative fuels and liquefied natural gas activities carried out jointly or individually by CMTS member (and other) agencies. This document is continually under review to ensure each agency is represented comprehensively and accurately.

BENEFITS TO THE MTS

Working in concert with the Future Navigation IAT, the R&D IAT, the Arctic Marine Transportation IAT, and others, the Environmental Stewardship Subcommittee will help to inform policies that effectively address the MTS's most pressing environmental concerns.

ACCOMPLISHMENT

OTHER SIGNIFICANT ACTIONS

SUMMARY

In addition to the Integrated Action Teams, Subcommittees, and Task Teams identified in this report, the CMTS engages in many other activities that provide value to the Marine Transportation System and the Nation.

- New Members
 - Marine Mammal Commission (MMC), which was created under Title II of the Marine Mammal Protection Act of 1972, was added as a new member of CMTS. CMTS Vision is that the US MTS “will be a safe, secure, and globally integrated network...in harmony with the environment...” Thus, the addition of MMC, whose primary focus is on conservation and protection of marine mammals and their ecosystems, is important to CMTS.
- Mandated Reports
 - The Coast Guard and Maritime Transportation Act of 2012 directed the CMTS, amongst other things, to provide to Congress an Assessment of the condition of the MTS.
 - Completed draft report on the Assessment of the Marine Transportation System for interagency review.
 - Completed a draft of the revised National Strategy for the Marine Transportation System *and reviewing for consistency with MTS Assessment Report.*
- Communications and Outreach
 - The Coordinating Board developed and approved a CMTS Communication Plan and outreach framework, including updated MTS Fact Sheet, Congressional Talking Points, and Congressional table drop.
 - The Plan and outreach framework will help the CMTS to strategically, proactively, and effectively communicate with Congress, MTS stakeholders, and the public to raise awareness and increase understanding regarding the importance, value, challenges, and needs of the US MTS.