US Army Corps
of Engineers
Pacific Ocean Alaska

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

Name	Start	Finish
Task 1: Develop Work Plan		
Execute Tier 1 Amendment to FCSA	9/20/11	12/05/11
Kick-off Meeting		10/27/11
Establish Steering Committee		11/30/11
Task 2: Define Study Area		
Establish Study Area Working Definition	12/15/11	
Confirm Definition w/Steering Committee		12/30/11
Task 3: Identify Other Agency Efforts		
Initial Write-up of Agency Efforts		1/25/12
Final Compilation of Agency Efforts	2/22/12	
Task 4: Evaluate Public/Private Partnerships (PPP)		
Evaluate PPP Approach and Potential	1/25/12	2/22/12
Task 5: Periodic PDT and Steering Committee Meetings		
Meetings to occur the last Wednesday every month		
Task 6: Examine Problems and Opportunities		
Draft Write-up Problems/Opportunities	1/25/12	2/22/12
Final Write-up Problems/Opportunities	2/22/12	3/30/12
Task 7: Establish Criteria		
Draft Scenario Analysis	3/30/12	4/25/12
Final Criteria Established	4/25/12	5/30/12
Task 8: Conduct Scenario Analysis		
Scenario Analysis Developed by PDT	5/30/12	6/27/12
Scenario Analysis vetted thru Stakeholders	6/27/12	7/25/12
Task 9: Identify Potential Sites		
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
Task 10: Engage Public		
Public Meetings around the State	10/03/12	10/31/12
Task 11: Rescope Study Plan for 2013		
Draft Scope	11/01/12	11/14/12
Final Scope	11/14/12	11/28/12
FY13 and FY14: Site Specific Feasibility Phase	11/28/12	11/03/14
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

☐ State Match Required	☐ One-Time Project	☐ Phased - new	☑ Phased - underway	☐ On-Going
0% = Minimum State Match % Required		☑ Amendment	☐ Mental Health Bill	

Operating & Maintenance Costs:

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