



**Written Testimony of Joy Baker
Port Director, Nome, Alaska
Before the U.S. Senate Energy and Natural Resources Committee
Hearing to examine the potential for infrastructure improvements to create jobs and reduce the cost of living through all-of-the-above energy and mineral production in Alaska**

March 30, 2017

1. Introduction

Chairman Murkowski, Ranking Member Cantwell, and members of the Committee, thank you for this opportunity to appear before you as you consider potential infrastructure improvements to create jobs and lower the cost of living in Alaska. My name is Joy Baker and I am the Port Director in Nome, Alaska. I have worked for the Port for the past 25 years, and my testimony here today is based on the experience I have gained while working to expand the Port's capabilities to meet increasing vessel traffic, and planning for the development of an Arctic Deep Draft Port (ADDP) in Nome.

The 45th Iditarod Trail Sled Dog Race just finished earlier this month, which I believe highlights the logistical difficulties in Alaska and especially in the Northwest and Arctic regions of the state. There really are only three ways to get to Nome, to quote our illustrious Mayor Beneville: by boat, by plane, and of course by dogsled. I will be focusing on Alaska's ports, and highlighting the opportunities specifically presented in Nome for the development of an Arctic Deep Draft Port.

2. Alaskan Ports

Ports are the lifeblood of Alaska. It is that simple. There are no major land transportation links to the Lower 48, no viable highway and no railroad. And it cannot all come in by air. It is the 125 ports scattered along the 44,000 miles of Alaska's coastline that provide the lifeline for commodities coming in from outside and for resource exports from the state. The vast majority of cargo coming into Alaska flows through the Port of Anchorage, with significant exports moving through the ports in Valdez (oil), Seward (coal), Unalaska (seafood), Nikiski (natural gas), and Red Dog (minerals). The network of ports in Southeast and South Central also made it possible for the cruise ship industry to bring more than 1 million tourists to the shores of Alaska in 2016. Finally, many of Alaska's ports support robust commercial, subsistence and recreational fisheries, including 6 of the top 10 commercial fishing ports in the country.

Despite the overall importance of ports to the state, the 2017 American Society of Civil Engineers (ASCE) gave Alaska's ports a report card grade of D for infrastructure conditions and



needs. The report recommends continued efforts to leverage state and federal grants, and acknowledges that new federal statutory provisions included in the Waterways Infrastructure Improvement for the Nation Act (the WIIN Act) should help provide better access to federal funding for Alaska’s ports. From my perspective, continued investment of state and federal funds in the development and expansion of Alaska’s ports is critically necessary to allow for the development of Alaska’s energy resources. This will not only help improve our economy, but will also lead to lower energy costs across the state, especially in rural and remote areas.

3. Nome

Nome is home to about 3800 residents and is strategically situated on the south-facing shore of the Bering Sea near the southern end of the Seward Peninsula. The cost of living in Nome is elevated relative to state and national levels. Groceries cost 60% more in Nome than in Anchorage and a gallon of gas often exceeds \$5.00. The average home spends almost \$8500.00 per year for heating; more than triple the cost of an average Anchorage home, and costs are even higher in more rural areas.

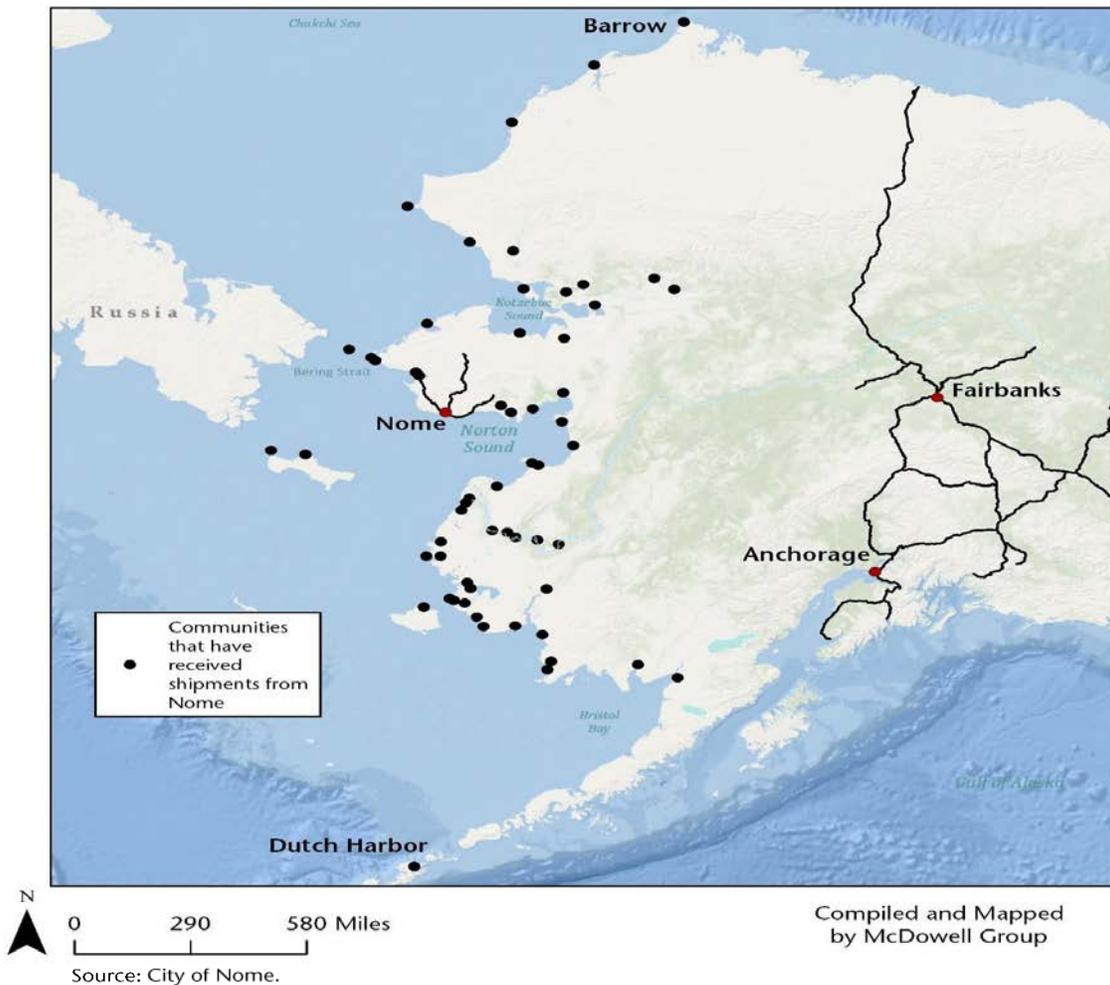
a. Background on the Port and its operations

The Port of Nome, located just south of the Arctic Circle, is strategically positioned to serve national, state, regional, and local needs. Nome is the regional transshipment hub for more than 54 Western Alaska communities that rely on the port for movement of heating oil and gasoline, construction supplies, non-perishable food, gravel, and other cargo. It is also the staging ground for operations north of the Bering Strait as vessels prepare for the ice-free season. In the fall, it serves as the demobilization center for companies operating in the Arctic.

While the ice-free season is gradually increasing, Nome’s port is typically closed for almost 6 months of the year. Consequently, the ice-free period between June and December is very busy, with vessels bringing goods to be used in Nome or transshipped to communities throughout the region. Nome’s port facilities serve a wide variety of customers, including subsistence and commercial fishermen, gold dredgers, regional shippers, tourism operators, public research and enforcement vessels, and vessels engaged in operations north of the Arctic Circle, such as Prudhoe Bay. Nome’s role in maritime vessel support extends to ships transiting both the Northwest and Northeast Passages, frequently serving as the last stop before, and first stop after, transiting Arctic waters that hold no commercial port infrastructure.



Communities Connected to the Port of Nome



Improvements have been made to the Port of Nome for nearly a century. Construction of Nome's original jetties began in 1919 and was complete by 1923. A seawall protecting Nome was constructed early in the 1950s and the 3000 foot armor stone causeway was built in 1985. Two sheet pile docks located on the causeway were operational by the early 1990s, currently providing a basin depth of -22 feet at mean lower low water (MLLW). The addition of the east breakwater in 2006 significantly increased port capabilities by decreasing the number of days port operations were limited due to weather. Completion of the 210 foot Middle Dock in 2015 added much needed moorage space.

In general, the outer harbor is used for incoming cargo, fuel and equipment, and outgoing gravel products, as well as ship resupply and refueling. The inner harbor facilitates the redistribution of these commodities and other supplies to outlying communities. The Army Corps of Engineers conducts annual dredging of the navigation channel and maneuvering basins,



while the City of Nome is responsible for dredging the berthing areas along docks and transfer ramps.



b. Mining activity

Mining has played a vital role in Nome's development and will continue to do so in the years to come. Since 1880, the Nome mining district has produced the state's third largest quantity of gold behind only Fairbanks and Juneau. In addition to current placer mining in the region, there are a number of mining prospects that could stimulate shipment of equipment, supplies, and construction materials through the port when they progress to advanced exploration and production. The world-class Graphite Creek prospect near Nome has attracted significant interest and it has been characterized as the largest and highest grade large flake graphite deposit in the U.S. Its development is very close and the Port of Nome will play a key role in both in supporting its development, and exporting the raw material for refining in Alaska or in the Lower 48.

Elsewhere in the region, the Kugruk Prospect has produced more than 500,000 ounces of placer gold. Exploration is underway for potential significant gold mineralization, as well as zinc, lead, and silver prospects. There is also continued interest in the Bluff and Council Prospects, primarily for gold deposits.



c. Oil and gas development

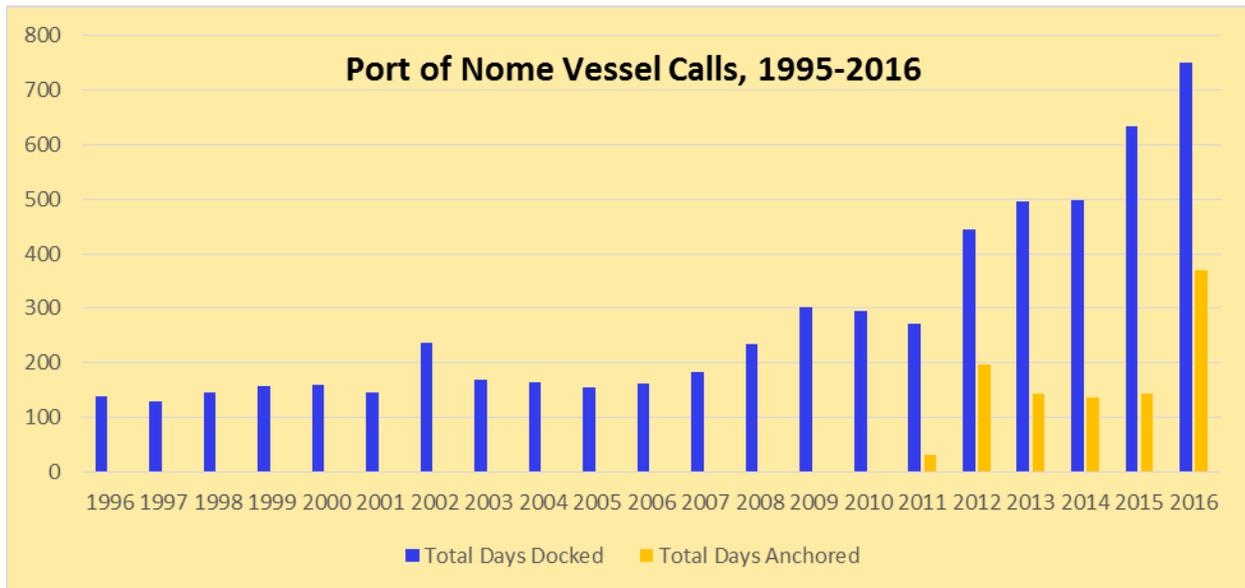
According to the U.S. Geological Survey, the area north of the Arctic Circle has an estimated 90 billion barrels of undiscovered, technically recoverable oil, 1,670 trillion cubic feet of technically recoverable natural gas, and 44 billion barrels of technically recoverable natural gas liquids. These resources account for 22% of the undiscovered, technically recoverable resources in the world. The Chukchi Sea is believed to hold approximately 15 billion barrels of recoverable oil and almost 76 trillion cubic feet of recoverable natural gas.

During Shell’s multi-year mobilization for operations at the Burger Prospect, the Port of Nome played a key role in supporting the fleet of vessels engaged in the effort. When offshore oil and gas exploration and development activities return to the Chukchi Sea, the number of vessels making port calls in Nome will increase dramatically, above and beyond the increases already occurring, and there also will be an increase in cargo and construction materials flowing through the port.

d. Recent vessel traffic trends

Arctic vessel traffic demand has shown a significant increase from 2011-2016:

Bering Strait Transits	+155%
Port of Nome Dock Calls	+177%
Nome Anchored Traffic	+1130%





The Port's 2016 statistics demonstrate a significant increase, all of which is post-Shell departure. Dock occupancy reached 92% in July 2016, which includes the recent addition of a 3rd dock built in 2015. The bulk of the 2016 increase is directly related to more foreign fuel tankers, research vessels, domestic and foreign government vessels, gravel and cargo. The increased maritime activity brings much needed economic opportunity to the region, but also great risks without the infrastructure to support the needs of the larger vessels. Expanded facilities will minimize the number of offshore ship-to-ship transfers and reduce waste discharge in Arctic waters capable of destroying cultural subsistence hunting and fishing.

The Crystal Serenity's successful voyage through the Northwest Passage will further change the dynamic of traversing the Arctic by generating more commercial interest in the Arctic, which will bring not only more pleasure vessels, but the commercial shipping industry as the option for this reduced cost route becomes more prevalent.



Foreign-flagged vessel traffic has increased exponentially at Nome since 2011, with routine calls by research and government vessels from Korea, Japan, Russia, and Canada, in addition to cruise vessels. The largest increase in foreign-flagged traffic at Nome has been in the oil tanker category which drives a large portion of the anchored traffic, with some effect on dock calls.

Clearly one of the greater risks with increased traffic centers around maritime incidents and accidents triggering marine pollution, which drives the need for expanded oil spill response



capacity in the region. The USCG’s Alternative Planning Criteria network, which is currently responsible for the Western Alaska region, relies on large mobilizations of assets and resources from the Anchorage area by air, but does not really provide for timely response to remote locations. Response times can be significantly reduced by the staging of assets within the region that can be more quickly mobilized to the site by contract vessels already working the coastline. This gap must be addressed in order to adequately prepare to respond to an incident in Western Alaska and the Arctic.

There is a growing need for shore-based waste reception facilities along the Arctic coastline. Recent changes in MARPOL and increased vessel traffic highlight the imperative for establishing a waste reception facility north of Dutch Harbor to allow ships to discharge large volumes of black and grey water, regulated galley waste, and oily bilge water. Although some of the newer vessels have increased capacity and treatment mechanisms for managing ship waste, there are challenges for the older vessels. Intentional or unintentional discharges into Arctic waters can be minimized by the presence of a waste reception facility in the region that can accommodate both the medium-draft and deep-draft fleets transiting the Arctic.

4. The Need for an Arctic Deep Draft Port

“The lack of a deep-water Arctic port is a barrier to providing the infrastructure necessary to develop Alaska resources and to carry out national strategic goals in the region.”

“[An Arctic Deep Draft Port] would provide local and regional economic development opportunities (resource extraction, tourism, and research); decrease Arctic region operating costs; provide protected dockage to support offshore oil and gas endeavors, fishing fleet, and resource extraction vessels; and provide vessel repair and maintenance support as well as facilities for emergency response and assistance vessels. It would improve international relationships and increase U.S. exports, optimize the aforementioned benefits while preserving natural resources; raise awareness of U.S. as an Arctic nation; and provide upland support to vessels operating in the region (fuel, water, electricity, food, medical, and storage, laydown/staging for resource extraction).

2017 ASCE Alaska Infrastructure Report Card

The City believes the development of an Arctic Deep Draft Port in Nome is critical to the long term viability of the community, the region, and the U.S. Arctic. Expanding Nome’s existing facility to a depth of -36’ MLLW will achieve the intended goal of reducing maritime operating costs which will result in lower transportation costs for commodities into Nome and throughout the region. An ADDP will also make it feasible to provide the infrastructure capacity to support assets for strategic and non-strategic missions. Development can be achieved on a

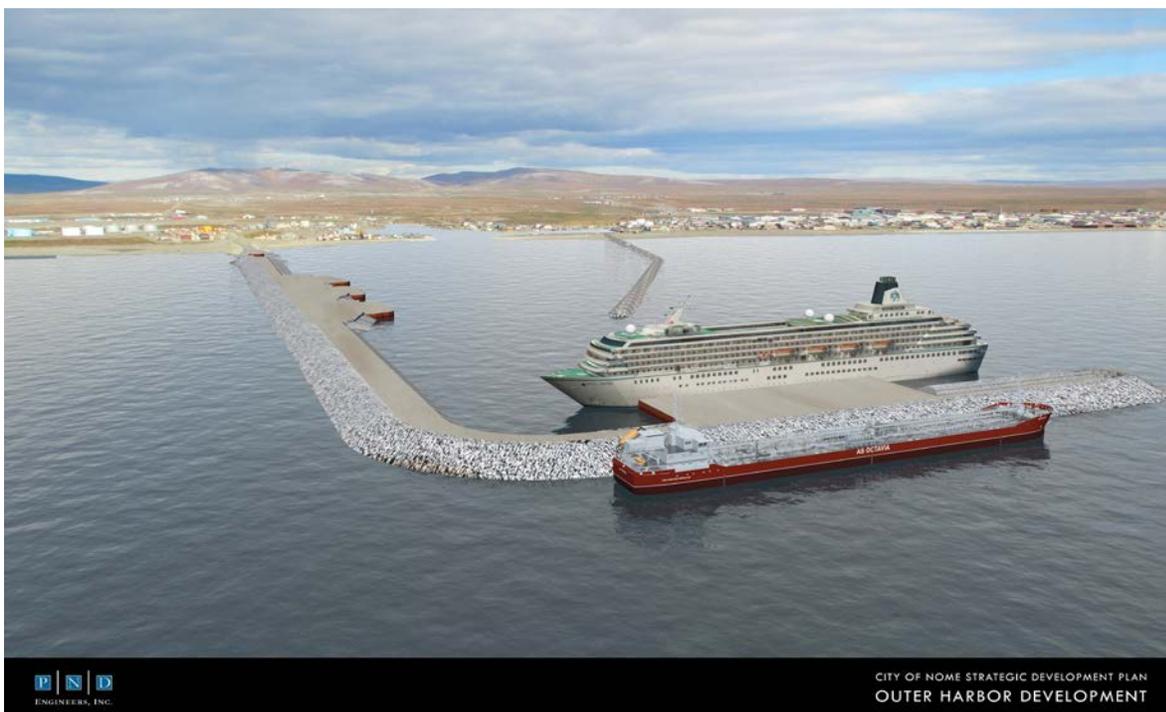


reduced timeline by expanding an existing facility that is strategically located to base the U.S. Arctic fleet in support of national security, life safety, oil spill response, resource protection and icebreaking within the region. The staging of SAR and OSR assets closer than Dutch Harbor is critically necessary to ensure the response capacity is in place in the event of a maritime incident or accident, in order to mitigate loss of life and damage to the coastline as risks continue to elevate with increased traffic.

a. Alaska State DOT-USACE ADDP Studies

Beginning in 2011, the U.S. Army Corps of Engineers and the Alaska Department of Transportation initiated formal studies on the need for and preferred location for an Arctic Deep Draft Port. This evaluation process focused on the infrastructure necessary to support offshore oil and gas development, search and rescue operations, and oil spill response capabilities. The studies evaluated port location options from the mouth of the Kuskokwim River to the northern border with Canada. The area covered included 3626 miles of coastline, a distance 1500 miles greater than traveling from Maine to Key West.

After extensive evaluation of numerous sites, in 2015, the Army Corps selected the Port of Nome as the preferred site for an Arctic Deep Draft Port. This decision was based on Port of Nome's overall ability to meet the mission criteria, geographical advantages, and the presence of active commercial port operations and existing shore-based infrastructure, including a fuel tank farm, a full service hospital, and an airport with two 6000+ foot runways. The Port is actively working with the Army Corps to refine the study scope and design of the ADDP project, with further actions expected in 2017.





Finally, as public-private partnerships (P3s) will clearly have a definitive role in Arctic development, the Port of Nome and Sitnasuak Native Corporation (SNC) have entered into a P3 agreement that will allow SNC to contribute funds and resources, as well as provide input into the development of an ADDP in Nome. This represents the kind of private investment and project support that stands behind the ADDP in Nome and the importance of this project to a key stakeholder in the region.

b. Recent Congressional actions

The Water Infrastructure Improvements for the Nation Act (WIIN Act) included two provisions that will benefit the development of an Arctic deep draft port in Nome: 1) an expanded scope for the “Remote and Subsistence Harbor” provision that now covers the region, not just a single community benefitting from the project (Sec. 1105 of the Act); and 2) a new provision that authorizes consideration of “national security benefits associated with an Arctic deep draft port” (Sec. 1202(c) of the Act).

The FY17 National Defense Authorization Act (NDAA) includes a provision requiring the Departments of Defense and Homeland Security to evaluate potential ADDP sites and authorizes the designation of a Strategic Arctic Port which should further help justify the development of an Arctic deep draft port (Sec. 1095 of the Act).

The 2014 Water Resources Development Act established a mechanism to allow non-federal public entities to contribute funds to the Army Corps for the “development, construction, operation and maintenance of channels, harbors, and related infrastructure” associated with deep draft ports for the purpose of Arctic development or national security purposes.

5. The need for accurate navigational charts in Alaska

I also want to address an important issue related to the successful development of Alaska’s offshore and onshore resources. As I have discussed, ports are key components of the state’s infrastructure that make resource development possible. It is also critical that we have up-to-date and accurate hydrographic charts, especially since only 2.5% of the Arctic has been surveyed with modern standards. I will provide two recent examples of just how important safe navigation is in Alaska.

First, I want to highlight the impact that one vessel’s grounding can have on a project. In July 2015, the MV Fennica struck an uncharted rock in Unalaska’s harbor. This was unfortunate on many levels, but most importantly because the MV Fennica was a required support vessel for Shell’s drilling activities in the Chukchi Sea. The resulting damage necessitated repairs in the Lower 48, which delayed Shell’s operations by more than a month.

Second, on June 24, 2016, the chemical tanker MV Champion Ebony ran aground on an uncharted shoal near Nunivak Island in southwest Alaska. She was carrying more than 14.2 million gallons of fuel products, and fortunately was able to refloat without a spill.



Both of these incidents underscore the considerable risks associated with maritime commerce in areas without adequate navigational charts. The negative impact of a maritime casualty in Alaskan waters remains a painful memory, and the potential risk for another incident must be minimized. A large-scale spill in the Bering Sea, Chukchi Sea or Beaufort Sea would be devastating to the communities that depend on the ocean for cultural and economic needs. This risk needs to be mitigated with an aggressive charting program. This will help reduce the potential for a spill or loss of life, and will better protect the interests of subsistence hunters and fishermen, the growing tourism trade above the Bering Strait, and safeguard the future of resource development activities.

6. How can Congress help?

I will keep my recommendations straight forward. Alaska has many needs to secure its future, and everything that the Alaska Delegation and Congress can deliver is greatly appreciated.

I urge you to consider the following:

- *Secure sufficient federal funding to maintain the functionality of Alaska's ports, including dredging, maintenance and construction;*
- *Provide continued support for the timely development of an Arctic Deep Draft Port in Nome;*
- *Accelerate hydrographic charting in Alaska, and especially in the Arctic; and*
- *Support the designation of Nome as a strategic port in the Arctic.*

7. Conclusion

I have dedicated my career to advancing the development of the Port of Nome to support the community, the region, and the state. While we have made significant progress, the next few years will truly make a difference and support from Congress is absolutely necessary to achieve our goals.

Thank you for providing me with this opportunity to appear before the Committee. I would be happy to discuss specific issues in more detail and answer any questions you may have.