Admiral Robert J. Papp, Jr.
U.S. Special Representative for the Arctic

October 2015
President Obama Speaking at GLACIER
President Obama in Alaska
Visiting Seward, Kivalina, and Kotzebue

Official White House Photo by Pete Souza

Official White House Photo by Chuck Kennedy

Official White House Photo by Pete Souza

Official White House Photo by Pete Souza
Arctic Boundary as defined by the Arctic Research and Policy Act (ARPA)

All United States and foreign territory north of the Arctic Circle and all United States territory north and west of the boundary formed by the Porcupine, Yukon, and Kuskokwim Rivers; all contiguous seas, including the Arctic Ocean and the Beaufort, Bering and Chukchi Seas; and the Aleutian chain.¹

Credit: US Arctic Research Commission
Change in the Arctic: Rapid Warming
U.S. National Interests in the Arctic

- National defense;
- Sovereign rights and responsibilities;
- Maritime safety;
- Energy and economic benefits;
- Environmental stewardship;
- Scientific research;
- Indigenous peoples and their rights & cultures;
- Preservation of the rights, freedoms, and uses of the sea as reflected in international law.
President Obama’s Visit to the American Arctic

- Safety and security
  - New Icebreaker

- Enabling safe marine operations and transportation
  - Mapping and charting efforts in the Bering, Chukchi and Beaufort Seas

- Advancing Climate Resilience
  - Naming of Denali Commission to coordinate Federal, State, Tribal resources to assist communities to address impact of climate change

- Access to Clean Energy Solutions
  - New $4 million initiative by remote Alaskan communities to adopt sustainable energy strategies, through a competitive effort

- Releasing new climate data and tools
  - NSF is making available in both hard-copy and explorable-digital formats the most comprehensive pan-Arctic map ever published by USG
The Ottawa Declaration (1996) formally established the Arctic Council as a high level intergovernmental forum to promote cooperation, coordination and interaction among the Arctic States, with the involvement of the Arctic indigenous communities and other Arctic inhabitants on common Arctic issues.

Particular emphasis on sustainable development and environmental protection in the Arctic; military security issues are specifically excluded from its mandate.
Arctic Council Structure: U.S. Chairmanship
Overarching Goals

• Continue strengthening the Arctic Council as an intergovernmental forum
• Introduce new long-term priorities into the Arctic Council
• Raise Arctic and climate change awareness domestically and across the world
Arctic Priorities

- Balanced thematic pillars of the Arctic Council during the US Chairmanship 2015-17:
  - Arctic Ocean Safety, Security, and Stewardship
  - Improving Economic and Living Conditions
  - Addressing Impacts of Climate Change

- Arctic as a region of stability, peace and international cooperation

- Arctic climate change impacts locally and globally
Ambitious and Balanced Agenda

**ARCTIC COMMUNITIES**
- Renewable Energy
- Community Sanitation & Public Health
- Water Resources
- Freshwater Security
- Telecommunications Infrastructure
- Suicide Prevention & Resilience

**ARCTIC OCEAN**
- Search & Rescue Exercises
- Marine Environmental Protection
- Marine Protected Areas Network
- Arctic Ocean Cooperation
- Arctic Ocean Acidification

**ARCTIC CLIMATE**
- Short-lived Climate Pollutants
- Arctic Climate Adaptation & Resilience
- Pan-Arctic Digital Elevation Map
- Early Warning Indicator System
Tracks of Cook’s Three Voyages

Red = Endeavour (1768-1771)
Green = Resolution & Adventure (1772-1775)
Blue = Resolution & Discovery (1776-1780)
Conquerors
How Portugal seized the Indian Ocean and forged the First Global Empire
World Trade Patterns 1500s and 1600s

- Silver
- Silks, porcelain, spices
- Slaves
- Sugar
- Cheap manufactured goods

Map showing trade routes and major regions of the world during the 1500s and 1600s.
Arctic Shipping Routes

- North-West Passage (NWP)
- Northern Sea Route (NSR)
- Transpolar Sea Route (TSR)
- Arctic Bridge Route (ABR)
# U.S. Polar Icebreaker Capabilities

Source: July 28, 2015 Congressional Research Service Report

<table>
<thead>
<tr>
<th></th>
<th>Polar Star</th>
<th>Polar Sea</th>
<th>Healy</th>
<th>Palmer</th>
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<tbody>
<tr>
<td>Operator</td>
<td>USCG</td>
<td>USCG</td>
<td>USCG</td>
<td>NSF</td>
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<tr>
<td>U.S.-Government owned?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No*</td>
</tr>
<tr>
<td>Currently operational?</td>
<td>Yes (reactivated on December 14, 2012)</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Length (feet)</td>
<td>399</td>
<td>399</td>
<td>420</td>
<td>308</td>
</tr>
<tr>
<td>Displacement (tons)</td>
<td>13,200</td>
<td>13,200</td>
<td>16,000</td>
<td>6,500</td>
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<tr>
<td>Icebreaking capability at 3 knots (ice thickness in feet)</td>
<td>6 feet</td>
<td>6 feet</td>
<td>4.5 feet</td>
<td>3 feet</td>
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<tr>
<td>Ice ramming capability (ice thickness in feet)</td>
<td>21 feet</td>
<td>21 feet</td>
<td>8 feet</td>
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<tr>
<td>Operating temperature</td>
<td>-60° Fahrenheit</td>
<td>-60° Fahrenheit</td>
<td>-50° Fahrenheit</td>
<td>n/a</td>
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<tr>
<td>Crew (when operational)</td>
<td>155b</td>
<td>155b</td>
<td>85c</td>
<td>22</td>
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<tr>
<td>Additional scientific staff</td>
<td>32</td>
<td>32</td>
<td>35d</td>
<td>27-37</td>
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**Sources:** Prepared by CRS using data from U.S. Coast Guard, National Research Council, National Science Foundation, Department of Homeland Security (DHS) Office of Inspector General, and (for Palmer) additional online reference sources. n/a is not available.

* Owned by Edison Chouest Offshore (ECO) of Galliano, LA, and leased to NSF through Raytheon Polar Services Company (RPSC).

* Includes 24 officers, 20 chief petty officers, 102 enlisted, and 9 in the aviation detachment.

* Includes 19 officers, 12 chief petty officers, and 54 enlisted.

* In addition to 85 crew members 85 and 35 scientists, the ship can accommodate another 15 surge personnel and 2 visitors.