ALASKA DEEP-DRAFT ARCTIC PORT SYSTEM

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Arctic Ambitions II Conference

20 Feb 2013

ALASKA DEEP-DRAFT ARCTIC PORT SYSTEM

Project Need

- Large vessel traffic is increasing and more than 60% of these vessels are foreign flagged.
- Greater traffic heightens risk of incidents, accidents, and potential threats to subsistence and national sovereignty.
- Emergency response can be many days travel away.
- Community resupply costs are high.
- State policy calls for increased development of mineral, oil and gas resources in the Arctic.
- Increased national concern for energy sufficiency.

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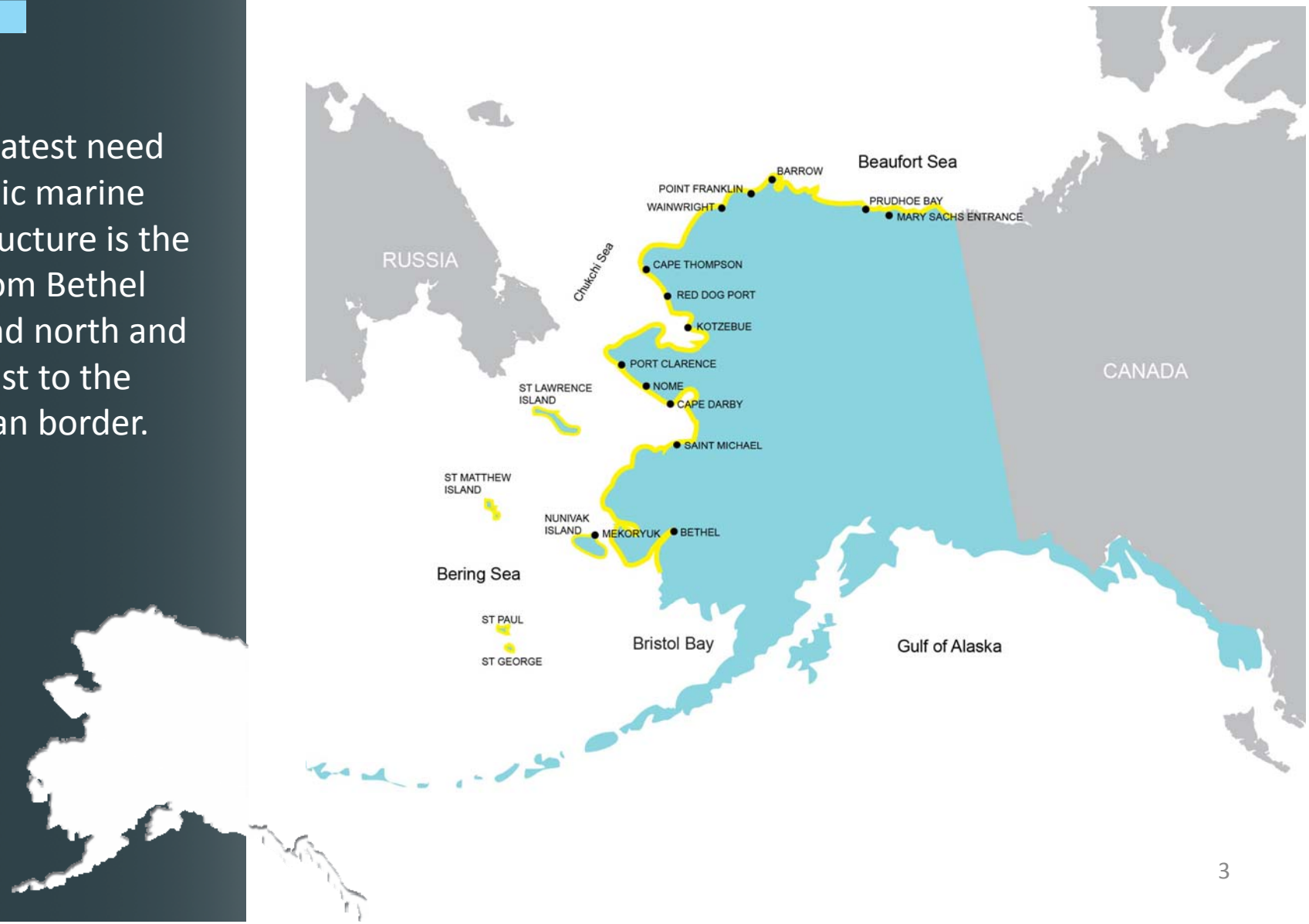
Study Area

The greatest need for Arctic marine infrastructure is the area from Bethel west and north and then east to the Canadian border.



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Initial List of Sites

- St Paul - Pribilof Islands
- St Lawrence Island
- Nome
- Port Clarence/Teller
- Kotzebue/Cape Blossom
- Mekoryuk
- Cape Thompson
- Wainwright
- Point Franklin
- Barrow
- Prudhoe Bay
- Mary Sachs Entrance
- Bethel
- Cape Darby

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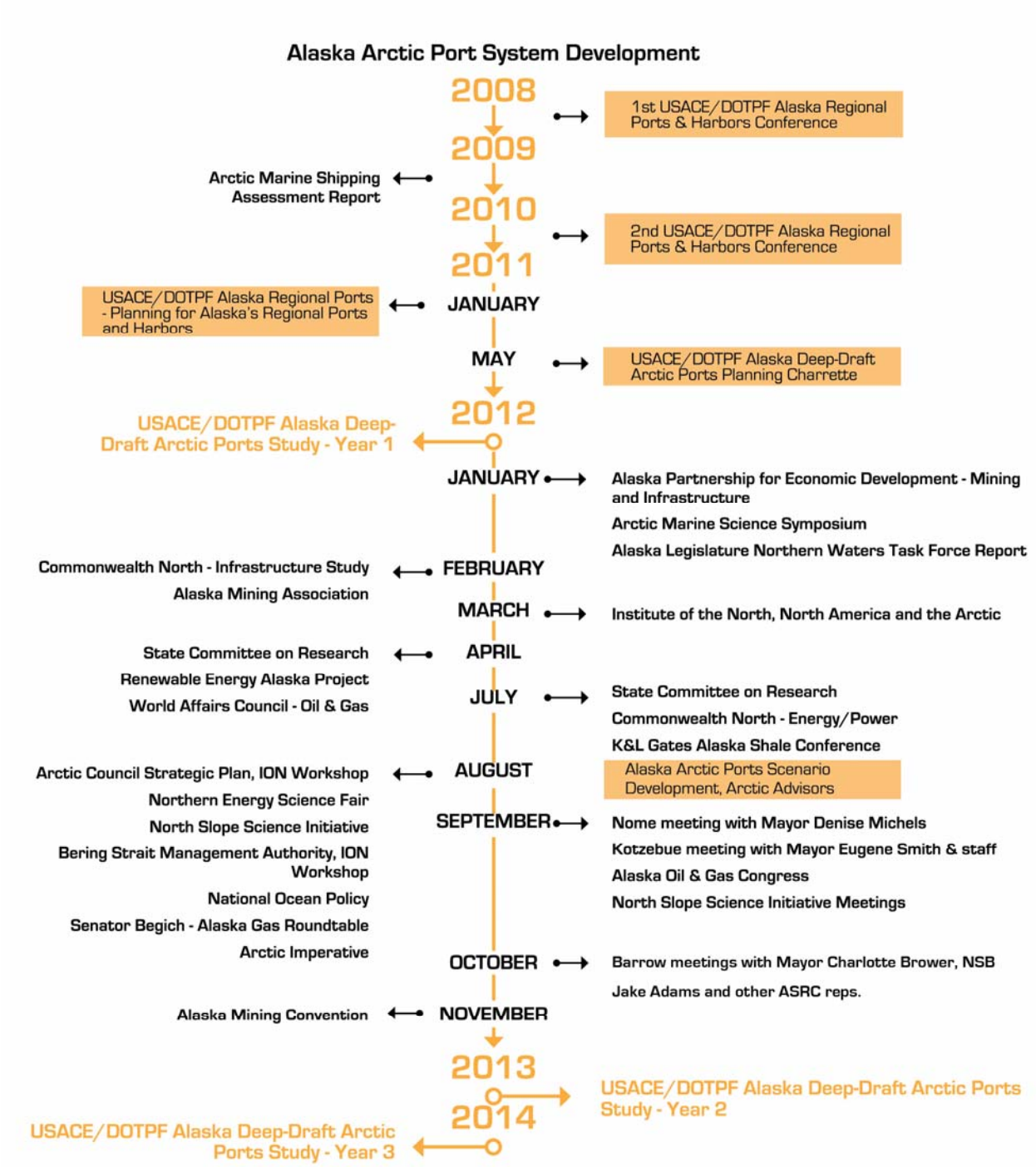
Large Vessel Traffic

Region	2009	2010	2011
Bering Strait, NW AK	191	286	255
Nome, Norton Sound	379	675	402
North Slope	32	25	21
Pribilofs	16	86	103
Southwest AK	3	74	89

Study Activities



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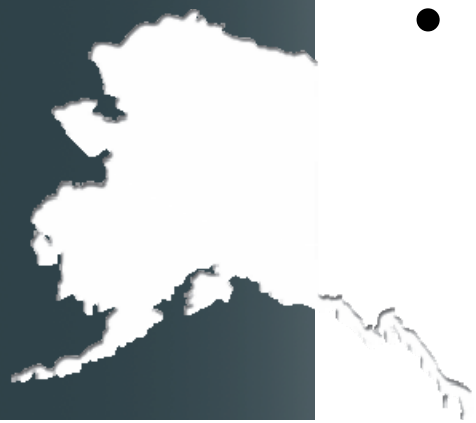
Site Selection Criteria

The primary criteria for evaluation of each site's physical suitability as a deep-draft Arctic port were:

- Ports Proximity to Mission(s)
- Intermodal Connections
- Upland Support
- Natural Water Depth
- Navigation Accessibility



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Port Proximity to Mission(s)

- Oil and gas (OCS)
- Mining
- Existing oil spill response
- Community resupply
- Shipping lanes

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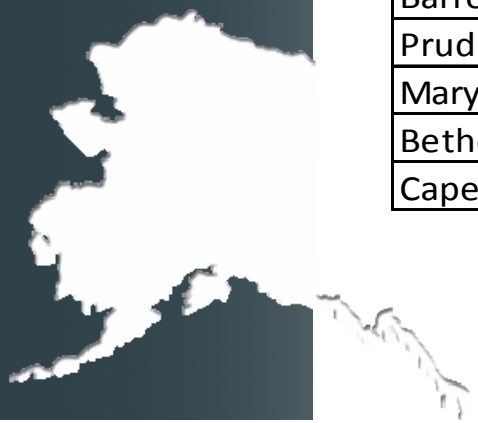
Oil and Gas and Mining Missions

Sites Considered from NWTF and Roads to Resources	Oil and Gas potential	Mining potential
St. Paul Island		
St. Lawrence Island		
Port Clarence (Teller)	X	X
Nome	X	X
Cape Blossom (Kotzebue)		X
Mekoryuk (Nunivak Island)		X
Cape Thompson (Point Hope)		X
Wainwright	X	X
Point Franklin	X	
Barrow	X	
Prudhoe Bay	X	
Mary Sachs Entrance	X	
Bethel		X
Cape Darby		X



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Intermodal Connections

- Air service (jet service ranked higher than gravel runway)
- Road potential
- Existing marine infrastructure

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Upland Support

- Hub status
  - Major
  - Regional
  - Minor
  - Community
  - None/potential

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Natural Water Depth

- Distance to minus 35-feet (5.8 fathoms)
- Distance to minus 45-feet (7.5 fathoms)
  - Increments were ½ mile, 1 mile, 2 miles, 5 miles, 10 miles, and greater than 10 miles

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Navigation Accessibility

- Months ice-free
- Engineering considerations
  - Wind
  - Waves
  - Tides
  - Currents

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Site Shortlist

- All purposes, all criteria, equal weights:
  - Nome, Port Clarence (Teller), Cape Darby
- Oil and Gas sites – water depth limited to minus 35-feet
  - Nome, Port Clarence (Teller), Barrow
- Mining Sites – water depth limited to minus 45-feet
  - Nome, Cape Darby, Port Clarence (Teller)

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Site Shortlist

Nome and Port Clarence/Teller are being considered for initial investigation by USACE and the State in 2013 for deep-draft port development and enhancement of the Arctic as funding and resources become available.

Disclaimer: The recommendation for further study does not necessarily reflect the program and budgeting priority inherent in the local/State and Federal programs for the formulation of a national Civil Works water resource program. Recommendations can be changed at higher review levels of the local/State and Federal government.

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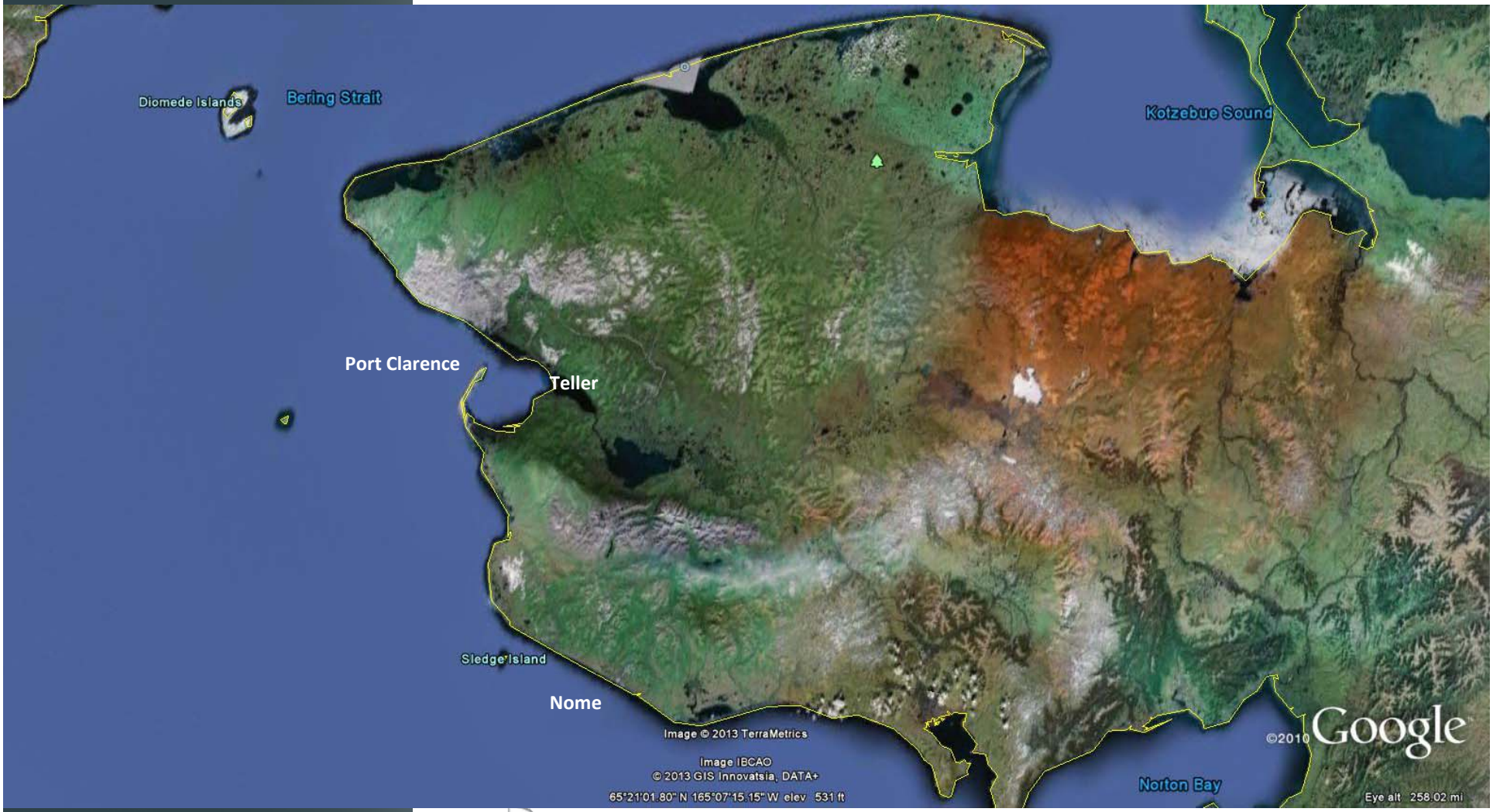
Nome and Port Clarence/Teller



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Future Scenarios

- Scenarios were developed to test candidate port sites for a range of plausible, but uncertain futures.
- The two driving forces are:
  - ***Resource Development*** **-** includes all the elements of resource supply and demand that go into the business decision.
  - ***Collaborative Investment*** **-** represents the nature of investment as both quantitative and qualitative.

The study period of analysis is 50 years.

Future Scenarios

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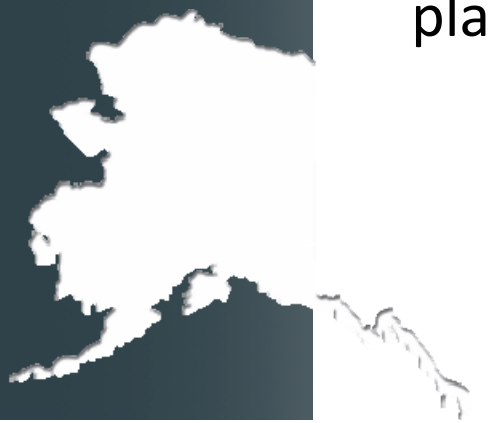
Investment Context

The study team engaged in multiple Arctic meetings to help shape the political and investment climate.

Representatives of local communities and private industry provided the team with the status of investment and infrastructure planning.



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ALASKA DEEP DRAFT ARCTIC PORT STUDY PROCESS

USACE/DOT&PF Arctic and Port Stakeholder Meetings 2008-2011
Alaska Regional Ports and Harbors Study
Arctic Marine Shipping Assessment
DOT&PF Roads to Resources Program
Northern Waters Task Force / 2012 Recommendations

PORT SITING APPROACH

- Define Study Area
- Identify Agency Studies
- Develop P3/Port Authority Potential
- Evaluate Sites on Technical Basis: *(Proximity, Intermodal Connections, Upland Support, Water Depth, Navigation Accessibility)*
- Shortlist Potential Deep-Draft Port Sites
- Perform Future Scenario Analysis
- Engage Stakeholders
- Report and Recommendations

Ongoing Arctic Policy Meetings

INVESTMENT CONTEXT

- International *(e.g., Russia, Canada, Arctic Council)*
- Federal *(Dredging, Permitting, Navigation and Flood Protection)*
- State *(FY 2013 Port Bonds)*
- Local Communities *(e.g., Nome, Kotzebue, Unalaska and Barrow)*
- Private Sector *(e.g., Crowley, ASRC)*
- Technical Innovation *(e.g., Airships, Drones)*

2013 STUDY SCOPE

- Feasibility Analysis of Shortlisted Sites Aligned with Technical Criteria AND Investment
- P3 Development/Financing Approach
- Management Development: Port Authority

ENHANCED ALASKA ARCTIC PORT SYSTEM

Federal Sovereignty, Economic Development, Search and Rescue, Community Resupply and Oil Spill Response

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RECOMMENDATIONS

1. Invest strategically to enhance the Arctic Ports System. Include deep-draft solutions for resource export and support, as well as improvements appropriate for USCG, environmental protection, SAR, and community resupply.
2. Assign lead Federal agency responsibility to the US Army Corps of Engineers for permitting, design, and construction of the Alaska Deep-Draft Arctic Port system.
3. Encourage private entities/banks and authorize public agencies to collaborate in funding and constructing marine infrastructure. Use the strengths of each sector to achieve success through Public/Private Partnerships.

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RECOMMENDATIONS (Cont'd)

4. Increase funding to NOAA and other agencies to provide hydrographic and bathymetric mapping and needed data to support marine infrastructure development.
5. Explore and develop navigational aids, such as ship routing, vessel tracking, traffic separation, ice breakers and identification of areas of concern.
6. Conduct feasibility analysis of shortlisted sites (Nome and Port Clarence/Teller) using physical criteria and alignment with potential investors; P3 development; and Port management authority. These two highest ranked sites will be the focus of the feasibility work for 2013-2014.

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More Information….

State website and email

http://www.dot.alaska.gov/stwddes/desports/arctic.shtml

dot.jhq.arcticportstudy@alaska.gov

Federal website and email

http://www.poa.usace.army.mil/Library/ReportsandStudies/AlaskaRegionalPortsStudy.aspx

Akregports@usace.army.mil

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Thank You

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