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#### NOME PORT COMMISSION WORK SESSION & REGULAR MEETING AGENDA THURSDAY, JUNE 20, 2019 @ 5:30/7:00 PM COUNCIL CHAMBERS IN CITY HALL

# WORK SESSION - 5:30PM:

Presentation on Draft Commercial Arctic Shipping Assessment – Anita Parlow w/Parlow & Associates

# REGULAR MEETING - 7:00PM:

- I. ROLL CALL
- II. APPROVAL OF AGENDA
- III. APPROVAL OF MINUTES
  - 19-05-16 Regular Meeting

#### IV. CITIZEN'S COMMENTS

#### V. COMMUNICATIONS

- 19-05-22 Ponant to offer North Pole cruises in 2021 Arctic Today
- 19-05-23 New rules for mining operations in Norton Sound ABM
- 19-05-26 Corps publishes draft Nome Port Study Petroleum News
- 19-06-02 Bering Sea survey could provide insight on cod finds ADN
- 19-06-06 Nome eyes significant port expansion, is it enough? Arctic Today
- 19-06-07 Mayor Beneville to National Science Foundation (Polarctic)
- 19-06-07 Interim City Manager Handeland report
- 19-06-14 Polar Code may be applied to smaller vessels Nunatsiaq News

#### VI. COMMISSIONER UPDATES

#### VII. HARBORMASTER REPORT

• Update on Operations, Repair & Maintenance

#### VIII. PORT DIRECTOR REPORT/PROJECTS UPDATE

- 19-06-07 Port Director/Projects Status Report
  - Legislative Consultants Special Session Report
  - P&H Project Priorities Update

#### IX. OLD BUSINESS

•

 Fiscal Plan for Funding Major Asset Repair/Replacement & Capital Improvements for Recommendation to Council

# X. NEW BUSINESS

• Westgold Dock Damage Update – Repair Plan/Estimate (handout)

# XI. CITIZEN'S COMMENTS

XII. COMMISSIONER COMMENTS

# XIII. NEXT REGULAR MEETING

- July 18, 2019 5:30pm
- XIV. ADJOURNMENT



# **WORKING DRAFT:** Changes in Arctic Shipping and The Port of Nome *Meeting the New Demands*

# **PREPARED FOR:**



## **PRESENTED BY:**



# **CITY OF NOME, JOY BAKER, PORT DIRECTOR**

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LOCAL CONTENT AND GLOBAL CONTEXT A.L.PARLOW & Associates, LLC

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Monday, June 10, 2

# WHAT FOLLOWS IS DRAFT #3 OF STUDY FOR REVIEW AND COMMENT BY PORT DIRECTOR, JOY BAKER

Changes in Arctic Shipping and The Port of Nome Meeting the New Demands

> or, "How Do We Up Our Game in the Arctic?" General James M. Mattis, Alaska 2018

**EXECUTIVE SUMMARY** 

Much remains unknown about the Arctic region, including what level of Congressional support might be anticipated by Alaskans, the state that makes the United States an Arctic nation. However, more is known about the drivers of considerable change in the Arctic, particularly the twin issues of melting sea ice along with projections of substantial increases in shipping in Arctic waters, particularly the Bering Sea and Strait.

Several observers have noted that unless Nome creates a vision for its future, prioritizes the development of a series of new or expanded port capabilities in order to prepare for increased shipping traffic in the Bering, Sea and Strait, the city – and its port – will fall behind. Indeed, if Nome, Alaska and the United States do not actively engage in enhancing its Arctic marine infrastructure, it is likely that the city, state and nation will have missed substantial economic and national security opportunities

This report, addresses the question, "How do we up our Game in the Arctic," by providing an understanding of the major climate and commercial forces that are moving the region: shipping, oil and gas, mining and, fishing. The background and context that is developed in this report is designed to provide the basis for the recommendations below. The purpose is to offer a point of departure, or, reinforces current thinking, for a Nome– specific actionable framework for the near, medium and, long term.

To fully respond to the assigned question, "How do we up our game in the Arctic," this study places the Port of Nome interests in the larger Arctic context of shipping and commercial activity in the high North. This report offers a framework – an operational point of departure – to serve as a foundation for other assemblages of facts, depending upon Nome's priorities.

Following a combination of desk research and relevant interviews, the following nine points are recommended as components to Nome's port development. They might be prioritized in incremental and interlinked stages, building upon existing capabilities. The recommendations, while important in themselves, are also designed to prepare Nome as a future gateway port to the Mediterranean-sized Central Arctic Ocean (CAO) that is likely to open for transit across the North Pole from Asia to Europe by mid-century.

Of the nine recommendations for consideration, some are ongoing, several, such as cruise tourism, reflects and build upon current increases, and others are either new in concept, if not in practice. Together they facilitate a coordinated approach, to be prioritized, thus, linking the capabilities together. Each builds upon the others and offers a basis for what will ultimately become a gateway port to a brand new ocean.

The recommendations below are made following the past five months of research, analysis and interviews to convey a deeper understanding of the ongoing changes in the Arctic region, in terms of climate, environment and commerce, and what Nome might consider so that the city, its port and peoples become part of the evolution, both in commercial and environmental terms. The recommendations include development of infrastructure, commercial and other capabilities in the following contexts, with the context and background information more fully discussed in this report. The recommendations include the following:

- 1. Commercial fishing -
- 2. Cruise tourism -
- 3. Green port -
- 4. Sister ports -
- 5. Adaptation and Resilience: climate change impacts on the Port
- 6. Search and rescue and Spill Response capabilities and safe haven
- 7. Smart Port Capabilities autonomous ships
- 8. Prepare to become a Central Arctic Ocean gateway
- 9. Capabilities to support Coast Guard constabulary capabilities and DOD national security terms.

# Changes in Arctic Shipping and The Port of Nome Meeting the New Demands

or,

# *"How Do We Up Our Game in the Arctic?"* General James M. Mattis, Alaska 2018

# **1.0 INTRODUCTION**

With the accelerated sea ice retreat, the Arctic region is experiencing a massive transformation. Along with a warming that progresses twice as fast as the rest of the planet, increases in commerce, particularly natural resources development and shipping, is already visible both on and offshore. A significant part of the conversation on the Arctic's Atlantic and Pacific sides involves enhancing marine infrastructure, expanding and interlinking port facilities and, developing both "smart ports" and, in particular, "green ports," to protect marine ecosystems and subsistence ways of life.

According to the 2008 Arctic Marine Shipping Assessment Report (AMSA) nearly all shipping in today's Arctic is destinational, conducted for community resupply, shipping natural resources (hydrocarbons, hard minerals and fish) out of the Arctic, along with marine tourism, scientific exploration, national security transits and, military exercises. The AMSA report reflects a skepticism about the large-scale development of container ship transits in the short or medium term.

This report is focused on the Bering side of the Arctic region, although some useful and relevant examples and questions regarding best practices, public-private partnerships, the

utility of a Port Authority, the construction and maintenance of green ports, and smallscale, north-to-north commerce, also draws from the Arctic's Atlantic side.

While it is challenging to know with any degree of certainty how fast and at what scale the sea-ice retreat will open the Arctic to significant commercial use, it is certain to so do. In that respect, there is a degree of urgency for America to build port infrastructure in the high North, while establishing priorities that are mindful of the realities that are unfolding.

A certain sense of urgency is noted by a Council of Foreign Relations plenary with then US Coast Guard Commandant, Thad Allen, *Arctic Imperatives: The Fourth Coast*, to both "tap opportunity and cope with disaster." The CFR report notes that in the Arctic region, the Russian Federation and China are moving forward in both commercial and security terms. The United States Congress and Department of Defense (DOD) are increasingly acknowledging that the United States needs greater awareness of the events in the region as they unfold. A combination of political, infrastructure, commercial and security domain awareness. Nome is in the front line. However, with or without U.S. policy shifts, it is vital that Nome move forward in service of its own interests.

The acceleration in temperature, ice melt, increased traffic and, resource development also requires disaster response capabilities, spill response, and Search and Rescue to respond to the likely inevitable natural calamities, be it spills, grounded ships, collisions or, mammal strikes, suggests both interlinked path forward for shippers and ports, including great need for port infrastructure capabilities.

Commercial fishing and cruise ship calls are showing an uptick at Nome, and can be further developed. In this context, Nome must decide – whether, what pace, and how. Most observers believe that the key drivers of future Arctic marine economic activity will be shaped, I good part, by developing the plentiful natural resources that provide definition to the region. According to the U.S. Geological Survey, some one-third of the world's oil, gas and minerals are located in the Arctic region, most within existing sovereign waters. With Asia emerging as a major export and import market, a combination of destinational shipping, and ultimately, Arctic transits, including across the currently frozen Central Arctic Ocean, will link Asia, with Europe and America.

While the City of Nome, along with the Army Corps of Engineers, takes a "new look" at developing the nations' only high North deep draft port – the dynamic growth in the Arctic region has led more than several observers to note that the city and its port must establish the parameters for growth. This challenge is not only for the City of Nome, but also the State of Alaska, and, indeed, the United States to ensure that economic opportunities are not missed. But, it is Nome that must take the lead. Or, as Port Director, Joy Baker, reframed the General Mattis question: "How do We Up Our Game in the Arctic"

Will Nome be on the front end of the developments as they unfold, literally bypassed, or – in the best of circumstances – become the Arctic port of the United States.

#### **2.0 TABLE OF CONTENTS:**

Executive Summary Introduction Context and Shipping Trends and The Port of Nome Primary Stakeholders in Arctic Pacific Waters: Russia, China, Canada and the United States Cooperation: The Russian Federation and the United States: Bering Sea and Bering Strait Projected Growth Trends in Various Forms of Shipping Green Ports: Competitive and Reputational Advantage Sister Ports and Port-to-Port Agreements Best Practices: Port Development and Upgrades Public-Private Partnerships Is a Port Authority Necessary or Redundant? Conclusion

Appendices: Short-Term Achievable Elements Downloads of Arctic Port Description

# 3.0 CONTEXT

The conversations of the past four or five years regarding the paradox of warming and the opening of commercial opportunity is generally filled with excitement and optimism regarding possibilities that the opening of Arctic waters would offer to commerce, shippers, ports and port development. In seeming paradox, the warming seas and accelerating sea-ice retreat is creating opportunities for the interlinked subjects of transport and trade. Recent press coverage has highlighted the potential for commercially feasible Arctic shipping routes, with a particular focus on the potential for trans-Arctic voyages that would more closely link, for example, Shanghai to Rotterdam.

Perhaps the most compelling argument for transit shipping across the Russian or Canadian Arctic coastlines is its shorter route, by forty percent, to travel from Asia to European markets rather than through the Suez or Panama Canals. Climate models show ice-free summers, likely between 2050 and 2070, with the east Arctic shipping lanes such as the Northern Sea Route remaining the most reliable. Earth's Future reported a brief opening of shorter central routes crossing the North Pole by 2060, using Polar Class 6 ships.

Short of high insurance fees and shallow waters, reliably ice-free high north routes would indeed, save time and costs. Several trial runs by Danish and Chinese shipppers confirmed that the Arctic route could cut thousands of miles from each trip, compared to voyages through the Suez or Panama Canal.

In the past several years, several major global shippers such as the world's largest shipping company, Denmark's *Venta Maersk*, the world's largest container ship, and China's COSCO tested the northern routes to determine their feasibility as an alternatives to the southerly transcontinental shipping lanes of the Suez and Panama Canals. In 2018, the Maersk vessel loaded with Russian fish and South Korean electronics became the first container ship to navigate the Northern Sea Route, supporting Russian hopes for NSR to become a preeminent Arctic shipping highway. The Maersk sailed through the Bering Strait before cruising along Russia's north coast to the Norwegian Sea to St. Petersburg.

*Maersk* executives pronounced a successful 'proof of concept," as it tested its vessel systems, gained operational experience in icy waters, and taking the "highest measures" to protect the sensitive eco-system. Even though none of the shippers anticipate that Arctic container shipping will replace the far larger transits through the Suez or Panama Canals, the successful test voyage combined with China's Polar Belt and Road shipping aspirations, reflects the timeliness of preparations to accommodate some form of the anticipated growth in shipping, along with the interlinked subject of how the Port of Nome might build its short-medium-and, long term strategies.

The deeper question that is the subject of this report and a central issue for Nome is what do all the changes and accelerated shipping and commerce mean for Nome to consider and prioritize – to get ahead of the proverbial curve?

The types of voyages that generally occur in US Arctic waters, include:

- Destinational transport where a ship sails to, or from, the Arctic region, performs its designated activity and, then, sails south. Examples include LNG oil tankers from northwest Russia or Norway to world markets, cruise ships from southern ports or scientific operations in the Central Arctic Ocean;
- Intra-Arctic transport: a voyage that stays within the Arctic region, linking two or more states. For example, the route between Port Churchill of Manitoba, Canada on the Hudson Bay and Murmansk, Russia referred to as the "Arctic Bridge" Sea Route, is viewed as an alternate maritime transportation route that integrates Asian business markets with Europe. Its principal harbors are Port Churchill, Canada and the Russian Port of Murmansk, on the Norwegian side;
- Tug-barge operations between Canada's Northwest Territories and the U.S. Beaufort Sea off the Alaskan Coast.
- US Coast Guard Activities
- Trans-Arctic transport: voyages across the Arctic from the Pacific to the Atlantic oceans or, in reverse. These full voyages across Russia and, or Canada, are rare, likely to increase in the long term, with several route options for trans-Arctic navigation;
- Icebreakers and ice-capable ships;
- Scientific inquiry;
- Cruise and Adventure Tourism
- Alaska, a hub to more than one hundred coastal communities.

As for berthing, the Port of Nome, as we are aware, is currently too shallow for large ships. Fuel tankers are anchored in deep water, with fuel lightered to Nome's inner harbor, about ten feet deep and outer harbor at twenty-two feet deep. With the Corps' evaluation to construct docks from 450 to 600 feet long and dredge to 40 feet deep, it is vital to understand what the ship requirements will be moving forward. Future vessel are projected to be larger, particularly container vessels that are capable of transiting long distances non-stop. So, what should Nome identify as its priorities as a port of the future?



Map:

# **3.4 THE POTENTIAL FOR GROWTH IN SHIPPING**

The AMSA Report notes that sea-ice retreat will continue, if not accelerate, with trans-Arctic shipping likely to increase in the long run, certainly across Russia's Northern Sea Route, and, probably lagging in the less predictable Canadian Northwest Passage.

According to a 2017 NASA Report, Arctic sea-ice reached a record low wintertime maximum extent since NASA began to measure sea-ice retreat in 1979, with sea-ice diminishment and thinning over the past five decades. In the long run, it is anticipated the now frozen Central Arctic Ocean, the approximate size of the Mediterranean, is likely to be navigable for several summer months. With its multi-year ice loss, and consequent thinning ice, vessels will be more able to cross through the Bering from Asia to Europe, without traversing either the Russian or Canadian coasts. In this instance, Nome is perfectly situated as a gateway port.

While a succession of administrations and the US Congress has yet to prioritize Arctic development, including national security, infrastructure development, or greater environmental security in Alaska and the Alaskan offshore, state and local communities must increasingly integrating into the Arctic economy, its system of ports, possibly developing a series of –public–private partnerships, or, if useful, and a Port Authority, to sustain the much needed growth.

NOTE: Just Released DOD Report



Photo: Aerial view of Nome's small boat harbor and port. photo: Joy Baker, Port Director

#### 4.0 PORT OF NOME

## 4.1 CONTEXT:

Before further discussing the growth trends in Arctic shipping, i.e., who is moving the agenda and what choices and priorities are logical for Nome – it is useful to review, as a point of departure, Nome's capabilities, aspirations and plans as expressed by Port Director, Joy Baker in her Congressional testimony before the U.S. Congress on March 30, 2017.

## 4.2 CONGRESSIONAL TESTIMONY: JOY BAKER:

Nome's Port Director testified to Congress that 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. Baker noted that Nome 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.

Although the ice-free season gradually increases, Nome's port is typically closed for almost six months of the year. Consequently, the ice-free period between June and December is 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 Russian Northwest (NSR) and Canada's Northeast Passages, frequently serving as the last stop before, and first stop after, transiting a thousand miles of Arctic waters that holds insufficient commercial port infrastructure.

With a deep-draft port back on the table due to the successful lobbying of Alaska's delegation and other political forces, the Water Infrastructure Improvements for the Nation (WIN) Act (2016) authorized the Corps to consider the benefits for the region as a whole and not just the city of Nome. Language added to the 2017 National Defense Authorization Act advocated for the strategic importance of an Arctic Port. Further, the 2018 Water Resources Development Act (WRDA) P.L. 115-270, that authorizes improvements to infrastructure, and investments in America's water resource systems, including Alaska.

Baker testified to the Congress that Nome is accessible only by plane, boat and dog-sled before emphasizing:

"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; (yet)
- Supplies 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 Alaska also made it possible for the cruise ship industry to bring more than 1 million tourists to the shores of Alaska in 2016.
- Many of Alaska's ports support robust commercial, subsistence and recreational fisheries, including six of the top ten commercial fishing ports in the nation.
- Further, Baker notes that in 2007, 184 vessels docked at the Port of Nome with twelve anchored offshore. In 2015, some 625 ships with 112 anchored offshore. And, it is anticipated that in 2019, some ten cruise ships will pass through the Port of Nome. More ships means more debris, more trash and more waste streams and spills that affect marine ecosystems, including a concern for subsistence hunting and fishing,
- At this writing, no spill response or search and rescue capabilities are readily available.

# 4.5 Army Corps of Engineers Report Card

Baker also testified that 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 Corps' 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 2018 WIN Act) should help provide better access to federal funding for the Port of Nome – both in national security and commercial terms.

## 5.0 Recent Vessel Traffic and Need for Infrastructure

According to Baker, Arctic vessel traffic demand has shown a significant increase from 2011-2016:

• 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 3<sup>rd</sup> 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 cruise ship Crystal Serenity's successful voyage through the Northwest Passage is likely to further change the dynamic of traversing the Arctic by generating more commercial interest.
- Baker also testified that 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.

# 6.0 NOME'S FUTURE, AND, U.S. NATIONAL SECURITY INTERESTS

While it is beyond the scope of this report to discuss perceptions and goals of infrastructure, future construction, and post capabilities, it is vital to distinguish the State of Alaska and the Corps of Engineers, and some members of the U.S. Congress, who treat the Port of Nome as a small port in need of expansion rather than growing Congressional and Defense Department perceptions that Nome offers a foundation for an Arctic port that is also capable of serving the nation's ongoing and growing national security needs.

Further, given the recent, and welcome, upgrade in Congressional and National Security interests in the Arctic region, it is vital that the whole of government support, both politically and financially, Nome's much needed growth in infrastructure. By investing in Nome's port, the United States would, indeed, be sending a message that it truly views itself as an Arctic nation, is a meaningful player in the conversations to come regarding regional security, and the new rules that will be necessary to transit the Mediterranean-sized Central Arctic Ocean by mid-century for which Nome can serve as a gateway.

# 7.0 SHIPPING TRENDS IN THE ARCTIC REGION

# 7.1 BACKDROP

As the sea ice melts in the Arctic, with the high North region warming twice as fast than the rest of the planet, attention is increasingly placed on seeming paradox of challenges and opportunities.

The Arctic Circle, located at 66.33 parallel north, is unpredictable, with hazards and dilemmas that disrupt both daily life and long term planning in a region long identified by its relative isolation, thick and persistent multiyear ice, uncharted waters, winter storms and months of darkness.

The retreating sea-ice has significantly increased the potential for natural resources extraction – oil, gas and mining – whose shipping is generally destinational rather than transit, and does not require tight time schedules.

The Arctic is a resource-rich region. According to the oft quoted United States Geological Survey (USGS), the Arctic region contains about 30% of the world's undiscovered gas and some 13% of the world's undiscovered oil – mostly offshore and accessible. Russia's vast undiscovered petroleum is estimated between 66 billion tons of oil equivalent (BTOE) – accounting for about 52% of Arctic totals, and Norway, 12%.

The increasing trade in energy and minerals along with the growing availability of Russian ice–breaker support for the projected increases in bulk and break bulk vessels along the NSR suggests that resource shipping is likely to be economically advantageous in the Arctic routes. The Russian Academy of Science reports that Russian natural resources exported to Europe are increasing, with the second largest, and growing, customer being China. Through its Polar Belt and Road initiative, China is also increasingly an investor.

In November, 2018, *Arctic Today* reported that traffic on the NSR doubled in the past year, surpassing 15 million tons of cargo in eleven months of 2017, with an expectation of a two million ton increase for 2018, with natural resources having increased fivefold since 2014, with primarily Asian destinations.

Port and infrastructure upgrades and new capabilities are vital to Arctic shipping growth – be it along coastal Russia, the United States (Alaska) or Canada's Northwest Passage. The Russian Federation has indicated that an upgrade of resource development and vessel traffic in the Northern Sea Route (INSR) is among its highest priorities.

Recently, *Reuters* reported President Putin's invitation at an Arctic forum meeting in St. Petersburg, for foreign investors to engage in the expansion of port infrastructure in Murmansk and Petropavlovsk-Kamchatsky that would serve the Northern Sea Route. At the same forum, the Russian President asked his government to draw up tax relief plans to encourage investment and "promote the development of the Arctic region." The likelihood of increased shipping and a need for greater and improved port and other infrastructure continues to draw opposition by environmental groups concerned about stresses to marine ecology, climate, and limits to subsistence hunting and fishing. While Greenpeace is not likely to be granted access to Russian waters any time soon, the environment–development balance requires far more communication amongst interests by all Arctic nations, and stakeholders, to protect the rugged, yet fragile Arctic marine environment.

Western sanctions placed heavy limits on Arctic development, virtually encouraging increased commercial activity between Russia and China. Chinese media recently celebrated the nation's first energy project investment in Russia within its Polar Belt and Road Initiative, anticipating that the project will contribute significantly to China's energy security.

Cooperative initiatives such as the nascent Canadian–Russian 'Arctic Bridge,' the increasing Chinese interests in Arctic shipping, natural resources, and science are just some of the variables in a part of the world that is moving from the margins to meaningful integration into global commerce.

For a sense of scale, in 2015, *The American Journal of Transportation (AJOT)* reported that 13 ships sailed through the Northwest Passage and 18 international ships through the Northern Sea Route while 13,874 passed through the Panama Canal and 17,834 through the Suez.– both with expansion underway to accommodate the larger container ships projected into the future.

Container shipping generally requires dense population and rail and/or air links. Most shippers create routes with as many intermediary stops as possible. For example, voyages from Los Angeles to Hong Kong might visit ten ports along the way to pick up and drop off cargo. A shorter route does not necessarily make it less expensive or more commercially viable. Also, a sufficient labor force is necessary to perform cargo handling activities and other operational tasks.

This is particularly the case for Arctic hub ports that require direct connections as a gateway to a particular region. Several observers noted that "Nome can offer large areas to be developed as lay down or yards." Apparently, this cannot be said for Dutch Harbor or Provideniya – a key point in the section below that discusses the potential for "sister port" arrangements.

What follows are brief descriptions of port related issues amongst the major national forces and trends in the Arctic, as the sea ice melts: Russia, China and the United States. The purpose of the following sections is to provide a brief view of the region's interests and developments Nome considers its options.

# **8.0 PRIMARY STAKEHOLDERS IN ARCTIC PACIFIC WATERS: RUSSIA,** CHINA, CANADA AND, the US

# 8.1 RUSSIA: NORTHERN SEA ROUTE

# 8.2 Context

The Russian Federation, the largest Arctic nation with the greatest high North development plans, on both the Atlantic and the Pacific oceans. The Kremlin generally defines the Northern Sea Route as a "set of marine routes from Kara Gate (south of Novaya Zemlya) in the west to the Bering Strait in the East." Several routes exist along Russia's northern coast, particularly the main strait through the islands of the Russian Arctic, other potential routes run north of the island groups



Nuclear Powered Ice-Breaker escorts a series of tankers on Russia's Northern Sea Route.

With its symbolic planting of its flag under the North Pole, Russia made its intentions regarding the Arctic region in the Russian Federation's economic and political life clear. The Russian Federation intends to proceed with its intentions to turn its large sector of the Arctic to a driving force in its economy and thus, a meaningful part of global shipping – at least, destinational shipping in the Arctic. Because of its natural advantages of current and wind, along with its prioritization for development, the Russian side of the Arctic is opening before the Canadian Northwest Passage. Further, with its 42 ice-breakers and ice capable ships, Russia has the capability to move traffic through choppy and ice covered waters in a generally timely manner.

While Russia is upgrading ten of its dual–use ports along the Northern Sea Route, it is evident that a well-connected system of ports, port hubs, ice-breaker escorts and, response capabilities improves both predictability and greater capability in transit. It is generally agreed that the Russian port at Murmansk is its largest Arctic shipping hub. Located on the Koala peninsula at the coast of Barents Sea, the non-freezing port is able to service any type of vessels. In the near future it will undergo a major modernization as part of Russia's objective to develop industrial facilities in the port region.

The Murmansk shipping hub is not the only Russian port to be playing the key role in its Arctic marine shipping. The Port of Petropavlovsk at the coast of Kamchatka is to be developed as an eastern hub for the Norwegian Sea Route. According to recent Russian reports, the port of Petropavlovsk is going to play a major role as plans are for it to become the hub for all vessels operating the route.

Additionally, the fast growing Sabetta Port on Russia's Yamal Peninsula, financed, in part, by China, is facilitating the shipment of LNG from Russian's north coast, primarily to Asia, particularly China, and, possibly Western Europe and Latin America. The enormous and growing Port of Sabetta is laying the foundation for further development of hydrocarbon fields, with an expectation of exporting 15 million tons of cargo in 2018, 30.7 million tons by 2020, and 50 million by 2030. The port is being developed by a Public-Private Partnership between the Russian Government, and Yamal LNG, and China Insurance Investment, LLC.



# 8.3 Port Activities

Yamal LNG and Port Activities: LNG Gas Exports

For a sense of scale, *The Barents Observer* reported in January 2018 that The Association of Russian Sea Ports show that in 2017, Russian Arctic Seaports handled a total of 74.2 million tons, an increase of 49.1 percent compared to 2016. According to the Association, last year the Northern Sea Route experienced its "biggest volume ever," although only a modest amount of goods transited the entire route. The Association further reported that the port at Murmansk accounted for nearly two-thirds of all total Arctic port turnover.

Along with its NSR ports upgrades as part of a new Polar Route, Russia is also building new roads, a railway, to expand its total freight capacity, with a reach by rail into the Russian interior, and, to prepare for a desired increase in shipping traffic along what the Kremlin refers to as its "new polar route."

Further, as port and transit needs increases, Russia plans a fleet of some fourteen new icebreakers for Arctic waters. Two of the new icebreakers are nuclear powered, thus, saving on fuel and able to break through nearly four feet thick ice. Russia is also building the world's most powerful diesel-engine icebreaker. It will be able to operate autonomously for sixty days in ice up to two meters thick. The first ice breaker of this kind was build for the Russian state-owned company, *Rosmorport*. The Russian oil industry is likewise building more icebreakers to operate in and around the *Sabetta* Port, home to the enormous Chinese-financed LNG Yamal project.

With Russia's icebreaker fleet of some 42 ice-breakers and support vessels, emerges requirements for new infrastructure, including a modernized \$500 million docking facility for repairs and specially designed casks for spent nuclear fuel.

In this respect, it underscores that it is likely that oil and gas development will require expansion of Nome's port – such as what was contemplated when Shell intended to operated offshore.

With or without new ice-breakers, Russia plans to boost traffic and shipments on the NSR. Its *Tor Viking*, an icebreaker and anchor handling tug as it entered the Bering Strait in November, 2015 and passed the northern tip of Novaya Zemlya without icebreaker assistance. As Russia's Arctic Commission Deputy PM, Dmitry Rogozin to call Russia's Arctic route, the "Cold Silk Road," referring to China's medieval silk route and more current Polar Silk Route. Icebreakers will escort tankers to service the oil industry to and from *Sabetta* port, and other resource exports. Over time, several observers have pointed out, fewer ice-breakers will be needed.

## 8.4 Trends in Growth: Energy Dominance

Russian President, Vladimir Putin, is aggressively focusing on shipping and oil, gas and mining developments in the Russian Arctic, particularly in the Northern Sea Route, which could, according to the State Department, irrespective of sanctions, make the Arctic more economically interesting for the U.S. in the future.

Some twenty-percent of Russia's GDP is generated in the Arctic region. The Russian economy, based on exports, and relies heavily on the extraction of gas and oil from its Arctic region, both on and offshore. Beyond its historic destinational shipping to local communities, commodity shipments to Asia and beyond is accelerating. Russia is investing in new icebreakers – beyond its current forty-one breaker and support ships – and is expanding its large China-backed LNG plant at the *Sabetta* Port, even as it plans to establish a container line between Russia and China to export commodities to Asian markets.



Yamal LNG project's port of Sabetta. Source: Novatek

If Russia succeeds with its Arctic ambitions regarding the Northern Sea Route, shipping traffic in the Bering Sea would substantially increase as ships to and from China, Japan and, South Korea, will pass through the Bering Strait. Given that the Arctic region is where geopolitical differences are generally set aside to accommodate agreements and coordinated policies, such as the recent joint governance initiative in the Bering by the US and Russia approved by the International Maritime Organization (IMO,) everyone has interest in a stable, cooperative region that is capable of increased commercial growth.

However, Russia appears to be taking a "trust but verify" approach to its approach to the Northern Sea route. Recently, the Kremlin tightened its rules regarding transit and operations along the Northern Sea Route. Russian legislation requires northern Sea Route with advanced notice, Russian ice-breaker escorts and, passage only by Russian flagged vessels. But, whatever the regulatory changes along the northern routes, whether moving east-west, west-east or, south-north, the Bering Sea and Strait figures prominently for increased marine traffic. With China's emerging, and massive, Polar Belt and Road initiative, its two new ice–capable container ships and its promotion of science, innovative technologies and its financing of infrastructure to bet on shorter Arctic routes, The Port of Nome's location makes it a potential gateway for the Arctic transit routes in the future.

# 8.5 Russia's projected top investments, include the following:



Sabetta Port: Yamal LNG Exports

- The Murmansk Transport Hub, including the construction of a railway link. Murmansk seeks to become a main base for Arctic container shipments;
- Bridge across the Ob River to help link two Arctic rail lines;
- The Sabetta Port, with an annual capacity of 30 million tons. Award winning prize for best infrastructure project that could be the world's largest Arctic port;
- The LK-60 icebreaker, the world most powerful and nuclear icebreaker;
- The LK-60 II, a second icebreaker of the same class.
- Highway upgrade to Norway between Murmansk and Norwegian border

# 9.0 CHINA: A "NEAR ARCTIC STATE"

Since the 2017 announcement of the *Polar Belt and Road*, Chinese government, shipping energy and media officials have sung the praises of this newest addition to China's ambitious and powerful global Belt and Road initiative that spans across Central Asia to Europe's edge, sub-Saharan Africa and the Middle East. And, now, the Arctic.

China is becoming evermore a "near Arctic state," particularly in its links with Russian oil, gas, mining and shipping interests. In 2018 China revealed ambitions to create a 'Polar Silk Road' – a Polar Belt and Road component to its global Belt and Road program, by developing shipping lanes opened up by global warming and financing much needed infrastructure in the Arctic region – both Atlantic and Pacific.



Chinese research icebreaker «Xue Long».Photo: Chinese Arctic and Antarctic Administration

At this not so early stage, China is promoting science, innovative technologies and the need for infrastructure as it develops interest in three Arctic routes that would shorten transport times by crossing Canada, Russia and, eventually, according to its recent Arctic Policy White Paper, across the over the top of the North Pole in the Central Arctic Ocean. China is also engaged on the Atlantic side of the Arctic, with commerce, green energy technologies, infrastructure, port development in Greenland, Iceland and Norway.

China has sailed an icebreaker toward the North Pole, invests in Russian liquefied natural gas (LNG) projects along Russia's Northern Sea Route, is building ice capable container ships designed to operate in the context of it's Polar Belt and Road initiative, with its, thus far, two ice-breakers. Its Polar Initiative is intended to connect the Pacific and Atlantic sides by its ambitions for transit shipping through the Arctic's fragile yet rugged waters.

Along with its commercial fishing and tourism interests, and the energy production and infrastructure to sustain it, China's self-definition as a "near Arctic state," combined with its goal of integrating Arctic waters into its larger transportation and trade strategies, China brings the key question of what operative legal and regulatory standards will come to play regarding marine environment protections, climate, protections of coastal and Indigenous communities, and subsistence hunting, fishing and whaling.



LNG Shipped out from Sabetta Port: Photo: Novatek

The economic and geostrategic depth of the China-Russia cooperation was perhaps best expressed on June 27, 2017 when an agreement between the governor of Murmansk, Gazprom's General Director and a Chinese drilling rig operator resumed drilling in the energy-rich Kara Sea with an estimated 3.15 trillion cubic feet of gas and 3 million metric tons of gas condensate

How far the cooperative and joint ventures will go is unclear. However, as Russia seeks enhanced bilateral relations with China – China, with its Observer State membership in the Arctic Council, China is playing a long–game for a strategic role in the increasingly significant, emerging blue water region at the roof of the world.

## 9.1 CONTAINER SHIPPING:

The Venta Maersk's route reflects the curiosity, if not interest, in the Arctic routes as it departed from Vladivostok on Russia's east coast, loaded cargo in Busan, South Korea, then passed through the Bering strait to arrive in St. Petersburg on the Baltic. While the Venta Maersk, capable of navigating three-foot ice conditions, is the first container ship to sail the NSR, other vessels have also explored its potential, such as Maersk's rival, China's COSCO.

A year earlier, Maersk's main competitor, China's COSCO, sent about a dozen vessels through the Arctic, including five transit voyages. Using ice-strengthened vessels, both companies succeeded in proving the feasibility of transiting the northern routes, although neither company intends to alter their existing routes – at least not for the present.

The downsides are many. Arctic waters are relatively shallow, unable to support the monster container ships that are forthcoming. Even with thick bows capable of withstanding batteries of floating or calved ice and hardened propulsion systems, infrastructure is scant in case of need for search and rescue, running aground, or oil spill response.

Further, given that timing is vital to container shipping, the combination of seasonality, unpredictability and high costs to reinforce vessels for ice conditions, all work to dissuade shippers from seriously considering a northern route replacement for container ships. According to Arctic scholar Malte Humpert, the need for "just in time" delivery combined with terminal costs at \$80,000 hourly, and, insurance costs likely far higher than for the traditional routes, incentives for container shipping transits are few for the time being. Tero Verauste, the former CEO of the Finnish ice-breaker company, Arctia, and Chair of the Arctic Economic Council, noted additionally, that geopolitics, regulatory and insurance factors also present unknown costs.

However, the joint ventures in natural resources between Russia and China do satisfy demands for oil and gas, and, commodities shipments are less time sensitive than container shipping and also feed local Russian and Chinese markets – thu8s making the route more interesting to bulk and break bulk shippers.

Although the route is significantly shorter than the Suez canal, given unpredictability of ice, the short three-month ice-free season and general lack of infrastructure, differing views on whether the northern routes will become commercially viable to container shippers. For the foreseeable future – unlikely. Although it is beyond the scope of this report, an exploration of the role that Nome might play with Central Arctic Ocean access would help develop a long-term stratewgic plan.

# 10.0 CANADA: NORTHWEST PASSAGE

Canadian Arctic shipping traffic nearly tripled over the past twenty-five years, according to high North News. Unlike Russia, the main driver is less natural resources development than resupply, government vessels and, cruise ships. *High North News* reported that in addition to an overall growth in traffic, some types of vessels have experienced more growth than others. "In 1990 general cargo ships accounted for 28 percent of traffic, followed by government vessels and icebreakers (25 percent), bulk carriers (20 percent), and tanker ships (14 percent). Fishing and pleasure craft represented just 5 percent and 1 percent, respectively. By 2015 the share of fishing vessels and pleasure craft had increased to 15 percent and 8 percent of total vessel traffic."

The Canadian routes, differ in capabilities from Russia's Northern Sea Route, given Canada's lack of infrastructure, unpredictable ice patterns and only two icebreakers, it is anticipated that shipping in the NWP is likely to grow more slowly than the Russian routes – although, interest in increasing.

Canada's Northwest Passage is also the most challenging route given its shallow waters, powerful currents and poorly charted Archipelago that shields ice from the summer breakup of sea-ice. Seven routes have been used for NWP transits. According to the Scott Polar Research Group at the University of Cambridge, only 222 different vessels have transited the routes as of 2018, with a Russian icebreaker accounting for 18 transits, more than any other vessel. Passenger vessels have made 56 transits, 8 transits transported commercial cargo, and others for repositioning, or Coast Guard activity. Traffic in the region has tripled over the past two decades, particularly for tourism, pleasure craft, resupply and subsistence fishing.

## **10.1 Trends in Shipping: Vessel Types, Route Patterns and Cargo**

In 2015, Northern Canada Vessel Traffic Service (NORDREG) noted that computer models predict that ice will disappear from the North Pole by the middle of the century, although some ice coverage will continue to exist, causing uncertainties for shippers given the vessel's need for open waters.

With the trend of longer shipping seasons, the Canadian government is taking a phased and holistic approach in developing its short, medium and long-term strategies: promoting environmental protection, social and economic development and improved northern governance. Shipping is the key component for Canada's offshore commercial activity.

Canada's infrastructure deficit is as much a constraint as its unmapped shallow waters with year round ice. The Hudson Bay railway, a short line in disrepair, runs 850 km southwest from Hudson Bay's Port Churchill, but, connects with Canada's national railway system and thus, into the Canadian interior close markets. Repair and expansion of the rail is currently slow and highly politically charged, yet vital to tomorrow's shipping as a connect to resources and markets.

Canada's Arctic Bridge and Gateway initiative, a public-private partnership, raises the potential for the Canadian ports with its "intermodal port and rail" transport network for a combination of energy, mining and tourism. Rail is vital to the role a port might play in tomorrow's shipping as a link to resources and markets. Canada's Prince Rupert, with its rail capabilities is able to bypass Chicago as it moves cargo to the Canadian and U.S. east coasts. Prince Rupert offers an excellent growth-model from a small port to one with great capabilities, particularly since the rail was developed. A sister-port relationship might be quite useful as Nome moves forward.

The principal harbors that define the Arctic Bridge are Canada's Port Churchill in Manitoba Province in north-central Canada, and Russia's major port at Murmansk – adjacent to Norway and the Barents Sea. The route is intended to integrate Asian markets with America and Europe. The project, a public–private partnership, in what each nation views as its internal waters, was fully realized in the late 1990s through an agreement between the Russian and Canadian governments to allow the transiting of cargo ships through the route. While it is beyond to scope of this report to fully explore this agreement and how it evolved, it might be useful for Nome to reflect upon its evolution.

# **10.2 Hudson Bay: Port Churchill**



All-important rail to Port Churchill through Central Canada, often rendered unusable due to melting permafrost photo: download

Hudson Bay's Port Churchill authorities generally agree that basic capabilities for safe and secure passage is generally lacking. Only twelve percent of its waters have been charted to international standards, navigation services (navigational, meteorological, hydrographic and communication) do not meet the need and standards of increased activity; and, limited to non-existent searching and rescue and spill response capabilities do not provide adequate support services, including waste disposal, ship repair or safe harbor services.

The Canadian north, like Alaska, is pretty much focused on niche markets which serves local communities, many of which do not have docks. Foreign vessels are limited to handling destinational shippers, particularly new resource projects and longer season is increasing the level of shipping. Further, both Canadian and foreign corporations are involved in chartering vessels on the spot market to export mainly dry bulk products.

Generally speaking, while there has been growth of Canadian-Arctic shipping over the past decade, it is at a relatively small scale, mostly destinational to remote communities that require diesel oil, whose future growth patterns remain in question as ship technologies, iced breaker support and services are present. It is likely, given the small population in the Canadian Arctic and spare road, although a few rail connections, the growth driver for port development will be the development and shipment of raw materials.

According to Transport Canada (2015), the number of bulk carriers, general cargo and tanker ships registered in Canada, flying the Canadian flag, represent 180 vessels that total 2,123,019 gross tons. For foreign flag vessels, the bulk trade is more important to foreign carriers. Increased investment in mining and energy production is increasing the demand for specialized transport project vessels as equipment for major construction sites.

Nome should be part of this conversation.

## **11.0 UNITED STATES: ARCTIC SHIPPING, INFRASTRUCURE AND OFFSHORE ENERGY RESOURCE DEVELOPMENT**

The U.S. lags far behind not only the other Arctic coastal states but, also other nations, such as China, interested in developing Arctic shipping and commerce capabilities. In that respect, it reaffirms the fact that, along with, or independent of the Alaska delegation, support, Nome must establish its priorities and move forward.

## 10.1 Senator Murkowski Legislation

Senator Murkowski recently unveiled legislation aimed to raise the nation's presence in the Arctic through two bills: *The Arctic Policy Act* (APA) and, Shipping and Environmental Leadership Act (SEAL Act.)

According to the Senator's staff, the SEAL Act intends to establish a congressionally charted seaway development corporation in the Arctic as Arctic shipping and maritime traffic is growing and expected to grow exponentially as the sea ice retreats due to the planet's warming that is occurring faster than the rest of the globe. It is vital that the City's efforts to include the current and future developments at the Port to strengthen Congressional inclination to finance some significant portion of much needed port infrastructure.

While it is unlikely that foreign carriers will pay fees to traverse American waters, the more important issue that the Senator has flagged is the fact that the likelihood of Arctic shipping, including through the Bering Sea and Strait, will continue to grow. Told Congress in her floor speech that unveiled the Arctic legislation that we are "likely to experience a sea-ice free Arctic summer before this century is out."

## **Bering Sea and Strait Routing**

Most of the ships currently sailing through the Bering Strait are delivering goods to ports along Alaska's Northwest Coast. As the Bering Strait and Sea prepares for increased shipping, the Bering Strait has scant safety or infrastructure capabilities in place.

That is changing. In terms of ship safety, following the Seventeenth U.S. Coast Guard District support for the Bering Strait Port Access Route Study (PARS,) the IMO in 2018 adopted a joint proposal by the U.S. and Russia for a series of vessel routes and precautionary areas in the Bering Sea, Strait and Chukchi Sea with an expectation of a 100 to 500 percent increase in vessel traffic by 2025.

To note the recent IMO–approved, routing measures developed between Russia and the United States that has designated the north and southbound lanes laid out on either side of the Diomede Islands. It also highlights St. Lawrence, Nunivak and King Island as areas to be avoided by vessel traffic in the Bering Sea. Whether the projected increases in vessel traffic is accurate - time will tell. It is important to note that the Arctic waters of the Bering are relatively shallow. *The Maritime Executive* estimates ocean depths ranging from 18 to 250 feet, thus offering minimal clearances. However,

## 10.2 National Security, Coast Guard and, the Port of Nome

Senator Murkowski focused on national security interests in the high North. She testified to Congress that a deep water port is the center of vital infrastructure needed to serve a variety of security uses, including the Navy, Coast Guard, NOAA's research missions, search and rescue activities, spill response, monitoring of illegal and unregulated fishing and other necessary activities as increased commercial vessel traffic requires a functional US presence.

With only one functional ice-breaker, the Healy, given the growth in shipping, General Mitchell recently observed that the Department of Defense is increasingly recognizing the "strategic geographic location" of the Arctic region – and thus, the need for more than

one ice-breaker. According to the *Military Review*, the General told Senator Murkowski, "The Arctic is going to be a major area of importance to the United States strategically and economically in the future. I think it is fair to say that we are late to the recognition of that, but I think we have that recognition, now." (Forsythe, Military Review)

The Secretary of the Navy recently told the Wall Street Journal that the first Freedom of Navigation Operation in the Arctic was scheduled for the summer of 2019 to both expand America's presence in the region and to test American operational capabilities. While the Navy is considering Alaska's southern location at Adak, the Secretary mentioned the need for a high north port, minimally, for purposes of refueling, resupply, and other services necessary for safe transit.



Aerial view of Nome's port. (Photo: Joy Baker/Nome Port Director)

This month, June, 2019, the Department of Defense (DOD) released an update of its security objectives for the Arctic region. Defense seeks a "desired end-state" as a stable Arctic region in which U.S. interests are protected by "posturing its forces" to shape the region's security environment while maintaining a "credible deterrent." DOD noted three sets of inter-related national security interests in the Arctic where US national interests are defended and the region's shared challenges are cooperatively advanced.

- The Arctic as the U.S. homeland;
- The Arctic as a shared region;
- The Arctic as a potential corridor for strategic competition.

#### **11.0 COOPERATION: THE RUSSIAN FEDERATION AND THE UNITED STATES: BERING SEA AND BERING STRAIT**



While it would seem that contemplation of military security in the region is leading DOD to consider "upping its game in the Arctic," in terms of a deep draft high North Port. It is vital that communication, cooperation, and, interoperability shape the navigational, political and infrastructure capabilities across the Bering. It is heartening that cooperative activities, such as those listed below, continue mostly unimpeded despite clashes by the great powers, U.S. and Russia, in other parts of the world.

What follows is a list of mutually supported cross-Bering treaties between the United States and the Russian Federation.

- Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic;
- Agreement on Enhancing International Scientific Cooperation;
- Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic;

- Bilateral Agreement Between the United States and Russia;
- Eight Arctic Nations' Coast Guard Agreement to Strengthen Cooperation on Safety and Environment;
- International Maritime Organization Approved United States-Russian Federation Agreement on Two-Way Routes in the Bering Sea.

Having said this, given the geo-strategic considerations and the likely need for new regulatory standards as the sea-ice continues to retreat, it is crucial that the United States demonstrate its interests in the Arctic by showing a presence in the region in terms of support for Nome, its infrastructure plans and thus, a real projection of power in human terms. Whomever might emerge as a dominant force in the region – Russia, China or other coalitions – it is vital that the United States demonstrate an interest, and thus a meaningful presence so as not to marginalize itself from the discourse – thus to solely rely on its big-power global footprint rather than a meaningful presence in its largest state.

# **12.0 PROJECTED GROWTH TRENDS**

What follows is a brief description of various port-related activities in the Arctic region and the likelihood of their applicability to Nome.

# **12.1 Container Shipping**

The World Shipping Council recently noted that nine of the world's busiest container ports are located in East Asia, with seven in China. The shift to container vessels and larger vessels and the current over-capacity in the industry makes the northern routes less attractive financially despite projected saving in distance and the fact that the northern routes face size constraints given the shallow waters, uncertainties regarding just-in-time delivery and general lack of rail, roads or sufficient populations to support container ship activity that occurs in the Panama and Suez canals.

Shippers are not likely to substantially retool their routes given the impediments. At the recent Arctic Circle–Shanghai meetings, a COSCO representative estimated that China's container shipping across the high North might reach five or ten percent of China's total international exports. While the potential for container shipping in Nome is slim – given shallow waters, lack of rail and road and, scant population centers suggests that container shipping is not likely in the near term. This could change when, and if, the Central Arctic Ocean (CAO) opens for trans–polar shipping from Asia to Europe. At that juncture, Nome contains a strong potential to serve as a gateway port.

# **<u>12.2 Feeder Port Suitability</u>**

As this is a new concept in the Bering, what follows briefly describes the concept. Feeder vessels and feeder ports as a concept and reality is growing. A feeder vessel is a ship that

# **Arctic shipping routes**

Currently there are two main sailing routes through the Arctic, the Northwest Trail, which runs along the Canadian coast, and the Northeast Passage through Siberia, which is also the shortest route connecting northeast Asia and western Europe.



Sources: Arctic Data; U.S. National Snow & Ice Data Center; NOAA; Reuters.

G. Cabrera, L. Desrayaud, 24/08/2018

REUTERS

"feeds" the larger ocean-going vessels with containers. A feeder port is a port where the large ocean going vessels typically don't go – in part, because there are insufficient containers to load onto a large ocean vessel or, because the port is not large enough to handle the large, and growing, ocean going vessels.

In feeder port situations, small vessels collect shipping containers from different ports, then transport to central container terminal where they are loaded onto larger vessels. The smaller ships operate from transshipment hubs to service lower capacity ports. To be economical, the smaller ships require regular ports of call, with cargo drop-off and pick-up opportunities, for revenue generation.

- Feeder vessel classifications comprise different categories of capacity for a logistics process, i.e., between 1,000 TEU and 2,750 TEU from barges to smaller ships is paramount. In this way, larger ships are able to serve smaller ports;
- Feeder ships pick up containers from different ports and terminals of various sizes;
- This process allows for flexibility, agility, and, generally close to inland cargo owners.

This is perhaps of interest to Nome in the longer term. Neither the NSR nor the NWP offer at this stage container ports that might serve as transit hubs for Nome's circumstance. However, like Nome, regional hubs, such as Norway's Kirkenes are expanding to develop container capabilities. Given the competition for low costs, shippers – with increasing vessel sizes for economies of scale – seek ports with lower costs and higher capabilities. Norway's Kirkenes, as a gateway to the Northern Sea Route, offers an interesting approach that Nome might want to explore as it considers a similar gateway role to the Central Arctic Ocean.

Given that Nome, according to several observers, has "ample land" to dedicate to port development – and, land that is higher than the growth in potential storm impacts, it offers a possibility for serving in such capacity. However, it would likely require rail or road for cargo to reach the port. Efficiency in port infrastructure, roads, rail and logistics will change dramatically over the next several decades – thus requiring ports to prepare for the unfolding eventualities. For example, doubling vessel sizes, means half the number of calls. Smaller ports may attract only a handful of container calls per week – is this financially viable?

Feedering or other accommodation for container shipping is likely a long-term prospect for Nome as the Central Arctic Ocean opens for business – Nome is perfectly situated. A long-term and ongoing assessment of Nome's situation makes sense. Rail is critical for long term prospects as the gateway to the CAO. As is a "green port" and "smart port" to anticipate future shipping requirements.

# **14.0 AUTONOMOUS SHIPPING: SMART PORTS AND PORT CONNECTIVITY**

Smart ports are becoming more essential as large ships anchor outside of ports and fewer crew are needed – particularly for tugs, barges and other port-support infrastructure in the context of disruptive economies that are redefining shipping.

Autonomous shipping is about to become a fact of life, particularly in what is arguably the backbone of the global economy – the container industry. In a 2017 report, McKinsey



Photo: Safety4Sea China's First Autonomous Test Ship, 2018

and Company projects that "in 50 years, container ships will operate autonomously and will be nearly three times the size of the largest current vessels." The global management consulting firm also predicts that the shake-out may leave only three or four liner companies, that will operate "either as digitally enabled companies or as "small units of tech giants."

Reflecting innovative disruption in the shipping industry, the report "forsees" ocean going ships with a capacity of 50,000 twenty-foot TEU containers, with the possibility of modular, drone-like floating containers alongside. Further, McKinsey envisions a reinvention of the business model with a "fully autonomous transport chain" that will include loading, stowage along with loading onto autonomous trains and trucks, with the "last mile deliveries" by drones.

The McKinsey report notes that the economies of scale that undergird the growth in the size of container ships is likely to level off at 50,000 teu because even the current large ships are straining the capabilities of port and terminal operators forced to dredge, purchase new cranes or reinforce quay walls or, extend berths. The expectation is that a

"data enabled shipping industry," would integrate with supply chains, thus producing an entirely new order of performance and efficiency with "smart logistics" that integrates industry with transport.

Companies like Maersk, through a Senior Innovation Project Manager noted that the goal of autonomous technology is not necessarily "complete autonomy or unmanned vessels" – it is more interested in the development of remote harbor and transit pilotage "to make operations more efficient."

*One Sea – Autonomous Maritime Ecosystem –* formed in 2016 by an international multiindustry cooperative initiative – seeks to develop and optimize data connectivity, particularly with ports, and various levels of autonomy. Finland's Test Area, designed to establish proof of concept, focuses on marine safety, particularly to provide crews with greater understanding of a ship's environment along with fewer environmental emissions. With eighty percent of accidents due to human error, greater data connectivity and autonomy is viewed as offering greater safety – even though critics note that digitization simply would transfer the risk to remote shore personnel. With a gradual progression of integrated hybrids, auto-docking and short voyages to replace land travel, the process is in its early stages.

Beyond the challenges of technology and concept, is the necessity of a regulatory and governance structure adapted to future challenges. The IMO has developed a working definition of maritime autonomous ships and is beginning to consider regulatory standards for the possibility of no on-board crew Further, insurers standards and costs, how to avoid cyber-risk, as well as the most vital question of all – how to retrain long-standing and highly capable crews?

In the Arctic context, shipping remains limited due to ice conditions, insufficient mapping and, few ports sufficient to berth existing container ships. Despite increased shipping, slow investments in both ice-capable and digitally connected ships with shore-based bridges, the Arctic region is, perhaps paradoxically, optimum for shipping in icy waters. Ship's hulls can be constructed without need for crew member quarters, powerful ice breakers would lead unmanned cargo ships across the Northern Sea Route and autonomous or hybrid ships capable of remote sensing of the Arctic ocean's mostly unmapped floor.

With so much at play, Nome might consider a step-by-step approach to determine how it will lay the foundation for connectivity to the future – likely to implicate cruise ships, bulk vessels and certainly, any container ships involved in the region – with the awareness that one of the key characteristics of projected Arctic-wide container shipping is likely fewer port calls and deployment of far larger vessels – thus not likely for Nome's engagement in the short term, yet, a similar dynamic for smaller cruise, fishing and other vessels – with partial autonomous function.

# **13.0 BULK SHIPMENTS: OIL, GAS AND MINERALS ON AND OFFSHORE**

The 2009 Arctic Marine Shipping Assessment (AMSA) Report, viewed as a significant foundation for understanding Arctic shipping, reported the greatest growth in Arctic shipping is likely to be in the oil, gas and mining industries – with the greatest increases in bulk and break bulk vessels generated from Russia, Canada, Norway and the United States.

While it is not within the scope of the study to explore the specific port requirements necessary to accommodate the natural resources trade, below is a brief snapshot of existing and projected developments as it might interest or engage Nome.

According to AMSA, "Development of the rich natural resources in the Arctic is a rapidly growing industry. Since 2004, several significant new bulk shipments have begun operations, such as the year-round oil shipments out of Varandey in the Russian Arctic. In early 2008, an offshore lease sale conducted by the U.S. Minerals Management Service for the U.S. Arctic totaled nearly \$US2.7 billion; offshore gas appears to be the resource under consideration for development in this Arctic region.

Further, in June 2008, the Government of Canada received record breaking bids for oil and gas exploration leases in the Beaufort Sea, including a \$C1.2 billion bid for the rights to explore an offshore area of 611,000 hectares. In September 2008, a test shipment of some of the purest iron ore found on the planet was delivered to Europe from the Baffinland mine in Mary River on Baffin Island. This type of ship activity is likely to occur as likely growth continues.

As mines, such as Red Dog, 240 miles north of the Arctic Circle, produce large amounts of ore, the ice-free season means heavy traffic and carefully planned bulk shipments to ensure mines get all of the ore out before the fall ice forms. A 52-mile road leads from the mine to the port for its 100 day shipping season. Large bulk carriers, Panamax and Handymax sized up to 65,000 tons, visit Red Dog mine in Alaska.

According to Red Dog mine website information, port development began in 1986 with installation of a shallow water dock and small staging area at the port site. Construction of the road and mine occurred one year later. Special module transporters bring the ore to the port. An interesting point is that the Native Corporation, NANA, maintains significant community engagement and seeks to protect the marine ecosystem that supports subsistence fishers and hunters.

Alaskan U.S. federal district Judge recently invalidated a planned oil and gas lease sale in the Beaufort Sea off northern Alaska, as the Trump administration sought to replace the previous administration's limits on development in the Beaufort and Chukchi Seas. A new five-year plan is required while the withdrawals from the Outer Continental Shelf Lands Act wind through the courts. It was noted that subsistence whaling areas were not maintained in a protected status under the Trump Administration plan, in the Earth-Justice lawsuit.

Given the 2015 pull-out of Shell oil in the Alaskan offshore, combined with the recent decision of the US District Court to overturn President Trump's effort to open Arctic waters to oil and gas leasing, reflects the degree to which Nome is subject to the vagaries, prices and interests of the petroleum industry regarding Nome's capacity to anticipate oil and gas development and production.

It would appear that after 2022, irrespective of the court's decision, the region will again be open for offshore oil and gas exploration and production. It likely is logical to both anticipate and await the timetables of external forces of the industry – which, presumably would pay for any changes to the port that it might require to which Nome would assent. It might be useful to explore the likelihood in advance.

# 14.0 FISHING VESSELS AND ENHANCED PORT CAPABILIITES?

Alaska produces more than one-half of the fish caught in waters off its coast, with a value of nearly 4.5 billion dollars annually. Few places in the world offer such bounty, or are managed so well. The nearly 1.5 million square mile region includes waters in the Gulf of Alaska, the Bering Sea, the Aleutian Islands, the Chukchi Sea and the Beaufort Se

According to members of The Norton Sound Economic Development Corporation (NSEDC,) the local fleet on the Bering include some fourteen boats between some 30 and 51 feet long and fish on the Bering. These fishers live with an uncertainty of fishing for the future given that warming is changing the life patterns of the Bering Sea's billion dollar fisheries, including those on the Alaska coast.

In 2010, the Seattle-based Alaska Fisheries Science Center, a component of the National Oceanic and Atmospheric Administration (NOAA) documented that Pollock was absent from the Northern Bering Sea in large numbers. In 2010 the estimated biomass was 20,000 tons. By 2017, a warmer season with lower sea ice, showed 1.3 million tons of Pollock and 280,000 tons of cod. This year, the NOAA scientists will study to determine if the large movement of fisheries was a one-time event or a trend of fisheries moving north. If the fish disappear – then a significant problem not only for Alaskan fishers but for the United States that greatly depend upon Alaskan fish.

The fishers are looking to the NOAA survey results, along with their own experience, to make decisions about purchases of new gear for commercial fishing of cod, or possible shifts in crab and fish stocks that would significantly change their business models.

Several other impediments – or, potential impediments, beyond warming waters, also exist:

• In 2009 the United States of America government approved a plan (Fishery Management Plan for Fish Resources of the Arctic Management Area) to prohibit the expansion of commercial fishing in federal Arctic waters, including the US Beaufort Sea waters, until researchers gather sufficient information on fish and
the Arctic marine environment to prevent adverse impacts of commercial harvesting activity on the ecosystem;

When the region opens for commercial fishing – fisheries may or may not be available – given the open question of whether the nutrients that support the fish will grow or move as quickly as the fisheries themselves. Further, according to scientists and fishers, the fisheries can appear and disappear, virtually in a moment's notice;

• According to several fishers interviewed for this study, the current trade war with China could hurt Alaska and its fishing industry, as China is the top foreign market for Alaska. Even with some degree of federal support for financial losses, given barriers from China, disruptions to the markets would be difficult to regain, given the years building up markets and goods will. At this writing, it is not clear whether reprocessing fish would be exempt from the anticipated tariffs.

The combination of warming waters and fisheries movement, trade wars and increases in Russian fishing in northern waters to sell into Chinese markets, are, in part, replacing American fish. The Chinese tariffs are forcing the seafood industry in Alaska to seek other markets, with the Alaska Seafood Market reporting to the Associated Press that sales are off by more than 20 percent this year. The combination of warming, politics and trade disputes are coalescing in a manner to suggest that the number of fishing vessels in the Nome region will not likely significantly increase. It is also unlikely that trawlers from Dutch Harbor will require safe haven or repair in sufficient numbers to justify Nome spending to upgrade for this purpose.

It is vital, however, to maintain the port to support the existing craft, and build out to anticipate future growth.

### **15.0 CRUISE, ADVENTURE SHIPS AND PORT CAPABILITES**

From the vantage of Nome, the current interest might be less natural resources development – which is basically in the hands of the energy industry – and, more, the potential for increased cruise and adventure tourism, as well as the moving fish habitats and its impacts on subsistence fishing and whaling.

#### 15.1 2019 Cruise Ship Calls Projected for the Port of Nome

From early July until later September, the Port of Nome anticipates eleven cruise ships calls, including:

- Lindblad/National Geographic
- Holland America
- Silver Sea/Explorer
- Hapag Lloyd
- World of Residensea

- Hurtigruten
- Ponant

A glimpse of the future might be seen in the experimental voyage of the *Crystal Serenity* in the summer of 2016 and 2017. The cruise ship stopped at Nome, and, disembarked its passengers at several Arctic pots, using ferries to bring the high-paying passengers on shore. For safety and protection of the ship and passengers in ice-filled waters, this luxury liner paid for its own search and rescue and ice-breaking ship to accompany its during its voyage. The Serenity's captain was in contact with coastal authorities – however, sparse – during the voyage across the Canadian Northwest passage to New York.

Given that it is not likely that all, or even many, cruise ships can financially accommodate such support, creating a safe harbor, housing search and rescue stations and spill response capabilities would improve the region's ability to prepare for likely increases in marine traffic, whether from tourism, destinational or transshipment voyages and provide a reason – beyond the regional beauty – for cruise ships to stop.

A follow-on study is vital to determine who, what and how to expand and build upon the growing cruise ship and tourism possibilities, including what potential cruise shippers want both of the port and local site visits, what draws their interest, what facilities would support their calls, and, how to finance.

While it is beyond the scope of this study, cruise ships and the increased interest in adventure tourism is a logical step for Nome's interest and growth. Given both developments in the larger Arctic context and the specific growth in cruise ships calls at the Port of Nome, the follow-on study will specifically explore the promising interests of cruise ships from the other side of the Bering, particularly Japan, South Korea and China.

### **16.0 GREEN PORTS: COMPETITIVE AND REPUTATIONAL ADVANTAGE**

Green ports are vital for both commercial and subsistence fishing and cruise tourism. While this subject is beyond the scope of this study, it is – without doubt – the most important to explore. Particularly if cruise tourism is considered a growth element for Nome's economy.

As more and larger vessels are likely to operate in the Bering Sea and Strait, waste streams will generate a growing risk to the marine ecosystem. While the IMO Polar Code has produced higher waste treatment standards, generally – the principal waste stream discharges – oil, sewage and grey water – might provide the basis for new or enhanced services that Nome might offer. It is possible that Nome's ability to accept sewage from vessels will be at capacity by 2027. Elsevier, Marine Policy notes that increasing the capabilities and availability of port reception facilities could both enable vessels to properly dispose of their waste and, offer greater income generating potential for the port. Operating in advance of the projected increases in shipping will "help avoid the necessity to take corrective measures in the future." Shippers of all types, given the growing environmental requirement of the internationally accepted standards of the Polar Code, are requiring the Arctic Ports of the future to operate with as little CO2 emissions as possible, with capabilities to absorb and neutralize gray-water and ship refuse and other contaminants. This is particularly important for cruise ships whose passengers are more likely to consider a green port with all of its reputational advantage.

- To identify the drivers, pressures, state and national regulatory policies and practical steps for environmentally and financially sustainable development;
- The green port model requires the integration of different types of indexes: environment, social, economic and capacities. Capabilities such as waste disposal enhancement to visiting vessels, less risky fuel transfers and other reductions of pollution risks;
- What might Nome enhance, improve or develop to meet the evolving green ports standards, particularly prevalent in Europe?
- Several world-class ports that engage the Arctic are on the forefront of improving the green nature of their ports will be examined;
- The purpose is to not only have an environmentally efficient port, but also for reputational advantage, particularly for Arctic cruise tourism.

## **16.1 CLIMATE AND PORT SECURITY**

While it appears that the Port of Nome is on sufficiently high ground to withstand much of the erosions that are impairing both military and civilian ports, worldwide and in the United States, the Department of Defense, the United States Navy and the U.S. Coast Guard are evaluating and responding to implications of weather changes that are eroding America's ports, and thus, implicating national security.

The Port of Nome might want to inquire into the military climate science studies regarding ongoing and projected impacts on ports and shorelines.

## **17.0 SISTER PORTS AND PORT TO PORT AGREEMENTS**

While this topic is beyond the scope of this study, it is imperative to develop sister-port relations with Canadian, Russian and Nordic ports for information exchanges, creation of shipping hubs, cruise tourism exchanges – such as with Provideniya across the Bering. Several ports in Canada, Russia, Alaska and on the Atlantic side of the Arctic region could be reviewed for a wide range of commonalities.

For example, a sister or friendship port agreement may call for the sharing of various information in port infrastructure improvement, commercial facilities development, port operation and to cooperate for trade vitalization and service improvement. Various existing partnerships, Arctic wide or outside of the Arctic region, involve exchanges of technical and commercial information and experience on best practice. A further objective is to build up strategic networks in ports with many trade routes from and, to Nome.

Sister ports for cruise ships and tourism offer a logical foundation for growth that is a solid short-and medium term strategy as the climate conditions and number of vessel passages change.

#### **<u>17.1 Sister Ports: Best Example</u>**

A conscious decision was made by a number of ports in the Atlantic high north to develop trade and shipping with each other rather than seek to enter the global economy full bore, but rather, to focus on the links with each other in the high North Atlantic.

Their successful and pre-eminent example of growth in Arctic linkages regarding ports and shipping is worth looking at as an example of cooperative efforts regarding both ports and markets that Nome might want to evaluate – both within the region and Arctic-wide – and would be explored in a follow-on study.

#### **17.2 Eimskip, Royal Arctic Lines and, the Major Atlantic-Arctic Ports and Small** Business Development

The shipping lines of Eimskip and the Royal Arctic lines make round trip trips with cargo both coming and going to: Portland, Maine, Reykjavik Iceland, Nuuk, Greenland, Tromsø, Norway, and, Murmansk, Russia.

The shipping and marketing initiative, commenced in 2013, and began to systematically establish trade activities that, in a short time, build common development activities that suited the shippers, increased trade volumes, and ultimately, the ports.



Eimskip to Portland, Maine Photo: Courtesy Eimskip

The overarching goal was joint business development between the port cities in the northern part of the Atlantic. Their focus was on the following three sectors:

- Joint business development between port cities;
- Collaboration between ports in relation to common interests;
- Tourism: Collaboration between businesses for increased sustainability and economic growth.

The agreements include the following ports and entities across the Atlantic high North:

- Nuuk:
  - Royal Arctic Lines
  - Sikuki Nuuk Harbour
  - Visit Greenland
- Reykjavik:
  - o Eimskip
  - Flaxofloihafnir
  - Iceland Ocean Cluster
  - Visit Reykjavik

Torshavn:

- Port of Torshaven
- o Visit Faroe Islands

Tromsø:

- Port of Tromsø
- o Norinnova
- o Visit Tromsø
- Hurtigruten
- St. Johns:
  - Port of Argentia
  - Placentia Chamber of Commerce
  - St. John's Board of Trade

Halifax:

• Port of Halifax

Portland:

- Maine Port Authority
- Maine North Atlantic Development Office
- New England Ocean Cluster.

### **18.0 CENTRAL ARCTIC OCEAN: GATEWAY TO INTERNATIONAL WATERS**

Nome is a logical gateway to the Central Arctic Ocean (CAO) as its sea-ice melts, with an expectation that it will be navigable by mid-century.

The potential for Nome to serve as a gateway to the Central Arctic Ocean as the sea-ice retreats and shipping becomes possible, and a regular matter of business to travel from

Asia to Europe - a vital subject for Nome to consider - and, none too early. Nome could logically play a role such as the Port at Kirkenes, at the end of the Northern Sea Route. It is not too early to start a process of monitoring and assessment of Nome's potential role.



# SHRINKING ICE CAPS

The Geophysical Research journal, notes that the Arctic region is expected experience ice-free summers by mid to late century. The projected changes are said to be particularly important to the Central Arctic Ocean, (CAO) an ecosystem that is covered for the majority of the year, that serve s as a habitant to an unknown quantity of species, and helps shape global weather systems. As the Central Arctic Ocean As Nome is a potential gateway to the CAO is likely to become somewhat navigable over the next decades, it will offer a straight line of ocean across the North Pole over a sea, the size of the Mediterranean.

The Committee on Marine Transportation (CMTS) projects that Arctic vessel traffic will grow somewhere between 100 and 500 percent by 2025. Further, vessels are traveling faster and earlier in the year than previously. Early discussions about the creation of traffic corridors across the predicated new ocean where multi-year ice is giving way to far thinner yearly ice. It is suggested by some observers, such as Elsevier's Trans-Arctic Vessel Routing, that ships will prefer to stay in international waters such as the CAO to avoid tariffs and geo-political issues.

Despite a relatively scant amount of information about the CAO, marine scientists describe it as an "important Large Marine Ecosystem," both under-sea and above, that supports a diverse "macro-invertebrate" system that feeds polar cod, Arctic cod and others to the extent that discussion of whether the region, or parts of it, be designated as a Particularly Sensitive Area – thus with a requirement for traffic corridors, mapping, avoidance mammal strikes, and management measures such as – for example, vessel discharges – and a port of call to accommodate it.

Discussion are underway regarding proposed vessel routes, vulnerability assessments regarding environmental impacts and concerns that would help define defined shipping corridors and the possibility of annual or seasonal adjustments through bilateral or multilateral venues such as the International Maritime Organization (IMO) are preliminarily underway and would behoove Nome to monitor the events as they unfold.

### **19.0 ARCTIC PORTS-IN-DEVELOPMENT AND UPGRADES**

While beyond the scope of this study, it would be useful to flag key aspects of the development and planned upgrades of ports in Norway, Iceland and Russia that are preparing for increased shipping over the next decade, and more. Their intentions are to both adapt to service the through shipping, but to also to support operations at regional and local levels.

In my preliminary conversations with Arctic shippers, each emphasized the need for a "holistic approach" to port development: one that does not set the region up for a tsunami of complaints on the basis of environmental degradations, including climate change.

## 20.0 PUBLIC-PRIVATE PARTNERSHIPS

Perhaps this advisor might be assigned to work with the Public-Private-Partnership advisor to connect the financing of potential opportunities as expressed in this and any forthcoming reports with his responsibilities.

## 21.0 IS A PORT AUTHORITY NECESSARY OR REDUNDANT?

Given the speed and rapidity of growth in the region, it would behoove Nome to consider the benefits and drawbacks of the development of a port authority – in terms of financing future developments, possibly floating bonds. Discussions of other Arctic port authorities might be useful both in terms of size, scale and efficacy. Is Nome able to develop with the resources at its disposal – or, might a port authority provide the lever and leverage to assist Nome in its projected growth.

What follows are several key questions or issues as a point of departure to assess the utility of a port authority for development purposes, as Nome considers expansions and upgrades:

• **Clearly defined commercial targets.** These goals include projected growth of throughput volumes, attraction of investments, increasing maritime and intermodal connectivity, and cost and congestion levels.

Generally, return on investment is best treated as necessary for long-run financial sustainability. Once the direction is clear, choices on *how* to achieve these objectives can be fully based on commercial logic.

- Is the Existing Growth Model Capable of Finding Investors and PP3s? Floating bonds, dues to shipping lines, lease fees from tenants, and other revenue streams. Government investments in transport infrastructure (e.g., road, rail, and inland waterways) as part of a long term strategic plan.
- The structure of a port authority and its relation to Nome: Useful or Redundant? The engagement of industry expertise into the management of such a port development company would be essential. Running a corporatized port authority requires deep knowledge of the port and maritime business; an understanding of user requirements (i.e., tenants, shipping lines, and logistics service providers) in terms of infrastructure, utilities, information platforms and labor; and entrepreneurial capabilities to capture newly emerging opportunities for instance, in offshore, clean energy, and bio-based industries.
- **Regulatory and Financing matters:** Government entities (regional, national, and supranational) have regulatory responsibilities or standards. It would be useful for Nome to consider whether a port authority, a port development company or, the existing structure makes the most sense for short-medium and long-term development.

### 22.0 CONCLUSION AND RECOMMENDATION FOR FUTURE ACTIONS

Nome is wonderfully positioned to make the most of the paradoxically circumstance of melting ice and increased commerce – particularly shipping.

The recommendations below are made following my past five months of research, analysis and interviews allows me to convey a deeper understanding of the ongoing changes in the Arctic region to the City Council, the Port and Mayor so that decisions can be made about priorities, sequence and short-medium and long-term goals.

The recommendation below include the development of infrastructure, commercial and related capabilities, including concern for marine eco-system protection and subsistence fishing. The context, background information and interviews are what gave rise to the recommendations that follow:

- Commercial fishing Continuity.
- Cruise Tourism and adventure tourism.
- Green port Consistent with interests of tourism and subsistence livelihoods.

- Sister ports Both across and on the Bering Sea and Strait and in the Arctic region, generally.
- Adaptation and Resilience: Determine climate impacts on Port capabilities.
- Search and Rescue, Spill Response and Safe Haven capabilities.
- Smart Port Autonomous ships.
- Prepare for service as a Central Arctic Ocean (CAO) gateway.
- Coast Guard constabulary support capabilities and DOD national security support.



Photo: courtesy of Journal Gazette, Fort Wayne, Indiana

After preparing this study - designed to provide a broad understanding of the dynamics, events, economics and geopolitics that are shaping the Arctic region – several specific questions emerge that might be of interest to Nome that I would be honored to develop.

Thank you for this remarkable opportunity.

#### APPENDICES

#### 1.0 THE FOLLOWING SHORT-TERM ACHIEVABLE ELEMENTS INCLUDE:

# **1.1 Identify any linkages between existing ports for commercial interests regarding passengers or cargo**

#### See Section:

#### **Eimskip, Royal Arctic Lines and, the Major Atlantic-Arctic Ports and Small Business Development**

The shipping lines of Eimskip and the Royal Arctic lines make round trip trips with cargo both coming and going to: Portland, Maine, Reykjavik Iceland, Nuuk, Greenland, Tromsø, Norway, and, Murmansk, Russia.

The shipping and marketing initiative, commenced in 2013, and began to systematically establish trade activities that, in a short time, build common development activities that suited the shippers, increased trade volumes, and ultimately, the ports.

The overarching goal was joint business development between the port cities in the northern part of the Atlantic. Their focus was on the following three sectors:

- Joint business development between port cities;
- Collaboration between ports in relation to common interests;
- Tourism: Collaboration between businesses for increased sustainability and economic growth.

The agreements include the following ports and entities across the Atlantic high North:

- Nuuk:
  - Royal Arctic Lines
  - Sikuki Nuuk Harbour
  - Visit Greenland
- Reykjavik:
  - o Eimskip
  - Flaxofloihafnir
  - Iceland Ocean Cluster
  - Visit Reykjavik

Torshavn:

- Port of Torshaven
- o Visit Faroe Islands

Tromsø:

- Port of Tromsø
- o Norinnova
- Visit Tromsø

• Hurtigruten

#### St. Johns:

- Port of Argentia
- o Placentia Chamber of Commerce
- St. John's Board of Trade

#### Halifax:

• Port of Halifax

#### Portland:

- Maine Port Authority
- Maine North Atlantic Development Office
- New England Ocean Cluster.

#### **1.2 Identify potential opportunities or gaps in linkages between Arctic Ports**

At this preliminary stage, linkages might be best in a "sister port" modality with Canadian and Russian ports, primarily for tourism purposes. In the Arctic generally, sister port relations might be made for information sharing, joint purchases and acquisitions or Track-Two levels of enhanced security whether in marine-ecosystem protection, coastal-port matters in terms of climate change, or developing a sense of trends in shipping, particularly the impacts of autonomous shipping for all types of vessels and voyages.

#### **1.3 Major Arctic shippers, priorities and needs in transiting the Bering Strait:**

The major international shipping companies that have demonstrated interest in the Arctic region that relates to the Bering are Maersk, Cosco, Hapag Lloyd Cruise and Murmansk Shipping.

Arctic shipper noted the needed for improved aids to navigation, including:

- Updated hydrographic charting
- Navigational aids such as lighthouses, signs, buoys, marine hazard locations, as time passes, smart ports
- Improved weather forecasting.

More, Shipping industry undergoing significant changes as oil, gas and mining operations project the development of "smart ships," thus requiring creating advanced technologic and communications capabilities, it might be logical to anticipate such developments, particularly for tugs, and create a foundation to keep up with or get ahead of developments, including:

- Shore to bridge container and autonomous shipping communications
- o Green ports

- Gateway to Central Arctic Ocean
- Sister ports
- Cruise shipping
- Commercial fishing

Several NGOs such as Pew Charitable Trust added issues of:

- Air pollution and discharge oil, trash ands sewage
- Noise that can alter migratory patterns
- Direct strikes on marine mammals
- Interference with subsistence activities
- Need for oil spill response capabilities
- Emergency spill response capabilities
- Need for ice-breakers.



Image Courtesy: Gazprom, The Russian Federation

#### 1.4 <u>Biggest hurdles for Arctic shippers in meeting Polar Code requirements</u>

The most substantial problem for Polar Code compliance by shippers are those shippers that are not familiar with Arctic conditions.

*Seafarers' Rights* reported that the adoption of the Polar Code regulation is just the "tip of a substantial iceberg for a safe and environmentally sound Arctic shipping industry. "They note that the Polar Code offers a significant commercial and creative opportunity for designers of technologies and equipment that can withstand extreme low temperatures. They also noted a certain lack of equipment certified for polar waters and extreme low temperatures.

Seafarers' rights also noted that new lifeboats must be designed. Ships currently transiting the Arctic, do not have lifeboats that are fit for purpose under the Polar Code. For example, ordinary lifeboats would not: survive a freefall onto ice or snow; provide sufficient room for all the crew who would be wearing bulky suits to withstand the cold; or the appropriate environment for human survival – an enclosed lifeboat would have to be ventilated, but opening a hatch in -30° degrees would "freeze you to death."

Some ships operating in the region have innovated and created tunnels from the vessel into the lifeboats, ensuring that the crew need not be exposed to life-endangering temperatures.



Several shippers expressed doubt that currently available lifeboats could keep a whole crew alive for the Polar Code's stipulated five days – and in reality, if the conditions were bad, the wait time for rescue could be much longer – particularly given the lack of infrastructure in much of the Arctic region.

Documenting compliance for an ice-class ship is straightforward, but finding equivalence with the Polar Code for other categories used by the various ice shipping regimes and documenting these is not.

There is a need to develop certified training courses to fulfill Polar Code requirements – Russia, Finland and Norway might be the exceptions to this dilemma. Seafarers recommended that those who are experienced in Arctic shipping should document what they are currently doing so that this may be used as guidance.

(See: Global Commons and Law of the Sea: Sun and Beckman)

# **1.5** How does Nome become a superior and marketable international Arctic Port?

- Step by step:
  - Infrastructure considerations that require near-term planning and implementation;
  - Infrastructure considerations that require near term planning for mid and long term implementation;
  - Infrastructure considerations requiring long-term planning and implementation.
  - Infrastructure including physical, communications, mapping, awareness of other Arctic ports and shippers interests, and awareness of commercial decisions – particularly by Russia and China – and the evolution of the Central Arctic Ocean given the potential for Nome to serve as a gateway port.
- Build in anticipation of future changes in shipping and shipping conditions
- Prepare and make certain new additions can be built upon existing upgrades.
- Consider development of a Green Port for environmental and reputational reasons, particularly for cruise shipping enthusiasts.
- Sister port relations both nearby and Arctic generally. Particular consideration to Provideniya, Prince Rupert and others.
- Preparation for autonomous or semi-autonomous ships: communication bridges: To note: Potential to introduce new communications systems and onshore facilities for the remote operation of vessels in anticipation for the changes in technology that is becoming or, will become the norm.
- For example: In the Arctic region, the <u>world's first digital Arctic-logistics</u> <u>management system was recently launched</u> by Gazprom Rosneft, Russia's oil and gas company. According to Gazprom, the company aims to ensure uninterrupted year-round shipments of crude produced and to improve efficiency in logistics management.
- Once Nome develops its priorities and short-medium and long-term strategies, the question of how to market it offers the next steps.



# **1.6 Identify and document capabilities of the major ports in the Arctic region** (operational or in development

Attached as appendix # 1 is a full exploration of the major ports located in the Arctic region. Smaller ports, such as Nome, are generally not included at the information was not readily available and thus, outside the scope of this study.

In that respect, perhaps the port at Kirkenes offers the most reasonable example of what the Port of Nome could become in the future – as a gateway port to the Central Arctic Ocean and possibly a stop point for cruise vessel preparing to cross the Northern Sea Route, once accessible.

Briefly, the port of Kirkenes is situated close to the Russian/Norwegian border and offers good deep-water quays and sheltered location. The port area comprises a number of private and Port Authority owned quays. Handles iron ore, fish, passengers and general cargo. The port also offers supply services to the offshore oil and gas industry.

For a fuller description of Kirkenes and other Arctic ports, please review Document # 1 in the appendix for information that is specific to cargo, tonnages, vessel traffic and port services.

#### **<u>1.7 PORT AT KIRKENES: NORWAY (Drawn from Findaport.com)</u>**

#### Summary

Max.Size: DryCargo: Depth 13.1 m. (tidal). Passengers: Depth 6.9 m. (tidal).Bulk: LO A 303 m., draft 12.4 m. (tidal).Tankers: LOA 200 m., depth 8.2 m. (tidal). Fuel: Fuel and lubricants available. Airport: Kirkenes Domestic, 16 km.

Medical: Facilities available.

**OVERVIEW:** The port of Kirkenes is situated close to the Russian/Norwegian border and offers good deep-water quays and sheltered location. The port area comprises a number of private and Port Authority owned quays. Handles iron ore, fish, passengers and general cargo. The port also offers supply services to the offshore oil and gas industry.

Kirkenes is usually ice-free. During periods with extreme cold weather and/or special wind conditions ice may occur. If and when ice occurs the port is kept open by ice-breaker.

**LOCATION:** On the north coast of Norway, on the Varangerfjord. Approx. 10 km. from the border with Russia.

**CHARTS:** BA Chart No. 2317. Norwegian Charts No. 115 and 116. Norwegian Charts No. 115 and 116. <u>kartverket.no</u>

Publications: BA Norway Pilot 58B, NP 3B.

Norwegian Pilot Guide – Sailing Directions Volume 6 (Lodingen and Andenes – Grense – Jakobselv) (in Norwegian).

#### **DOCUMENTS:**

1 Bill of Lading

3 Crew Lists

1 Maritime Declaration of Health

Ship's Register

Additionally, the relevant forms to be sent to Agent for input into the SafeSeaNet single-window system.

**ISPS COMPLIANCE:** Port is compliant.

MAX. SIZE: Dry Cargo: Depth 13.1 m. (LAT).

Passengers: Depth 6.9 m. (LAT).

Bulk: LOA 303 m., draft 12.4 m. (LAT).

Tankers: LOA 200 m., depth 8.2 m. (LAT).

**DENSITY:** 1011–1026 (brackish).

**PILOTAGE:** Compulsory and available throughout 24 hours. Pilot should be ordered through SafeSeaNet ordering system. Alternatively, the Lodingen Pilot Dispatch Centre may be used but this may incur additional charges.

Pilot boards in the following positions (by arrangement):

1. Lat. 69° 51' N, Long. 030° 07' E (off Trondheimsneset)

2. Lat. 69° 47' N, Long. 030° 05' E (about 0.5 n.m. west of Reinoy Light).

Channels 13/16. pilot.lodingen@kystverket.no www.kystverket.no

**ANCHORAGES:** As directed by pilot. Anchorage area in Langfjorden just off the Tschudi Bulk Terminal. Depths up to 28 m. (CD).

## **PRE-ARRIVAL INFORMATION:** See Bulk Facilities and General - Pre-Arrival Information

**TUGS:** One tug ``Kraft Johansen" with 2,500 h.p. and 25 tons BP. Tugs join vessel within harbour basin. Ship's lines to be used during towage.

Berth	Length	Depth <sup>1</sup>	LOA	Draft	Cargo	
	(m.)	(m.)	(m.)	(m.)		
Industriakaia	120	6.7-8.3			Dry bulk, general	
Hurtigrutekaia	104	5.3-6.9			Passengers	
Dypvannskaia	92	11.2-13.1			Fish	
Vikingkaia		4.6			Fish	
Henriksen kai		5.0-45.0			Fish	
Sentrumskaia	52				Dry bulk, general, passengers, lay-by	
Tschudi Bulk Terminal:						
Service Quay	80	4.0			Pilots, tugs	
Import Quay	137	8.2	200		Bunkers	
Export Quay	195	13.0	303	$12.4^{2}$	Iron ore	
<sup>1</sup> LAT						
<sup>2</sup> Max. sailing draft based on LAT (and allowing for 0.6 m. UKC)						

### **BERTHS:**

**BULK FACILITIES:** 

## **Tschudi Bulk Terminal (TBT):**

**Operator:** Tschudi Bulk Terminals AS

**Overview:** The loading facility for export of iron ore from the export berth is owned by Tschudi Bulk Terminals and operated by Sydvaranger Gruve AS. TBT is responsible for mooring of vessels and ISPS-security. Sydvaranger Gruve is responsible for the loading operation.

Location: Lat. 69° 43′ 32″ N, Long. 030° 01′ 34″ E. The Tschudi Bulk Terminal berth is placed at the farthest end of the port area towards the west.

Facilities: The Tschudi Group owns a deep-water berth, dry bulk silo capacity of approx. 370,000 cu.m. and extensive storage space in the port. Handles transshipments of dry bulk commodities, refined goods and finished products.

**Pre-Arrival Information:** Berth bookings shall take place in writing by email or fax (ISPS vessels minimum 24 hours prior to arrival). The booking shall include the following information:

- 1. type of vessel
- 2. name of ship, nationality, port of registration and flag

3. invoice address

4. call sign and IMO number

5. name of agent

6. name and telephone number of contact person on board

7. name and address of responsible ship owner

8. vessel's LOA/beam/summer draft

9. light displacement/S.d.w.t.

10. g.t./n.t.

- 11. purpose of visit (bunkering, loading)
- 12. type of cargo to be loaded (type, volume and weight)
- 13. services required (mooring, water, garbage, etc)
- 14. maintenance and repairing requirements.

**ETA:** The Master of bulk carriers loading at the export berth shall, via the ship's agent, send ETA to all relevant parties according to the governing Charter Party but at least 72 hours prior to estimate time of arrival. The 72-hours ETA shall be confirmed 48 and 24 hours before arrival. The Master shall thereafter advise any changes in the ETA or other information.

The 72-hours ETA (local time and date) shall contain the following information:

- 1. arrival and estimated sailing draft
- 2. grade(s) and quantities of cargo to be loaded
- 3. hold wise stowage plan
- 4. hold loading or discharging sequence
- 5. last cargo
- 6. time required for deballasting
- 7. distance from waterline to top of hatch cover in open position
- 8. distance from forward end hatch number 1 to aft end hatch
- 9. number and kind of mooring lines

**Cargo Handling Equipment:** Loading method via conveyor belt. Outreach of loading boom from fender line 22.1 m.; clearance of loading boom above LAT 17.8 m., above MSL 15.9 m. and above HAT 14.07 m.; travelling length of loader 158.0 m.

Loading operations shall be stopped if the wind exceeds 25 m./sec.; the shiploader is to be parked and secured at 25 m./sec.

**Gangway:** The vessel is responsible for the procuring and securing of gangway facilities. The means of access between the ship and the berth must be safe and legal. It shall consist of an appropriate gangway or accommodation ladder with a properly fixed safety net underneath. It should be well illuminated during darkness. A lifebuoy with a heaving line attached shall be available on board the ship near the gangway or accommodation ladder. The accommodation ladder must be placed on the berth well clear of the ship loader track or other obstructions.

## PASSENGER FACILITIES: Operator: Hurtigruten AS

Location: Lat. 69° 43′ 43″ N, Long. 030° 04′ 21″ E.

**Facilities:** Hurtigruten operates services from its own facility. Kirkenes is a turnaround port for its services to and from Bergen.

**OTHER FACILITIES:** Port of Kirkenes is a major fisheries port. It is the most important service port for the Russian fishing fleet in the north. Facilities include a modern and efficient terminal with neutral cold storage facility for frozen fish from both foreign and domestic fishing fleets. The port is a base of operations for crew changes, resupply and repairs.

**TANKER FACILITIES:** 

Shell Kirkenes Depot:

**Operator:** Shell Norge

**Location:** Lat. 69° 43′ 37″ N, Long. 030° 01′ 49″ E. Utilises the Import Quay of the Tschudi Bulk Terminal.

**Pre-Arrival Information:** Tankers calling at the Shell bunkering station at the Import Quay must comply with the regulations issued by Norske Shell AS. Vessels should comply with the pre-arrival requirements of Tschudi Bulk Terminal (TBT) regarding berth availability in addition to bunkering confirmation from Shell.

Also see Bulk Facilities - Tschudi Bulk Terminal (TBT).

Facilities: Marine fuel depot. Handles MGO at 150 cu.m./hr. via 4 in. hose.

**CRANES:** Two cranes, 20 tons and 75 tons. Mobile crane of 50 tons capacity available.

**STEVEDORES: Opening/Closing Hatches:** Carried out by crew.

**WASTE DISPOSAL:** Garbage disposal available. Contact the Port Authority or Agent with requirements.

**SLOPS DISPOSAL:** Reception facilities available for oily residues, oily tank washings, scale and sludge and oily mixtures containing chemicals. Contact Port Authority or Agent.

**MEDICAL:** Facilities available. Agents to receive notice of required medical attention.

**FRESH WATER:** Available, delivered through pipes from quay.

**FUEL:** Fuel and Mobil brand lubricants available through Bunker Oil from its depot in Tromso.

#### DRY DOCK: See Murmansk and Repairs

**REPAIRS: Kimek Kirkenes Shipyard: Operator:** Kimek ASLocation: Lat. 69° 43′ 42″ N, Long. 030° 01′ 58″ E.

**Facilities:** 300 m. long quayside and slipway to covered dock. Services include docking

and Class work, rebuilding/fixtures/extensions, machining, surface treatment (blasting, metallisation and painting), steel and aluminium works, electrical installations and general maintenance.

**POLICE/AMBULANCE/FIRE:** Police T: 112. Ambulance T: 113. Fire T: 110. **SECURITY/GANGWAY:** See <u>Bulk Facilities</u>

**LOCAL HOLIDAYS:** 1 January; Easter Day; Whitsun Day; 1 May; 17 May; 25 December; 26 December. Work carried out if permission given by the authorities.

**WEATHER/TIDES:** Tidal currents flow SW'ly on a rising tide and NE'ly on a falling tide. Tidal currents do not represent any problems in the port basin. There might however be some minor variations in direction and velocity depending on wind and tide.

**Wind:** Prevailing winds N-NE'ly and NW'ly direction. Wind from S to NE can be of some influence.

**Ice:** During the winter season ice may be encountered in the port of Kirkenes. Icebreaker is provided by the Kirkenes Port Authority. During the period from 1 December to 31 March all calls will be charged with a separate ice duty by the port authorities.

**CONSULS:** Finland, Germany, Russia and Sweden.

**TELEPHONES:** Ship's telephone connections not available. Mobile telephone coverage provided, GSM 900/1800 and 3G 2100.

**NEAREST AIRPORT:** Kirkenes Domestic, 16 km.

**CONNECTIONS:** Kirkenes is located at the northern terminus of European route E6, the main north-south road in Norway and the west coast of Sweden. The southern end is at Trelleborg, Sweden.

Limited domestic air services available from Kirkenes Airport (KKN). Onward domestic connections possible through Tromso, Vadso and Vardoe. A wider selection of services, including international services, possible through Oslo.

**BANKS:** National banks with ATM facilities available.

**SHORE LEAVE:** Crew members allowed ashore.

**REPATRIATION:** Possible.

**IDENTIFICATION CARDS:** Not needed.



(From New Bedford to Nome: Scrimshaw by E. Burdett)

#### MINUTES NOME PORT COMISSION REGULAR MEETING May 16<sup>th</sup>, 2019

The Regular Meeting of the Nome Port Commission was called to order at 7:06pm by Chairman West in Council Chambers at City Hall, located at 102 Division Street.

#### **ROLL CALL**

Members Present:	Smithhisler; West; Henderson; Rowe; Sheffield; McLarty; Lean (joined
	telephonically at 7:27 pm)j;

Absent:

Also Present:	Lucas Stotts, Harbormaster; Joy Baker, Port Director
In the audience:	Sandra Medearis, Arctic News

#### **APPROVAL OF AGENDA**

Chairman West asked for a motion to approve the agenda:

Motion made by Smithhisler to approve the agenda, seconded by Rowe:

At the Roll Call: Ayes: West; Henderson, Rowe, Sheffield, McLarty, Smithhisler Nays: Abstain:

The motion **CARRIED.** 

#### **APPROVAL OF MINUTES**

April 18, 2019	Motion was made by Smithhisler, seconded by Sheffield to approve:	
Regular Meeting		
Discussion:	Sheffield requested that a sentence be removed under Communications, on page 2, last paragraph, as that was not what she intended to convey:	
	Smithhisler amended his motion for approval to include the requested change, with a second by Sheffield:	
	At the Roll Call:	
	Ayes: West, Henderson, Rowe, Sheffield, McLarty, Smithhisler	
	Nays:	
	Abstain:	

The motion **CARRIED.** 

#### CITIZENS' COMMENTS

None

#### COMMUNICATIONS

- April 2019 Corps Public Notice on Floating Recovery Devices
- 19-05-02 Senator Murkowski urges admin to continue Arctic training APM
- 19-05-02 Navy plans to be more active in the Arctic APM
- May 2019 Infrastructure Week Flyer on Wilson Center Event

#### Discussion:

PD Baker informed the members that Mayor Beneville would be speaking at the Wilson Center on a panel regarding Arctic infrastructure

#### COMMISSIONERS' UPDATES

This new topic was inserted into the agenda format through a consensus of the Commission so that individual members may report on specific issues, information or conversations they have had that relate to the port and harbor, and/or their role on the Commission:

West: reported on his and Lean's participation in the City's meeting with personnel from Army Corps Headquarters and District offices that traveled to Nome on 15 May to get sponsor input on the study process and visit the project site. The City expressed concerns on the schedule, requesting efforts be pursued to avoid further delays and recover lost time when possible.

#### HARBORMASTER'S REPORT (Verbal)

Harbormaster Stotts updated the Commission on staffing for the season, facility clean up and prep for the season. The USCG Alex Haley is expected to arrive on Saturday 18 May, which will be the earliest arrival on record for any season at the facility. Dock surfacing has been getting improved, and we appreciate the Road Crew assisting with that, as well as Building Maintenance for the planned work to improve the public bathrooms. Several users have plans to launch early with the early breakup, so installation of floats, ladders and fenders will also be early.

#### Discussion:

Road conditions and maintenance were discussed, as well as timing for installation of the waste dumpsters and frequency of the pickup schedule for the new, larger units. The storage of equipment on the tank farm property was also discussed, and whether it was generating revenue, as well as short-term rental of the Garco Building.

#### PORT DIRECTOR REPORT (19-05-09 Written Report)

PD Baker highlighted the progress with Alaska House Joint Resolution 14, supporting development of an Arctic Deep Draft Port at Nome. HJR 14 has passed the House and Senate, and is awaiting the Governor's signature.

An update was given to the group on the pending EDA grant for the Launch Ramp Repair Project concerning EDA's decision to conduct their NEPA level Public Notice process and evaluation on the permitted work – this results in construction being pushed to summer 2020.

Further detail was provided regarding the visit by the Army Corps brass, with info regarding schedule delays and the critical importance of incorporating how the project supports the nation. A reminder was shared regarding the draft feasibility report being out for public comment, along with the status of the study cost-share.

#### Discussion:

Lean expressed his frustration with the Corps, which he shared during the brass visit regarding their limited focus of calling Nome a regional port, when we are actually an Arctic port with a larger purpose.

#### **OLD BUSINESS**

Draft Port FY2020 Operating and Capital Budgets

PD Baker indicated that the F20 draft provided as a handout contains a couple of changes that had been made since the packet was distributed. The purpose was to reduce the amount of the deficit that resulted in an offset caused when finance added in the labor, insurance, utilities and taxes.

Discussion ensued on the various changes made and how the draft F20 budget stacks up against the closing F19 budgeted, as well as the F19 actual numbers. Clarifications were made on the expenses assessed on the Port at the end of the fiscal year; namely Public Works equipment and Finance labor time, as well as what is covered by the PILOT paid to the City.

Motion was made by Henderson, seconded by Rowe, Recommending the Nome Common Council adopt the following FY20 budgets:

Port of Nome Fund for \$1,712,196 Port of Nome Capital Projects Fund for \$2,238,103

At the Roll Call: Ayes: Henderson, Rowe, Sheffield, McLarty, Smithhisler, Lean, West Nays: Abstain:

The motion **CARRIED.** 

#### **NEW BUSINESS**

Consideration to Develop Plan to Fund Repairs, Maintenance & Capital Improvements for Recommendation to Council

#### Discussion:

The Commission reiterated their appreciate of the education given by the Finance Director on the flow of cash between the City and Port, as well as the use of the Fund Balance for things such as NOAA principal, etc. The group agreed that following that informational session, it would be productive to have another work session in the near future to drill down further on the fiscal plan being requested by the Council. An email will be sent to determine the most convenient date.

#### CITIZENS' COMMENTS (None)

#### COMMISSIONERS' COMMENTS

S. McLarty – good work session. Being that we are an advisory commission, it would be helpful to have more direction on the plan for the Port. Seems the Mayor, Council and Staff all have different visions of a Port. Would be helpful if we knew which idea we're planning the future for.

C. Henderson – great work session, learn something every time. Having Julie/John present for the fiscal work sessions is very helpful. A couple more rounds of this effort and we should have a good handle on it.

C. Sheffield- a good work session, learned a lot. There are a great many seal strandings occurring lately. The Sikuliaq is coming in November and they are offering tours of the ship. USCG is starting their season base in Kotzebue on July 1<sup>st</sup> until Halloween. Also, they advised that we will see more fisheries traffic coming from the south.

C. Lean – apologized for not being at the work session. His vision is to be a self-sufficient entity – not necessarily to make a big profit but be self-supporting. It's important to the town, the region, the nation as a gateway to the Arctic.

C. Smithhisler – with all the budget talks, Councilmember Reader brought up a good point to review expenses. Perhaps we should look at the Port's operating expenses as a group.

C. Rowe – welcome back Joy. Enjoyed the work session, and it's a good foundation the work from. Appreciate having Julie present as it provides significant assistance. Agree with Charlie that the Port should be a self-supporting entity, that's not necessarily making a profit but setting aside funds for capital costs – and maybe we shouldn't call it a reserve fund but a depreciation fund.

C. West – budgetary items are a best-guess on expected expenditures, and we should come up with some way to bring it back into the black on a regular basis. We have set aside funds in the past over time, and yes, our operating expenses are much higher now with increased traffic, but we can create a way to set aside funds.

#### SCHEDULE OF NEXT MEETING

The next meeting is SCHEDULED to July 18<sup>th</sup>, 2019.

#### ADJOURNMENT

Motion was made by Henderson and seconded by Sheffield for adjournment.

**APPROVED** and **SIGNED** this 20<sup>th</sup> day of June 2019.

Jim West, Chairman

ATTEST:

Joy Baker, Port Director

# France's Ponant to offer North Pole cruises starting in 2021

The Le Commandant Charcot will be the the world's first icebreaking cruise ship. While it will run on LNG and carry a Polar Class 2 rating, questions about environmental and passenger safety still persist for Arctic cruises.



By Malte Humpert, High North News - May 22, 2019

Le Commandant Charcot by Ponant will be the first luxury icebreaker in the Arctic. (Courtesy of Ponant)

With the continued melting of Arctic sea ice and the further opening of the Arctic Ocean to maritime traffic, cruise ship tourism is the latest economic sector forecasted to experience a boom in the region over the coming years. Cruise ship operators around the world are adding ice-capable expedition cruise ships to their fleets: in 2019 alone, 13 such new vessels will be launched, with an additional 28 vessels to be commissioned by 2022.

The technologically most advanced and most capable of these will be French cruise ship operator Ponant's *Le Commandant Charcot*, which will be powered by

a hybrid liquefied natural gas (LNG) and battery propulsion system to reduce emissions by up to 85 percent.

The *Le Commandant Charcot* will have Polar Class 2 designation, placing it on the same level as the newly designed U.S. Coast Guard icebreakers and allowing it to travel virtually anywhere across the Arctic. Ponant plans to offer regular trips to the geographic North Pole, which would be a first for non-nuclear powered vessels and highlights the vessel's proposed capabilities in ice-covered waters.

However, even high ice-class designations are not a "carte blanche" when it comes to safely navigating in ice-covered waters, emphasizes Pierre Leblanc of Arctic Security Consultants. Even powerful icebreakers can become stuck and potentially require rescue when they encounter multi-year ice and pressure ridges. In 2017, two large Russian icebreakers, the *Kapitan Dranitsyn* and the *Admiral Makarov*, got stuck in the East Siberian Sea. In 2014 China's Xue Long icebreaker got stuck in Antarctica after assisting the Russian research vessel *Akademik Shokalskiy*.

In the Arctic Ocean's vast distances, assistance and rescue may be many hours or likely days away if a vessel encounters difficulties.

"Search and rescue resources are very limited above 82 degrees north and due to the large distances even aircraft will take many hours to arrive on scene," explains Bent-Ove Jamtli, the director of Norway's Joint Rescue Coordination Centre (JRCC).

The *Le Commandant Charcot*, which was designed by Ponant in cooperation with Stirling Design International, Aker Arctic and VARD, will deploy Aker's dualdirectional hull, which allows it to travel forward through light to medium ice, and operate in reverse to ram through extreme ice conditions. The ship also employs newly developed ice navigation and routing technology to help it find the optimal

Ponant contracted Vard, a shipyard group, to build the \$330 million *Le Commandant Charcot* and construction began at Vard's facility in Tulcea, Romania, in December 2018. The vessel is expected to be launched in 2020 and will enter into service in early 2021.

Aside from its icebreaking design, *Le Commandant Charcot* features a new generation of Wärtsilä medium-speed engines, which Ponant will power with LNG, rather than the traditional and more emissions-heavy diesel. In order to operate without any emissions for short periods of time (up to three hours, according to Ponant ) the *Le Commandant Charcot* will combine its LNG engines with large, high-capacity battery banks to create a the world's first hybrid icebreaker.

# [Cruise tourism in the North: Undersize me]

Ponant's effort to move towards cleaner fuels in Arctic shipping was welcomed by the Clean Arctic Alliance, a global campaign to protect the Arctic from the hazards and risks of heavy fuel oil. However, the company's efforts are only a first step, Sian Prior, the organisation's lead advisor, stressed.

"While Ponant is heading in the right direction, the Clean Arctic Alliance believes that shipping companies must embrace a future where international shipping is fueled entirely without the use of fossil fuels," she said.

The *Le Commandant Charcot* will be propelled by two ABB Azipod VI units, producing a combined 34MW of power, and fitted with massive six-meter propellers, comparable to the power output of the newly designed U.S. Coast Guard icebreakers.

The vessel will resemble the latest generation of icebreakers in terms of overall size and weight, with a length and width of around 490 feet by 90 feet (150 meters by 28 meters) and a weight of approximately 30,000 tons.

Ponant plans to equip the ship with 135 luxurious cabins which can accomodate 270 passengers, in addition to a crew of 180.

# [At Russia's North Pole camp, it's not all fun and games]

In order to safely navigate in the Arctic, an ice-capable vessel is just one of many important factors, explains Arctic Security Consultants' Leblanc. The captain's and ice navigator's experience is key, he says; inexperience with specific ice conditions led to the sinking of the MV Explorer in 2007.

Especially when navigating in coastal waters, the lack of accurate charts presents a danger and resulted in the running aground of the Russian ice-class cruise ship *Akademik Ioffe* in 2018, fortunately in calm weather with assistance nearby.

And while the *Le Commandant Charcot's* unique propulsion system aims to be environmentally friendly, it is also unproven, and there is a risk associated with new technology which could lead to a loss of power, according to Leblanc.

It is the vast distances of the region that present a particular challenges, especially when venturing into the center of the Arctic Ocean, thousands of miles from the nearest shore. The logistical challenge of evacuating passengers and crew from a listing ship would be insurmountable, as the recent incident of the *Viking Sky* off the Norwegian coast showed. Distances may be too great for helicopters and weather conditions may be too adverse for launching emergency boats.

Due to the long lead-time for rescue aircraft or vessels to arrive on scene, coldwater immersion suits, which are mandated by the International Maritime Organization to provide six hours of survival time, may not be able to protect sufficient personnel long enough.

Similar sentiments were voiced by the JRCC's Jamtli. In case a cruise ship becomes stuck in ice near the North Pole, other vessels may take many days to arrive on scene.

"There are very few other icebreakers that can break ice all the way to the North Pole, so it will probably take many days to render to assist with another icebreaker."

Rescuing passengers of a stranded cruise ship will require setting up a complex evacuation chain with and an icebreaking coast-guard vessel that can be used as a refueling platform for SAR helicopters. Even with these resources, it would take several days to evacuate all passengers. Jamtli added that due to the large distances cruise ships must cover on polar expeditions, they need to be selfsufficient and have medical crew and advanced medical facilities on board and carry sufficient medical supplies to deal with medical emergencies independently.

Ponant appears confident that it has designed a capable vessel and is ready to venture into the remoteness of the Arctic Ocean. *Le Commandant Charcot* will spend nearly six months around and above the Arctic Circle during the spring, summer, and fall of 2021, culminating with a three or four-week cruise along the Northern Sea Route in September.

Note: Ponant did not respond to several requests for comment regarding how they aim to address the challenges of navigating in the Arctic Ocean.



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HOME | MONITOR | MINING OPERATIONS IN NORTON SOUND SUBJECT TO NEW RULES

# Mining Operations in Norton Sound Subject to New Rules

MAY 23, 2019 | MONITOR

New protection measures for crab and salmon will restrict timing, depth, and locations of mining operations in Norton Sound, Alaska.

The US Army Corps of Engineers (USACE) recently released for public comment a General Permit for Floating Mining Operations in Alaska State Navigable Waters, including marine waters. The permit includes new measures to protect red king crab and salmon which migrate through Norton Sound and into rivers to spawn. NOAA Fisheries reviews public notices and offers expertise to the USACE for the conservation of living marine resources.

Floating mining operations use a dredge in nearshore waters to 'vacuum' up gravel and sand substrates which are then sifted to retain gold. The new protections restrict mining operations during certain spring and summer months when juvenile red king crab settle to the seafloor. Mining operations will also be restricted in waters deeper than 30 feet and within one nautical mile of stream mouths to avoid areas where salmon concentrate. An Essential Fish Habitat (EFH) consultation with NOAA Fisheries is required whenever a federal agency authorizes, funds, or undertakes activities in an area that will a ect EFH. Together, the agency and NOAA determine how best to conduct the coastal activity while supporting sh habitat and minimizing or avoiding environmental damage. The science conducted through this consultation helped USACE make management decisions; balancing mining and shery interests in the Norton Sound.

NOAA Fisheries has provided USACE with EFH conservation recommendations relating to suction dredging operations in Norton Sound since 1999.

# Corps publishes draft Nome port study

Recommends expansion of current structure, deepening of outer basin, creating new deep basin, and construction of new docks

#### **By ALAN BAILEY**

Petroleum News

On May 8 the U.S. Army Corps of Engineers published a draft report on the results of a feasibility study into the expansion of the Port of Nome, and an environmental assessment of the potential port expansion.

The Corps has recommended an option involving extending the port's west causeway by 3,484 feet; replacing the existing east breakwater with a new 3,900-foot causeway; deepening the port's existing outer basin to 28 feet below mean low water; and creating a new deep-water basin with a water depth of 30 to 40 feet below mean low water beyond the extent of the current port. The Corps is also recommending the construction of five new docks. The agency has assessed that there would be no significant environmental impact from the port modifications. Dredged material collected during the port deepening would be placed east of the port.

Apparently the outer basin dredge depth is constrained to 28 feet by the sheet pile construction of the west causeway docks.

#### **Alternatives**

Other alternatives considered but not recommended included only making minimal modifications to the east breakwater, converting only part of the existing east breakwater to a causeway and varying the number of docks. A potential more extensive modification would involve removing the east breakwater and replacing it with a new causeway farther east. A primary factor in deciding on a preferred alternative

An aerial view of the Port of Nome. The proposed expansion involves adding a deep-water section beyond the current port entrance, deepening the existing outer basin and replacing the east breakwater.

was the need to separate non-industrial pedestrian traffic from industrial activities, the report said.

Public comments on the draft report must be filed with the Corps within 30 days of the report's publication.

#### A long debate

The issue of whether and where to develop a deep-water port for Arctic Alaska has been a subject of debate for many years, with more recent planning activities dating back to conferences held in 2008 and 2010. Currently the Port of Nome can only handle shallow draft vessels — large cruise ships, for example, have to anchor offshore, with passengers being transferred to the shore in small boats. A deep-water port could provide logistical support for large vessels plying Arctic waters and could act as a port of refuge in the event of stormy weather. The current small port also suffers from overcrowding, the draft feasibility study says.

Vessel traffic in the region is expected to increase, as the Arctic seas open up with reduced sea ice.

In late 2014, after a study into a number of potential deep-water port locations in

see **PORT STUDY** page 9











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# A need for more US Arctic involvement

Testimony to congressional committee urges actions to boost the country's presence in the region as international attention grows

#### **By ALAN BAILEY**

Petroleum News

he commissioning of a new heavy polar icebreaker for the U.S. Coast Guard will form a vital component of the United States' future engagement in the Arctic region. But the country has been falling behind other nations, in particular Russia and China, in making moves to exert its influence and presence in the region, a series of experts testified to a subcommittee of the House of Representatives Committee on Transportation and Infrastructure on May 8. And key to exerting an Arctic presence is the development and maintenance of appropriate Arctic infrastructure, the testifiers said. Infrastructure includes port facilities and an adequate communications network.

Russia has nearly 50 icebreakers and has been opening up the Northern Sea Route around its coast. China has been opening Arctic research stations and observatories and is building its second icebreaker. Meanwhile, with just one aging polar heavy icebreaker and one medium-sized icebreaker, the U.S. Coast Guard can only operate in the Arctic during the summer.

#### Almost no infrastructure

Retired Adm. Thad Allen, former Coast Guard commandant, told the committee that, although the U.S. Navy sees its subsurface capabilities as meeting the nation's Arctic defense needs, the current inadequate Arctic command, control and communications infrastructure points to a lack of U.S. sovereignty in the region. Currently there is



Coast Guard icebreakers Polar Star and Polar Sea.

almost no marine infrastructure in the U.S. maritime Arctic, he said.

Heather Conley, a senior vice president from the Center for Strategic and International Studies, suggested that the country has lost a decade in advancing its Arctic interests, given the inactivity that followed President George W. Bush's signing of a new Arctic security policy in 2009.

Adm. Charles Ray, vice commandant of the Coast Guard, commented on how the Coast Guard has been demonstrating its presence in the Arctic through the agency's annual Arctic Shield program. This involves deploying assets, working with Arctic communities and conducting activities such as search and rescue, and emergency response planning. Mead Treadwell, co-chair of the Polar Institute, the Woodrow Wilson Center, and a previous Alaska lieutenant governor, argued for the establishment of an Arctic seaway, modeled on the St. Lawrence Seaway, with a tariff-based service that could help fund infrastructure support. A bill has been introduced in the U.S. Senate to establish an organization of this type. Treadwell thinks that in future it will be possible to transport liquefied natural gas by sea from Alaska's North Slope.

#### **China's interests**

Conley suggested that China's current involvement in the Arctic primarily reflects an economic interest in the region. In particular, the country is interested in energy resources, as reflected in the country's investment in Russia's Yamal LNG facility. However, in the long term there is major interest in Arctic shipping, with the Arctic Ocean presenting a shorter distance alternative to the Straits of Malacca for shipment between the Pacific and Atlantic Oceans, Conley said. Of particular interest to China is a potential trans-polar route, across the middle of the Arctic Ocean, given that the waters of Russia's Northern Sea Route are too shallow for deep container ship traffic.

"The Chinese vision is 2040-2050. They are thinking that far ahead," Conley said.

#### Icebreaker program

The new polar icebreaker which Congress has now funded is planned as the first of three icebreakers of the same design. Adm. Ray said that the Coast Guard needs six icebreakers: three heavy icebreakers and three medium icebreakers, to have the capacity for year-round Arctic operations, including long-distance missions such as patrolling around Greenland. He also emphasized that it will be important to characterize the icebreakers as security cutters, given that the ships will be expected to be able to support multiple Coast Guard missions.

"We need the ability to project a yearround presence in the Arctic," Ray said. "It is possible to be up there summertime and wintertime."

Ray also said that maintenance of the Coast Guard's existing heavy polar ice-

#### see **ARCTIC INVOLVEMENT** page 9





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# continued from page 8 **ARCTIC INVOLVEMENT**

breaker, the Polar Star, will be critical to a continuing ice breaker capability until the new icebreaker is delivered, potentially in 2024.

#### Support infrastructure

Ray said that he anticipates Kodiak as continuing to be the Coast Guard base for the agency's Arctic operations.

"That's our northernmost place, where we have the most plans and the most specifics about investment," he said. Given the dynamic nature of the Arctic, the Coast Guard's approach is to operate from Kodiak and move icebreakers to wherever they are needed, he said. Conley suggested that there is a need to also think about establishing some forward operating bases in the Arctic.

Ray said that the Coast Guard has successfully worked with the Russians on a port access route study in the Bering Sea region, coordinating this work with local Native communities.

In terms of the Arctic communications infrastructure, the Coast Guard has now reached a point where it can use satellite communications reliably up to the 85th latitude — the agency is working with the Department of Defense to gain access to updated satellite communications. This year, in cooperation with other government agencies, the Coast Guard launched two miniature satellites in polar orbit, able to receive emergency signals, Ray said.

Abbie Tingstad, senior physical scientist in the RAND Corp., a policy think tank, commented on the importance of support infrastructure beyond icebreakers, in bolstering the ability to respond to threats and hazards in the Arctic. International and domestic cooperation between stakeholders is also critically important, she said.

#### Arctic navigation

Rear Adm. Shepard Smith, director of the NOAA Office of Coast Survey, described NOAA's efforts in maintaining data, charts and forecasting services for marine navigation in the Arctic region. The agency supports international cooperation in the Arctic, including the activities of the Arctic Council, the Polar Code for Arctic shipping and the Arctic Report Card, an annual peerreviewed science publication.

Smith commented that, given the huge distances involved to reach survey sites, NOAA's annual operational season tends to be very short. The agency is considering the use of unmanned systems, to augment its efforts, he said.

#### Deep-water port

A major issue, the subject of much discussion and study over the years, is the question of establishing a U.S. Arctic deep-water port, both for logistical support for shipping and to act as a port of refuge in the event of stormy weather. Much attention has focused on the potential to expand and deepen the port at Nome, which cannot currently handle deep-draft vessels. There is a natural deepdraft port at Port Clarence, not far from Nome. But Port Clarence has no supporting infrastructure and would require the construction of an access road.

Col. Phillip Borders, commander of the Alaska district, U.S. Army Corps of Engineers, told the committee that studies have concluded that Nome presents the most viable deep-water port option. The Corps has recently published a draft feasibility study for expanding the Port of Nome. (See story in this issue.) However, the agency has been conducting this study as a civil works project that limits port depth considerations to depths required for vessels that currently use the port and for Coast Guard vessels. That would put the depth of the port at somewhere in the range of 30 to 40 feet — military use of the port would require a depth of 45 feet. Allen commented that the Corp uses a 45-foot depth in its official definition of a deep-water port.

#### **Revenue from traffic?**

Treadwell suggested that the Port of Nome and Port Clarence could be supported by revenues from Arctic shipping traffic.

"Together you're talking about a system of ports which is about a \$300 million problem," he said.

And Conley commented that it is time for a decision on the port issue.

"We have to get out of the mode of studying ... we study things in lieu of action," she said.

Allen urged for a whole-of-government approach to the issue, taking into account the drafts of vessels that might need the port over an extended U.S. presence in the region.

And Treadwell urged action on the port issue.

"I believe there's enough on the record, right now, for Congress to find that it would be absurd for us to go into a brand new ocean, newly accessible to the world, and not have a deep-water port of refuge, and not have a port which could have us play a role in assisting shipping," he said.  $\bullet$ 

# continued from page 7 **PORT STUDY**

Arctic Alaska, the Corps determined that Nome presented the most cost-effective solution and developed a tentative plan for expanding the port there. The Corps embarked on a feasibility study for the port expansion but announced a pause in this study in October 2015, following Shell's withdrawal from its Arctic offshore oil exploration program. Apparently Shell's potential use of the port had been a factor in the economics of the port expansion.

In early 2018 the Corps announced that it had signed an agreement with the city of Nome to look again at the costs and benefits of port expansion. Hence the feasibility study that is now being completed.

#### **Option to maximize benefits**

The new draft report says that the option that the Corps is recommending was favored on the basis of maximizing annual economic benefits, and on the basis of economic benefits coupled with national security benefits. Security benefits would accrue from the use of the port by U.S. Coast Guard vessels — the Coast Guard could use the enlarged port as a port of convenience for fuel, for example, the draft report says. The recommended option minimizes costs while meeting the objectives of the port expansion, the report says.

Other benefits potentially include su



port for 18 communities in the Nome region.

Construction could take up to four to five years to complete, with construction activities having to take place during a four-month summer construction season. Activities would be designed to avoid marine mammals and protected species. Crab habitat lost during construction would be replaced. The east causeway would include a bridge to allow the passage of fish. And an on-site archaeologist would ensure minimal impacts to significant cultural resources during construction.

The estimated cost is \$418 million. Under the federal Water Resources Development Act, the federal government could pick up \$313 million of this cost, the draft report says.  $\bullet$ 

Contact Alan Bailey at abailey@petroleumnews.com



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# **ANCHORAGE DAILY NEWS**

**Business/Economy** 

# Bering Sea survey could provide insight on cod finds

Author: Associated Press 🙂 Updated: 16 hours ago 🛗 Published 16 hours ago

ANCHORAGE - U.S. scientists plan to survey the Bering Sea this summer and hope to shed light on why fish not normally seen in its northern stretches have been found there.

Cod is caught in large numbers by commercial boats in the Bering Sea but typically hundreds of miles south of Nome.

Yet, last fall, fisherman Adem Boeckmann, who lives outside Nome, said he found cod in some of his crab pots. He told Alaska's Energy Desk he had never seen anything like that.

Lyle Britt, a federal fisheries scientist, said there aren't clear answers.

"Is this part of an environmental shift, where with the warming, the northern Bering Sea is going to become a top-down system?" he said. "Or, is this more like an ephemeral trend that just happened because we had an unusually warm year, and things will reset? We don't really know."

The surveys are being done by the Seattle-based Alaska Fisheries Science Center, which is an arm of the National Oceanic and Atmospheric Administration. They will include the northern part of the Bering Sea, full surveys of which have been done less frequently than those in the eastern Bering Sea, a region that also will be included in this summer's work.

The two most recent surveys of the northern Bering Sea occurred in 2010 and 2017, the latter of which was a warmer year with lower sea ice.

The year's surveys could shed light on whether 2017's results, which showed large amounts of pollock and cod in the northern Bering Sea compared to 2010, reflected an isolated event or the start of a long-term trend.

The eastern Bering Sea cod and pollock fisheries are worth an estimated \$2 billion. Fishermen have seen a gradual shift northward in their cod fishing patterns, said Chad See, executive director of the Freezer Longline Coalition, an industry group.

Researchers and fishermen want to know more about where the northern Bering Sea cod came from. For example, did they swim from fishing grounds in the eastern Bering Sea or come from elsewhere, such as Russian waters to the west?

If they swam from the eastern Bering Sea, that would help explain why scientists didn't find more cod in the fishing grounds in their 2017 survey, See said.

"If it's the same stock, one might say that the health of the stock, at least from a biomass perspective, is still very strong," See said. "If the fish in the eastern Bering Sea just disappeared, we have a different problem entirely."

Boeckmann has considered spending \$30,000 on new gear for commercial cod fishing bu first wants reassurances that he could consistently make a profit.

He recalled speaking with a federal scientist who suggested that as quickly as the cod showed up off Nome, they could disappear.

"Things have changed, absolutely," Boeckmann said. "But there's nothing saying it's not going to flop right back to what it was for 100-plus years tomorrow."

About this Author

**Associated Press** 

# Comments

# Nome eyes a signicant por t expansion — but critics wonder if it will be enough

A new feasibility study proposes expanding the port to a depth of 40 feet — which still might not accommodate larger national security vessels.

By Melody Schreiber - June 6, 2019



The existing port in Nome would require upgrades to serve larger vessels. A new U.S. Army Corps of Engineers report recommends significant expansion there. (City of Nome)

The city of Nome, located on Alaska's Seward Peninsula not far from the Bering Strait, has long been seen as a leading contender for the site of the first U.S. deepwater port in the Arctic.

And a draft report on potential port expansion there, released last month by the U.S. Army Corps of Engineers, brings that vision a step closer to reality

But some critics wonder if the plan goes far enough.
Currently, the port can't accommodate ships with drafts of more than 22 feet. These restrictions make shipping less efficient and less safe, the report said, and result in higher prices for goods and services in the region, which threatens "the long-term viability of surrounding communities."

The Corps of Engineers report recommends expanding the existing port's west causeway by more than 3,000 feet in order to create a 40-foot-deep basin. It also recommended constructing a new east causeway with five new docks.

The same day the report was released for public comment, Col. Phillip Borders, commander of the Corps' Alaska District, testified in a House hearing on Arctic infrastructure, including the Nome port expansion.

Rep. Sean Maloney, a Democrat from New York, questioned whether even the expanded the port would be deep enough for future needs. Maloney said the port needed to be at least 45 feet deep in order to accommodate larger ships from the Coast Guard and Navy. (The Nome feasibility study was funded by a civil works act, WRDA, and so it looked at vessels currently using the port, as well as Coast Guard ships.)

"It's not going to be enough to just service the vessels who are using it now. Is that fair to say?" Maloney asked Borders.

But Borders responded that military construction of a deeper port more suitable for national defense vessels would fall under a different budget.

The feasibility study itself said only that the proposed expansion is intended to provide "safe, reliable, and efficient navigation and mooring" of vessels in Nome — without making civilian or military distinctions.

Joy Baker, Nome's port director, said she has been told a 40-foot depth will be "sufficient" for icebreakers and other national security vessels.

"But we're still in the feasibility phase," she pointed out. The purpose of releasing the study for public comment is to receive feedback like this, she said; if the port needs to be one or two feet deeper, "that'll be sorted out."

Baker said they are planning to release the final report late this year or early next year. "So there's plenty of time to weed out the specifics," she told ArcticToday.

One alternative in the report includes a 30-foot depth, but the preferred choice for both the Corps of Engineers and the city of Nome, which undertook the assessment jointly, is the 40-foot option.

"We don't expect the 30-foot basin to survive the final cut," Baker said.

The report also assessed potential environmental effects, finding no significant impact and recommending no requirement for an environmental impact statement. The reasoning is that the port would expand within an "existing footprint," Baker said, where previous environmental assessments on dredging and construction have already been conducted. But again, this recommendation is open for public feedback, she said.

The Kawerak Marine Program urged the public to comment in particular on discharge in ancestral waters, the potential for an oil spill, and effects of shipping upon marine life.

Baker said an expanded port in Nome isn't just good for the city or the region. "It's important for the nation" and even the world, she said, by opening up more national and international shipping opportunities such as resource development, tourism, research, and, eventually, cargo shipping.

"There's nowhere for these vessels to go in western and Arctic Alaska," she said. "The United States doesn't have a deepwater port in Arctic, period. Contrary to our friends across the water. This year, Nome is also expecting its busiest cruise ship season ever, with seven ships booked. Currently, smaller ships dock in the port and others anchor nearby. Larger vessels in the Arctic must go to Dutch Harbor, some 1,000 miles south of the Arctic Circle, for refueling and resupply.

"There is an increasing level of urgency and importance for the project to be constructed, based on the receding ice, increased traffic and a rising need to ensure that there's a deep-draft port in the Arctic," Baker said.

"And in addition to supporting the larger national needs for resource development, tourism, research, national defense — the proposed expansion also stimulates additional economic activity in the region," she said.

The draft report is open for public comments until June 6.



June 7, 2019

To The National Science Foundation,

Coastal erosion is an economic and social challenge for Nome and the Norton Sound region. As temperatures rise in the Arctic, thinning ice, ocean storm surge, and melting permafrost are eroding the coast at critical rates. This raises challenges for our city planning, preservation of historic grave sites, and economic development for our region.

For the City of Nome, understanding and having access to modeling of the coastal erosion gives the ability to plan for enhanced shipping traffic, expanding fisheries, increased interest in Arctic cruise tourism, and developing critically needed infrastructure such as a deep draft port.

As more maritime traffic arrives in the name of tourism, commodity transshipment, resource development, scientific research and in support of national security, it is important for the City to be able to plan and adapt as fast as the climate is changing in the Arctic. Additionally, the ice-free season is growing as the ice is shrinking. As this occurs, vessel traffic in our region continues to increase. Therefore, it is important for Nome to be prepared to assist in the event of a spill or accident, general monitoring and navigational safety. A better understanding of the coastal areas will help Nome with planning and safety of maritime operations.

The City of Nome supports and encourages scientific research that would enhance the growing need for understanding local coastal erosion and bathymetry, like PolArctic's proposed "Near Shore Bathymetry and Coastline Modeling in the Arctic through the Integration of Beach Erosion Physics with Augmentation and Curation from an Artificial Intelligence Engine"

Sincerely,

CITY OF NOME

Richard Beneville Mayor

cc: John Handeland – City Manager Joy Baker – Port Director

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CITY OF NOME City Manager's Office P.O. Box 281 Nome, Alaska 99762 907.443.6600 johnh@nomealaska.org

#### City Manager's Report

From:	John K. Handeland, City Manager (Interim)
To:	Nome Common Council
For Period:	May 25 –June 7, 2019

• The city cleanup week was a success. Thanks to Cheryl Thompson for coordinating the activities. Public Works had several trucks out for folks to deliver their items to, and Calvin from DOT, as well, provided two trucks to assist in the effort. A number of vehicles were transported to the monofill, as well as other white goods under the "You Call – We Haul" program.

"Free Dump Saturdays" will continue through the summer. While a fall "You Call – We Haul" week will also be scheduled, depending on other scheduling and truck needs, an additional mid-summer week may be scheduled.

- Prior to her departure, Dawn Ubelaker was busy working with families to schedule burials. Our morgue was full after winter; several burials have already occurred with others booked for June. Most families have made arrangements; if necessary, the City will assist to insure all are properly buried in the next month or so.
- For present, animal control responsibilities will fall to the CSOs. We are still looking to see if we might find a responsible contractor, or if the duties will permanently (for now) remain with NPD.
- Following a teleconference with the city engineer, public works supervisor, and myself, we determined to stay with the gravel specification for city streets, as it had been bid. Adding more fines would likely result in more mud, which was not considered acceptable. We will have dust, regardless, and will work to mitigate that with watering. RAP used when Greg Kruschek Avenue was rebuilt remains an issue, and will require additional maintenance activity. We intend to work with DOT to nominate GKA for dust control.
- David Barron, Troy Miller and I met with Colby Engstrom relative to his efforts to develop the old Twin Dragon in to a laundromat and will continue to coordinate with him on his activities. I learned from NSEDC's community benefits director that while they will not extend the performance period under the small business initiative program, Mr. Engstrom will not have to pay back funds advanced for his development. (Repayment provisions apply only to any purchases of "rolling stock".)

- A meeting has been scheduled with Chugie and Jessica Farley for Monday afternoon relative to their building permit concerns.
- Sharon Sparks has been hired under the classification of administrative assistant at NPD. Her duties will include serving as a liaison with crime victims to communicate the status/disposition of cases. Often, it is my belief, individuals are simply unaware of the legal process, and as a result have the impression "nothing is being done".

Sharon has extensive experience in child protection services, having worked for both Kawerak as Children Family Service Coordinator and a period as Director, and the State Office of Children's Services where she assisted case workers with services, referrals, and follow-up with clients.

- Mike West has been hired, at least for the summer, in building maintenance. He has worked part time for the City in the past and his skills and proficiency in boilers will insure our heating plants receive proper attention in cleaning and maintenance prior to fall.
- I met with a neighbor to the Steadman Field Park relating to concerns on access and condition. The only access currently is from 4<sup>th</sup> Avenue. Folks have been climbing over or shimmying through a hole in the fence from King Place. Prior access, across Catholic property, was closed due to nefarious activities occurring behind some cabins they had constructed.

The neighbor requested access be addressed, as children are also climbing over the fence from his property, and that it be cleaned. (He fully supports the park being available for the community.)

Chip Leeper and I met, and we will address cleanup-maintenance, including placement of a porta-potty (as currently bushes behind the Catholic Church are being used). We are looking at adding some lighting, for a little later in the year, and also will look at the possibility of extending a security camera.

As Father Kumar is on vacation, I contacted Father Ross and Cindy in Facilities Management at the Fairbanks Diocese Office. They stated the door was definitely open to discussion on potential additional access, away from the church, to avoid the dangers associated with fence climbing. Father Kumar is due back in about 10 days, and we will have a follow-up meeting upon his return.

- The annual landfill inspection by ADEC is scheduled for June 24. John Blees will be in town, as usual, for this interaction.
- Those involved with fuel transfers and storage (Bonanza Fuel-lead agency this year, Crowley, NJUS and the Port will be practicing readiness on June 26 on the Snake River.

- Jay Sterne, Federal Lobbyist, and John Smolen, attorney specializing in "P3" (public-public partnerships) will be in town July 21-23. Mr. Smolen will be providing a P3 overview to the Council and community at the July 22 regular meeting.
- The visit mentioned above will coincide with the call by the *Maasdam* cruise ship. It will be anchored offshore, with passenger lighterage to the Port.
- Julie Liew, along with Brooks Chandler, participated in a productive AML online sales tax summit earlier in the week. Work continues on standardized definitions, and they will be pursuing software development. AML will likely form an entity, similar to AML-JIA, to serve as the processor-clearing house for all transactions.

**Upcoming Meetings-Events:** 

- June 17 Work Session Revenue, including personal property tax
- June 18-21 Midnight Sun Festival
  - Booths at "Golden Goose lot", Lions Club BBQ Chicken on Front Street
  - June 20 Parade, Arts Council "Richard Beneville Day" recognition
  - o June 21 Raft Race at Nome River
- June 24 Regular Council Meeting
- July 4 Independence Day
  - o Parade
  - Street Games
  - Ice Cream courtesy of Nome Volunteer Fire Department
- July 8 Regular Council Meeting
- July 22 Regular Council Meeting P3 presentation by John Smolen

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LETTERS OPINION

## **NEWS** 14 JUNE, 2019 – 9:30 AM EDT

# Polar Code may be applied to smaller Arctic vessels

NEWS

"We are well aware of the increased number of fishing vessels and pleasure yachts"











Every year in August, the western Nunavut community of Cambridge Bay sees many yachts and smaller vessels trying to transit the Northwest Passage, The International Marine Organization is now looking at how it might expand the Polar Code and its environmental requirements for ships in the Arctic to smaller vessels. (Photo by Jane George)

# By Nunatsiaq News

At a recent Arctic Council shipping forum in London, the International Marine Organization said it's looking at <u>expanding the Polar Code</u> to smaller vessels.

"The entry into force of the Polar Code marked only the first phase of our effort to protect the pristine Arctic and Antarctic environments," said IMO Secretary–General Kitack Lim to the recent Arctic Council shipping forum, held in London in early June.

The IMO, a United Nations agency responsible for the safety and security of shipping and the prevention of marine pollution, is now putting attention on vessels that fall outside its mandatory regulatory regime, due to their size, Kim said.

In 2017, more than 20 smaller vessels and yachts transited the Northwest Passage, according to online sources. Apparently, none made it through the ice-choked waters last summer.





"We are well aware of the increased number of fishing vessels and pleasure yachts sailing in polar waters that do not fall under the provisions of the Polar Code," Kim said.

The IMO was recently approved as an <u>Arctic</u> <u>Council observer</u>.

That will further strengthen the two organization's efforts in support of sustainable Arctic shipping, Kim said.

"From Theory to Practice" was the overall theme of the forum, which included presentations on implementing the Polar Code, with a focus on successes, impediments, and remaining challenges, a news release from the Arctic Council said.

Those at the forum also looked at a new website, which offers a one-stop, online source of information to support safe and environmentally sound Arctic shipping.

The website, accessible at

www.arcticshippingforum.is, provides links to what shippers need to know about the implementation of and compliance with the Polar Code.

For example, on the website, shippers can find links are available on the hydrographic, meteorological, and ice data information needed to plan for navigation in the Arctic.





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Arctic States, intergovernmental organizations, classification societies, the shipping industry, marine insurers, and non-governmental organizations regularly contribute information to the website, the release said.

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# (0) Comments

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# Memo

To:	John K. Handeland – Interim City Manager						
From:	Joy L. Baker – Port Director $\mathcal{JLB}$						
CC:	Mayor & Common Council; Nome Port Commission						
Date:	6/6/2019						
Re:	Port & Harbor Report/Projects Update – June 2019						

The following provides a status update on active issues and projects pertaining to the Port & Harbor.

#### Administrative:

The F19 Port Operating Budget at 31 May shows 72.9% revenue and 51.0% expended, with June activity on track to bring in the revenue balance, but expenses are expected to remain lower than projected. Harbormaster Stotts and his staff, with the help of Public Works, have successfully put all of the seasonal appurtenances in place at the facility. Office Manager LeClair has the office up and running smoothly, and providing efficient customer service.

The Port Commission will be holding another work session on 11 June 2019 to continue discussing their approach to developing a long-term fiscal health plan for the Port & Harbor, which may include various options for generating revenue. Once a draft plan is identified, it will be recommended to the Council for consideration, through a regular meeting of the Port Commission.

It is anticipated that the Commission will use a July 2019 work session to resume consideration of long-term onshore development planning, which will inform an update to the 2016 Port of Nome Strategic Development plan, as well as facilitating a coordinated strategy to connect both offshore and onshore development needs.

#### Causeway:

Arctic Deep Draft Port – Modification Feasibility Study (MFS):

The Corps Project Delivery Team will hold their monthly meeting on 13 June 2019, updates in the interim:

- The Draft Integrated Feasibility Report and Environmental Assessment are out for public input with comments being accepted through 21 June 2019.
- A public meeting on the draft report will be held in Nome on 18 June 2019 at 5:30 pm at OSJ.
- The public is encouraged to review/comment on the report, and attend the public meeting.

John Smolen with Nossaman, LLC will be in Nome July 21-22 to provide an initial overview of using Public-Private Partnerships (P3) to fund large infrastructure projects – and work with administrative staff to begin framing the execution of the deliverables identified in the engagement contract.

Anita Parlow with Parlow & Associates, presently under contract to provide a Commercial Arctic Shipping Assessment, will be presenting the draft report at the 20 June 2019 Port Commission Work Session. The intent is to gain knowledge of Arctic shipping, ports and opportunities on the short and long term horizon to inform Port development into the future. The final report is anticipated to be complete in late July/early August 2019.

#### Harbor:

#### Inner Harbor Deepening to -12.5' MLLW (Section 107 Corps CAP Program):

The Corps will hold the first Project Delivery Team meeting on 14 June 2019, following the decision that deemed this project worthy of federal interest. Once the preliminary project information is provided regarding budget, scope, and the official determination letter, followed by the cost-share agreement.

#### Concrete Launch Ramp Replacement Project:

The additional information requested by EDA for the pending grant application was submitted on 28 May 2019. It is possible additional information may be needed, but otherwise we are hopeful that official award may be received sometime in July 2019. (All matching funds remain available and await award of federal funds).

#### Snake River Moorage & Vessel Haulout Facility:

The U.S. DOT BUILD program announced release of another round of funding available for application on 18 April 2019. We are working with Jenny Evans, with Rural Alaska First, for submitting an application for this project prior to the deadline of 15 July 2019.

#### Port Industrial Pad:

#### West Nome Tank Farm (Property Conveyance):

We received an update from the USAF that the final Environmental Baseline Survey has been signed by the proper authorities, and the property will now shift to the Real Estate department for preparing the property transfer documents. These will include a step-by-step breakdown of tasks to be completed by each party for the transfer to become effective.

#### **External Facilities:**

#### Cape Nome:

A portion of the City's funding reimbursement request has been paid, with two more disbursements still in processing. Alaska DHS/EM staff has advised the grant closeout process for the Cape Nome Jetty Repair has resumed (following all staff being assigned to the earthquake response), and funds will be reimbursed.

Additional information is available on request.



Wendy Chamberlain - (partpartner) Heatherkes - (partner) wendyc@gci.net 907-230-4308 <u>hkbrakes@gci.net</u> 907-723-3920

224 4<sup>th</sup> Street, Juneau, AK. 99801

#### **Legislative Update Report**

#### June 16, 2019

**The first 30-day special session** adjourned (sine die) on June 13<sup>th</sup> without action being taken to fully fund the capital budget or provide a Permanent Fund Dividend.

Governor Dunleavy immediately called the Legislature back into a second special session commencing July 8<sup>th</sup>, 2019 in Wasilla. Several hours after adjournment Dunleavy wrote on social media, "*I said it before and I'll say it again, the Legislature's job is not over until it passes a full statutory PFD for Alaskans.*"

#### Why is this issue so difficult to resolve?

Members on both sides of the aisle have strong feelings for/against paying the constitutionally mandated dividend amount (estimated to be \$3,070 this year). A full dividend payment will result in more than a \$1 billion-dollar budget deficit, forcing legislators to decide on one of two options to balance the budget:

#### Option 1

1. Draw from dwindling savings accounts

Savings account balances as of May 1, 2019:

- Constitutional Budget Reserve. (CBR) \$1.8 billion
- Earnings Reserve account (ERA) \$19 billion
- Permanent Fund \$65 billion (This includes the \$19 billion interest in the above ERA account)

#### **Option 2**

- 2. Reduce the budget significantly (25 percent).
  - In the final days of the special session, an amendment to fully fund the dividend failed the Senate on a 10-10 vote. Intense lobbying by the Governor and his team could not secure the final votes needed to approve the constitutionally mandated \$3,070 dividend. The House vote failed 21 nays 15 yeas.

**So, what is the answer.** Most legislators support a "healthy" dividend; however, a majority remain opposed to reducing or eliminating programs such as the pioneer homes, Marine Highway, the University, education and Medicaid to pay a full dividend. In contrast, numerous conservative members believe government should be reduced and the funds used to pay a full dividend.

Meanwhile, an 8-member group of House and Senate members plan to meet over the next few weeks in hopes of making recommendations about the use of Permanent Fund Earnings. Fairbanks Republican Sen. Click Bishop, one of the group's leaders, said 21 days is the target for the group to do its work. The group held their first meeting last week. Members continue to express concerns that paying a \$3,000 dividend this year will make it harder to reduce the amount next year as most legislators will be facing reelection.

#### Will the Governor get his way forcing the Legislature to pay a full dividend?

Right now, the odds are 50/50.

#### What about the budget?

#### **Operating budget**

The FY 2020 operating and mental health budgets were transmitted to the Governor on June 13<sup>th, 2019</sup>. The Legislature approved an operating budget that reduces current year spending around \$200 million, rejecting most of the deep cuts sought by Gov. Dunleavy in his proposed austerity budget. Dunleavy emphasized closing the roughly \$1.6 billion budget deficit without new revenues or reductions to the PFD.

The Senate DHSS budget is \$142 million less than the current fiscal year. However, Dunleavy had proposed \$309 million in cuts to DHSS.

The Senate also halved the Governor's \$95 million cut to the Alaska Marine Highway System with a \$44 million reduction that would keep the ferries running at reduced levels year-round. The House cut ferry funding by just \$10 million.

Dunleavy's \$134 million cut to the University of Alaska system did not receive support in either the House or Senate. The House cut \$10 million and the Senate reduced University funding by \$5 million.

The Department of Corrections current \$291 million budget was reduced by \$14 million. The Governor proposed a \$19 million reduction to Corrections spending.

The Dept. of Public Safety received a \$10 million increase over FY 2019 funding. Dunleavy planned to cut Public Safety by \$3 million

The Governor has until July 6<sup>th</sup> to approve or veto these budgets. He has indicated he does not intend to veto the entire budget bill therefore; the Governor may look to reduce programs that were significantly increased by the Legislature including Health and Social Services, AMHS, University of Alaska, school bond debt reimbursement, the Arts Council etc. The second special session is scheduled to commence July 8<sup>th</sup>, 2019. Veto override actions could be taken

up by the Legislature at this time, however, there are currently not the required 40 votes for a veto override.

#### The Capital Budget

The FY 2020 Capital budget passed the final hours of the special session. Funding for new crime legislation along with numerous items traditionally funded in the operating budget were included in the FY 2020 capital budget. In an usual move, Finance Co-Chair, Tammie Wilson used the Constitutional Budget Reserve to fund some Capital Budget items. Accessing these funds requires a <sup>3</sup>/<sub>4</sub> vote from both the House and Senate, the vote failed leaving several critical programs such as DOT federal highway matching funds, criminal reform programs etc. without funding beginning July 1, 2019. DOT officials state the department could utilize unexpended funds to bridge the shortfall for two months, but this funding MUST be replaced no later September 1, 2019.

#### **School Funding**

The other big issue is future school funding. School districts throughout the state wait anxiously hoping for a compromise however, it appears it will be up to the courts to decide on this matter. The Governor insists that last year's advanced education funding is unconstitutional and violates the annual budgeting process mandated by the state constitution. <u>According to a legal</u> <u>memo</u> from Attorney General Kevin Clarkson, the legislature's action violates the Governor's veto authority. The Senate and House remain firm, stating it is the Legislature who has the authority to appropriate NOT the Governor.

Governor Releases \$20 Million Under Litigation to Schools

Interestingly, the Governor released the \$20 million appropriated for schools to be spent in the current school years. This funding was under litigation as an illegal impoundment of funds. School districts remain hopeful the Governor will reverse his stance on forward funding Education for FY 2020, otherwise districts will not have funding starting July 1, 2019.

#### Nome update

I informed Bryant on Friday that unfortunately everyone is waiting to see the outcome of the Governor's vetos. Dunleavy has until July 6, 2019 to finalize the FY 2020 budget.

#### Below are items that may be of interest to Nome leaders:

- Community dividend/municipal assistance fully funded
- School bond debt reimbursement fully funded
- Nome Youth Facility fully funded
- DOT, Northern Region fully funded
- Senior Benefits payment program fully funded
- Power Cost Equalization fully funded

- Tribal Assistance Program fully funded
- Behavioral Health Services fully funded
- Public Health Services fully funded

#### Nome Port Resolution

#### <u>HJR 14</u>

Urging the Alaska Congressional delegation to pursue infrastructure funding for a deep draft Arctic port in Nome; requesting the Department of Transportation and Public Facilities to send a letter from the state to the Alaska Congressional delegation supporting a deep draft Arctic port in Nome; and requesting the Department of Transportation and Public Facilities to work collaboratively with the City of Nome on a deep draft Arctic port in Nome.

This Resolution is awaiting transmittal to the Governor for signature. HJR 14 should be transmitted within the next month.

#### **Governor's invitation**

Goldeneye Media (our film company) will be in Nome to capture footage and drone imagery during the Holland America M/V Maasdam visit. We have invited the Governor and his administration to attend. We are waiting to hear his availability. All media content will be available for the City to utilize for media messaging efforts moving forward. SEE YOU ALL SOON!!

# NOME PORT/HARBOR CAPITAL PROJECTS

				ESTIMATED	FUI	NDING	Fiscal
PRIORITY	PROJECT TITLE	PROJECT TITLE SCOPE OF WORK		SCHEDULE	SOURCE	AMOUNT	Year
ASSET RE	PAIR/REPLACE/IMPROVE					(red = Port \$)	
	WESTGOLD DOCK EMERGENCY	Remove/replace sheetpile and tail wall at cells 5/6 to restore the integrity of	Awaiting PND repair design to obtain repair	Work must be done			
	REPAIR - SHEETPILE/TAILWALL	the dockface at this location. (tailwall separated from wye)	estimate for crane/hammer/pile	immediately	PORT FUNDS	estimating	F19-20
			EDA \$1.7M grant applied - await award		EDA	\$1.7M	
		Remove and replace existing concrete launch ramp in harbor - excavate and	NSEDC \$300K grant awarded	Bid/construct 2020 -	NSEDC	\$300K	
2	LAUNCH RAMP REPAIR/REPLACE	stabilize subsurface w/rock-piling-timber	City funds budgeted F19 (Capital)	if EDA \$\$ awards	City	\$123K	F20-21
		Replace old boston whaler that was refurbished from an abandoned vessel -					
3	REPLACE HARBOR SKIFF/TRAILER	along with failing trailer	Awaiting passage of F20 budget to order	2019 Season	PORT FUNDS	\$42K	F20
		Demo existing walls/roof, Install new roof/panels, prep interior for insulation					
4	GARCO BUILDING REHAB PROJECT	install - concrete curb around perimeter	Seeking suitable funding opportunity	UNKNOWN	UNKNOWN	\$900K	
		User request for additional ladders to avoid wasting dock space and allow crew					
5	ADDITIONAL HARBOR LADDERS	to reach top of dock	Purchased/shipped 3 in Aug 2018	Install July 2019	PORT FUNDS	\$31K	F19
		Install overhead lighting at new TBS pad for safety, security and and	NJUS has provided estimates for budgeting				
	IP/THORNBUSH PAD LIGHTING	operational needs	purposes	UNKNOWN	PORT FUNDS	\$15K	F20
	PURCHASE NEW VEHICLE	Replace oldest of Port & Harbor vehicle fleet (1995)	Awaiting budgetary funds	UNKNOWN	PORT FUNDS	\$35K	

MAINTENANCE							
	HYDROTESTS & CP INSPECT - PORT	Annual maintenance tests/inspection/maintenance on port fuel lines system to	Hydrotesting Complete				
FUEL LINES		meet compliance/ensure integrity	CP Work Scheduled	Performed Annually	PORT FUNDS	\$26K	ALL
	CSWY & INNER HARBOR	There is a periodic need to survey/dredge the SBH and Snake River ramp	Evaluate pre & post COE 2018 surveys -				
SURVEY/DREDGING		approaches to ensure control depth maintained	determine if shoaling	As needed	PORT FUNDS	\$35K	F20

SEEKING	FUNDS						
	SNAKE RIVER MOORAGE AND	Procure, ship and install floating docks/gangways/anchors/piling - shore			USDOT Grant	\$12M	
	VESSEL HAULOUT FACILITY	protection and uplands development, and -8' dredged basin	seeking design/construction funds	2020-2021	City	\$1M	
	THORNBUSH SITE COMPLETION	Develop remainng 9 of 18 acre parcel for needed uplands space.	seeking construction funds	UNKNOWN	UNKNOWN	\$1M	
	PWRF INCINERATOR - ENGINEERING PHASE	95% design, ROM estimate to develop/permit incinerator and building to be located at landfill (regulated waste disposal)	seeking design funds	UNKNOWN	UNKNOWN	\$120K	

# NOME PORT/HARBOR CAPITAL PROJECTS

Fiscal				ESTIMATED	FUN	DING	Fiscal
Year	PROJECT TITLE	SCOPE OF WORK	STATUS	SCHEDULE	SOURCE	AMOUNT	Year
IN FEASIB	BILITY/DESIGN						
	ARCTIC DEEP DRAFT PORT - MODIFCATION FEASIBILITY STUDY	50/50 Cost-share study w/Corps to move forward with results of the 2015 ADDP Regional Study, under existing and new WRDA authorization supporting regional economic viability justification.	Project Development Team (PDT) doing analysis of economics and other social effects, design costs & benefits	Feasiblity Report Due to Congress June 2020	SOA 17-DC-005 Grant	\$1.6M	F18-20
	ARCTIC DEEP DRAFT PORT - MODIFICATION DESIGN	Design phase resulting from project layout justified in feasibility study report conclusion and authorized by Congress.	Funds being held until completion of study	2020-2022	SOA 19-DC-008 Grant	\$1M	F21-22
	INNER HARBOR DREDGING TO -12.5' MLLW	Deepening inner harbor to minimize number of draft conflicts due to frequency of wind-driven tide set downs	Corps is drafting cost-share partnering agreement for feasibility under CAP 107	2019-2020	SOA 19-DC-008 Grant	\$600K	F20
	PORT RD IMPROVEMENTS w/ALASKA DOT	Cost-share project w/ADOT to widen, resurface Port Rd w/drainage and safety improvements (sidewalks)	PDC Engineers working feasibility/environmental/ROW access	Construction 2021	SOA City Paid City obligated	\$7.1M \$51K \$381K	F20-22

IN PLANN	ling						
		Concepts/ROM Costs for buried/surface infrastructure to receive ship's waste					
	PORT WASTE RECEPTION FACILITY	materials-assess NJUS WWT capacity & City handling capabilities for	Bristol completed feasility on all wastes	Feasibility done 2018		\$40K	F18
	(PWRF)	accommodating additional marine volumes	Planning wastewater capacy/development	Wastewater plan 2019	PORT FUNDS	Unknown	F20
		Bury overhead lines crossing Port Rd & WNTF entrances to allow for					
	PORT RD OH LINE BURY	unobstructed vessel/equipment movement	Obtained estimate from EPS	Unknown	UNKNOWN	\$670K	
		Permitting - engineering - design	Estimate from EPS	Identifying Funds	PORT FUNDS	\$56K	
		Design/procure/install large diameter dolphins inside east breakwater in outer	Evaluating priority before expending design				
	OUTER HARBOR DOLPHINS	harbor for vessel standby.	funds	Unknown	UNKNOWN	UNKNOWN	
		Evaluate/conceptualize establishing disembarking floats at ramp in SE corner of	Evaluating options for in-house float use			\$265K/eng. est.	
	CRUISE TENDER FLOATS	harbor for cruise ship tenders to minimize congestion	before new construction	Unknown	UNKNOWN	\$25K/in-house est	
		Design/install shower facilities by SBH floats, extend existing water/sewer from	Awaiting private sector project options		PRIVATE		
	SHOWER/LAUNDRY FACILITIES	Office & coin-op or credit card mechanism	recently expressed by resident	Unknown	INDUSTRY	\$800K	
		Design/install electrical outlets near base of street lights, develop suitable	Evaluating priority and ROM costs -				
	ELECTRICAL SHORE POWER	mechanism to charge users to access	specifically charging mechanism	Unknown	UNKNOWN	\$35K	
		Work w/terminal fuel operators to develop fueling station in SBH, identify most	ROM/Concept Design Underway with In-		PRIVATE		
	SHORE-SIDE FUELING	suitable site and preferential access agrmt	house City Engineer	Unknown	INDUSTRY	UNKNOWN	
		Pursue as adjacent operation to terminal operator fueling station for potential	ROM/Concept Design Underway with In-				
	WASTE OIL/BILGE PUMPOUT	cost-share (also option as part of Waste Reception Facility)	house City Engineer	Unknown	UNKNOWN	UNKNOWN	

# NOME PORT/HARBOR CAPITAL PROJECTS

	FUNDING						
PRIORITY	PROJECT TITLE	PROJECT SCOPE	CONTRACTOR	COMPLETION	SOURCE	AMOUNT	Year
CONSTRU	ICTION COMPLETED						
					DENALI	\$667K	
	HIGH MAST LIGHTS	Design/procure/install 3 phase power and high mast lights at 3 Cswy docks	PND/ASRC/NJUS/BESC	JUNE 2013	CITY	\$314K	F12-13
	THORNBUSH PROPERTY SITE	Purchased 21.43 acre parcel from Nome Gold for Port laydown expansion	(3.36 acres sold to SNC/BFI)	SPRING 2013	PORT FUNDS	\$1.2M	F13
	INNER HARBOR HIGH RAMP	Design/bid/construct open cell +8' loading ramp adjacent to launch ramp	PND/PPM/BESC	OCT 2014	SOA GO Grant	\$5.3M	F13-15
	HARBOR REPAIRS/UPGRADES	Repair/replace ladders, install camel fenders & security lighting	PND/PPM/NJUS/BESC	OCT 2014	ADOT-50% CITY-50%	\$1.2M <mark>\$1.5M</mark>	F12-15
	LULU BARGE REMOVAL	Demo and remove sunken barge from outer harbor	Q TRUCKING/BESC	JUNE 2014	PORT FUNDS	\$305K	F14
	CSWY MIDDLE DOCK	Construct 3rd sheetpile dock on Causeway w/roro ramp	ORION MARINE CONTRACTORS	OCT 2016	NSEDC, EDA/SOA	\$8M	
	Authorized project Change Order	Extend concrete ramp to minimize erosion loss during storms	ORION MARINE CONTRACTORS	JUNE 2017	SOA Grant		F15-16
	SEAWALL EROSION REPAIR	Repair seawall from long term storm erosion - replace missing core rock and armor stone	ORION MARINE CONTRACTORS	JULY 2016	SOA Grant	\$750K	F16
	THORNBUSH SITE DEVELOP.	Developed 9 of 18 acre parcel for needed uplands space.	Q TRUCKING	JUNE 2017	SOA	4	F17-18
	SNAKE RIVER DREDGING OF EXPANSION MOORAGE AREA	Additional dredging to -8' MLLW along west bank of Snake River to accommodate light draft anchorage	Q TRUCKING	JUNE 2018	GO & DC-108 GRANTS	Ş1.375	F16-18
	SECURITY CAMERA SYSTEM	Install 24 camera security system in Port/Harbor w/desktop stations, server, software and fiber connections	ARCTIC FIRE & SECURITY NJUS - PK ELECTRIC	MAR 2018	DHS CITY	\$202К <mark>\$115К</mark>	F18
	CAPE NOME JETTY REPAIR	Repair Jetty from Nov 2011 storm - replace missing core rock and key in armor   APE NOME JETTY REPAIR stone surface layers-remove scattered rock		AUG 2018	FEMA ADHS/EM	\$4.05M	F11-19
	/ESSEL SCRAP Hazmat Cleanup/Demo Cabin/Disposal of 65' tugboat		Haul to monofil by Q for City disposal	OCT 2017	PORT FUNDS	\$15.5K	F18
	BARGE/LAUNCH RAMPS LIGHTING	Purchase/Install poles and buried service for overhead lighting at barge rampARGE/LAUNCH RAMPS LIGHTINGpad, for safety, security and and operational needs		SEPT 2018	PORT FUNDS	\$38K	F19
	HAUL OUT - DEAD MAN	Design/procure/ship/fabricate/install dead man mechanism to serve as anchoring point for equipment in vessel haul-outs	City crews installed in Sept 2018	SEPT 2018	PORT FUNDS	\$20K	F19
1	CSWY BRIDGE FUEL LINE HANGAR & ROLLER REPLACEMENT	Replace corroded hangars/rollers on underside of bridge to allow free-floating movement of fuel line casing when bridge flexes	Seakers received materials in October and completed install in early Nov 2018	NOV 2018	PORT FUNDS	\$55K	F19

INDICATES COMPLETED PROJECT

#### PORT & HARBOR FISCAL HEALTH STRATEGIES

Per discussion at the Port Commission Work Session on Tuesday 11 June 2019, the following options are being presented for discussion at the 6/20/19 Regular Meeting:

#### EFFECTIVE 2020 OPERATING SEASON:

- 1. <u>Annual CPI Adjustment:</u>
  - Tariff rates to be adjusted annually per the applicable Anchorage CPI (2% today)
- 2. <u>Asset Repair/Replace & Capital Improvements Fee</u>:
  - a. Setup new account to set aside funds annually and authorized for specific use
    - A flat rate amount to be booked as an expense (\$100K suggested)
    - A % of closing gross revenues or % of net surplus
      - F19 gross revenues are presently projected at \$1,833,760:

3.5%	5%	10%
\$64,182	\$91 <i>,</i> 688	\$183,376

#### STAFF RECOMMENDATIONS

- A. Establish New Account:
  - a. Upon F19 final closing figures, determine amount of Port Fund Balance (available cash) and use at least 25-40% of that as basis to start new asset repair/replace account.
- B. Increase for Targeted Rates:
  - Evaluate specific rate adjustments for increased labor, utilities, insurance, taxes

#### **OTHER CONSIDERATIONS**

Cruise Ship Passenger Fee:

• As mentioned in the Cordova report, we could establish a cruise pax head tax, but it is recommended that some research occur before that decision is formalized to become familiar with the mechanics of the state-assessed fee, and how exactly what specific projects would be targeted for avoid misperceptions of the purpose of the fee.

#### PORT FISCAL HEALTH WORKSHEET

EXPENSE	FY16	FY17	FY18	% INCR./DECR.	F	Y19 - 5.16.19	DRAFT FY20	Notes
LABOR	\$ 601,089.36	\$ 676,355.76	\$ 663,942.44	10.46%	\$	634,607.11	\$ 623,033.00	
UTILITIES	\$ 34,496.95	\$ 50,822.55	\$ 50,679.33	46.91%	\$	60,650.00	\$ 60,650.00	
SUPPLIES	\$ 55,134.41	\$ 41,851.02	\$ 59,686.01	8.26%	\$	41,800.00	\$ 36,400.00	
INSURANCE	\$ 46,329.00	\$ 54,000.00	\$ 53,069.00	14.55%	\$	52,950.50	\$ 59,430.00	
PROF SERVICES	\$ 269,422.80	\$ 248,012.91	\$ 263,786.09	-2.09%	\$	301,550.00	\$ 397,250.00	Proj \$\$ moved to Capital
REPAIRS/MAINT	\$ 143,251.25	\$ 40,525.62	\$ 9,590.75	-93.30%	\$	75,000.00	\$ 145,000.00	Proj \$\$ moved to Capital
BAD DEBT	\$ 3,076.62	\$ (28,012.77)	\$ 8,744.92		\$	3,000.00	\$ 5,000.00	
NOAA INTEREST	\$ 159,524.23	\$ 154,799.26	\$ 149,883.01	-6.04%	\$	146,500.00	\$ 155,656.00	
OTHER/MISC	\$ 37,653.00	\$ 40,187.23	\$ 27,981.77	-25.69%	\$	36,651.00	\$ 41,900.00	
PILOT	\$ 33,946.55	\$ 32,834.45	\$ 55,624.50	63.86%	\$	55,625.00	\$ 59,774.00	
SUBTOTAL	\$ 1,383,924.17	\$ 1,311,376.03	\$ 1,342,987.82		\$	1,408,333.61	\$ 1,584,093.00	_
TRANSFER OUT*	\$ -	\$ -	\$ 204,217.79		\$	425,423.23	\$ 128,103.00	
TOTAL EXPENSE	\$ 1,383,924.17	\$ 1,311,376.03	\$ 1,547,205.61	-	\$	1,833,756.84	\$ 1,712,196.00	]
				-				-
TOTAL REVENUE	\$ 1,509,041.96	\$ 1,930,039.35	\$ 1,790,552.79	-	\$	1,719,055.00	\$ 1,735,555.00	
F				-				-
SURPLUS/DEFICIT	\$ 125,117.79	\$ 618,663.32	\$ 243,347.18		\$	(114,701.84)	\$ 23,359.00	
								=
NOAA PRINCIPAL	\$ 129,899.00	\$ 134,624.00	\$ 139,540.00		\$	142,923.00	\$ 133,767.00	

DEPRECIATION (including deprecation would generate significant loss for each fiscal year - standard practice would be to set aside deprec \$\$)

CAPITAL EXPENSE\* (see next page for capital projects by fiscal year - these are tied to Transfer Out category as of FY18)

### **UTILITIES BREAKDOWN**

UTILITIES	FY15	FY16	FY17	FY18	FY19 - 5.16.19	CATEGORY TOTAL	% of Total
Electric	7,138.68	5,464.42	10,486.48	10,605.97	14,300.00	47,995.55	24.08%
Water Meter	2,735.36	3,520.43	3,290.09	3,617.33	3,850.00	17,013.21	8.54%
Sewer	4,838.00	6,655.76	5,666.00	5,773.04	7,200.00	30,132.80	15.12%
Garbage	14,359.52	14,205.31	19,268.89	21,130.37	22,000.00	90,964.09	45.64%
Heat	2,541.98	2,010.19	2,565.46	2,274.88	3,800.00	13,192.51	6.62%
subtotal	31,613.54	31,856.11	41,276.92	43,401.59	51,150.00	199,298.16	
Utilities - Resale	1,838.43	2,640.84	9,545.63	7,277.74	9,500.00	30,802.64	
Total	33,451.97	34,496.95	50,822.55	50,679.33	60,650.00	230,100.80	



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