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United States
Coast Guard



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U. S. COAST GUARD

STATEMENT OF

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ON

COAST GUARD ICEBREAKING

BEFORE THE

SUBCOMMITTEE ON COAST GUARD AND MARITIME TRANSPORTATION

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

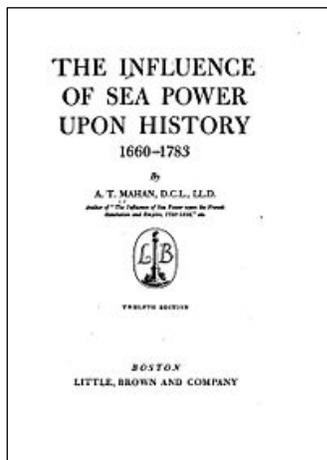
U.S. HOUSE OF REPRESENTATIVES

JULY 16, 2008

Good Afternoon Mr. Chairman and distinguished members of the Subcommittee. It is a pleasure to appear before you today to discuss the Coast Guard's icebreaking program.

STRATEGIC SIGNIFICANCE OF USCG ICEBREAKING CAPABILITY

Captain Alfred Thayer Mahan, President of the Naval War College, unofficial advisor to President Theodore Roosevelt, and author in 1890 of the landmark treatise titled *The Influence of Sea Power*



Upon History, framed the importance of strong naval forces and merchant marine capacity to a nation's ability to facilitate and project military, economic, and political strength on its waters and the high seas. The significance of Mahan's strategic view continues to this day and is memorialized in statute (e.g., Jones Act and Cargo Preference Act), regulation (e.g., Federal Acquisition Regulations requirements to assert preference for U.S. flag vessels to move certain government cargo and officials), and policy designed to support and develop the Nation's governmental and commercial maritime capacity.

Recognizing the key strategic benefits of a robust and capable U.S. fleet articulated by Mahan and substantiated historically, it is imperative that our Nation maintain its ability to project maritime strength in all environments throughout the world.

Whether on the Great Lakes, the critical waterways of the East Coast or in the harsh operating environments of the Polar Regions, the Coast Guard's icebreaker fleet provides a vital service to the Nation across all safety, security and stewardship missions. The Coast Guard has statutory authority and Executive direction to carry-out icebreaking operations and maintain icebreaking facilities to support multiple missions. Domestically, Coast Guard ice breakers support Federal, state and local agencies, maintain open waterways to ensure the continuous flow of commerce, patrol waterways to enforce our laws and protect critical infrastructure, and are available to assist mariners in distress. Internationally, the Coast Guard's medium and heavy icebreakers primarily operate in support of U.S. research interests in the Arctic and help maintain resupply routes to Antarctica's McMurdo Station.

Changing environmental conditions and advances in technology are expanding activity in the Arctic Region. The potential for access to more efficient shipping routes is fueling demand. Continued growth in commerce, tourism, and exploratory activities in the Arctic is increasing risks to mariners and ecosystems while challenging law enforcement regimes, operational capabilities, and conventional assumptions of sovereignty. The U.S. Coast Guard must be capable of protecting national interests in the Polar Regions. I am committed to ensuring we have the capability, competency and capacity needed to remain responsive to the Nation's domestic and Polar icebreaking needs.

DOMESTIC ICEBREAKING

Ice formation on the Great Lakes and the rivers and harbors of the East Coast would render most vessels inoperable during winter months if not for Coast Guard domestic icebreaking operations. On the Great Lakes, Coast Guard icebreakers provide support that extends the shipping season for transport of critical cargo such as iron ore, coal, and steel. In the Northeast, icebreaking services ensure critical supplies of heating oil are delivered throughout the winter. Moreover, Coast Guard icebreakers break ice jams to help prevent flooding in the Great Lakes, the Northeast, and the Mid-Atlantic.

Assets

Domestic icebreaking operations are primarily accomplished by the 240-foot CGC MACKINAW, nine 140-foot icebreaking tugs, and eleven 65-foot small harbor tugs (which are necessary for operation in shallow waterways). The 225-foot seagoing buoy tenders are also used for icebreaking operations, although on a more limited basis. The 175-foot coastal buoy tenders are occasionally employed to conduct icebreaking operations in addition to maintaining aids to navigation.

CGC MACKINAW, five 140-foot icebreaking tugs, and two 225-foot buoy tenders are homeported on the Great Lakes. In addition, there are four 140-foot icebreaking tugs, eleven 65-foot small harbor tugs and three 225-foot buoy tenders homeported in the First and Fifth Districts on the East Coast. With the exception of CGC MACKINAW and the buoy tenders, the 22 vessels comprising the remainder of the domestic icebreaking fleet are at or past their designed service lives. Both the 140-foot icebreaking tugs and the 65-foot small harbor tugs are showing signs of age and wear. We are focusing maintenance projects on critical engineering systems as a bridging strategy until the vessels can be replaced or modernized through an appropriate recapitalization program.

CGC MACKINAW – COMMISSIONED JUNE 2006

The winter of 2007-2008 was the first ice season that the new CGC MACKINAW was fully engaged with icebreaking operations on the Great Lakes. Ice conditions were more severe than in previous years and provided an operating environment suitable to test the ship's icebreaking performance as well as develop icebreaking tactics that maximize the capability of the new propulsion system. CGC MACKINAW exceeded our initial expectations and offers several advantages over the vessel it replaced.



CGC MACKINAW's state-of-the-art "azipod" propulsion system provides excellent maneuverability and greater flexibility in difficult ice conditions. This unprecedented level of agility in ice saves time when assisting beset vessels and when coming about in restricted waterways. In addition to icebreaking, CGC MACKINAW serves as a capable buoy tender. Overall, the acquisition of MACKINAW is a resounding success for the Coast Guard and the American public.

Providing Economic Security

The Great Lakes iron ore, steel and freight transportation industries constitute a considerable economic force, employing some 500,000 people in the region. Approximately 15 million tons of raw materials are shipped on the Great Lakes during the winter. An economic analysis of the Coast Guard's domestic icebreaking mission completed in 2002 by the Center for Naval Analysis concluded that the benefit-cost ratio of the Great Lakes icebreaking mission ranges from 2-to-1 to 4-to-1. During the 2006-2007 ice season, the U.S. Coast Guard and Canadian Coast Guard partnered to facilitate movement of more than \$334 million of cargo on the Great Lakes. Beyond benefits to the economies of both countries, other benefits include flood control and other response capabilities including search and rescue.

POLAR ICEBREAKING

Ice-strengthened vessels work in the Arctic to enable maritime mobility and enforce fisheries and safety laws. These multi-mission vessels also support the Coast Guard's role in national defense and our ability to project U.S. presence to protect national and homeland security interests. Polar-class icebreakers primarily provide support to other agencies for national research and science needs in the Polar Regions. These icebreakers also support the full spectrum of Coast Guard missions while enroute to, and operating in, high-latitude areas.

POLAR SEA in Alaska Enforcing Fisheries and Safety Laws (April 2008)

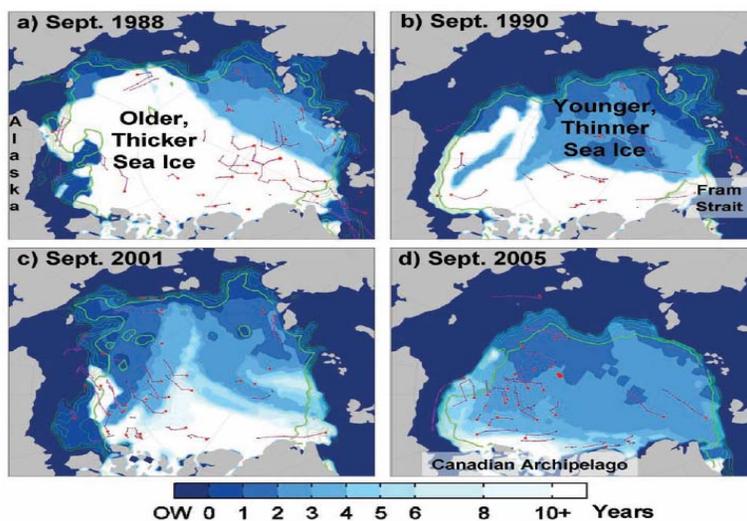


If climatic conditions enable greater access to the Polar Regions, I expect we may see an increase in human activity, oil and gas exploration, commodity transportation, fishing, and eco-tourism. There are still many risks and technological challenges to overcome before these activities become economically feasible. Eventually, however, each of these activities will

require the Coast Guard to have the capability to meet statutory responsibilities involving maritime domain awareness, disaster/humanitarian relief, enforcement of laws and treaties, marine pollution response, search and rescue and national security. Icebreakers or ice-strengthened vessels will be part of that capability.

Changing Conditions and Evolving Strategic Needs

The future need for U.S. icebreaking capability is currently under discussion in several interagency forums and will be addressed specifically in the Coast Guard's High Latitude Study, described in the President's 2009 Request. In my personal assessment as Commandant, I believe several factors related to interest in Arctic exploration and development indicate the region will become increasingly more critical to U.S. national security interests in the future:



- Dynamic Movement of Arctic Sea Ice: During the warmer months in the Arctic, greater ice movement may increase danger to shipping owing to unpredictable and dynamic movement of ice. If more ships transit Arctic waters, the need for U.S. icebreaking capability could increase with the dissolution of solid, formerly predictable multi-year ice.
- Energy Security: A significant percentage of the world's energy reserves (i.e., oil, gas, gas hydrates) are estimated to be in the Arctic region and some portion of those reserves are within United States offshore claims. As offshore oil/gas industry infrastructure grows over the next few decades, the United States may need additional maritime presence, possibly including greater icebreaking capability, to help protect national and allied critical infrastructure in these isolated areas.
- U.S. Sovereign Rights: The United States Government needs icebreaking capability to continue to project maritime presence and reinforce U.S. sovereign rights in the Arctic Ocean.
- Prevention and Incident Response: The United States Government must be prepared to address "all threats, all hazards" in the Polar Regions involving safety, security and stewardship. Increased activity will lead to increased threats on many fronts for which we must be prepared to respond. Additional icebreaking capability may be needed.
- Safeguarding our Oceans and Resources: Increased incursions into the U.S. Exclusive Economic Zone (EEZ) will likely occur over an expanded area as ice recedes and fisheries shift northward. Increased ice-strengthened surface presence will be useful to detect and prevent illegal incursions and protect U.S. living marine resources.

Identification and prioritization of U.S. national interests in the Polar Regions will drive development of Administration capability and resource requirements.



Assets

The Coast Guard medium and Polar-class icebreaker fleet consists of the cutters HEALY, POLAR SEA, and POLAR STAR, all homeported in Seattle, Washington. The newest cutter, CGC HEALY, was commissioned in 2000 and conducts annual deployments for Arctic scientific research as a priority. Operational time on CGC HEALY is at a premium and almost exclusively devoted to direct mission tasking of other agencies.

CGC POLAR SEA and CGC POLAR STAR were commissioned in the late 1970s and have reached the end of their designed service lives. CGC POLAR SEA completed an extensive overhaul in 2006 that is expected to extend her service life through 2014. The National Science Foundation (NSF) uses CGC POLAR SEA in a backup capacity for Operation Deep Freeze, the annual resupply of McMurdo Station in Antarctica. In addition, NSF advised the Coast Guard of the likelihood that there would be Arctic science projects for the POLAR SEA in FY 2009. The Coast Guard recently deployed her to the Bering Sea to support law enforcement and conduct ice operations training to preserve minimal levels of competency and currency. CGC POLAR STAR was placed in caretaker status (i.e., lay-up) in 2006 and requires 12 to 18 months lead time and significant overhaul to return to full operational condition.

Funding Arrangement with the National Science Foundation (NSF)

In 2006, the Department of Homeland Security's Appropriations Act transferred the Coast Guard's \$47.5 million in budget authority for Polar icebreaking to NSF. Through a Memorandum of Agreement (MOA), NSF later funded a total of \$55.2 million in FY 2006 and \$52.1 million in FY 2007 for the vessels. The FY 2008 appropriation to NSF is \$57.0 million.

While Polar-class icebreakers primarily provide support to NSF and other agency's research missions, the current Coast Guard-NSF MOA gives the Coast Guard a reasonable ability to divert these vessels to search and rescue, oil spill and other missions to respond to emergencies and threats to maritime safety and security. We are working closely with NSF and the Administration to ensure preservation and efficacy of our Nation's critical icebreaking capabilities and competencies. To prepare for the impacts of changing Arctic conditions on multiple agencies and their missions, the Administration has undertaken an Arctic policy review in which the Coast Guard is an active participant.

CONCLUSION

The Coast Guard icebreaking mission, our cutters, and the men and women who operate them are national assets providing a significant service and return on investment for the American public. CGC MACKINAW and CGC HEALY are two of the most technologically-advanced cutters in the Coast Guard and continue to surpass every expectation. Despite these successes, many challenges remain including several of our icebreaking assets reaching their designed service life. *We must keep*



International Bathymetric Chart of the Arctic Ocean
Courtesy of National Geospatial-Intelligence Agency

faith with Mahan's vision and doctrine for the United States to maintain the capacity to project its power at sea, and I am committed to ensuring the Coast Guard can meet America's icebreaking needs through use of a modern fleet capable of mission success in harsh ice environments at home and abroad.

Thank you for the opportunity to testify today. I look forward to your questions.