

**2/28/12
OVERVIEW BY
DEPARTMENT OF
TRANSPORTATION:
ARCTIC PORTS
STUDY UPDATE**

<TARGET><BILL></BILL><SUBJECT>2-28-12 OVERVIEW BY
DEPARTMENT OF TRANSPORTATION ARCTIC PORTS STUDY
UPDATE</SUBJECT><COMM>SFIN27</COMM></TARGET>



Alaska Department of Transportation & Public Facilities

Arctic Port(s) Study Update

Jeff Ottesen, Alaska DOT&PF

February 28, 2012



Study History

- January 2008 Port and Harbor Conference sparked wide interest in focusing attention on Alaska's ports
- November 2010 Port and Harbor Conference built on this and identified a long list of ongoing and new needs including an Arctic port.
- May 2012 Arctic Port Kickoff Meeting (charette) was held with numerous stakeholders
- December 2012 Army Corps of Engineers and Alaska DOT&PF execute \$3 million Alaska Deep-Draft Arctic Ports Study Feasibility Study Cost Sharing Agreement.



2012 Funding Purpose

- “Study and identify potential arctic deepwater port sites. A deepwater Arctic port would be a long-term vital asset to national security and to the State’s economy.
- It would provide a new, northernmost port for the US Coast Guard to protect and patrol the State’s arctic waters. Such vessels require a minimum of -35 feet.”



Army Corps Partnership Schedule

- Use multi-criteria decision analysis technique to screen potential sites
- Identify Potential Sites Final List by September 2012.
- Evaluate Public-Private Partnership (P3) finance mechanism
- 2013-2014 Site Specific Feasibility Phase



Ports Vital to Many Needs

- Sovereignty/Homeland Protection
- Resource protection
- Offshore oil and gas exploration/development
- Search and rescue/incident response
- Onshore resources export
- Community supply and economic activities
- Fisheries



Port Needs Vary

- Different needs, require different port characteristics:
 - Mining export: very deep draft, proximity to resource
 - Oil and gas services: intermediate depth, proximity to on-shore services, and off-shore leases
- Potentially, no one port site ideal for all needs



Natural Harbor Sites Scarce

- Few natural harbors with wind and wave protection
 - Marine structures must withstand significant ice forces
- Water depth is generally shallow in Arctic shore areas
 - Dredging will likely be necessary, on-going



Linking Need to Funding

- Funding should relate to overall purpose:
 - Sovereignty/Homeland – federal
 - Resource protection – federal and state
 - Search and rescue – federal and state
 - Off-shore resources – federal
 - On-shore resources – state/private
 - Community/Economic development – state/local
 - Fisheries – state/local



Funding Issue

- Little *National Economic Benefit* as measured by federal rules
 - Corps, other federal agencies reluctant to participate
- Despite strong federal nexus, federal funding in doubt
- Public Private Partnership (P3) tool being evaluated



P3's – Public Private Partnerships

- Increasingly common means to achieve public goods, typically infrastructure
- General characteristics:
 - Contract between public-sector and private party for a public service or good
 - Substantial private sector role; typically design, finance, build and operations involved
 - Costs borne by users rather than public
 - Requires robust economics to cover risks
 - Private entity often a new special purpose company



Why the Trend to P3's?

- Someone else's money involved
- Off books of government spending or debt
- Brings private sector expertise and management skills
- Possible tax advantages to private investors
- Aligns risk and reward to single entity
- What's old is new again
 - Early American toll roads, continental railroad were P3's by another name
- Canada currently uses P3's at far greater level
 - British Columbia requires P3 consideration for all public projects



Fitting P3's to Alaska

- Many Alaska projects require government help
 - Thin economics due to low user base
 - High costs due to environment, geography
 - Other ways to tap into private expertise
- AIDEA has long been in business to assist beneficial quasi-public projects
 - Skagway ore terminal
 - Red Dog road and terminal
 - Ketchikan Shipyard and Drydock



Related Efforts

- Congressional Delegation working on several fronts to help: icebreakers, hydrographic surveys, federal port funds, international interest
- Statewide digital mapping effort will focus on northwest Alaska this year to update onshore mapping information in Arctic port study area
 - (Some mapping costs eligible as state match)



2013 Appropriation Request

- Governor's capital budget request:
 - #54074 \$1 million GF to continue the Arctic Ports Study
 - Matched by \$0.5 million federal funds
 - Based on the 2012 effort, carry on the site specific port feasibility investigation.



Canada's "Northern Strategy"

- Sovereignty
 - Deepwater port, vessels and year round military base
- Environment
 - Monitor and protect on- and off-shore resources
- Social and Economic Development
 - Improve circumstances of residents
 - Enable resource development for jobs and tax base
- Governance
 - Working for sustainable local governance



Key Take-Aways

- Multiple ports likely necessary to serve many needs
- No single governmental entity likely to cover full costs of arctic port: federal, state or local.
- Resource user(s), may bring economies of scale to help finance.
 - Today's push for minerals and energy could expand opportunities
 - Some form of private participation seems desirable (AIDEA, P3's or ?).
- Need to shift federal focus to national security need versus economic purpose



22 February 2012

INFORMATION PAPER

SUBJECT: Alaska Deep-Draft Arctic Ports Study.

1. **BLUF:** The State of Alaska and the U.S. Army Corps of Engineers, Alaska District (Alaska District) executed a \$3M Feasibility Cost Sharing Agreement (FCSA) to study the feasibility of implementing Alaska Deep-Draft Arctic Ports (minimum -35 feet depth). The State is very interested in resource extraction from western and northern Alaska, and the diminishing sea ice is making development more economically viable. The Alaska Congressional delegation has sponsored legislation highlighting the need for U.S. Arctic ports to support national sovereignty, environmental stewardship and life safety. The U.S. Navy (USN), U.S. Coast Guard (USCG), and National Oceanographic and Atmospheric Administration (NOAA) all have an increasing mission in the Arctic, but so far have not been a contributing partner for developing a deep-draft port. The State would welcome Federal participation in selecting, funding, and designing deep-draft port(s) in the Arctic that would incorporate the Federal mission.

2. **Background:** The Alaska District initiated the Alaska Regional Ports Reconnaissance Study in 2003. In 2008, they determined there was Federal interest in participating in cost-shared feasibility studies addressing regional ports and harbors in the state of Alaska. On 21 September 2009, the State of Alaska and the Alaska District executed an FCSA for the Alaska Regional Ports Feasibility Study. Two Statewide Ports and Harbor Conferences were conducted in January 2008 and November 2010. As a result of the November 2010 Conference, Gov. Sean Parnell requested a more specific effort to evaluate Deep-Draft Arctic Port(s) primarily focused on the extraction of resources. On 16-17 May 2011, the State and the Alaska District conducted a "planning charrette," which has led to the development of a specific FCSA and Project Management Plan (PMP) for the Alaska Deep-Draft Arctic Port(s) Feasibility Study. The documents were signed by both parties on 8 December 2011. The Corps has \$350K+/- and State of Alaska has \$300K+/- to initiate the estimated \$3M three year study. The study was not in the President's budget for FY11 or 12.

Sen. Murkowski unsuccessfully introduced legislation in 2009 for the study of an Arctic Deepwater Port. She reportedly reintroduced it in 2010. Sen. Begich obtained Legislative Drafting Assistance in 2010 for an Arctic Deep Water Port. So far we have not seen evidence that it was introduced. Congressman Young successfully introduced legislation in February 2010 that provided funding for hydrographic surveys to support safe navigation and deep draft studies in the Arctic. It has been suggested that Congress is interested to have DoD study and construct a Deep-Draft Port in the Arctic, but nothing has been formalized.

During the Planning Charrette, the terms Arctic Deepwater and Arctic Deep-Draft were discussed. The differentiation is that Deep-Draft implies we can create the depth of water as compared to it occurring naturally. There are few naturally occurring deep water sites in the US Arctic. The Planning Charrette helped define "arctic" (north of Nunivak Island even though many official definitions go all the way to the Aleutian Chain) and "deep-draft" (greater than or

equal to -35 feet MLLW). However, these definitions have not been vetted by the public at large. It was discussed that mineral exporters would be the primary users, and therefore, the mining industry should be the primary proponent of port selection instead of the public sector. However, if vessel activity in the Arctic increases as much as projected, it will result in a significantly increased Federal mission. Representatives from the Alaska Delegation attended all of the mentioned conferences or charrette.

The results from the two Statewide Conferences and the Planning Charrette are posted on the Alaska District website (<http://www.poa.usace.army.mil/en/cw/AKPortsStudy.htm>).

Potential Future Actions:

Civil Works – The primary purpose of the Alaska Deep-Draft Arctic Ports study is to investigate the alternatives for developing deep-draft Arctic ports in Alaska to best serve state and national interests for generations to come. Considerations during the study are preferably a direct shipping point for resources developed in western and northern regions in Alaska, a strategic military and commercial port as vessel traffic increases, and a major infrastructure asset to any future endeavors for oil and gas operations. While it is recognized that industry will drive the future development, the study must incorporate the efforts and needs of other agencies and organizations, and to consider how they can play into a Private Public Partnership. The study has two distinct phases. In the first phase, all potential sites north of Nunivak Island will be identified and evaluated. A Multi- Criteria Decision Analysis will be used to evaluate each site based on established criteria and potential scenarios. Stakeholder input will be obtained through public meetings and interviews, and after a year the study will be re-scoped. The last two years of the Feasibility Study will focus on specific site development, harbor master planning, cost, benefits, and environmental coordination.

The study must incorporate the region's stakeholder concerns, especially those of the Native Alaskans to preserve their culture and subsistence activities, and the effects of climate change and increased vessel traffic and industry impacts on the environment. There are numerous marine and Arctic species of special interest that congregate in this region.

Military – The USN, USCG, and NOAA have “participated” in the two statewide conferences and planning charrette. Specifically, the USN and USCG have said in our conferences they do not require an Arctic Deep-Draft Port; however, if one were to be developed they would be interested in using it occasionally. The USCG has provided the dimensions of their ice breakers. NOAA has expressed some interest but has no funding towards such a project at this time.

International Considerations - The United States has been reluctant to ratify the United Nations Convention on the Law of the Sea Treaty, which governs national maritime boundaries and international maritime operations. Russia meanwhile is investing heavily in the Northeast Passage to support cargo traffic, where in 2010 four ships traversed the route. In 2011 thirty-four ships made the journey. Russia has four nuclear powered icebreakers and are constructing at least one more. The United States has one icebreaker.

2. SCHEDULE & MILESTONES

| <u>Name</u> | <u>Start</u> | <u>Finish</u> |
|---|--------------|---------------|
| <u>Task 1: Develop Work Plan</u> | | |
| Execute Tier 1 Amendment to FCSA | 9/20/11 | 12/05/11 |
| Kick-off Meeting | | 10/27/11 |
| Establish Steering Committee | | 11/30/11 |
| <u>Task 2: Define Study Area</u> | | |
| Establish Study Area Working Definition | 12/15/11 | |
| Confirm Definition w/Steering Committee | | 12/30/11 |
| <u>Task 3: Identify Other Agency Efforts</u> | | |
| Initial Write-up of Agency Efforts | | 1/25/12 |
| Final Compilation of Agency Efforts | 2/22/12 | |
| <u>Task 4: Evaluate Public/Private Partnerships (PPP)</u> | | |
| Evaluate PPP Approach and Potential | 1/25/12 | 2/22/12 |
| <u>Task 5: Periodic PDT and Steering Committee Meetings</u> | | |
| Meetings to occur the last Wednesday every month | | |
| <u>Task 6: Examine Problems and Opportunities</u> | | |
| Draft Write-up Problems/Opportunities | 1/25/12 | 2/22/12 |
| Final Write-up Problems/Opportunities | 2/22/12 | 3/30/12 |
| <u>Task 7: Establish Criteria</u> | | |
| Draft Scenario Analysis | 3/30/12 | 4/25/12 |
| Final Criteria Established | 4/25/12 | 5/30/12 |
| <u>Task 8: Conduct Scenario Analysis</u> | | |
| Scenario Analysis Developed by PDT | 5/30/12 | 6/27/12 |
| Scenario Analysis vetted thru Stakeholders | 6/27/12 | 7/25/12 |
| <u>Task 9: Identify Potential Sites</u> | | |
| Potential Sites Preliminary List | 7/25/12 | 8/08/12 |
| Potential Sites Final List | 8/08/12 | 8/22/12 |
| Final Site Selection Document | 8/08/12 | 9/26/12 |
| <u>Task 10: Engage Public</u> | | |
| Public Meetings around the State | 10/03/12 | 10/31/12 |
| <u>Task 11: Rescope Study Plan for 2013</u> | | |
| Draft Scope | 11/01/12 | 11/14/12 |
| Final Scope | 11/14/12 | 11/28/12 |
| FY13 and FY14: Site Specific Feasibility Phase | | |
| Conduct Feasibility Study | 11/28/12 | 04/25/14 |
| Value Engineering Study | 03/01/13 | 07/01/13 |
| Feasibility In-House Review | | 04/28/14 |
| Alternative Formulation Briefing | | 05/16/14 |
| Feasibility Review Conference | | 06/18/14 |
| Finalize Feasibility Report | | 09/16/14 |
| Division Commander Notice | | 10/03/14 |

Arctic Ports Study

FY2012 Request: \$972,000
Reference No: AMD 50770

AP/AL: Appropriation **Project Type: Research / Studies / Planning**
Category: Transportation
Location: Statewide **Contact: Marc Luiken, Commissioner**
House District: Statewide (HD 1-40) **Contact Phone: (907)465-3901**
Estimated Project Dates: 07/01/2011 - 09/01/2018

Brief Summary and Statement of Need:

This is a new capital request to fund the study and mapping of potential arctic deepwater port sites, in conjunction with the United States Army Corps of Engineers (USACE). A deepwater arctic port would be a long-term vital asset to national security and to the State's economy. It would provide a new, northernmost port for the United States Coast Guard (USCG) to protect and patrol the State's arctic waters. USCG icebreakers and other vessels require a minimum of -35 feet. Additional funding to complete the study would be required in FY2013 and FY2014.

| Funding: | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 | FY2017 | Total |
|---------------|------------------|--------------------|--------------------|------------|------------|------------|--------------------|
| Fed Rcpts | | \$500,000 | \$500,000 | | | | \$1,000,000 |
| Gen Fund | \$972,000 | \$500,000 | \$500,000 | | | | \$1,972,000 |
| Total: | \$972,000 | \$1,000,000 | \$1,000,000 | \$0 | \$0 | \$0 | \$2,972,000 |

| | | | | |
|---|---|---|---|-----------------------------------|
| <input type="checkbox"/> State Match Required | <input type="checkbox"/> One-Time Project | <input type="checkbox"/> Phased - new | <input checked="" type="checkbox"/> Phased - underway | <input type="checkbox"/> On-Going |
| 0% = Minimum State Match % Required | | <input checked="" type="checkbox"/> Amendment | <input type="checkbox"/> Mental Health Bill | |

Operating & Maintenance Costs:

| | Amount | Staff |
|----------------------|----------|----------|
| Project Development: | 0 | 0 |
| Ongoing Operating: | 0 | 0 |
| One-Time Startup: | 0 | 0 |
| Totals: | 0 | 0 |

Additional Information / Prior Funding History:

This project is focused on studying and mapping the Arctic coast in conjunction with the Army Corps of Engineers for a deepwater port site. A separate statewide digital mapping project has received prior capital funding: DNR: \$6,000,000 GF total, \$7,000,000 federal receipts. DMVA also received \$11.4 million in federal receipts in FY06 for this project under what was known as the Alaska Aviation Safety Program.

Project Description/Justification:

The Arctic coast is approximately 927 miles long or 1,492 kilometers, and a high priority for the State of Alaska and all federal agencies. It is in our interest to learn as much as we can about the region and its potential deepwater (-35 feet or greater) port sites by working with the Army Corps of Engineers conducting a combination of research and mapping in order to develop a list of potential port sites on the State's arctic coastline. An arctic port in Alaska would serve as a major infrastructure asset as the State, nation, and world continue to evolve. In the short term, this would serve as the northernmost port for the USCG, the US Navy (USN), and the National Oceanic and Atmospheric Administration (NOAA) in order for them to protect and patrol this region, and to develop a greater understanding of the factors involved in the potential economic development of the region. In the long term, a potential arctic port could be expanded upon to allow for greater utilization to the state. It could help further diversify the state's economy in many ways. Including:

- The possibility of an arctic port becoming a direct shipping point for resources developed in the western and northern regions of Alaska.
- A major strategic American commercial and military port along the Arctic Coast as vessel traffic increases.
- A major infrastructure asset to any future potential endeavors to produce oil and gas from deepwater reserves in the Arctic Ocean.

Vital information that could potentially be gathered through digital mapping and studies in collaboration with the USACE includes, but is not limited to: depth of water, size and number of vessels, security requirements, hydrographic surveys, ice thickness and movement, operational needs, maintenance requirements, social, economic, and environmental impacts, potential arctic infrastructure development, coastal erosion, storm surge analysis, tsunami inundation analysis, sea rise, disaster preparedness, mitigation and recovery, climate change research, and an understanding of the capabilities of other arctic nations.

Attached are two digital mapping charts, one illustrating existing legacy IFSAR elevation data while the other illustrates the 2010 elevation collection. The legacy data is sporadic (i.e. mountain passes and etc.) and with exception of the northern oil and gas regions, the digital data is old and inadequate.

Accurate elevation data supports all types of resource, infrastructure and economic development through the streamlining of permitting and construction of supporting networks. This is accomplished through a thorough understanding of the terrain and how the terrain will impact engineering, construction and supply. It also impacts the mitigation of spills, contamination and cleanup.