



U.S. Committee on the Marine Transportation System

SUMMARY REPORT
JULY 1, 2012 – JUNE 30, 2013

INTRODUCTION

On behalf of the Coordinating Board of the CMTS, I am pleased to report on the Committee's achievements and a summary of its activities and accomplishments for the twelve-month period beginning July 1, 2012. The CMTS achieved marked and measureable progress regarding the safety, efficiency, and resiliency of the U.S. Marine Transportation System (MTS) to move people and goods, to support the U.S. economy and advance the Nation's trade competitiveness.

On December 20, 2012, the US Committee on the Marine Transportation System (CMTS) was authorized in statute (46 USC 55502) for the purpose of:

- Assessing the adequacy of the marine transportation system (including ports, waterways, channels, and their intermodal connectors);
- Promoting the integration of the marine transportation system with other modes of transportation, and other uses of the marine environment; and
- Coordinating, improving the coordination of, and making recommendations with regard to Federal policies that impact the marine transportation system.

The authorization was an affirmation by Congress of the value of interagency communication and coordination and of the CMTS. Since its establishment by Presidential Directive in late 2004, the CMTS has taken hold as a dynamic and proactive interagency partnership to provide a mutual vision for the MTS and promote that vision through the coordination of Federal MTS policies. Not only has federal agency membership in the CMTS remained strong, it has grown in to include the National Ocean Council and National Maritime Intelligence Integration Office as ex-officio members. Moreover, the members continue to commit expertise to a range of focused issue areas with the goal of improving interagency coordination, the Federal role, and the Marine Transportation System.

A significant accomplishment for the year was the completion of the CMTS U.S. Arctic MTS report, "U.S. Arctic Marine Transportation System: Overview and Priorities for Action 2013", which was submitted to the President by Transportation Secretary Anthony Foxx on July 30, 2013. The CMTS US Arctic Marine Transportation Integrated Action Team and report contributed to the development of the National Ocean Policy's Strategic Action Plan for the Arctic, the report to the President, "Managing for the Future in a Rapidly Changing Arctic" and the President's National Strategy for the Arctic Region. The members of the CMTS Arctic IAT were subsequently recognized by USDOT Secretary and CMTS Chair, Anthony Foxx.

Thank you for your interest in the CMTS. Should you have questions or require additional information regarding the contents of the CMTS 2012-13 Summary Report, please contact me or Helen Brohl, Executive Director, at 202-366-3612 or visit www.cmts.gov.

David Murk

2012-13 CMTS Coordinating Board Chair and
Senior Maritime Safety and Security Advisor to the Secretary
Department of Transportation

Integrating e-Navigation Technologies and Services to Improve MTS Safety, Efficiency and Reliability

Background

The CMTS addresses interagency coordination of navigation services to improve the safety, efficiency and reliability of the MTS through the e-Navigation Integrated Action Team (IAT), established as a task team in April 2010 and affirmed as an IAT in March 2012. The purpose of the e-Navigation IAT is to facilitate the coordinated and integrated collection, processing and dissemination of navigation data and information to provide services to stakeholders, eliminate duplication, and enhance the reliability, efficiency and safety of our waterways and ports.



In February 2012, the CMTS Coordinating Board approved the *e-Navigation Strategic Action Plan* that provides a strategic framework for U.S. implementation of e-Navigation as an interagency initiative to develop an integrated information environment for marine transportation.

Activities and Accomplishments

- Organized outreach to receive industry input on priority needs and uses of navigation technologies and services, including a two-month online dialog on the Future of e-Navigation in the U.S. The industry and Federal agency on-line dialog resulted in five most discussed areas:
 - Broadband Connectivity at Sea
 - PORTS Data Transmitted via AIS
 - Navigation as a Free Web Service
 - Single Window Reporting
 - Open Source System Architecture
- Drafting a CMTS Policy Statement recommending the adoption of the S-100 Universal Hydrographic Data Model as the preferred standard for product specifications for marine-based data in the United States.
- Participation, through agency members, in international e-Navigation development through representation at IMO, IALA, IHO, RTCM, IEC, and other policy and technical bodies;
- Commenced discussions with the Radio Technical Commission for Maritime Services (RTCM) regarding the development of an MOU on e-Navigation between CMTS and RTCM; and,

- Supporting initial efforts by US Coast Guard in the “Navigation 2025” initiative.

Benefits to the U.S. MTS

The coordination and integration of e-Navigation data and information is intended to improve MTS safety by:

- improved decision support enabling the mariner and competent authorities ashore to select relevant information pertinent to the prevailing circumstances;
- a reduction in human error through provision of automatic indicators, warnings and fail-safe methods;
- enhanced navigation system resilience, leading to improved reliability and integrity; and,
- better integration of ship and shore-based systems; leading to better utilization of all human resources.

The CMTS e-Navigation initiative is also expected to augment security by enabling silent operation mode for shore-based stakeholders for domain surveillance and monitoring. Moreover, it will improve human resource management by enhancing the experience and status of the bridge team. It is also expected to increase environmental protection by:

- reducing the risk of collisions and groundings and the associated spillages and pollution; and,
- advancing the ability and capacity in responding and handling of emergencies such as oil spills.

The e-Navigation initiative will achieve efficiencies and reduced costs by:

- global standardization and type approval of equipment;
- automated and standardized reporting procedures;
- improved bridge efficiency allowing watch keepers to maximize time to keeping a proper lookout and using multiple methods to ascertain the ship's position; and,
- integration of systems that are already in place, precipitating the efficient and coherent use of new equipment that meets all user requirements.

Participating CMTS Members

- ❖ National Oceanic and Atmospheric Administration (Lead)
- ❖ U. S. Army Corps of Engineers (Lead)
- ❖ U. S. Coast Guard (Lead)
- ❖ National Transportation Safety Board
- ❖ Saint Lawrence Seaway Development Corporation
- ❖ Volpe Center

U.S. Arctic Marine Transportation Policy Coordination to Insure Safe and Secure Maritime Shipping

Background

Climate change and the loss of Arctic sea ice are driving the increase in human activities in the Arctic including increased shipping. Safe marine transportation is fundamental to these activities, including offshore oil and gas exploration, tourism, shipping, marine research, commercial fishing, national security and maritime domain awareness, and subsistence by indigenous peoples.



In response to these drivers, the CMTS established an U.S. Arctic Marine Transportation Integrated Action Team (IAT) in March 2010. The Arctic IAT reviewed the recommendations of the Arctic Council’s Arctic Marine Shipping Assessment (AMSA) of 2009, and recognized the need for additional Federal interagency coordination to assist with implementing some of the report’s recommendations, particularly with respect to marine transportation infrastructure. The IAT also developed an inventory of Federal Arctic activities. In August 2011, the IAT was directed by the Coordinating Board to respond to a Congressional directive in the U.S. Coast Guard Authorization Act of 2010 (Public Law 111-1281). This directive charged the CMTS with coordinating the development of domestic transportation policies to ensure safe and secure maritime shipping in the U.S. Arctic. The team determined that a more comprehensive review of an U.S. Arctic MTS, with an emphasis on the Federal role, was timely.

Activities and Accomplishments

During 2012-13, a nine-member CMTS interagency team completed its work to draft a comprehensive document in response to the AMSA recommendations and the Congressional directive. The report, “U.S. Arctic Marine Transportation System: Overview and Priorities for Action 2013” was approved by the Secretary of Transportation, and submitted to the President on July 30, 2013.

The CMTS U.S. Arctic MTS report is a comprehensive systematic look at the components and challenges for marine transportation in the U.S. Arctic region. It also captures and classifies the myriad of Federal activities and reports related to U.S. Arctic marine transportation. In addition, the report describes the status and trends of U.S. Arctic marine transportation, identifies its risks and challenges, and recommends actions to improve some of the sixteen elements of the U.S. Arctic marine transportation system. Moreover, the CMTS utilized the content of the report to support the development of the National Ocean Policy’s Strategic

Action Plan for the Arctic, and subsequently the National Ocean Policy Implementation Plan. The CMTS report also contributed to the development of the report to the President, “Managing for the Future in a Rapidly Changing Arctic” and the President’s National Strategy for the Arctic Region.

The CMTS *U.S. Arctic Marine Transportation System: Overview and Recommendations* report examined the implications of existing and expected increases in maritime traffic in the U.S. Arctic, and proposed a U.S. Arctic MTS improvement plan, including a prioritization of recommended federal actions. These recommended actions include:

- Improve sea ice and marine weather forecasts
- Map and chart U.S. Arctic waters
- Improve communications
- Pursue expanded AIS coverage and capabilities
- Improve Arctic environmental response management
- Ensure effective search and rescue
- Increase U.S. icebreaking capacity

Benefits to the U.S. MTS

The CMTS U.S. Arctic MTS report offers the first-ever systematic interagency approach to assess U.S. Arctic marine transportation needs. It also offers a first ever sector-specific plan for the U.S. Arctic. Ensuring a safe and efficient U.S. MTS in the Arctic is essential to meeting the nation’s economic development and national security objectives in the Arctic region. Moreover, implementing the proposed U.S. Arctic marine transportation improvement plan will result in a more robust U.S. Arctic MTS that will improve safety and reduce risk of damage to the fragile Arctic environment.

Participating CMTS Members

- ❖ U.S. Coast Guard (Lead)
- ❖ U.S. Maritime Administration (Lead)
- ❖ National Oceanic and Atmospheric Administration (Lead)
- ❖ Bureau of Ocean Energy Management, Regulation, and Enforcement
- ❖ Oceanographer of the Navy
- ❖ U.S. Army Corps of Engineers
- ❖ U.S. Department of State
- ❖ U.S. Maritime Administration
- ❖ U.S. Transportation Command

Promoting Interagency Collaboration to Enhance Transportation Infrastructure Investments

Background

The Department of Transportation (DOT) and U.S. Army Corps of Engineers (USACE) have been working with the Office of Management and Budget (OMB) to identify and capitalize on opportunities to improve infrastructure investments where shared equities exist since May 2011. The objective has been to synchronize and increase coordination when evaluating infrastructure project proposals with a systems view in cases



where Federal investments are contemplated. The effort culminated in an MOU signed on March 2, 2012 by the Deputy Secretary and the Assistant Secretary of the Army for Civil Works.

At the March 13, 2012 Coordinating Board meeting, recognizing the need to expand and capture the equities of all applicable federal agencies, Deputy Secretary Porcari asked the Coordinating Board to stand up an integrated action team (IAT) to address the medium and long-term goals that had been outlined in the Work Plan Framework of the DOT-Army Infrastructure Investment Alignment Working Group.

Activities and Accomplishments

- Summer 2013: The IAT executed a proof of concept exercise using the draft interagency Decision Criteria for Infrastructure Investments developed by the IAT.
- June 2013: The IAT welcomed the Department of Treasury as a co-lead for the Team!
- April 23, 2013: The IAT completed the MTS Funding Handbook including over 50 Federal applicable programs and subsequently posted the handbook to the CMTS website on May 9, 2013.
- December 2012: The IAT delivered a completed interactive Transportation Funding Map of Federal Multimodal Infrastructure Investments to the Coordinating Board.

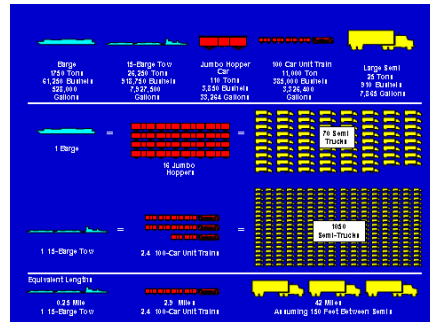
Benefit to the U.S.

Capturing and coordinating input from interested Federal CMTS agencies will lead to the development of decision tools for infrastructure investment. These tools will be used by decision-makers to better align Federal infrastructure investment across agencies enabling a safer, more efficient, better balanced and resilient U.S. MTS for the movement of our Nation's people and goods.

Participating CMTS Members

- ❖ Department of Transportation – Office of the Secretary (Lead)
- ❖ US Army Corps of Engineers (Lead)
- ❖ Department of Treasury (Lead)
- ❖ Maritime Administration
- ❖ Federal Highways Administration
- ❖ National Oceanographic and Atmospheric Administration
- ❖ Federal Maritime Commission
- ❖ Department of Commerce
- ❖ Environmental Protection Agency
- ❖ Office of Management and Budget
- ❖ Transportation Command
- ❖ International Trade Administration
- ❖ US Coast Guard

Researching and Measuring Performance to Identify Status, Needs, and Value of the Marine Transportation System



Background

The CMTS Coordinating Board established the Research and Development Integrated Action Team (IAT) in March 2009 with the 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: A Framework for Action* (July 2008). The IAT also serves as a crosscutting function among all CMTS IATs, and in particular, coordinates with the e-Navigation IAT by transitioning navigation services and products for national deployment.

The CMTS *Strategic Action Plan for Research and Development (R&D) in the Marine Transportation System* (January 2011) responds to the need for additional scientific information to address the challenges identified in the five priority areas identified in the CMTS *National Strategy*. The strategic action plan calls for a coordinated research framework aimed at leveraging and linking existing federal MTS research and development programs to improve the U.S. MTS.

Activities and Accomplishments

From June 26-28 2012, the CMTS and the Transportation Research Board co-sponsored a national biennial conference in Washington, DC entitled: *Diagnosing the Marine Transportation System: Measuring Performance and Targeting Improvement*. The conference also highlighted the necessity for a national strategic vision to foster a freight transportation system that is modern, efficient and fully integrated with all other modes of transportation. As a result of the 2012 conference and a follow-up expert workshop, a list of 60 draft performance measures was developed. These draft measures span the following categories: economic benefits to the nation, capacity, safety & security, resilience & reliability, and environmental stewardship. The IAT is conducting research to identify authoritative sources with publicly available data sets for each measure. Data collected as part of this research effort is being formatted so that information will be comparable to the greatest extent possible across categories. Visualizations in standard forms are being developed simultaneously so that stakeholders will be able to quickly and easily understand performance trends when the dashboard-style website for these MTS measures is ready.

The development of MTS performance measures is intended to complement efforts led by the Department of Transportation to implement freight provisions of Moving Ahead for Progress in the 21st Century (MAP-21), including the establishment and assessment of a national freight network. Members of the CMTS R&D IAT are participating on the MAP-21 teams to provide insight into the measures available for waterways. These measures will contribute to the MAP-21 report focused on a multi-modal performance evaluation of the national freight system. Other projects that have been initiated through CMTS partnerships include research into the development of an algorithm that will predict the amount of time vessels will have to wait at a station before passing through a lock chamber. This involves examining historical vessel traffic patterns on inland waterways, made possible through a combination of USCG, USACE, and Oak Ridge National Laboratories (ORNL) expertise. A related research effort is focused on integrating survey data from the DOT Freight Analysis Framework (FAF) and shipment records from the USACE Navigation Data Center to more accurately model and forecast freight flows as they shift between water and land-based transportation modes. Together these projects will improve our understanding of capacity limitations, both on the waterways and at intermodal transfer points.

Benefit to the U.S. MTS

A coordinated MTS research and development agenda will enable the country to efficiently adapt to pressing marine transportation infrastructure challenges, meet increased cargo demand, and address the environmental impacts of the MTS. The development of MTS performance measures will allow for the performance, needs, and value of the MTS to be assessed. These measures will also provide support for the freight initiative of MAP-21 to describe the condition and performance of the national freight network, an integral link to the U.S. MTS.

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
- ❖ Saint Lawrence Seaway Development Corporation
- ❖ U.S. Coast Guard
- ❖ U.S. Maritime Administration
- ❖ The Volpe Center (DOT)

Fostering MTS Program Coordination and Understanding

Background

One of the primary objectives of the CMTS Charter is to improve Federal MTS coordination. In line with this, the CMTS Business Plan (2008-2013) included the goal area of “Federal MTS Program Coordination” and directed the CMTS to compile a comprehensive compendium of Federal marine transportation programs. Beginning in 2011, the Federal Maritime Commission and CMTS Executive Secretariat led the development of a narrative and matrix of Federal MTS programs and functions.



Activities and Accomplishments

In February 2013, the CMTS issued the first ever compendium of Federal MTS programs. The final document included three versions of the Federal program/function matrix, each with increasing complexity, allowing flexibility to tailor the document for specific audiences. In addition, the team completed a detailed description of each Federal responsibility/role and points of contact should more information be sought. Each of these versions and the narrative were posted on the CMTS website at <http://www.cmts.gov/Resources/Compendium.aspx>.

The compendium and its three matrices illustrate that the Federal government provides a wide range of services and oversight regarding the U.S. MTS. In particular, more than thirty Federal Departments and agencies have marine transportation responsibilities, covering 75 prescribed program and functional areas. The matrix depicts Federal Departments and agencies that are actively engaged in a marine transportation program or function. The matrix provides a means to “at a glance” understand the decentralized nature of Federal MTS responsibilities.

Later in 2013, the compendium educated new members of Congress about the scope and breadth of Federal MTS responsibilities, and staff for the Ports Opportunity Renewal Trade and Security (PORTS) Caucus, and the Water Transportation Committee of the American Association of State Highway Transportation Officials. The compendium has become an integral part of all CMTS briefing materials and a useful awareness tool regarding the Federal role in the U.S. MTS.

Benefit to the U.S MTS

The review of Federal MTS programs and functions through the completion of the Federal MTS Compendium is a useful interagency initiative to identify potential Federal MTS program coordination opportunities. Once identified, like Federal MTS programs could be examined and efficiencies explored. Moreover, the compendium is intended to serve as an improved MTS governance understanding and management tool. Lastly, Federal MTS stakeholders are able to

use the matrix to further educate private sector stakeholders on agency jurisdictions, and the dynamics, value, and complexity of the Federal component of the U.S. MTS.

Participating CMTS Members

- ❖ Federal Maritime Commission (Lead)
- ❖ CMTS Executive Secretariat
- ❖ CMTS Interagency Working Group

Federal Marine Transportation System Matrix

By Department and Agency

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		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



Other Activities

Congress directed the CMTS to develop a Marine Transportation System Assessment Report through the Coast Guard and Maritime Transportation Act (Public Law 112-213), signed by President Obama on December 20, 2012. During the reporting period, designated staff from 15 CMTS member agencies were organized into five teams consistent with agreed upon priority areas: system performance, safety, security, environmental stewardship and investment. In the absence of funding or additional resources to perform the assessment and the limited time in which to complete the first one, the report was researched using existing sources of information and described under broad challenge areas. The CMTS developed an initial bibliography of over 100 sources to begin addressing the current state and importance of the MTS to the United States.



In November 2012, the CMTS was directed by GAO to issue an update of the 2008 *National Strategy for the Marine Transportation System: A Framework for Action*. Seventeen member agencies met in January 2013 to determine if the five priority areas from the 2008 report were still timely. The team recommended that the previous term “capacity” be replaced with “system performance” and the term “finance” be replaced with “investment.” Additionally, the team recommended that “safety and security” be provided individual consideration while environmental stewardship remained the same. The team also emphasized the importance of “resiliency” but recommended it be woven into the other priority areas. A draft “National Strategy for the Marine Transportation System: Moving the MTS Forward, 2013-2018” was completed in early July. The Coordinating Board recommended withholding the National Strategy until the challenges expressed in the MTS Assessment Report can be cross-referenced for appropriate examination and recommended actions.

During the reporting period, the CMTS updated the “Maritime Data Portal” (MPD) to integrated modern search engine applications. Previously, each inquiry required precise keywords that matched a document’s title to access. Now, the searcher need only enter key words and entire documents are searched for association. The MPD may be found at:

<http://www.cmts.gov/Resources/DataPortal.aspx>.

During the reporting period, the CMTS updated the compendium of MTS Federal Advisory Committees (FACs). The list of MTS FACs includes thirty-six different advisory committees that have direct or indirect impact on the MTS. The list is available at:

http://www.cmts.gov/downloads/MTS_Federal_Advisory_Committee_List_formatted_July2013.pdf. The revised list now also includes a cross reference list of committees by department:

REFERENCE GUIDE

Department of Commerce

Advisory Committee on Supply Chain Competitiveness (ITA)
Committee of Chairs of the Industry Trade Advisory Committee (DOC)
Hydrographic Services Review Panel (NOAA)
Industry Trade Advisory Committee on Services and Finance (ITA)
Manufacturing Council (ITA)
Marine Fisheries Advisory Committee (NOAA)
Marine Protected Areas Federal Advisory Committee (NOAA)
President's Export Council (DOC)
US Integrated Ocean Observation System Committee (NOAA)

Department of Defense

Chief of Engineers Environmental Advisory Board (USACE)
Inland Waterway Users Board (USACE)
USACE Coastal Engineering Research Board (USACE)

Department of Homeland Security

Advisory Committee on Commercial Operations of Customs and Border Protection (CBP)
Chemical Transportation Advisory Committee (USCG)
Commercial Fishing Safety Advisory Committee (USCG)
Critical Infrastructure Partnership Advisory Council
Great Lakes Pilotage Advisory Committee (USCG)
Homeland Security Advisory Council (DHS)
Merchant Marine Personnel Advisory Committee (USCG)
Merchant Mariner Medical Advisory Committee (USCG)
National Boating Safety Advisory Council (USCG)
National Maritime Security Advisory Committee (USCG)
National Offshore Safety Advisory Committee (USCG)
Navigation Safety Advisory Committee (USCG)
Towing Safety Advisory Committee (USCG)
US Customs and Border Protection Airport and Seaport Inspections User Fee Advisory Committee (CBP)

Department of the Interior

Ocean Energy Safety Advisory Committee (DOI)
Sport Fishing & Boating Partnership Council (FWS)

Department of Labor

Maritime Advisory Committee for Occupational Safety and Health (OSHA)

Department of State

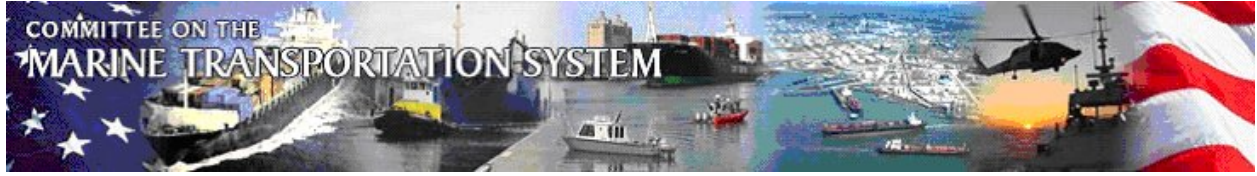
Shipping Coordinating Committee (DOS)

Department of Transportation

Advisory Council for Transportation Statistics (RITA)
National Freight Advisory Council (DOT)
St. Lawrence Seaway Development Corporation Advisory Board (SLSDC)
US Marine Transportation System National Advisory Council (MARAD)

Environmental Protection Agency

Clean Air Act Advisory Committee (EPA)
National Advisory Council for Environmental Policy and Technology (EPA)



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