Committee on Transportation and Infrastructure
U.S. House of Representatives
Washington, DC 20515

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July 8, 2016

SUMMARY OF SUBJECT MATTER

TO: Members, Subcommittee on Coast Guard and Maritime Transportation
FROM: Staff, Subcommittee on Coast Guard and Maritime Transportation
RE: Subcommittee Hearing on the "Coast Guard Arctic Implementation Capabilities"

PURPOSE

The Subcommittee on Coast Guard and Maritime Transportation will meet on Tuesday, July 12, 2016, at 10:00 a.m. in 2167 Rayburn House Office Building to receive testimony related to Coast Guard Arctic Implementation Capabilities. The Subcommittee will hear from the U.S. Coast Guard, the U.S. Government Accountability Office, the U.S. Navy, the Congressional Research Service, the Shipbuilders Council of America, and the Center for Strategic and International Studies.

BACKGROUND

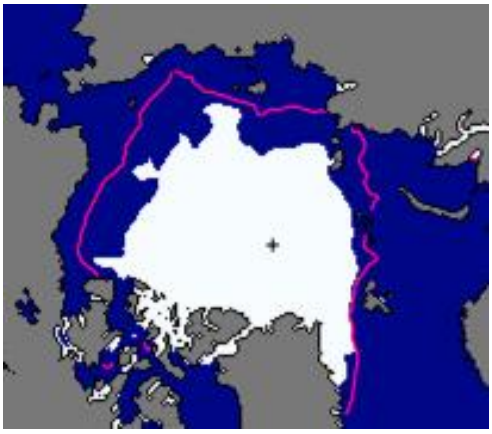
The Arctic region is the area north of the Arctic Circle, North Latitude 66.5622°. The Arctic Ocean dominates the Polar region, covering 6 million square miles (15.6 million square kilometers). Arctic temperatures range from an average winter value of -40° F (-40° C) to an average summer temperature just under 32° F (0° C). There are eight Arctic nations: Canada, Denmark (for Greenland), Finland, Iceland, Norway, Russia, Sweden, and the United States.

The United States Arctic, as defined in statute, includes 39,000 miles of shoreline in Alaska, including the Aleutian Islands. The Administration regards over half of United States Arctic waters, 242,000 square nautical miles, as navigationally significant. However, only two percent (4,300 square nautical miles) have been surveyed with modern technology.[1] Three Arctic

[1] In 2015, NOAA collected 500 square nautical miles of coastal area data along western Alaska and 12,000 linear nautical miles of trackline depth measurements along the Coast Guard's proposed transit route between the Bering Strait and Dutch Harbor (see Appendix for Bering Strait Port Access Route figure).

seas - the Bering, the Chukchi, and the Beaufort - border Alaska and historically these seas have been frozen for more than half the year.

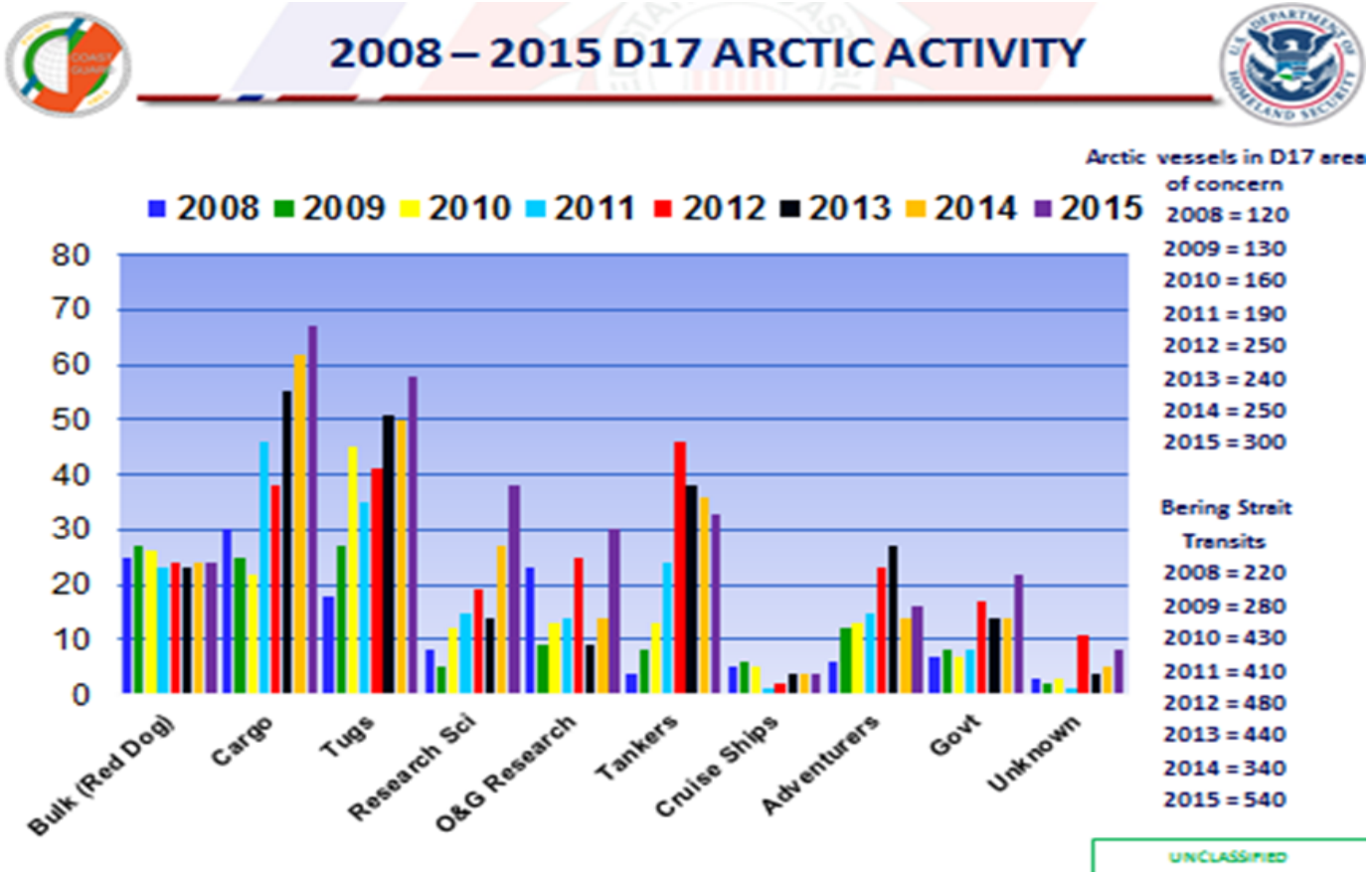
The U.S National Snow and Ice Data Center (NS&DC) reports the Arctic sea ice mean for 1981-2010 was 2.51 million square miles (6.5 million square kilometers), shown as the pink line in the NS&DC graphic to the right. The white shows September 2015 sea ice levels, totaling 1.78 million square miles (4.6 million square kilometers).



Source: National Snow and Ice Data Center

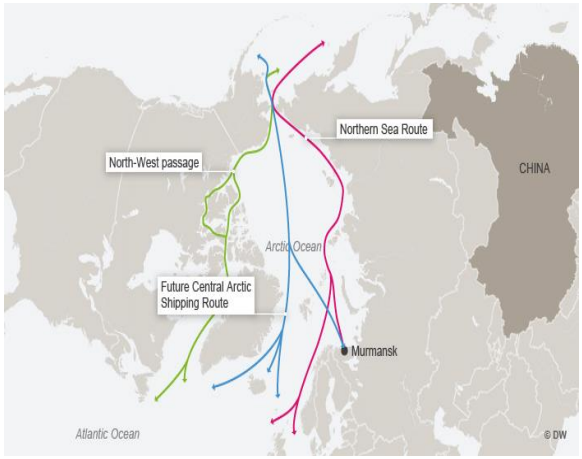
The Arctic maritime season typically runs from June through October, with unaided navigation occurring during a more limited time frame.

The reduced levels of summer sea ice have led to increased vessel traffic in the region. The following figure shows vessel traffic in the Arctic since 2008.



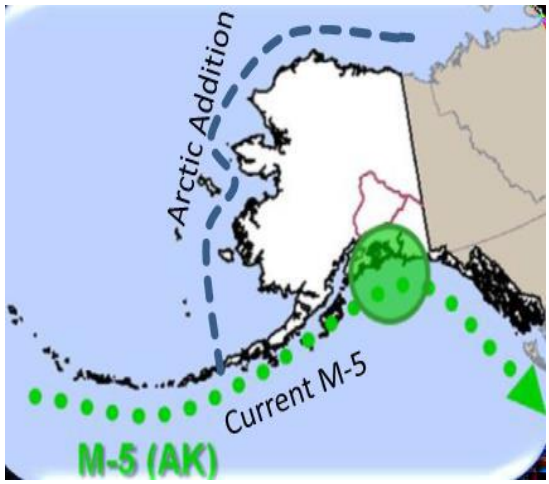
Source: U.S. Committee on the Marine Transportation System (CMTS) Arctic Marine Transportation Integrated Action Team report titled "A Ten-year Prioritization of Infrastructure Needs in the U.S. Arctic." D17 is Coast Guard District 17 Alaska.

Arctic transit routes include the Northwest Passage (green) and the Northern Sea Route (red) and the potential Transpolar Sea Route (blue) as shown in the graphic to the right. According to the U.S. Committee on the Marine Transportation System (CMTS), even with lower summer sea ice levels, navigation in the Arctic will continue to be challenging and hazardous, in part due to the variability of sea ice from year to year.[2]



Source: Deutsche Welle 12-15-2014 article

CMTS also reports that the America's Marine Highway (AMH) System is not currently reflective of the commercial shipping activity along the Arctic areas of the west and north coasts of Alaska.[3] The closest route is the M-5 Alaska Marine Highway Connector that currently consists of the Pacific Ocean coastal waters, including the Inside Passage. The Coast Guard is developing a proposed Arctic route through the Bering Strait to the M-5 AMH Connector through its Bering Strait Port Access Route Study.



Source: CMTS

In addition to increased vessel traffic in the region, exploration efforts could increase due to international interest in the oil (estimated at 13 percent of world's undiscovered oil), gas (30 percent undiscovered gas), and mineral deposits(roughly $1 trillion worth or gold, zinc, nickel and platinum) in the Arctic.

International cooperation in the Arctic includes the Arctic Council, which was established in 1996 with the signing of the Ottawa Declaration. The Council is made up of the eight Arctic nations. Organizations representing Arctic indigenous peoples have permanent participant status on the Council. The Council chairmanship rotates among the nations; currently the United States is chair (2015-2017). The Council is a consensus based, intergovernmental forum that works to promote environmental, social, and economic aspects of sustainable development in the Arctic.

[2] "*A Ten-year Prioritization of Infrastructure Needs in the U.S. Arctic*", U.S. Committee on the Marine Transportation System (April 2016).
[3] *id.*

In 2009 and 2013, the Administration released strategic guidance and policies[4] for the Arctic region. The 2013 National Arctic Strategy outlines the United States national security interests in the Arctic region. It also lists prioritized lines of effort, building upon existing initiatives by federal, state, local, and tribal authorities, private sector, and international partners, focusing on efforts where opportunities exist and action is needed. Many federal departments and agencies developed their own Arctic strategies, based on the national strategy, including the Coast Guard.

The Coast Guard's 2013 Arctic Strategy states the Service's current suite of cutters, boats, aircraft, and shore infrastructure must meet its near-term Arctic mission demands. Coast Guard assets are all located below the Arctic Circle. To address this issue, the Service employs mobile command and control platforms, such as large cutters and ocean-going ice-strengthened buoy tenders, as well as seasonal air and communications capabilities through leased or deployable assets and facilities. These mobile and seasonal assets and facilities have proven to be important enablers for front-line priorities in the region, including search and rescue operations, securing the maritime border, collecting critical intelligence, responding to potential disasters, and protecting the marine environment.

There have been a number of U.S. reports[5] indicating priority areas for the United States to focus on in the Arctic, including acquiring new heavy icebreakers, conducting surveys to improve nautical charts, improving communications capabilities, improving weather forecasting and modeling, constructing a deep-draft U.S. Arctic port(s), and developing community and regional emergency response networks in preparation for vessel and aircraft accidents and environmental damage related to increased ship traffic and industry.

Since 2012, the Coast Guard has implemented Arctic Shield operations, with the objective to perform Coast Guard missions, enhance Arctic maritime domain awareness, broaden partnerships, and enhance and improve preparedness, prevention, and response capabilities. The Service deployed a number of assets as part of its Arctic Shield 2015 operations, including the ice breaker Coast Guard Cutter (CGC) *Healy*; the national security cutter *Waesche*; the high endurance cutter *Boutwell*; the medium endurance cutter *Alex Haley*; the seagoing buoy tenders *Sycamore* and *Maple*; and two Coast Guard MH-60 Jayhawk helicopters from Air Station Kodiak, Alaska which were forward deployed to Deadhorse, Alaska. Arctic Shield 2015 operations included an oil spill exercise near Kotzebue, Alaska. Arctic Shield 2016 operations include a planned joint Coast Guard – U.S. Northern Command sponsored mass search and rescue exercise scheduled for August 22, 2016 through August 26, 2016.

[4] 2009 President National Security Directive; 2009 Presidential directive on the Arctic region; and 2013 National Strategy for the Arctic Region, with its 2014 and 2016 Implementation Plans.
[5] 2009 Arctic Council *Arctic Marine Shipping Assessment*; 2013 White House National Strategy for the Arctic Region (NSAR) and 2014 Implementation Plan; CMTS 2013 Arctic Report; 2014 GAO *Maritime Infrastructure: Key Issues Related to Commercial Activity in the U.S. Arctic over the Next Decade*; and 2015 Alaska Arctic Policy Commission report and implementation plan.

U.S. Government Accountability Office Report

In June 2016, the U.S. Government Accountability Office (GAO) released a report titled "*Implementation of Arctic Strategy is Underway, but Agency Could Better Assess How Its Actions Mitigate Known Arctic Capability Gaps*." In the report, the GAO reviewed the Coast Guard's responsibilities, capabilities, and plans for the Arctic. The report outlines the Coast Guard's progress implementing its Arctic Strategy, its ability to assess its Arctic capabilities and actions taken to mitigate and identify gaps, and its ability to carry out polar icebreaking operations.

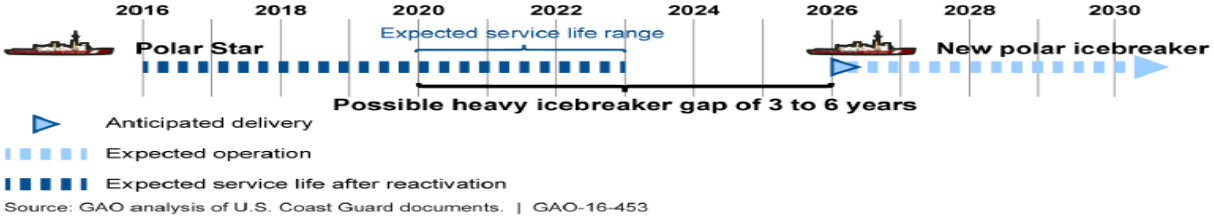
The GAO found positive results with the Coast Guard's implementation of its Arctic Strategy. The Service is using Arctic Shield operations as its primary method to better understand agency capabilities and associated gaps in order to take action to help mitigate any gaps. However, the GAO reported the Service is not systematically assessing its actions, across the agency, and without this assessment the Service cannot fully assess the effectiveness of its mitigation efforts. In its response to the GAO, the Service stated that starting in December 2016 it would conduct annual reviews that will include an assessment of the effectiveness of its mitigation efforts. The GAO urged the Service to also review Arctic capability gaps of other agencies and how they may impact Coast Guard missions.

The Service has two Class III-heavy icebreakers – CGC *Polar Sea* (inactive since 2010) and CGC *Polar Star* – that were built in 1978 and 1976, respectively. As mentioned earlier, the CGC *Healy*, a medium ice breaker built in 2000, is also active and operates in the Arctic.

The GAO notes that since 2010 the Coast Guard has been unable to fulfill some of its icebreaking responsibilities, mainly due to the *Polar Sea* being inactive. The Service's ice breaker fleet supports scientific research, within its Ice Operations mission, and promotes maritime security as part of its Defense Readiness mission. Between 2010 and 2015, the Service was unable to complete five out of 26 requests for polar icebreaking, including four of 11 requests in 2011 and 2012 when both the *Polar Sea* and *Polar Star* were unavailable.

Further, the GAO reported that future plans to acquire a new icebreaker by the Coast Guard are limited by legal and operational requirements and current projections show a three to six year gap in heavy icebreaking capability before a new icebreaker is operational, as shown in the following GAO graphic.

Coast Guard's Heavy Icebreaker Availability and Expected Capability Gaps, Present until 2030



Source: GAO analysis of U.S. Coast Guard documents. | GAO-16-453

Finally, the GAO noted the Service has not determined the cost effectiveness of reactivating the *Polar Sea*, estimates for reactivation range from $99.2 to $427 million. The 2015 Coast Guard Polar Icebreaker Bridging Strategy states that if the Service decides not to reactive the *Polar Sea*, it will need to determine the feasibility of extending the service life of the *Polar Star*. *Polar Star*'s 2012 reactivation cost $62.6 million for seven to ten years of additional service. The Service also notes in the Bridging Strategy that leasing is not an option for the Service.

The President requested $150 million in the fiscal year 2017 budget request to fast-track construction of a new polar-class icebreaker. The Senate Committee on Appropriations responded and included $1 billion for the first ship of the Polar Icebreaker Recapitalization Project in S. 3000, Department of Defense Appropriations Act, 2017.

WITNESSES

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Shipbuilders Council of America