

# ALASKA DEEP DRAFT ARCTIC PORTS STUDY

## ARCTIC PORTS STUDY AREA

The Alaska Department of Transportation and Public Facilities (ADOT&PF) and the US Army Corps of Engineers (USACE) are co-sponsoring the Alaska Deep Draft Arctic Ports Study to evaluate potential port locations on the northern and western coasts of Alaska. The study is in response to the Arctic coast experiencing increased vessel traffic. Alaskan Arctic port(s) would serve as a major infrastructure asset and northernmost port for the US Coast Guard (USCG), the US Navy, and the National Oceanic and Atmospheric Administration (NOAA) in protecting and maintaining federal sovereignty and the environment. Arctic port(s) would support search and rescue, oil spill response, and economic development.

The 2012 Alaska Deep Draft Arctic Ports Study includes: defining the study area, identifying other agency efforts, evaluating public/private partnerships, examining problems and opportunities, establishing siting criteria, conducting scenario analyses, identifying potential sites, engaging stakeholders and communities, and scoping additional study efforts. Drafts of these report components are being prepared by the Project Development Team which includes ADOT&PF, USACE, and RISE Alaska/ARCADIS. Background documents for the Alaska Regional Ports Study and additional information about this study are available at <http://www.poa.usace.army.mil/en/cw/AKPortsStudy.htm>

We appreciate your review of these working draft materials. All public and stakeholder input/comments are welcome and will be considered by the Project Development Team. These working draft products will be refined throughout the year and included in the Alaska Deep Draft Arctic Ports Study scheduled for publication in November 2012.

Please email your comments to the Project Development Team at [Akregports@usace.army.mil](mailto:Akregports@usace.army.mil).

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## ARCTIC PORTS STUDY AREA

### MULTIPLE DEFINITIONS OF THE ARCTIC

There are many ways to define the Arctic. The Arctic has been defined by temperature, ice, law, the presence of tundra vegetation and permafrost, the extent of sea ice on the ocean, jurisdictional and administrative boundaries.

An international definition of the Arctic is the area where the average temperature for the warmest month (July) does not rise above 10 degrees Celsius (50 degrees Fahrenheit). However, a definition based on a climate-related factor could circumscribe differing areas over time as a result of climate change. The northernmost tree line roughly follows the isotherm at the boundary of this region. The southern limit of the arctic region is commonly placed at the Arctic Circle (latitude 66 degrees, 32 minutes North).

This definition results in an irregularly shaped Arctic region that excludes some land and sea areas north of the Arctic Circle but includes some land and sea areas south of the Arctic Circle. This definition currently excludes all of Finland and Sweden, as well as some of Alaska above the Arctic Circle, while including virtually all of the Bering Sea and Alaska’s Aleutian Islands.<sup>1</sup>

The above map shows three definitions of the Arctic: the tree line; the 10 degrees Celsius isotherm, and the Arctic Circle.



**This map of the Arctic is from the The Perry-Castañeda Library Map Collection. The tree line was added at National Snow and Ice Data Center based on information from National Geographic 1983, Armstrong et al. 1978, and Young, 1989.**

<sup>1</sup> “Changes in the Arctic: Background and Issues for Congress”, Ronald O’Rourke, Specialist in Naval Affairs. 8 October 2010.

The Arctic Policy of the United States refers to the foreign policy of the United States in regards to the Arctic region. Section 112 of the Arctic Research and Policy Act of 1984 (Title I of P.L. 98-373 of July 31, 1984) defines the Arctic as follows:<sup>2</sup>

*As used in this title, the term “Arctic” means 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 [in Alaska]; all contiguous seas, including the Arctic Ocean and the Beaufort, Bering, and Chukchi Seas; and the Aleutian chain.*

This definition, which is codified at 15 U.S.C. 4111 includes certain parts of Alaska below the Arctic Circle, including the Aleutian islands and portions of central and western mainland Alaska, such as the Seward Peninsula and the Yukon Delta.

As illustrated below, the aquatic portion of the Arctic encompasses several distinct water bodies, each of which possess characteristics that influences the level of Marine Transportation System capabilities necessary to meet statutory mandates in U.S. Arctic policy.

### Arctic Boundary as defined by the Arctic Research and Policy Act (ARPA)<sup>3</sup>



<sup>2</sup> “Changes in the Arctic: Background and Issues for Congress”, Ronald O’Rourke, Specialist in Naval Affairs. 8 October 2010.

<sup>3</sup> Funding for this map was provided by the National Science Foundation through the Arctic Research Mapping Application and Contract #0520937 to CH2M Hill for the Interagency Arctic Research Policy Committee (IARPC). Map author: Allison Gaylord, Nuna Technologies. May 27, 2009.



*Acknowledgement: Arctic Monitoring and Assessment Programme (AMAP)*

Many scientists define the Arctic region as the area north of the Arctic Circle (66° 32' N), the approximate limit of the midnight sun and the polar night. The Arctic Monitoring and Assessment Programme (AMAP), a working group of the Arctic Council, adopted the following Arctic definition: “essentially includes the terrestrial and marine areas north of the Arctic Circle (66°32' N), and north of 62° N in Asia and 60° N in North America, modified to include the marine areas north of the Aleutian chain, Hudson Bay, and parts of the North Atlantic, including the Labrador Sea.”

Some observers use the term “high north” as a way of referring to the Arctic. Some observers make a distinction between the “high Arctic”—meaning, in general, the colder portions of the Arctic that are closer to the North Pole—and other areas of the Arctic that are generally less cold and further away from the North Pole, which are sometimes described as the low Arctic or the subarctic.<sup>4</sup>

The Arctic Council based the recent May, 2011 Search and Rescue (SAR) agreement on the AMAP definition of the Arctic. The Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic, or in short the Arctic Search and Rescue Agreement, is an international treaty concluded among the member states of the Arctic Council – Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden and the United States – on 12 May 2011. It coordinates international search and rescue

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<sup>4</sup> “Changes in the Arctic: Background and Issues for Congress”, Ronald O’Rourke, Specialist in Naval Affairs. 8 October 2010.

coverage and response in the Arctic, and establishes the area of SAR responsibility of each state party. In view of the conflicting territorial claims in the Arctic, the treaty provides that "the delimitation of search and rescue regions is not related to and shall not prejudice the delimitation of any boundary between States or their sovereignty, sovereign rights or jurisdiction."

The Arctic Search and Rescue Agreement is the first binding agreement negotiated under the auspices of the Arctic Council. The treaty reflects the Arctic region's growing economic importance as a result of its improved accessibility due to global warming.<sup>5</sup>

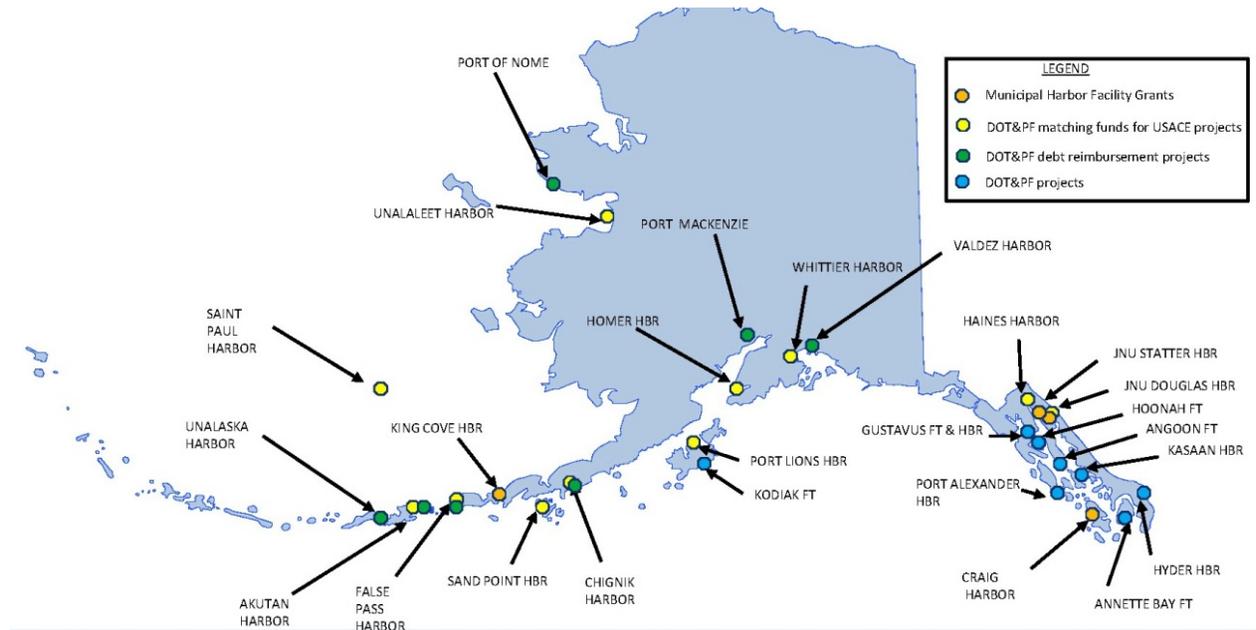
### Arctic Search and Rescue Agreement Illustrative Map



<sup>5</sup> Koring, Paul (12 May 2011). "Arctic treaty leaves much undecided". *Globe and Mail*. <http://www.theglobeandmail.com/news/world/americas/arctic-treaty-leaves-much-undecided/article2017510/>. Retrieved 13 May 2011.

There are several port and harbor improvement projects being planned/constructed to serve Southcentral Alaska, Aleutian and Pribilof Island, Bristol Bay and Southeast Alaska (See DOT&PF project map below). Unalakleet Harbor and Port of Nome are the only marine projects planned within our defined Arctic Ports Study Area by those will not accommodate deep-draft vessels.

**Current DOT&PF Port & Harbor Projects**

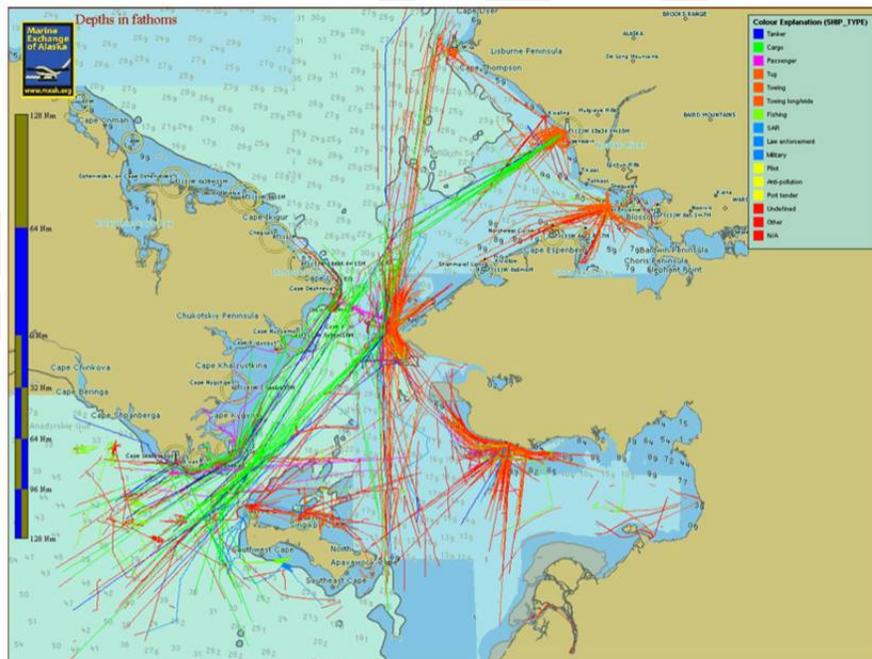


*Acknowledgement: Mike Lukshin, DOT&PF presentation, May 2011.*

USACE/DOT&PF CHARRETTE COMMENTS

During the USACE/DOT&PF Alaska Deep-Draft Arctic Ports Planning Charrette held on May 16-17, 2011, participants were asked how they “Define the Arctic,” for purposes of identifying the Alaska study area for future port planning efforts. Using large scale maps of Alaska and surrounding Arctic waters, participants engaged in a broad-ranging discussion of Arctic boundaries. Below are a few comment highlights:

- Dr. Lawson Brigham, UAF, defined the Arctic as all locations with ice cover.
- Some defined the Arctic as north of the Aleutian Chain, excluding the existing deepwater port at Dutch Harbor. Others included the Aleutians and recognized that there will be more than one port solution in the Arctic, including Dutch Harbor, and possibly Russian and Canadian ports.
- All agreed that the Bering Straits are the chokepoint that needs to get priority attention to the north and south.
- Many used the Arctic Circle as the boundary, including the northern seas.
- Nunivak Island was considered the southern boundary of an Arctic that is now unserved by deepwater port.
- Providenya offers an international Arctic Port that could be of value in the new Search and Rescue agreement of the Arctic Council.
- The USCG is based in Kodiak and serves the entire coast of Alaska, north of Kodiak.



Acknowledgement: Marine Exchange of Alaska

ALASKA DEEP-DRAFT ARCTIC PORTS STUDY AREA

For purposes of this Alaska Deep-Draft Arctic Ports Planning Study, the study area will include the state's Arctic waters north of Nunivak Island to Barrow. To the right is a map showing the project study area.

Based upon existing definitions of the Arctic as well as the comments from the May 2011 Deep-Draft Ports Planning Charrette, this specific study area was selected because it is the area most in need of deep-draft port development. Currently, there are deep draft ports in Anchorage, Seward, Valdez, Kodiak, Unalaska and Homer, but none along Alaska's arctic coastline.

Each of the candidate port sites referenced in the January 2012 Northern Waters Task Force Report are included in this study area. Bethel, Emmonak, and Cape Darby are included because they are noted in the DOT&PF Roads to Resources Program. While Dutch Harbor is not part of the Arctic Port Study area, it does play a role as a staging center for Arctic maritime purposes.

