City Manager
Tom Moran

Port Director
Joy Baker

Harbormaster
Lucas Stotts

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Nome, Alaska 99762
(907) 443-6619
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NOME PORT COMMISSION
REVISED **REGULAR MEETING AGENDA**
THURSDAY, JUNE 15, 2017 @ 5:30
COUNCIL CHAMBERS IN CITY HALL

I. OATH OF OFFICE FOR SEAT F MAYOR APPOINTMENT – DENISE MICHELS

II. ROLL CALL

III. APPROVAL OF AGENDA

IV. APPROVAL OF MINUTES
- 05.18.17 Regular Meeting

V. CITIZEN'S COMMENTS

VI. COMMUNICATIONS
- 05.19.17 Letter to Mayor Beneville on Municipal Infrastructure Projects
- 06.01.17 Port of Nome: Rescoping and Moving Forward – Alaska Business Monthly
- 06.09.17 Letter to AK DMVA Commissioner Hummel from Mayor on Infrastructure
- USCG D17 Arctic Shield Environmental Assessment

VII. CITY MANAGER REPORT
- 06.09.17 City Manager Report

VIII. HARBORMASTER REPORT
- Verbal Update on Maintenance/Repairs – Vessel Operations

IX. PORT DIRECTOR REPORT/PROJECTS UPDATE
- 17-06-08 Port Director/Projects Status Report

X. OLD BUSINESS
- Port & Harbor Development Analysis (Final) Draft – Cordova Consulting

XI. NEW BUSINESS
- Waste Reception Facility Feasibility Proposal – Bristol Engineering

XII. CITIZEN'S COMMENTS

XIII. COMMISSIONER COMMENTS

XIV. NEXT REGULAR MEETING
- July 20, 2017 - 5:30 pm

XV. ADJOURNMENT

MINUTES
NOME PORT COMISSION
REGULAR MEETING
May 18th, 2017

The Regular Meeting of the Nome Port Commission was called to order at 7:01pm by Chairman West in Council Chambers at City Hall, located at 102 Division Street.

ROLL CALL

Members Present: C. Smithhisler; C. Lean; C. West Jr.; C. Johnson; C. Cox; C. McLarty

Absent: C. Henderson;

Also Present: Lucas Stotts, Harbormaster; Tom Moran, City Manager; Joy Baker, Port Director; Garth Howlett, PND Engineers (telephonically)

In the audience: Lauren Frost, KNOM; Sandra Medearis, Arctic News;

APPROVAL OF AGENDA

Chairman West asked for a motion to approve the agenda, with a request from staff to allow discussion on engineering of Old/New Business to occur immediately after the Approval of Minutes, as Garth Howlett has a narrow window of availability tonight.

A motion was made by C. Lean to approve the agenda as amended, and seconded by C. Johnson.

At the Roll Call:
Ayes: Lean, West, Johnson, Cox, McLarty, Smithhisler
Nays:
Abstain:

The motion **CARRIED.**

APPROVAL OF MINUTES

April 20, 2017 Regular Meeting

A motion was made by C. Lean and seconded by C. Cox to approve the minutes.

At the Roll Call:
Ayes: West, Johnson, Cox, McLarty, Smithhisler, Lean
Nays:
Abstain:

The motion **CARRIED.**

Chairman West opened the floor for Garth Howlett w/PND Engineers to speak about the design changes he made to the deadman anchor for the haul out ramp, described under Old Business. Garth indicated the changes were based the desire to make good use of some available materials the City has on-hand. This layout, using existing materials with some additional welding, will provide substantial capacity for hauling out vessels. Cox inquired about the original design with H pile and pipe pile, and the new drawing requires significant more welding, and if the additional I beams were

necessary to achieve the strength? Garth indicated, yes, anything less would not reach the capacity needed to support removal of large vessels. Intent is for shackle attachment to be buried so there's less chance of it being tweaked by equipment on the surface. Questions came up about compaction being difficult with the pile cap already welded to the beam, which was resolved by having Public Works make the call to do the field compaction, and then weld the pile cap on the exposed beam.

Garth moved onto the discussion of a draft layout of additional ladders on the South Wall, showing new locations alternating between existing. The ability to double the ladders does exist, but it is likely overkill, based on need. Also, he does not recommend making the new ladders fixed in nature, similar to those in place, as that allows zero flexibility if impacted by a vessel. This means the new ladders would be somewhat different than existing, but much easier to install/remove. Installation of any new ladders will require relocation of some of the camel fender chain attachments, with the volume of work being dependent on the number of new ladders desired. Garth will need water-side photos of ladders and fenders installed, to make further recommendations and suggest quantity.

CITIZENS' COMMENTS
There were none.

COMMUNICATIONS

- Port of Nome Ship Schedule at 5.15.17
- FY17 Energy-Water Omnibus Appropriations – PON Excerpts

Discussion: None

CITY MANAGER'S REPORT *(05/15/17 Written)*
No questions

Discussion: None

HARBORMASTER'S REPORT *(Verbal)*
Permit applications are picking up with larger vessels getting closer to launching. Floats should be installed next week, and we have a Russian Research vessel and the first AML cargo barge arriving on 1 June. Several research vessels added to the schedule with more anticipated. New Dock Watch staff has been hired, and once training is complete, their schedule will be pushed to later in the day to cover the evening shift. At this time, Port and Public Works crews or working together on facility opening tasks, as well as some repairs and maintenance tasks.

Discussion:
Lean inquired about getting the delineators in place on Belmont Beach for launching small vessels, yes, install tomorrow.

Port Director Report / Projects Update (Written)
05.15.17 Port Director/Projects Status Report
Contractors are getting mobilized for the season's project - the Knik barge arriving mid-June at the Cape with rock placement equipment; Orion crews/equipment arriving 1 June to do ramp extension; Q Trucking will be hauling dry fill on the TBS project beginning the end of June; and surveyor for the annual Corps maintenance dredging will be in town doing the pre-dredge in early June, while the Alaska Marine Excavation is wrapping up Dillingham project, and working in Nome by 15 June.

Discussion:
Was the preliminary survey changes made for the Cape? The design changes were drafted that incorporated the changed sea floor, and have been submitted to DHS/FEMA for approval. Since it ultimately results in lower quantities/cost, FEMA was agreeable. Was there a preliminary survey done on the winter excavation of the survey? We anticipate the Corps dredging survey to conduct the river post-dredge once they have completed the federal project survey work.

OLD BUSINESS
Launch Ramp – Haul Out Anchor/Deadman

Discussion:
(See discussion after Approval of Minutes)

Motion:
The following motion was moved by Cox and seconded by Johnson

Recommending the installation of anchor deadman at barge ramp by the Public Works crew, with final welding and compaction specifications to be determined in the field.

At the Roll Call:
Ayes: Johnson, Cox, McLarty, Smithhisler, Lean, West
Nays:
Abstain:

The motion **CARRIED.**

NEW BUSINESS
South Wall Ladder Additions – Draft Schematic

Discussion:
More information needs to be conveyed to PND, and internal assessment done on placement, quantity and style.

CITIZENS' COMMENTS - None

COMMISSIONERS' COMMENTS
C. Lean – None

C. Johnson – definitely value to putting the buoy outside the Causeway as Ed Page presented.

C. Cox – good meeting, but this is my last, and I appreciate the opportunity to be a part of this. If anyone wishes to bounce anything off me, just reach out.

C. Smithhisler – Ed's presentation was good, having more info about what happens in and around the Port is always good.

C. McLarty – thought the presentation by Ed Page was fantastic and would like to see more things in that realm. Glad to see some fine-tuning efforts.

C. West – having more information on safety is always a good thing, and makes us more attractive.

SCHEDULE OF NEXT MEETING

The next meeting: June 15, 2017 at 5:30PM.

ADJOURNMENT

Motion was made by C. Johnson for adjournment – meeting adjourned at 7:57 PM.

APPROVED and **SIGNED** this 15 day of June, 2017.

Jim West, Chairman

ATTEST:

Joy Baker, Port Director

BILL WALKER
Governor

P.O. Box 110001
Juneau, AK 99811-0001
(907) 465-3500
Fax (907) 465-3532

STATE OF ALASKA
OFFICE OF THE GOVERNOR
JUNEAU

May 19, 2017

The Honorable Richard Beneville
Mayor
City of Nome
P.O. Box 281
Nome, AK 99762

Dear Mayor Beneville,

President Trump has made investment in national infrastructure a priority for his new Administration. As a result jurisdictions all around the country have been assembling their wish lists of projects for possible consideration. Governor Walker recently sent an initial list of Alaskan infrastructure projects for consideration by the Trump Administration. However, the Governor also provided notice that additional projects may be nominated by the State for qualifying municipal projects.

The State is therefore soliciting proposals for municipal or tribal infrastructure projects that might qualify for consideration under this federal program. If interested in offering projects for consideration, please follow the criteria below:

- Limit submissions to a maximum of three projects for communities of less than 10,000; or five projects for communities over 10,000 in population.
- Rank order all projects, highest to lowest.
- Projects must have a significant local match or private sector component to the overall funding package – provide project budget proposal.
- Preference should be given to projects that are shovel-ready.
- Identify if any project qualifies for other federal capital funding programs; these projects will likely receive lower priority in this solicitation.
- Project nominations must include a narrative explaining how the project would contribute to one or more of the federal goals for this program, including:
    - Promote American jobs and economic growth
    - Improve the balance of international trade
    - Promote American energy security
    - Rebuild failing public critical infrastructure
    - Meet an immediate life/safety concern not readily addressable by other means

Please submit all project nominations by June 30, 2017 via the Office of Management and Budget web interface: https://www.omb.alaska.gov/html/omb-home/community-project-requests.html.

Don't hesitate to let me know if you have any questions.

Sincerely,

John Hozey
Deputy Chief of Staff
Local Government Liaison

Transportation

The Port of Nome: Rescoping and Moving Forward

Value and potential as a deep-draft port remains intact

By Tasha Anderson

Much like the Port of Anchorage services more than the Municipality of Anchorage, the Port of Nome is vital infrastructure for Western Alaska. It was a particular disappointment for the region when Shell ceased exploration activities in the Chukchi Sea and the subsequent suspension of the Alaska Deep-Draft Arctic Port System Study, a multi-year examination of various options for port development in the Arctic.

Rescoping and Moving Forward

But the Port of Nome's value and potential as a deep-draft port remains, regardless of oil and gas exploration or production in the Chukchi. Richard Beneville, Mayor of the City of Nome, says that when Shell pulled out the community expected that further development of the port would never happen. "Such is not the case," Beneville says. "The future has not changed; what is happening has not changed."

Port Director Joy Baker explains that two new pieces of legislation have revitalized plans for the Port of Nome. The first is the Water Infrastructure Improvements for the Nation Act (WIIN) passed in January 2016, which, through modified language, allows development of a port to be justified by benefit to a region, not just a specific community. The second is the National Defense Authorization Act for FY 2016, which "Requires DOD to submit to Congress an updated military strategy for the protection of US national security interests in the Arctic region."

Baker explains, "Both of those bills provide additional justification for picking up the Nome portion of the existing regional study and moving forward to further investigate the development of Nome as an Arctic deep-draft port."

The Port of Nome has been and remains an optimal choice for an Arctic deep-draft port. "Towards the end of the three-and-a-half-year period, [the US Army Corps of Engineers] had determined that Nome was the most economically feasible to become the first site for an Arctic deep-draft port based on the existing maritime and community infrastructure," Baker explains. The community of Nome already has roads, a hospital, an airport, and existing port infrastructure and maritime operations and services.

Baker says that one benefit of the suspended study was that it assessed several site options, and now all of those sites are able to use the study results (even if they are not fully complete) for their own planning efforts. "Nome's path forward is with the Army Corps investigating all the benefits to the region and the national strategic benefits for the military and the country," she says. During an April interview Baker said that the US Army Corps of Engineers District Office submitted a plan to their DC headquarters for a rescoping of the Nome port project moving forward.

Serving a Region

The Port of Nome operates seasonally, due to a frozen winter sea. Beneville says that, on paper, the port is open from June 1 through October 1. However, with climate change, he says, the port has open water from mid-May through mid-December. Beneville says that in April the ice was already breaking up and was thinner than in previous years.

According to Nome: An Arctic Port for the Nation, published in January 2016 by the City and Port of Nome, the port supports 450 seafood harvesters and processors and is home to Norton Sound Seafood Products and the port offers ingress for groceries, construction supplies, gravel, and other goods that are distributed to more than sixty communities. In total, an average of 53,000 tons of rock, sand, and gravel; 34,000 tons of freight; and 13.1 million gallons of refined products move through the port annually.

Beneville says, "The expansion that is necessary [at the port] is not just for Nome, but it's a larger picture than that: it's a picture of opening western Alaska, and that would be a good thing for the state economy. We all know it needs some help, and the diversification of the economy is, to me, one of the ultimate goals." Beneville explains that traffic at the Port of Nome has increased steadily in recent years; the port saw 160 vessels in 2000 and 750 in 2016. "You can see that over a long and extended period of time the Port of Nome has been serving not just Nome, but the region."

One ongoing transportation issue in Alaska is the imbalance of imports versus exports. Beneville says that the Port of Nome exports products as well as importing them, for example rock from the Sound Quarry east of Nome where metamorphic rock is mined "that is terrific for sea walls or grinding up for gravel." He continues, "I really want to bring that point home; Western Alaska has other resources as well." He says a graphite mine is under development fifty miles north of Nome, and there are other opportunities for exportation as well.

Currently the Port of Nome's existing causeway is approximately 3,000 feet in length. The outer harbor basin depth is 22.5 feet, allowing the port to service medium draft and smaller vessels. The port is dredged annually by the US Army Corps of Engineers.

The limitations of the Port's current basin depth certainly affect development. Baker says that ideally the expansion would extend the existing maritime infrastructure out until the basin reached a depth of 36-to-40 feet, with 40 feet being a "high-end goal," that would accommodate most deep-draft vessels.

Baker says that expanding the port has numerous benefits: it will lower the cost of transshipping goods to Western Alaska as well as Arctic coastal communities; serve US national security needs; and allow staging of maritime assets to facilitate search and rescue and oil spill response in the Arctic, protecting the marine environment, food resources, and human life.

What's happening now?

The City and Port of Nome are working closely together, "internally contemplating and investigating options for funding the city's cost-share for construction down the road in four to five years," Baker says. "We are fortunate that we received $1.6 million in funding from the Alaska Legislature in 2016 to serve as the city's cost-share for finalizing the study and moving into design for the port," especially with the state's current fiscal climate. "We intend to make good use of it."

Beneville says the Port of Nome project is also fortunate to have the support of local partner Sitnasuak Native Corporation. "They have a vested interest in fuel, and they are in for the long-term on this, and we're thrilled about that," he says.

It's estimated that construction will cost approximately $212 million, though Baker stresses this is an extremely rough estimate, which was calculated without final decisions on the type of docks being built, the exact length of the breakwater, and other factors. Cost-share for completion of the study and design will be 50/50 between the City/Port of Nome and the US Army Corps of Engineers, but she says that percentage will likely be different for the actual construction, relying more heavily on the US Army Corps of Engineers for funding.

Baker says she anticipates it will take two- to two-and-a-half years to complete study, revision, and design of the expansion. If all goes well, and funding is in place, it's possible that all parties involved may be ready for construction in three years or so.

Beneville emphasizes that the Port of Nome is not just important to the region's economy, but is a strategic port in terms of national security. "When you look at a map of Alaska, especially on a globe as opposed to a flat map, you see why we are and were, during the Cold War, so incredibly important. A lot of people recognize the importance of development of a port in the far north from a strategic point of view," he says.

Baker says that one absolute fact is that traffic in the Bering Strait is increasing. "That was the consensus of the Arctic Encounters Symposium in Seattle that I attended [in April]; more than half [of the presentations] demonstrated the increase in vessel traffic… Everything pretty much resolved to the fact that, whether oil and gas is at pause or not, the traffic increases are continuing to rise." She says traffic is increasing in a variety of industries as interest in the region grows.

Beneville poses the question, "How many ways can you get from the Atlantic Ocean to the Pacific Ocean in the northern hemisphere by water? There are only two: the Panama Canal and the Bering Strait, and the Bering Strait is beginning to be far more accessible." ☼

P.O. Box 281 o Nome, Alaska 99762

June 9, 2017

Major General Laurel Hummel, Commissioner
Alaska Department of Military & Veterans' Affairs
P.O. Box 5800
JBER, AK 99505-0800

Dear General Hummel,

The City of Nome is in receipt of Governor Walker's list of Initial Priority Infrastructure Projects for Alaska, as submitted to the Trump Administration. I must say that I was delighted to see the Governor did include the need for an Arctic Naval Base, and the designation of a Strategic Arctic Port.

As you may know, Nome has invested significant effort over the last five years to expand our port facilities, which already serve as the maritime hub for western Alaska and the Arctic region. Historical vessel traffic has shown steady escalation in the last 10 years, with a continued upward trend after Shell suspended Arctic operations in 2015.

It is with that in mind that I extend a personal invitation to you to visit Nome this summer and tour our port facilities, where you can witness existing Arctic maritime operations firsthand, followed by a meeting with our team to discuss current and future capabilities at the Port of Nome. The City believes Nome is poised to play an expanded strategic role in the security of Alaska and the Nation.

I am hopeful that you can find some time in your schedule to visit our fair City, and experience the beauty of the southern Seward Peninsula during the long summer days. We will make every effort to accommodate whatever timing your schedule will allow.

Sincerely,

CITY OF NOME

Richard Beneville
Mayor

CC: Senator Lisa Murkowski
Senator Dan Sullivan
Congressman Don Young
Senator Donny Olson
Representative Neal Foster
City Manager Tom Moran
Port Director Joy Baker

ENVIRONMENTAL ASSESSMENT FOR ARCTIC SHIELD 2017

May 2017

U.S. Coast Guard
District 17
Juneau, Alaska

U.S. Department of Homeland Security
United States Coast Guard

2.2 PREFERRED ALTERNATIVE

2.2.1 Shore Operations

Several locations do, or may, serve as temporary Coast Guard home bases for sea and air support during the seasonal surge of Arctic activities (see Figure 2-1).

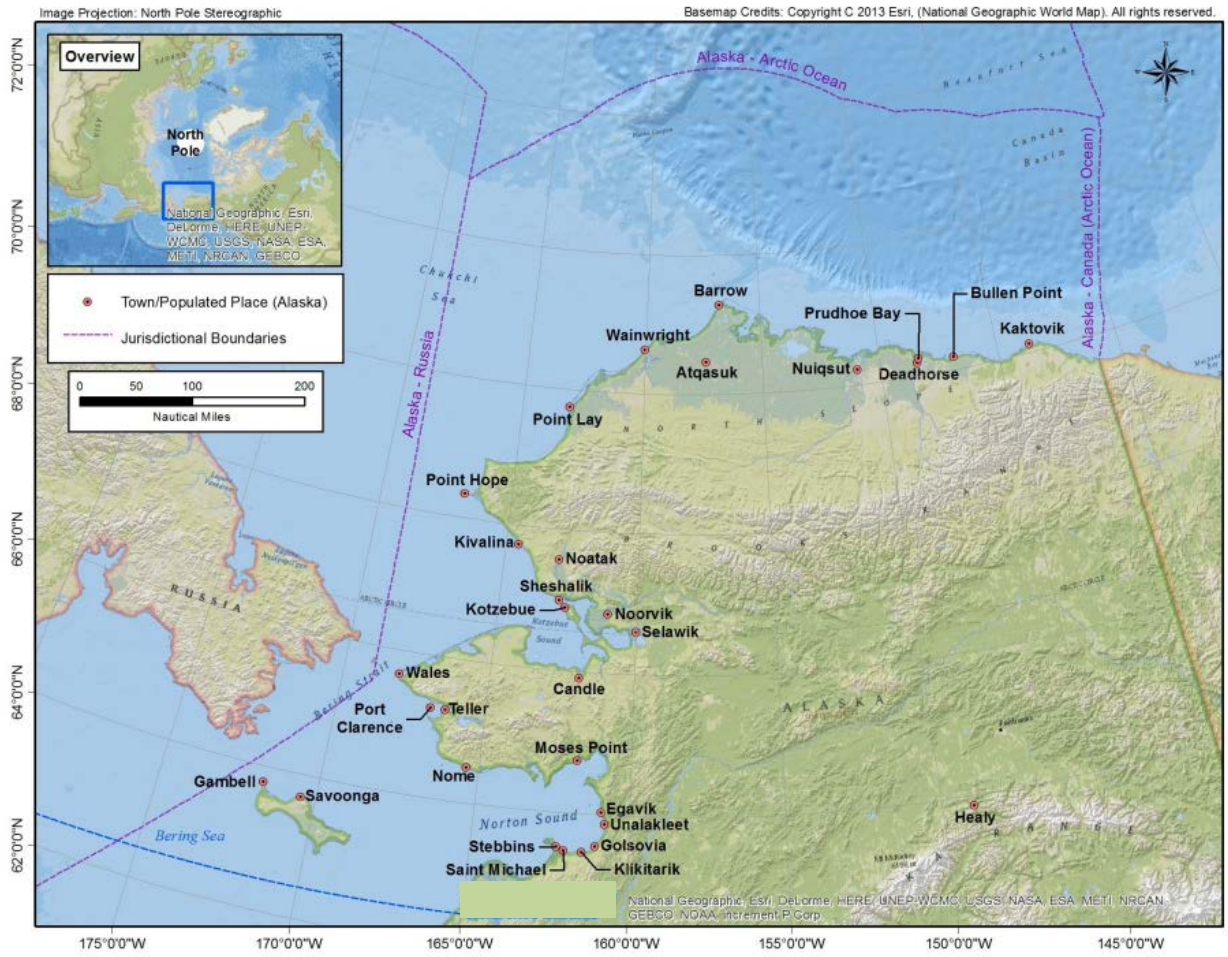

Figure 2-1. Possible Locations of Temporary Home Bases for Sea and Air Support During Arctic Shield 2017

2.2.1.1 Forward Operating Locations and Logistics/Staging Locations

FOLs are scalable facilities that can support sustained operations, but with only a small permanent presence of support or contractor personnel. The FOLs and logistics/staging locations would serve as temporary Coast Guard home bases for sea and air support during the seasonal surge of Arctic activities. The primary FOL in Alaska is the Army National Guard Hanger in Kotzebue. Other areas could include Utqiagvik (Barrow) and Nome. Kotzebue, Utqiagvik (Barrow), and Nome are further discussed in Section 3.3, and analyzed in Chapter 4 (see sections regarding socioeconomic resources).

The FOL at Kotzebue would involve the deployment of up to two MH-60 Jayhawk helicopters, personnel, and use of a leased Army National Guard Hanger facility. This FOL leverages existing infrastructure, and positions the Coast Guard to conduct standard operations and respond to maritime emergencies in the Arctic area. Kotzebue would also serve as a refueling station for two MH-60 Jayhawk helicopters.

Missions could include support for Search and Rescue (SAR), Arctic domain awareness flights, and, upon request, as support for other federal agency missions. Emergency Search and Rescue medivacs would depart from an FOL. Nome and Utqiagvik (Barrow) may serve as FOLs in a capacity similar to that of Kotzebue. Both locations have deep-water ports with close proximity to outer continental shelf oil and gas endeavors and potential mining operations. Flight and service crews would reside in hotels during Arctic Shield 2017, as they did during previous Arctic Shield events.

2.2.1.2 Inspections and Safety

The Coast Guard would conduct inspections of vessels in major ports in Alaska to ensure cargos are as claimed, safety standards are intact, and construction or maintenance plans meet established standards. Inspections of both commercial and non-commercial vessels further the missions of drug and migrant interdiction and marine safety. Inspections can take place at any Arctic port wherever a foreign flagged vessel arrives or makes its first U.S. Port-of-Call. These inspections are typically conducted dockside, but if dockside access to the vessel is not available, it would be accessed via a Coast Guard vessel (small boat). There have been infrequent inspections in Nome, Utqiagvik (Barrow), Kotzebue, and Kivalina. Inspections take approximately a half day and the Coast Guard evaluates the safety and vessel operational systems, processes, and documentation. In addition, the Coast Guard would discuss boating safety with recreational boaters during port facility inspections or in a public school classroom setting.

2.2.2 **Air Operations**

2.2.2.1 Search and Rescue

SAR missions are those that have the goal of preventing the loss of life and property. Because of the vast area of Coast Guard SAR responsibilities in Alaska, an aircraft, typically a MH-60 Jayhawk helicopter, is often sent first to find the vessel and report its location and status before a Coast Guard vessel is then dispatched for rescue. Air searches for persons in the water must be performed at an altitude below 500 feet (ft; 152 meters [m]) to be effective. Recovering persons in the water and dropping rescue equipment must also be done while the helicopter is hovering below 500 ft (152 m). All deployed materials (i.e., life jackets, life rafts), with the exception of flares, are expected to be recovered during a SAR mission. See Section 2.2.3.1 for “at-sea” SAR activities.

Figure 2-2. A Coast Guard MH-60 Jayhawk Helicopter

2.2.2.2 Routine Patrols, Arctic Domain Awareness Flights, and Reconnaissance

These operations serve to locate, identify, and document human contacts in the Arctic Region. The flights would also gather and verify data on coastal erosion, ice observation, and other scientific data requests (e.g., carcass surveys, walrus haulout locations, etc.). These scientific data requests typically come from researchers from other federal agencies, such as the USFWS or NMFS, who are onboard the Coast Guard's aircraft. The Coast Guard also assists with documentation of the scientific data, and is authorized for this work under the researcher's scientific research permit or authorization, if applicable. During Arctic Shield 2016, the USFWS requested three flights with the Coast Guard for their scientific data requests. It is expected that a similar number of flights associated with scientific data requests (less than five) could occur as part of Arctic Shield 2017.

Arctic domain awareness flights provide an opportunity for pilot and crew familiarization with the Arctic Region and can be the only safe opportunity for media coverage of events. Routine patrols and Arctic domain awareness flights are typically performed above 500 ft (152 m), weather permitting.

Helicopters conduct reconnaissance flights to detect open water leads in the ice and communicate this information to other assets in the area (e.g., an open water lead is an area where an icebreaker can more easily transit). Flights can occur at 400–1,500 ft (122–457 m) in altitude, but typically aircraft stay at or above 1,000 ft (305 m), when possible.

2.2.3 **Sea Operations**

Sea operations in the proposed action area include SAR missions (in conjunction with air support, and if necessary, in collaboration with an icebreaker), establishment and enforcement of safety zones, routine patrols, and establishment of berthing and facilities for operations and support personnel. Other small boat operations could include inspections, as discussed in Section 2.2.1.2. Sea operations and associated training activities include movement and operation of vessels and associated support craft in the proposed action area. All Coast Guard vessels are equipped with standard navigational technologies, including radar and navigation sonars. Characteristics of acoustic sources associated with sea operations are given

in Table 2-1. These sonar devices, which are in use at all times when a vessel is underway, allow ships to operate safely in the complex Arctic environment and would be used by all relevant platforms during standard operations, training, and other missions. The Coast Guard would use one high endurance cutter or medium endurance cutter and one buoy tender (Figure 2-3) during Arctic Shield 2017. Small boats, specifically rigid-hull inflatable boats (RHIBs), would be deployed from cutters and would go ashore to transport personnel to villages to attend meetings with the local community.

Table 2-1. Underwater Acoustic Sources Associated with the Proposed Action

Source type	Frequency range [kHz][a]	Source level (dB re 1µPa @ 1m) [b]	Associated Action
Small vessel	1–7	175	Small boat training, routine patrols
Large vessel	0.02–0.30	190	All sea operations and training
Single-beam echosounder (Fishfinder, Depth Sounder)	3.5–1,000 (24–200)[c]	205[d]	All sea operations and training

[a] Kilohertz
[b] Decibels referenced to 1 microPascal at 1 meter for underwater sound
[c] Typical frequency range for most devices that are commercially available
[d] Maximum source level is 227 decibels root mean square at 1 meter, but the maximum source level is not expected during operations
References: (National Marine Fisheries Service 2012; Richardson et al. 1995; U.S. Coast Guard 2013a)

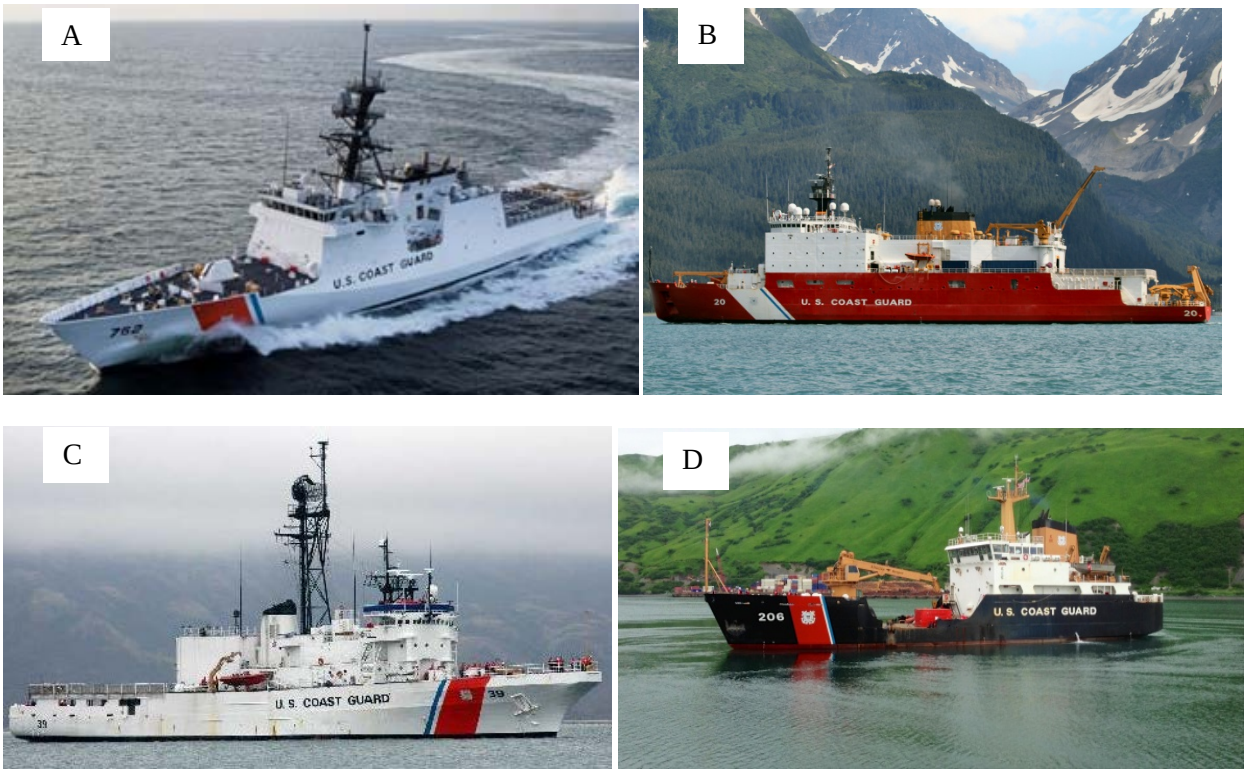

Figure 2-3. Coast Guard Sea Assets Include a National Security Cutter (A), Polar Icebreaker (B), Medium Endurance Cutter (C), and/or a Buoy Tender (D)

2.2.3.1 Search and Rescue

Coast Guard vessels would transit to a vessel in distress when air support provides the location (see Section 2.3.2.1). Flight deck equipped vessels provide logistical support to aircraft. Cutters can carry and deploy small boats to assist with rescues. Coast Guard vessels can also locate victims without air support through satellite emergency position-indicating radio beacon locators, cell phones, satellite phones,

distress flares, and by conducting search patterns in last known locations. Search vessels may employ radar and sonar technologies to aid in detection. When vessels carrying a large number of people aboard require rescue, Coast Guard vessels must get to the site quickly, as a helicopter alone cannot carry numerous additional passengers. The vessels for Arctic Shield 2017 are the SPAR, a buoy tender; the HEALY, a polar icebreaker; the ALEX HALEY, a medium endurance cutter; and, the STRATTON, a national security cutter. The cutters also have small (zodiac-type) boats, RHIBs that would be deployed. Coast Guard assets will support SAR and fast response cutters could act as aids to Arctic SAR. Depending on the emergency and location, a very large emergent military response, would require many Coast Guard assets, such as the HEALY icebreaker, but icebreaking itself is not proposed as part of Arctic Shield 2017.

2.2.3.2 Routine Patrols

The Coast Guard would routinely patrol Arctic waters to detect, deter, and disrupt maritime terrorist attacks, sabotage, or subversive acts; detect and investigate violations of the MMPA and the ESA; and to reduce the threat of foreign poaching of U.S. natural resources.

2.2.4 **Training**

The Coast Guard must continually assess the capability of personnel, assets, and resources operating in the Arctic. Training is required for ice navigation, small boat operations, aircraft, rescue exercises, and practicing of any Arctic logistics exercises for sea, land, and air. Training is essential for Coast Guard personnel to develop and maintain the skills needed to successfully accomplish mission objectives, and to allow the Coast Guard to accurately assess current capabilities and future needs.

The Coast Guard would follow Standard Operating Procedures (SOPs) and Best Management Practices (BMPs) described in Chapter 6 to minimize training impact or harm to biological resources.

2.2.4.1 Flight Training

Flight crews would be required to log in-flight hours to meet ongoing training requirements while at their FOL. As weather permits, MH-60T and MH-60D (Dolphin) helicopters would be flown in the FOL area to meet this requirement. The MH-60T helicopter would be stationed out of Kotzebue while the MH-60D helicopter would be stationed on the medium or high endurance cutter. Flight crews would coordinate with local tribes to ensure their proposed flight paths would not interfere with subsistence harvest activities. Training would occur as part of normal flights, for situational awareness, area familiarization, and as part of aircraft operational hours. All cutters have the training needed to conduct Deck Landing Qualifications; however, deck landings may or may not occur depending on whether the opportunity arises. Alternatively, deck hoists may be used on those cutters that are not flight deck equipped. Hoist altitude depends on the height of any obstacles in the area, but is anywhere between 25–100 ft (8–30 m) above the surface where the hoist is being conducted. There is no other type of flight training expected as part of Arctic Shield 2017 other than what has been described above. It is expected that up to 70 flight training exercises would occur during Arctic Shield 2017.

2.2.4.2 Small Boat Training

Coast Guard vessels under 65 ft (20 m) are classified as “boats,” which include cutter-based boats ranging from 14 to 28 ft (4 to 8.5 m). Small boat training would include boat launching and maneuvers, typically in the vicinity of the cutter that they support. Up to 25 training exercises would occur during Arctic Shield 2017 with no high-speed maneuvering or intercepts. Some shore-based boats may be transported to facilities by air and then launched via vehicle on a case-by-case basis.

2.2.4.3 Oil Recovery Training

Oil training field exercises during Arctic Shield 2017 would occur onshore or in the nearshore area in the Alaskan port of Utqiagvik (Barrow). The primary focus of the exercise is to provide both classroom and practical training consistent with the State and Federal Unified (Response) Plan Geographic Response Strategies. Participants would only practice deploying and retrieving a boom in the port's onshore and nearshore environment. All other training would be on shore. There will be no oil spill response activities conducted as part of Arctic Shield 2017.

2.2.5 **Tribal and Local Government Engagement**

Formal and informal government-to-government and community engagement (with tribes and local community leadership) is vital to all of the Coast Guard's missions. Engagement categories include local government engagement, educational training and outreach, and Tribal and Native community engagement.

Building partnerships is an important aspect of Coast Guard activities in the Arctic region. Coast Guard District 17 personnel would share information and communicate by phone or email with local governments, elected officials, Tribal leadership, mayors, and other leaders in affected communities (including Native communities) prior to and during Coast Guard activities in their local area. Year-round and recurring engagement with these communities would also occur through conferences, meetings, and personal communications allowing the opportunity for community, local governments, and tribal governments to provide input on Arctic activities. This also allows the Coast Guard to obtain key information from tribal stakeholders. During Arctic Shield 2017, this would involve regular, sometimes daily, communications of Coast Guard actions and how they may interact with local governments or with tribal activities.

The Coast Guard would reach out to tribes and villages and offer classes such as:

- Kids Don't Float - The Coast Guard would continue this program to maintain and supply remote communities with proper safety equipment to ensure youths can safely enjoy water and subsistence activities with their families.

- Water Safety - The Coast Guard would educate various community groups on water safety to ensure that they understand proper water safety techniques and fewer lives are put at risk.

- Commercial Fishing Vessel Standards Outreach - The Coast Guard would provide additional outreach efforts, including dock-side exams, town hall meetings, and forums in remote communities to increase knowledge of Commercial Fishing Vessel Standards requirements, including new requirements that would go into place in the next few years.

2.3 NO ACTION ALTERNATIVE

Under the No Action Alternative, the Coast Guard would not be able to fulfill its mission requirements in the Arctic in 2017. The Coast Guard also enforces the MMPA and ESA, and without increased Coast Guard presence in the Arctic, enforcement of these laws would be significantly reduced. The No Action Alternative would result in no on-scene assets in the region, simply using existing assets from their normal operating locations (i.e., Kodiak for aviation assets, and surface assets from Kodiak or, if deployed, the Gulf of Alaska or Bering Sea). Therefore, no assets would be positioned for immediate emergency response.

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City Manager's Report

From: Tom Moran, City Manager
Reporting Period: May 23 – June 9, 2017

- Congratulations to our May Employee of the Month, Dave Barron (Building Maintenance). Keep up the good work, Dave!

- Mayor Beneville and I headed to NACTEC on Tuesday, May 23rd for an "industry partners roundtable" with Commissioner of Education Johnson and Commissioner of Labor Drygas. The session was attended by representatives from a large number of local organizations (Northwest Campus, Nome Public Schools, Sitnasuak, Nome Job Center, NSEDC, Division of Juvenile Justice, Adult Probation, Graphite One, and Kawerak), and focused on the industry training needs of western Alaskans.

- Later that day, Port Director Baker, Harbormaster Stotts, Utility Manager Handeland, Mayor Beneville and I all met with Rear Admiral McAllister and Vice Admiral Midgette to discuss what assets the Coast Guard will have stationed in Nome this summer. No firm commitments were made, but "the brass" promised to look at the uptick in vessel traffic and consider a seasonal FOL (Forward Operating Location) in Nome. *Attachment 1.*

- Bravo to the employees at City Hall for what was hopefully the first of many annual spring cleaning events. This year's undertaking was held on Friday, May 26th and if you wander around, you'll see marked improvement.

- My gratitude to everyone who helped with our Annual Spring Clean-Up Event on Saturday, June 3rd, especially Executive Assistant Cheryl Thompson. The event was a booming success, and it went off without a hitch! *Attachment 2.*

- The Planning Commission met on Tuesday, June 6th to finalize its recommendations for updates to the zoning map. They now need to hold a public hearing at their July meeting, to be followed by a public hearing at the second July Council meeting.

- Kudos to Chip Leeper for serving as Acting City Manager while I was out of town. As always, he did a great job. Thankfully, though, all was quiet on the western front.

- Please join me in welcoming our newest employee, Caitlin LeClair (Clerk's Secretary). If you're ever here during business hours, please introduce yourselves. Welcome aboard!

- As you know, NVAD held a cookout on Friday, June 9th to recognize retirees Vickie Erickson and Wes Perkins. City Hall wasn't involved in the planning for this event, so we'll endeavor to hold a larger celebration later in the summer.

- Clerk Hammond will be attending the Pacific Northwest Clerks Institute in Tacoma, WA on the week of June 12th. In his absence, I'll be spending most of the time downstairs to ensure that tax bills get mailed out by Friday, June 16th. First half payments must be postmarked by Monday, July 17th.

- Sitnasuak and the City are currently in the planning stages for a jointly sponsored community picnic at Anvil City Square on Friday, June 23rd. We'll have burgers, hotdogs, and live music, so let's hope the weather holds up!

- A reminder that AMLJIA has decided to hold its Summer Quarterly Board Meeting in Nome from July 25th through the 26th. I believe that the City Council will be invited to break bread with the Board on Tuesday, July 25th at the Bering Sea Restaurant, so please mark your calendars if you'd like to attend.

- Please see the attached FY18 budget calendar from Finance Director Liew. I think it's wise to make this a recurring addition to my Manager's Report. *Attachment 3.*

- Please see the attached June edition of the monthly Port Projects Status Report from Port Director Baker. *Attachment 4.*

Rear Admiral Michael F. McAllister

Commander, 17th Coast Guard District
U.S. Coast Guard

Rear Admiral Michael F. McAllister assumed the duties of Commander, Seventeenth Coast Guard District in June 2016. He is responsible for Coast Guard operations throughout Alaska, which include protecting life and property, enforcing federal laws and treaties, preserving living marine resources and promoting national security. The Coast Guard's forces in Alaska total more than 2,500 active duty, reserve, civilian and auxiliary personnel, who employ 15 cutters, 52 boats, and 17 aircraft across an area of responsibility that includes the North Pacific Ocean, Arctic Ocean and Bering Sea. Headquartered in Juneau, the District Commander provides operationally ready maritime forces to Coast Guard and Department of Defense Commanders for Coast Guard, joint, and interagency operations both domestically and internationally.

Previously Rear Admiral Michael McAllister served as the Deputy Director of Operations for Headquarters United States Northern Command where he was responsible for homeland defense and defense support of civil authorities for North America, and theater security cooperation with Mexico and the Bahamas.

Admiral McAllister has served in a variety of operational assignments, both afloat and ashore. He served as a Deck Watch Officer aboard the USCGC STEADFAST, St. Petersburg, Florida, and as Commanding Officer of USCGC POINT STEELE, Fort Myers Beach, Florida and USCGC KEY LARGO, Savannah, Georgia. From 2000 to 2003, Admiral McAllister served as Chief, Response Division at Coast Guard Activities New York where he led maritime response and security operations following the terrorist attacks of September 11, 2001 in New York City. He also served as Commander of Coast Guard Sector Charleston, South Carolina where he oversaw all Coast Guard missions in the states of South Carolina and Georgia and prototyped the Department of Homeland Security's successful Interagency Operations Center Program.

Admiral McAllister's staff assignments include duty as a Construction Project Manager at Facilities Design and Construction Center Pacific in Seattle, Washington and as Executive Officer of Civil Engineering Unit Miami, Florida. He served as a program reviewer in the Office of Programs and Budget at Coast Guard Headquarters in Washington, DC, and the Officer Assignments Branch Chief at the Coast Guard Personnel Command, Arlington, Virginia. He was also the Executive Assistant to the Vice Commandant of the Coast Guard, the Executive Director for the Deputy Commandant for Mission Support, and the Director of Coast Guard Enterprise Strategic Management and Doctrine.

Admiral McAllister attended the United States Coast Guard Academy, graduating in 1986 with a Bachelor of Science Degree in Civil Engineering. In 1991, he was awarded a Master of Science Degree in Civil Engineering from the University of Illinois at Champaign-Urbana. In 2004, he received a Masters of Business Administration from the Massachusetts Institute of Technology as a member of the Sloan Fellows Program. His personal awards include the Defense Superior Service Medal, Legion of Merit (four awards), the Meritorious Service Medal (five awards), the Coast Guard Commendation Medal (three awards), the DOT 9/11 Medal, as well as numerous other personal, unit and Service awards. He is a registered Professional Engineer in the state of Washington.

Vice Admiral Fred M. Midgette

Commander, Pacific Area
Commander, Coast Guard Defense Force West
U.S. Coast Guard

Vice Admiral Midgette assumed the duties of Commander, Coast Guard Pacific Area in August 2016, where he serves as the operational commander for all U.S. Coast Guard missions within half of the world that ranges from the Rocky Mountains to the waters off the East Coast of Africa. He concurrently serves as Commander, Defense Force West and provides Coast Guard mission support to the Department of Defense and Combatant Commanders.

Prior to this, he served as the Deputy Commandant for Operations where he was responsible for developing operational strategy, policy, guidance, and resources that address national priorities. From 2014 - 2015 he served in the Great Lakes as the Ninth Coast Guard District Commander, an area that encompasses eight states, a 1,500 mile international border, and a workforce of over 6,000 active duty, reserve, civilian, and auxiliary members. From 2011 - 2013, he served as the Senior Military Advisor to the Secretary of Homeland Security where he supported the Secretary in the coordination and execution of policy and operations between the Department of Homeland Security and the Department of Defense.

Vice Admiral Midgette has served afloat on both coasts and the Great Lakes, earning designation as a Coast Guard Cutterman and a U.S. Navy Surface Warfare Officer. He has commanded four Coast Guard cutters and served afloat on the CGC TANEY (Portsmouth, VA); USS FIFE (San Diego, CA); CGC POINT LEDGE (Fort Bragg, CA); CGC POINT WINSLOW (Eureka & Morro Bay, CA); CGC KATMAI BAY (Sault Ste. Marie, MI); CGC HARRIET LANE (Portsmouth, VA); CGC FORWARD (Portsmouth, VA); and America's Tall Ship - the Coast Guard Barque EAGLE (New London, CT). He is the 14th Gold Ancient Mariner of the Coast Guard – an honorary position held by an officer with over ten years of cumulative sea duty who has held the qualification as a Cutterman longer than any other officer.

His shoreside assignments include: Chief of Staff of the Ninth Coast Guard District; Sector Commander and Captain of the Port of Detroit; Liaison Officer to U.S. Northern Command; Executive Assistant to the Assistant Commandant for Operations at Coast Guard Headquarters; Liaison Officer to the legacy U.S. Customs Service; and at the Pentagon on the Joint Staff (J-7). He also served as the afloat member of the training and streamlining implementation teams that were tasked with a budget-driven reorganization of operations, personnel, and support functions across the entire Coast Guard in the mid-1990's.

A native of Virginia Beach, VA, he holds a B.S. in Civil Engineering (U.S. Coast Guard Academy '82), a M.S. in Management (Rensselaer Polytechnic Institute '91), and a M.A. in National Security and Strategic Studies (U.S. Naval War College '97).

Memo

To: Tom Moran – City Manager

From: Joy L. Baker – Port Director JLB

CC: Mayor & Nome Common Council

Nome Port Commission

Date: 6/8/2017

Re: Port & Harbor Report/Projects Update – June 2017

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

Administrative:

Port and Public Works crews expended time over the past few weeks performing pre-season tasks necessary to open the facility. As expected there were numerous homeported vessels ready to launch once the floating docks were installed. Several minor repair and maintenance projects continue, as well as new staff training for fuel transfers and security duties. The cross-training effort between the Port and Public Works crews is proving very effective and beneficial to these departments.

Final F17 expenditures are being identified, as is usual when opening the facility at FY closing, but a decent surplus for F17 is still anticipated. The F17 Port Budget at 7 June 2017 shows revenue at 85.8% – with 47.7% expended.

Causeway:

Arctic Deep Draft Port (ADDP) Study:

Although the initial response from OMB on the Army Corps F17 Work Plan funding did not contain funds for Nome, a reconsideration process is underway with results anticipated in early July 2017. Alaska Delegation staff are looking into the reconsideration effort, and weighing in with support for approval as an effective and productive use of the existing state grant funds the City has in-hand for cost-sharing with the Corps.

As part of the Trump Administration's request for each state's priority infrastructure projects, Governor Walker has submitted the attached as an initial list, with additional projects to follow. Of specific note is item number 7 regarding an Arctic Naval Base and Strategic Arctic Port designation, which would benefit Alaska and the region.

Army Corps Maintenance Dredging:

The contractor for Army Corps has arrived for the annual maintenance dredging of the navigation channel. The pre-dredge survey is underway to determine target locations and quantities, with dredging work scheduled to begin after the 15 June 2017 close of the permit fish window. Port staff will review the pre-dredge survey to determine if any dredging is required within the areas outside of the federal limits (docks/ramps).

Middle Dock Project (Concrete Ramp Extension):

Project materials and crew have arrived, allowing Orion Marine to begin building the foundation of the concrete ramp extension within the next few days. Completion is expected by 21 June 2017. The crew will also be conducting a small fender and bullrail repair from damage during their demobe last year.

Port Industrial Pad:

Industrial Pad Development:

The post-dredge bathymetric survey of the winter river excavation is anticipated to occur sometime in the next few weeks, following the Corps surveys. The survey results will indicate exact quantity removed and what remains for removal in Feb/Mar 2018 via winter excavation. Q Trucking has completed the culvert installation for drainage points on the east and west side of the existing Industrial Pad. Construction of the berm between City and Bonanza Fuel property is currently underway, with completion expected within a few days. Project will resume in late June with contractor hauling and placing the select borrow material and topping with crushed rock for surfacing. Trucking will continue through July, with anticipating completion in late August/early Sept.

External Facilities:

Cape Nome:

Knik crew continues work on site, with barge arrival anticipated for mid-June, carrying the heavy equipment necessary for placing the rock during repair. We have received verbal confirmation from DHS, that FEMA has acknowledged the changed sea floor conditions as a reasonable expected occurrence. FEMA is conducting their formal review and preparing a revision to the Project Worksheet to account for redesign and reduced quantities on the project. DHS and the City await FEMA's revised project documents.

Additional information on any of these projects is available upon request.

Alaska's Initial Priority Infrastructure Projects:
Detailed Project Summaries

1. King Cove Road: The final 12 miles of a 28-mile access road connecting the City of King Cove with the City of Cold Bay and its all-weather airport.
    - Federal request: Expedited land exchange process
    - Total project cost estimate, funding source: $22.0 million, State of Alaska
    - Investment to date: State $2.1 million
    - Current status: Actively working with U.S. Department of Interior for land access and regulatory approval
    - Benefit: Access for isolated King Cove residents to the airport at Cold Bay in all weather conditions, enabling access to health services and movement of goods and people between King Cove and Cold Bay
    - Website: http://www.aleutianseast.org/index.asp?Type=B_BASIC&SEC={F01C70F6-028E-4181-83DD-90BC0F27E9FE}
    - Direct Project Contact: Commissioner Marc Luiken, Alaska Department of Transportation, Marc.Luiken@Alaska.Gov

2. Relocate Newtok Village to Metarvik: The village of Newtok is threatened by advancing erosion caused by the Ninglick River, permafrost degradation, and flooding during seasonal storms.
    - Federal Request: $124 million grant funding through 2021 with immediate need for $3.1 million
    - Total project cost estimate, funding source: $146.0 million, federal funds
    - Investment to date: $22 million from State of Alaska and multiple federal agencies
    - Current Status: Design and construction teams meet on a regular basis and are coordinating immediate and near-term deliverables to meet the Newtok-Metarvik Village Relocation Schedule
    - Benefit: Protection of life, health, and safety of citizens, long-term cost savings relative to alternative mitigation strategies
    - Website: https://www.commerce.alaska.gov/web/dcra/PlanningLandManagement/NewtokPlanningGroup.aspx
    - Direct Project Contact: Commissioner Chris Hladick, Alaska Department of Commerce, Community and Economic Development, Chris.Hladick@Alaska.Gov

3. Alaska Liquefied Natural Gas Project (AKLNG): Natural gas pipeline and liquefaction facilities to improve the balance of trade through exporting up to 2.7 billion cubic feet of gas per day and provide 0.5 billion cubic feet of gas per day for in-state markets.
    - Federal request:
        - Amend Alaska Natural Gas Pipeline Act (ANGPA) of 2004 to allow federal loan guarantee for Alaska LNG project
        - Expedite and rationalize environmental permitting
        - Provide first-loss federal equity investment

    - Provide EXIM Bank support
    - Support securitization of depreciation allowance
    - Allow direct export to China, Korea, Japan and other markets
- Total project cost estimate, funding source: $43 billion (in 2017 dollars), State of Alaska, industry, and market financing
- Investment to date: $600 million by State of Alaska, BP, ConocoPhillips, and ExxonMobil
- Benefits: U.S. energy security, improve balance of trade, export product, 10,000 direct construction jobs, up to 70,000 direct and indirect jobs during construction, 1,000 long-term jobs, royalty revenue
- Current status: Under National Environmental Policy Act (NEPA) regulatory review by FERC.
- Website: http://alaska-lng.com/
- Direct Project Contact: Keith Meyer, President, Alaska Gasline Development Corporation, KMeyer@agdc.us

4. Arctic Strategic Transportation and Resources (ASTAR) Project: Provide a transportation corridor from Utqiagvik (Barrow) to an area near Nuiqsut as the first phase of several transportation access routes to connect communities and access stranded resources in the resource-rich North Slope.
    - Federal request:
        - Expedited and rationalized environmental permitting
        - Support in federal land planning documents
        - Grant funding and/or federal cost share through low-interest loans
    - Total project cost estimate, funding source: $10 million for phase one planning, $300+ million for road construction within transportation corridor and subsequent phase planning. Potential funders include stat, local municipality port authority, and industry partners.
    - Investment to date:$7.8 million in state funding pending in current legislative budget
    - Current status: Concept development/planning, community engagement, funding design
    - Benefits:
        - Connection and cost of living reduction for communities
        - Enhanced access for development and economic activity
        - Improved value and federal and state royalty opportunities
    - Website: http://dnr.alaska.gov/mlw/astar/index.cfm
    - Direct Project Contact: Commissioner Andy Mack, Alaska Department of Natural Resources, Andy.Mack@Alaska.Gov

5. Port Mackenzie Rail Extension: Provides efficient rail transportation for minerals and other natural resources, an alternative for transporting materials and equipment for large construction projects, and critical back-up in the event the Port of Anchorage is unavailable.
    - Federal request: $125 million grant funding
    - Total project cost estimate, funding source: $309 million, State of Alaska and federal
    - Investment to date: $184 million from State of Alaska

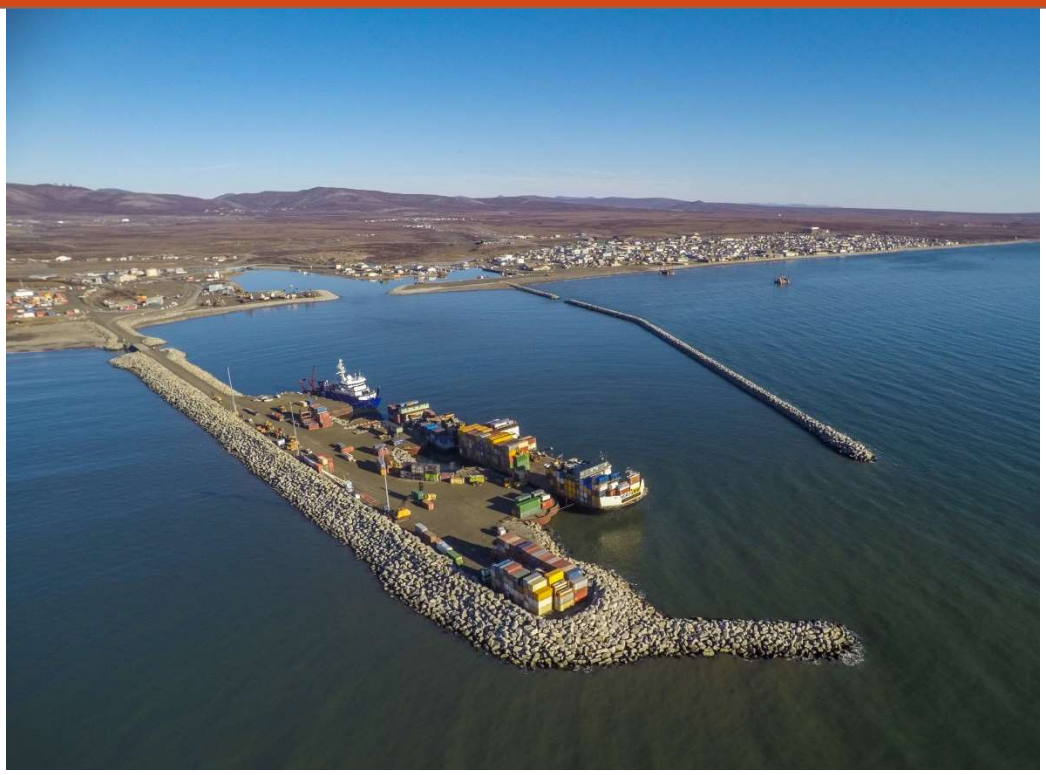
- Current status: Construction of segment 1 is complete and segment 2 design is 90 percent complete with right-of-way activities 100 percent complete. This funding request addresses the remaining segments, 3-5, which are "shovel ready."
- Benefit: Improve the efficiency and lower the cost of shipping goods to and from Interior Alaska, facilitate export of natural resources. Website: http://portmacrail.com/index.html
- Direct Project Contact: William O'Leary, President, Alaska Railroad, OLearyb@akrr.com

6. Port of Anchorage Modernization: This is a necessary reconstruction project, as the Port's aging infrastructure has far exceeded its economic and design life. It is vital to the state's economy. Every year the Port handles more than 3.5 million tons of food, building materials, cars, clothing, cement, fuel and other goods. Nearly half of the cargo is bound for destinations beyond Anchorage. The Port serves deep-water vessels operating year round to transport cargo faster, cheaper and more reliably than any other means. The Port is Alaska's only U.S. Commercial Strategic Seaport, one of 16 nationwide.
    - Federal request:
        - Timely resolution of the lawsuit between the Municipality of Anchorage and the Federal Department of Transportation Maritime Administration (MARAD)
        - Grant funding and/or federal cost share through low-interest loans
    - Total Project Cost Estimate, funding source: $556 million, municipal, federal backed project revenue financing
    - Investment to date: State and municipal contributions total $127 million, leaving an additional need of $429 million
    - Current status: Phase one construction is scheduled to begin in 2017, while future phases are "shovel ready" awaiting funding
    - Benefit: Peak of 300 employees during construction, access to the Port of Anchorage will ensure goods are moved throughout the state in an efficient and cost effective manner
    - Website: http://www.portofanc.com/
    - Direct Project Contact: Ethan Berkowitz, Mayor, Municipality of Anchorage, mayor@muni.org

7. Alaska Naval Base: Develop a naval base and expanded Coast Guard presence in Alaska to protect national security in the opening Arctic arena. Alaska has 6,600 miles of coastline while the rest of the United States has 6,000 miles. Yet Alaska has no naval capability and limited Coast Guard capability. Immediate attention is required for national security, given Alaska's proximity to Russia (2.3 miles), China (1,300 miles) and North Korea (1,600 miles), geopolitical tension in the Pacific region, and Russian Arctic military build-up. The Department of Defense (DOD) designation of one or more Strategic Arctic Ports and related development is a critical first step in the process.
    - Federal Request:
        - Timely delivery of DOD report containing an assessment of future security requirements for one or more strategic ports in the Arctic.
        - Timely designation of one or more Strategic Arctic Ports in Alaska by the Secretary of Defense

- Total Project Cost: To be determined based on Strategic Arctic Port site designation, first phase expected to be in the range of $15 to $30 billion
- Current status: Department of Defense is completing Fiscal Year 2017 National Defense Authorization Act required reports
- Benefit: National security, improve and protect balance of trade
- Direct Project Contact: Major General Laurel Hummel, Adjutant General and Commissioner, Alaska Department of Military and Veterans Affairs, Laurie.Hummel@Alaska.Gov

Nome Port and Harbor Development Analysis



Cordova Consulting

1191 South Lower Road

Palmer, AK 99645

April 2017

Table of Contents

Table of Figures

Table of Tables

Executive Summary

The City of Nome contracted with Cordova Consulting to provide services examining historic revenues and expenses for the Port of Nome. This analysis focuses efforts on the operations at the Port to ensure that operational revenues cover expenses. If we take depreciation and grants out of the equation for the Port's revenues and expenses, we see that the years 1989 through 1994 showed expenses that were greater than revenues.

Three forecasts are represented here: 1) flat – no growth, 2) moderate – some growth, and 3) high growth scenarios. Commodity movements of cargo, gravel, and fuel are shown historically with projections to the year 2035. Forecasts for other vessels assume that for the flat forecast, the number of unique vessels annually will remain constant, the moderate forecast for unique vessels will grow at about 2 percent annually, and the high forecast will grow at about 5 percent annually.

When we examine the financials for the Port Enterprise Fund, we see that the flat forecast shows negative revenues beginning in 2030 while the moderate and high forecasts show that the operations from the Port cover the expenses for all the forecast years. Under all scenarios, when we add depreciation back into the equation, the net revenues are negative. Nome should continue to evaluate annual rate increases to plan for future infrastructure repairs, enhancement, and eventual replacement.

Recommendations for changes include the following:

1. Add a fee for capital replacement. The City currently takes depreciation on its infrastructure investment which helps to minimize losses in any given year. However, once the infrastructure is fully depreciated, the City would need to raise funds or successfully receive grants to be in a suitable position should it become necessary to replace these items.
2. Add a Cruise ship passenger fee. As global climate change continues to make the Arctic more available, the City of Nome can expect to have more passengers visiting the City for brief periods of time. Initiating this fee would allow the City to recoup expenses associated with police, fire, transportation, and other services provided.
3. Change security, line handling, and other harbor staff assist rates to a cost-plus structure. This will allow the City to capture changes in personnel and equipment costs in future years without having to repeatedly revisit the tariff.
4. Allow dockage, wharfage, and storage rates to automatically increase based on Anchorage Consumer Price Index. Regular small increases are going to be much more palatable to the Port's customers and will allow the City to recoup the ever-increasing operations at the Port.
5. Investigate partnering with other entities for infrastructure improvements, port enhancements, or port expansion. These are often referred to as P3 structures or public/private partnerships.

Introduction

The City of Nome contracted with Cordova Consulting to provide services examining historic revenues and expenses for the Port of Nome. The contract additionally provides for an examination of vessel traffic by commodity type with future projections of Port activity based on scenarios and funding options developed with the assistance of Port staff. This analysis is conducted in cooperation with the Sitnasuak Native Corporation to evaluate the long-term development of an expanded Port facility at Nome that will allow vessels drafting to minus 36-feet.

This report is the first phase of work that examines historic revenues and expenses, forecasts vessels and commodities, conducts financial analysis of future conditions, and makes recommendations for rate structure modifications. This first phase forms the baseline from which future work will be compared. If there are changes in the rate structure, varied assumptions for future vessel traffic, or modifications to the operations at the Port of Nome, this baseline will allow decision-makers to gauge the impacts to revenues and expenses as a result of those changes.

Historic Revenues and Expenses

There are two funds covering the Port of Nome:

1. **Enterprise Fund/Port of Nome Fund:** This fund was established to account for the operations of the port and harbor. User charges are designed to cover cost of operation and maintenance of the system.
2. **Enterprise Fund/Port of Nome Capital Projects Fund:** This fund was established to account for the financial resources, which are limited to expenditures for capital outlays, expended to acquire or construct major capital assets of a relative permanent nature. Such financial resources include grants, contributions, bond proceeds, and operating transfers from other funds.[1]

Since both funds cover the Port of Nome, accounting for these two funds are sometimes lumped together. This evaluation focuses on the operations for the Port, the first enterprise fund mentioned, and attempts to separate out the capital projects where possible to demonstrate whether the Port is covering operations and maintenance of the system with user charges.

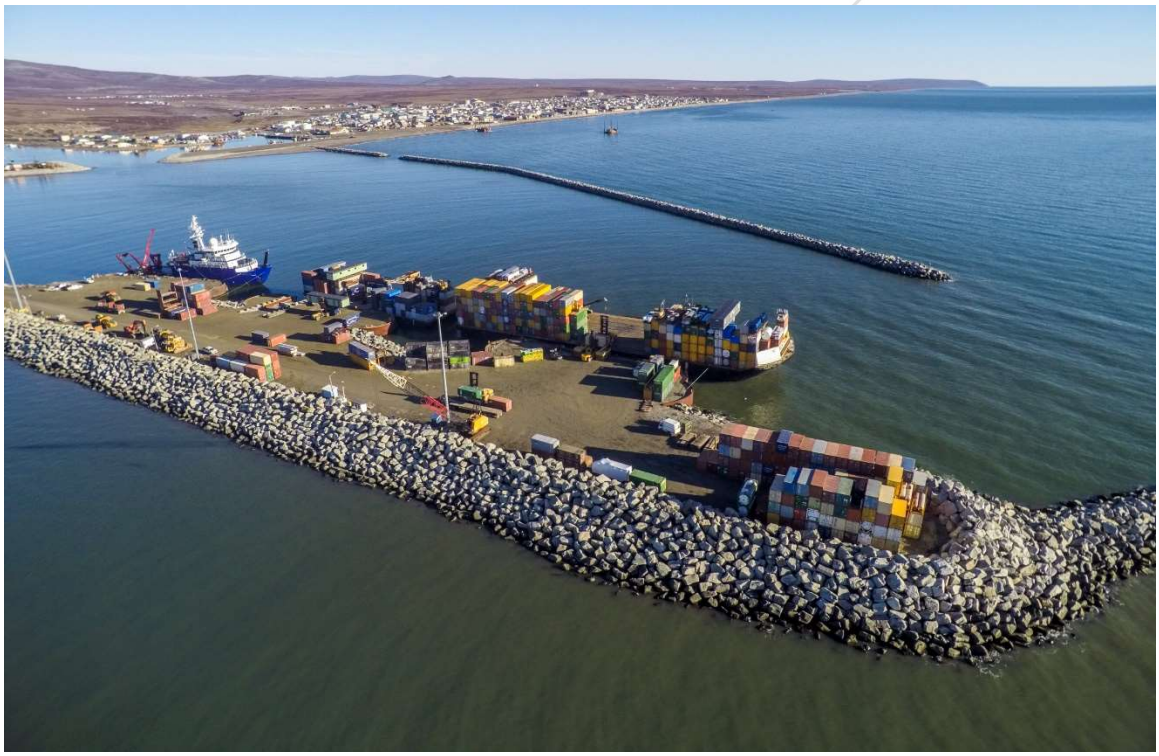


Figure 1 Port of Nome with completed Middle Dock

For instance, the Port of Nome constructed a third causeway dock in 2015, the Middle Dock (see Figure 1), resulting in total expenses in recent years that are more than double the total

[1] Annual Budgets for the Fiscal Year Ending June 30, 2017 prepared by the City of Nome. http://www.nomealaska.org/egov/documents/1472677711_82095.pdf

expenses from previous years. Grant funding covered these expenses. Additional dredging was conducted at the Middle Dock in 2016.

When depreciation is added to the expenses for the Port, it appears that revenues do not exceed expenses for many years. However, the depreciation expense category is a marker for the City to set aside funds to replace assets in the future that are no longer useful. Having said that, even when an asset is fully depreciated, it may still have value. For instance, the causeway and its docks may be fully depreciated but continue to function normally. A wooden dock, on the other hand, may need replacement shortly after it has been fully depreciated. An evaluation of depreciated assets, their worth when fully depreciated, and funds required for repair or replacement of those assets is outside the purview of this report.

The City has successfully obtained some type of contribution or grant funds for the Port & Harbor Enterprise Fund every year since fiscal year 2002. See Figure 2.

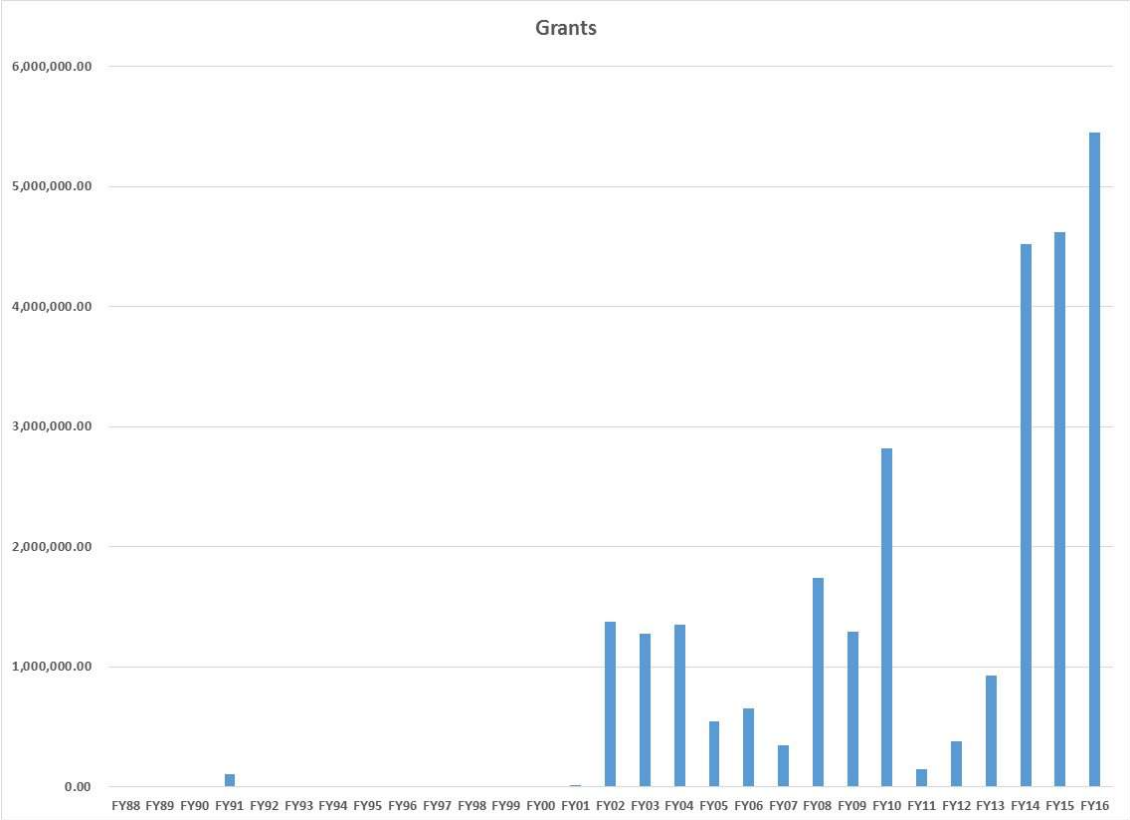


Figure 2 – Port of Nome historical grant status

Grant revenues are uncertain given the Federal and State fiscal condition, so for purposes of this analysis, we are going to assume that future grants are zero. This may not be the case, but if grant funds do become available, they would be used for specific purposes and not for covering inadequate operations revenues.

Revenues

Generally Accepted Accounting Principles (GAAP) requires state and local governments to use the enterprise fund type to account for "business-type activities"[2] – and the operations of the Port of Nome fit that description. The total cost of the activities of the Port need not be paid by user fees. The City, could in fact, decide that it wants to cover the operations of the Port through other funds for a variety of reasons. There are two funds covering the Port of Nome, operations and capital projects.

Funding operations is typically an ineligible expense for grants. Many grants stipulate that the recipient must be able to support ongoing maintenance and repairs after a project is constructed. For the balance of this evaluation, we will focus on operations only.

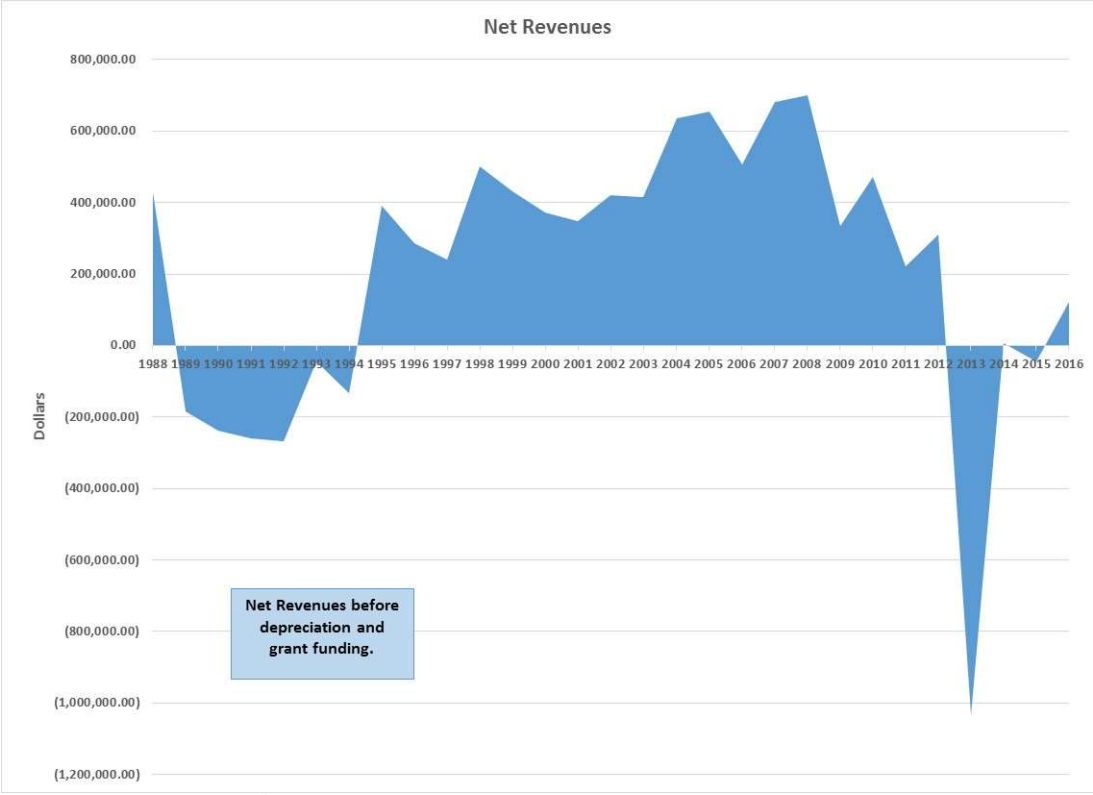


Figure 3 – Port of Nome net revenues 1988 – 2016

Note: Negative net revenues in 2013-2015 are due to a capital purchase and grant matches. Positive net revenues are used to offset negative net revenues in some years.

When we take depreciation and grants out of the equation for the Port's revenues and expenses, we see that the years 1989 through 1994 showed expenses that were greater than revenues. Fiscal Year 2013 has negative net revenue due to property purchases, reduced Causeway revenue, and a 50/50 grant match with Alaska Department of Transportation for harbor

[2] http://www.hud.gov/offices/reac/pdf/gaapflyer1.pdf

improvements. The Port historically has done very well ensuring that revenues exceed expenses for operations as can be seen in Figure 3.

Revenues as a portion of the various harbor accounts has changed a bit over time. Whereas the Causeway has historically made up the lion's share of the total revenues, that percentage has been shifting in recent years and the Industrial Pad and other revenue accounts are comprising more of this total. See Figure 4. The Other revenue account does not always reflect typical Port-related activity. Other revenues can include interest earnings, sales of assets (equipment, land, and stockpiled materials), the annual PERS Relief contributions, as well as appropriations from the Port's Fund Balance account to augment revenues when grant matches, capital purchases, and extraordinary expenses cause expenses to exceed revenue. An example of revenues from the Other revenue account was the sale of Recycled Asphalt Pavement (RAP) to a construction contractor working on the City's new museum project.

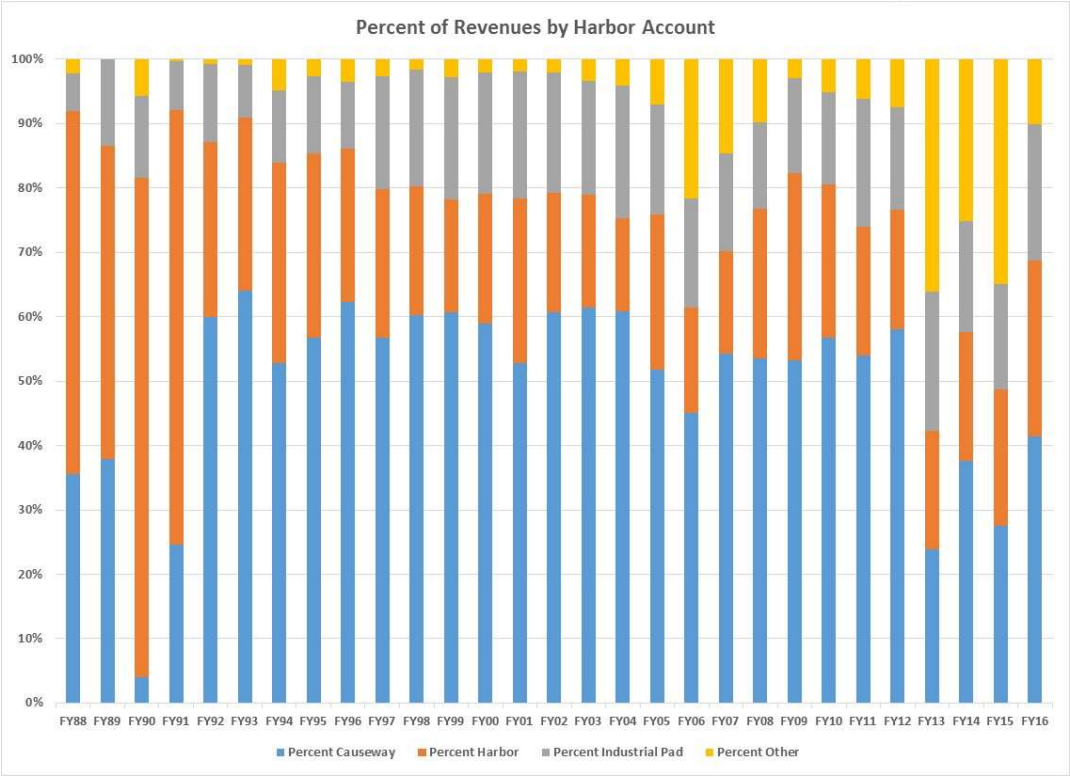


Figure 4 – Harbor Accounts as percent of total revenues

Expenses

The Bad Debt expense saw a significant increase in FY2013 due to the impound and recovery of a sunken tug, with an additional write-off to follow in FY2014 reflecting an adjustment in the collection of a dock damage incident. A subsequently high number shown in FY2015, consists of small additional bad debt, as well as a restatement of earlier bad debt as directed by the auditors. See Figure 5. As you can see from this figure, part of the recent bad debt expenses can be expected to be retrieved in future years. The credit in 1992 for instance, partially offset the bad debt expense in 1991.

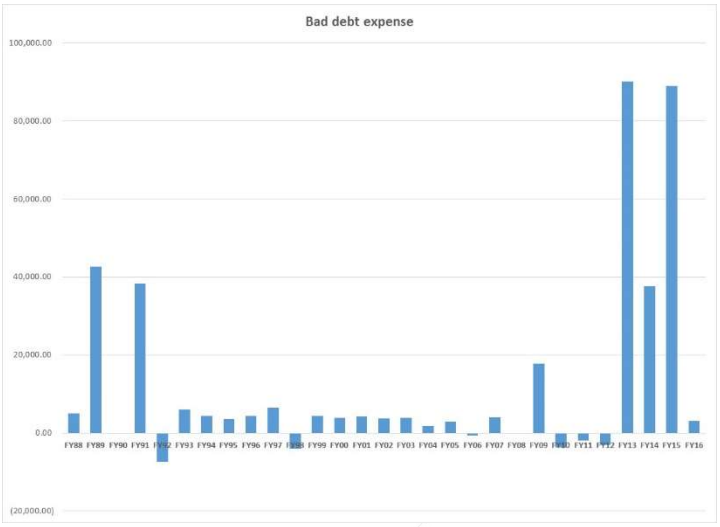


Figure 5 – Port of Nome bad debt expense 1988 – 2016.

Other expenses at the Port have also seen steady increases over the years. Labor, utilities, insurance, and professional services have all experienced increases as the Port works to meet the growing demand in vessel traffic and customer base, by expanding infrastructure and conducting maintenance and repairs to maintain a fully functional facility. See Figure 6 for historic expenses for the primary expense accounts at the Port.

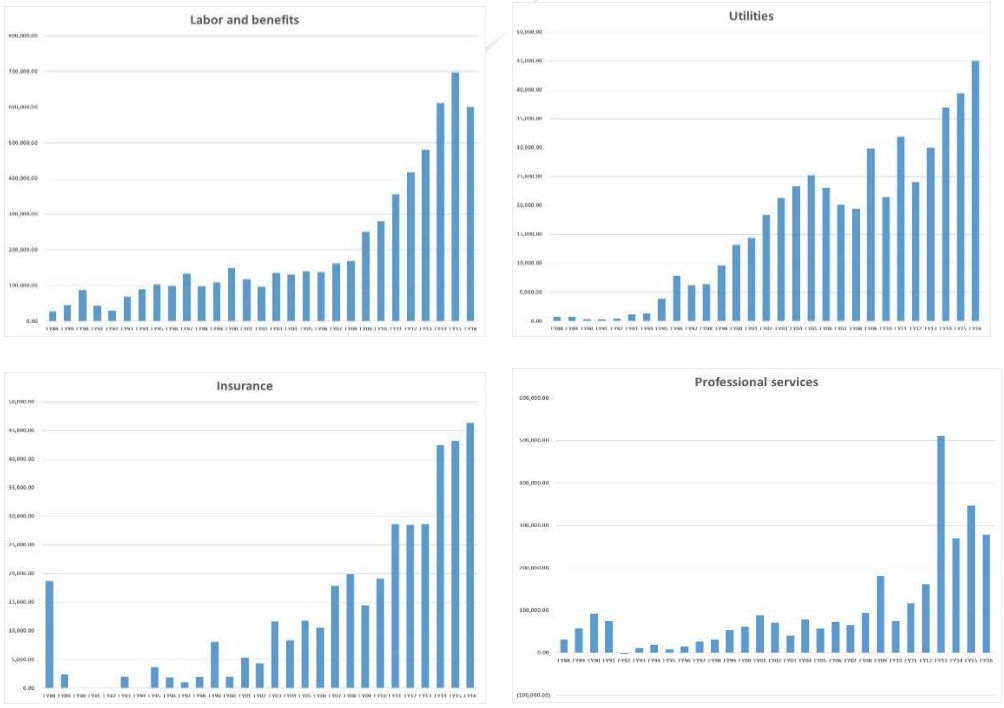


Figure 6 – Port of Nome Primary Expense Accounts – 1988 – 2016

The Port of Nome is a very busy place serving as a hub for the Western Alaska region communities, the "last gas" for vessels headed into the Arctic, strategically located near the Bering Strait, and an important asset for vessels needing a connection for services such as the hospital, groceries, airport, etc. Once the ice goes out in the spring, vessels are lined up to conduct their business at the Port so they can be on their way.

Global climate change seems most apparent in the Arctic regions and recent years resulted in an extension of the open water season for the Port of Nome. Generally, the Port is open for business around the first or second week of June. In 2015, however, the Port saw its first vessel on May 26. Generally, Port activity is done for the year by the third or fourth week of October. In 2015, the last vessel left the Port on November 18. Similar conditions occurred for the 2016 season.

The number of unique vessels calling at the Port of Nome have remained consistent in recent years. See Table 1. This contrasts with the number of calls and the number of days that vessels are staying at the Port to conduct business.

Table 1 – FY12 through FY16 Unique Vessels Calling at Port of Nome

NOME	2012	2013	2014	2015	2016
Bulk Cargo & Fuel	28	41	32	33	34
Govt. Ships	9	12	7	13	7
Gravel/Equipment	6	14	9	14	13
Miscellaneous	16	18	7	9	19
Pleasure - Cruise	2	3	3	5	5
Pleasure - S/V	20	27	13	15	14
Research	12	9	7	9	5
Homeported	153	134	148	133	109
Total Unique Vessels	**246**	**258**	**226**	**231**	**206**

Note: Unique vessels are individual vessels with unique call signs and names. These vessels may make multiple trips in any given year and will stay for varying lengths of time. These numbers therefore, will not correlate to the vessel call statistics produced by the Port as that data is reported by each day a vessel spent at the dock or at anchor. Historical data from 2012-2016 was reassessed to reflect all anchored traffic and pleasure vessels utilizing Port of Nome services.

In 2006, the combined calls at the dock including homeported vessels were 162. That number more than tripled by 2014 when the Port saw 584 vessel dockings and in 2016, that number had increased more than five times with 849 vessel dockings. This kind of growth is phenomenal and has led to vessels needing to conduct business in less than favorable conditions such as tying up to another vessel already at the dock to load/unload or resupply, as well as remaining at anchor until space is available. See Figure 7.

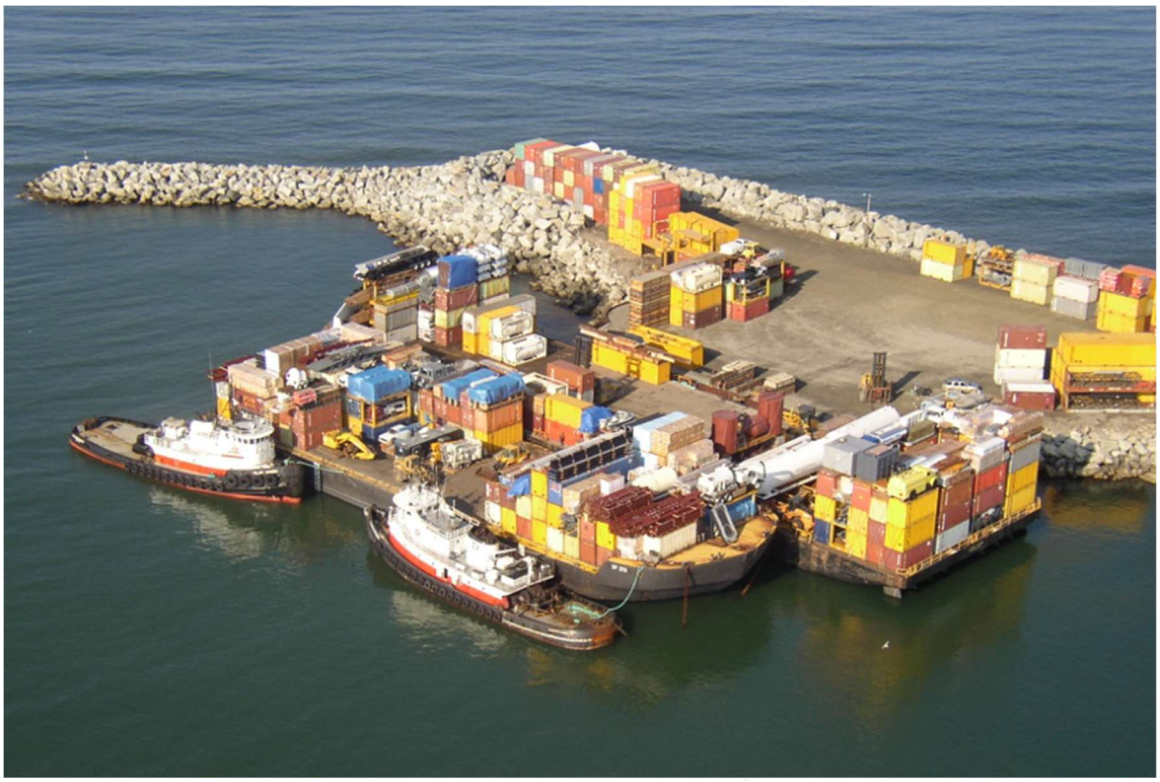


Figure 7 – Port of Nome Fuel Dock

Note: The vessels shown in Figure 7 are offloading/loading cargo as well as fueling by truck.

Vessel Forecast

The vessel forecast was developed using historic information on the various vessel types using the Port of Nome and the historic commodities moving over the docks at the port. Three forecasts are represented here: 1) flat – no growth, 2) moderate – some growth, and 3) high growth scenarios. Each of the forecasts were developed in cooperation with the Port of Nome for reasonable expectations. First, we will examine vessel forecasts for the commodities of cargo, gravel, and fuel. And secondly, we will examine the vessel forecasts for other harbor users defined by the Port as Miscellaneous vessels, Pleasure-Cruise, Pleasure-Sailing vessel, Government ships, and Research vessels. The vessel forecast for each of these categories relies on some underlying assumptions and those will be described in turn.

Commodities

Commodity movements of cargo, gravel, and fuel are shown historically with projections to the year 2035. The Port of Nome provided almost 30 years of historic commodity movements and this enables future projections that can capture the fluctuations over time or the episodic events for high and low years can be normalized for the future projections. Commodity movements are used for the underlying assumptions to project revenues and expenses further in this evaluation.

Cargo

Cargo moving through the Port of Nome enjoyed a steady climb from 1990 to 2011. In 2012, cargo took a dramatic jump due to the transshipment of contaminated soil from federal clean-up sites being exported for disposal, and heavy equipment and materials being shipped throughout the region for federal and state construction projects.

The flat forecast for cargo is an average of the most recent 10-years activity at the Port. The moderate forecast is based on the most recent 20-year trend and the high forecast adds an additional 5 percent to the moderate forecast.

Cargo tonnages in the flat forecast are about 36,000 tons per year, the moderate forecast starts at 42,000 tons per year and goes to 118,000 tons by the year 2035. The high forecast adds another 5 percent to the moderate forecast. See Appendix for details of cargo forecast.

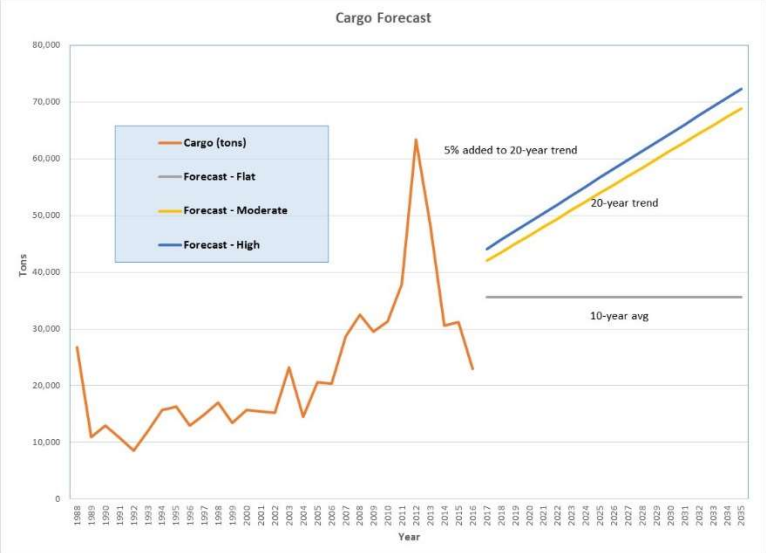


Figure 8 – Cargo forecast

Gravel

Gravel exports from the Port of Nome have enjoyed some wild swings over the years.

Similarly to Cargo, the flat forecast is an average of the most recent 10 years, the moderate forecast is the 20-year trend, and the high forecast adds 5 percent to the moderate forecast.

Gravel tonnages are estimated to be about 64,000 tons for the flat forecast, starts at 76,000 tons and rises to 112,000 tons for the moderate forecast, and rises an additional 5 percent for the high forecast. See Appendix for details of gravel forecast.

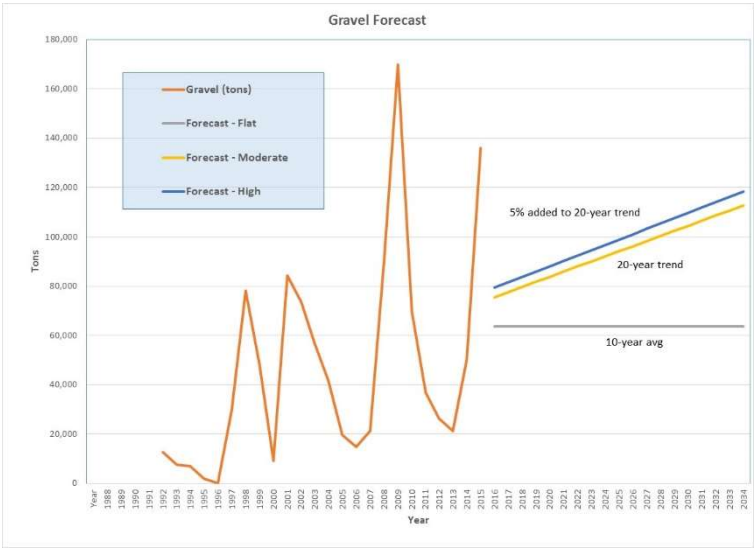


Figure 9 – Gravel forecast

Fuel

Fuel exports and imports moving through the Port of Nome have also seen some ups and downs. These fluctuations can be associated with large fuel deliveries that are held over from one year to the next, fuel operators taking advantage of low prices to stockpile product, and other factors associated with the limited season for delivery at Nome.

Maritime traffic in the Arctic is evolving with a longer ice-free season and increased economic development opportunities. In recent years, vessels traversing the Arctic have utilized the Port of Nome for fuel resupply. The outlook has potential for increased land-based oil and gas activity on the North Slope which will increase vessel traffic and transshipment logistics at the Port of Nome, requiring fuel resupply to support those efforts. Also, there is additional growth opportunities for fuel sales to cruise ship operators transiting the Arctic region.

The flat forecast for gallons of fuel is the most recent 10-year average, the moderate forecast is the 20-year trend, and the high forecast an additional 5 percent added to the moderate forecast.

The flat forecast is about 11 million gallons, the moderate forecast starts at 12.1 million gallons and rises to about 12.3 million gallons, and the high forecast starts at 13.3 and rises to 13.6 million gallons. The trend for the moderate and high forecasts vary little over time as the previous trend hovered up and down around similar volumes. See Appendix for details of fuel forecast.

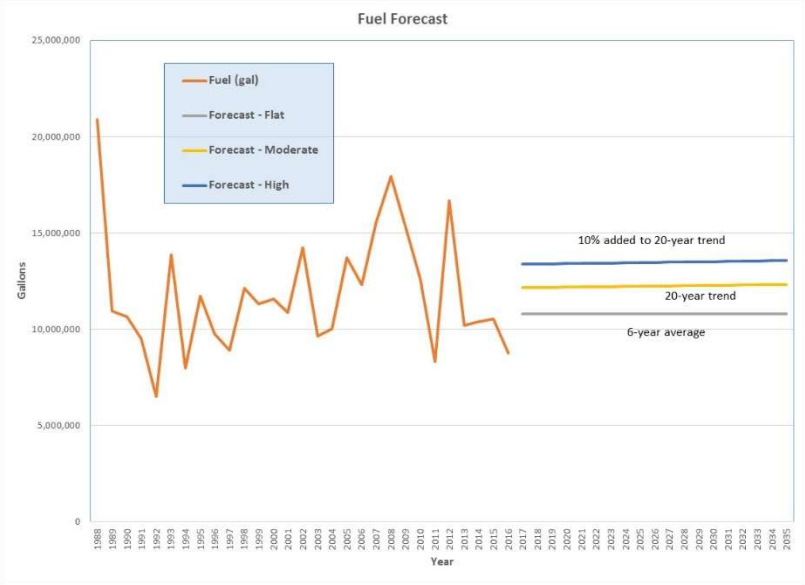


Figure 10 – Fuel forecast

Other Vessels

Other harbor users defined by the Port are Miscellaneous vessels, Pleasure-Cruise, Pleasure-Sailing, Government ships, and Research vessels. Forecasts for these vessels are based on various assumptions defined below.

Figure 11 – Nome Harbor – Cruise Ship, Gravel Barge, and Dredges

Forecasts for these other vessels assume that for the flat forecast, the number of unique vessels and vessel calls annually will remain constant, the moderate forecast for unique vessels will grow at about 2 percent annually, and the high forecast will grow at about 5 percent annually.

Figure 12 – Nome Harbor – Inner Harbor Docks

The flat forecast for vessel calls is about 250 individual vessels annually, the moderate forecast grows to 400 vessels by 2035, and the high forecast grows to 500 vessels by 2035. These are individual vessels calling at the port and not the combined calls typically tracked and shown in port statistics. Unique vessels shown in Table 1 are currently making an average of 250 calls at the Port in any given year. (From years 2012-2016) For details on the vessel calls by vessel type, see Appendix Tables.

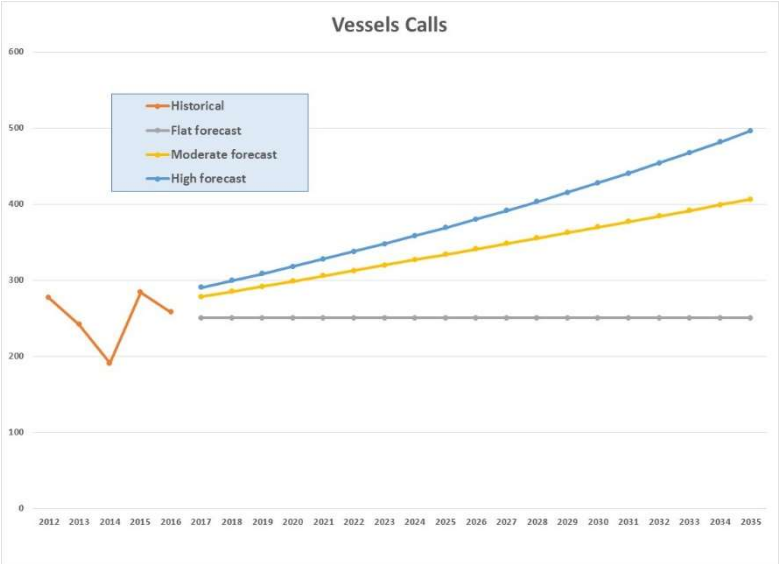


Figure 13 –Vessel Calls forecast

Since these vessels stay for varying lengths of time at the dock, additional analysis was conducted showing the average number of days vessels stay at the dock by vessel type. The number of days at the dock will be used for estimating future revenues. See Table 2.

Table 2 – 2012 through 2016 average calls and days at Port by vessel type

Vessel Type	Calls	Days	Avg Days per Call
Bulk Cargo	67.2	150.4	2.2
Fuel	47.6	207.6	4.4
Gravel & Equipment	49.8	108.6	2.2
Miscellaneous	17.8	87.8	4.9
Pleasure - Cruise	4.8	7.2	1.5
Pleasure - Sailing Vessel	18.2	155.4	8.5
Government Ships	15.6	48.4	3.1
Research	29.8	94.6	3.2
Average	**250.8**	**860.0**	

Source: Port of Nome monthly dock schedules for 2012 through 2016. Data in this table is reported by each day a vessel spent at the dock or at anchor. Historical data from 2012-2016 was reassessed to reflect all anchored traffic and pleasure vessels utilizing Port of Nome services.

Financial Analysis

To simplify the financial analysis, we first examine the operations only from Port activity. We are deliberately ignoring grant funds and depreciation in this initial analysis to see if operations expenses are covered by the Port revenues.

Revenue Assumptions

In addition to the assumptions previously described for commodities, unique vessels, and number of days spent at the Port by vessel type, we have also incorporated the following into the financial analysis:

- Docking permits increase by 5 percent for the moderate forecast and 10 percent for the high forecast. Docking permits are unchanged for the flat scenario.
- The Graphite One Mine begins exporting 50,000 tons of product in 2025 for the moderate forecast and in 2020 for the high forecast. Graphite One Mine may not increase the number of vessels as it is assumed that product will move as backhaul on barges leaving the Port of Nome based on current commodity volumes.
- Percentages for the various commodity rates are assigned as follows:

Table 3 – Commodity rates used for the forecast years by percentage

Cargo	**Rates:**		**Percent**
IN/OUT	11.55	per ton	72%
THRU/OS	5.78	per ton	20%
Inter-facility transfer	8.66	per ton	8%
Gravel	**Rates:**		**Percent**
2000 tons or under per barge load	2.55	per ton	21%
>2000 tons/load	1.94	per ton	69%
>40,000 tons/proj	1.64	per ton	10%
Project cargo >2000 tons	75% of rate	per ton	
Fuel	**Rates:**		**Percent**
IN	0.035	per gal	97%
OUT	0.023	per gal	2%
O/S	0.012	per gal	1%
Inter-facility transfer	0.035	per gal	

- Storage rentals for the flat scenario are based on the average FY14 to FY16, the moderate scenario increases these revenues by 5 percent, and the high scenario increases these revenues by 10 percent.
- Land leases for the flat scenario are based on the average FY13 to FY16 with increases of 5 percent starting in 2021 for the moderate scenario, and increases of 10 percent starting in 2019 for the high scenario.
- Utility sales are based on the average per vessel charge of $85 from FY12 through FY16.
- Miscellaneous revenues are based on the average from FY12 through FY16.
- Interest earnings are based on the average from FY12 through FY16.

Expense Assumptions

Expense account assumptions are as follows:

- Labor and benefits:
    - Flat scenario is the same as FY 16 with 1 percent increases to the total to cover COLA for those covered employees

  - Moderate scenario adds another employee in 2026 at an annual salary of $35,000 and assumes 1.8 for the overhead factor.
  - High scenario adds another employee in 2021 at an annual salary of $35,000 and assumes 1.8 for the overhead factor.
- Utilities are based on the 10-year trend for expenses with 2 percent and 5 percent increases for the moderate and high scenarios respectively.
- Supplies are based on the 5-year average with 2 percent and 5 percent increases for the moderate and high scenarios respectively.
- Insurance is based on the 10-year trend for all scenarios.
- Professional services are based on the 10-year average with 5 percent and 10 percent increases for the moderate and high scenarios respectively.
- Repairs and maintenance are based on the FY14 to FY16 averages plus:
  - 5 percent for the flat scenario
  - 10 percent for the moderate scenario
  - 15 percent for the high scenario
- Equipment rental holds steady at $500 annually for all scenarios.
- Bad debt expense holds steady at $1,000 annually for all scenarios.
- Principal and interest expense is the average of FY07 to FY16 and holds steady for all years and all scenarios.
- Other/miscellaneous expenses are estimated at $35,000 annually for all scenarios.
- Payment in Lieu of Taxes (PILT) are estimated as the average from FY12 through FY16 and holds steady for all years and all scenarios at $34,700.

The net revenues before grants and depreciation are shown in Figure 14 . The flat forecast shows negative revenues beginning in 2030 while the moderate and high forecasts show that the operations from the Port cover the operating expenses for all the forecast years. For details on the net revenues for operations, see the Appendix Tables.

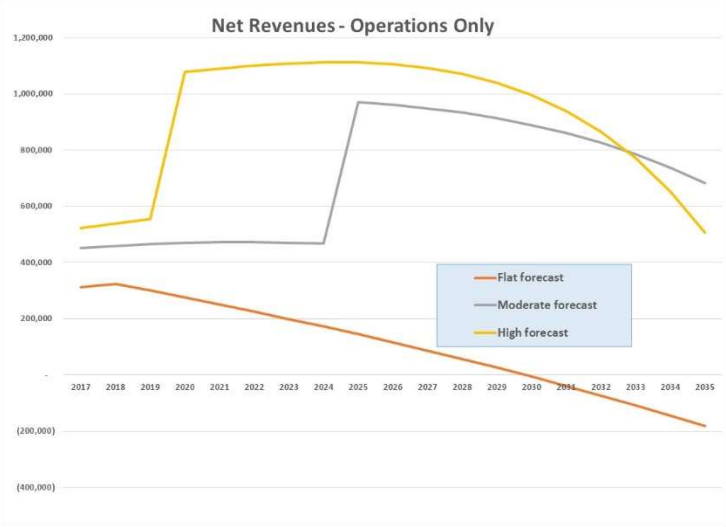


Figure 14 – Port Net Revenues before grants and depreciation

Rate Comparison

For this effort, we examined current tariff filings for the Ports of Seward, Dillingham, Bellingham, Unalaska, and Kodiak and compared sample billings to the Port of Nome. The Port of Nome

provided sample billings for vessels conducting business transferring gravel, cargo, fuel, and seeking dockage and storage.

Challenges in making these comparisons include the following differences:

- Customer bases for each of the ports are geared toward the type of customer generally encountered and their tariffs reflect these differences. The Port of Seward for instance has rates for timber and coal, their primary customers.
- Different means of measurement – the Port of Bellingham, for instance uses the metric system. The Port of Dillingham charges dockage based on the vessel tonnage whereas the rest of the ports examined use vessel length overall. Some dockage fees are based on a 12-hour period while others were based on a full day.

Even with these challenges, however, we can make the comparisons and base recommendations on the differences gleaned from the analysis.

Dockage

"Dockage" is the charge assessed to a vessel for docking at a wharf, dock, pier, float, revetment or other facility, or for mooring to a vessel so docked at a Port of Nome facility.

Table 4 – Dockage Rates comparison

Category	Nome – per foot per day	Seward – per foot per day	Unalaska – per foot per 12 hours	Bellingham – per 24-hour	Dillingham – per day per vessel tonnage	Kodiak – per foot for 12 hours
Dockage						
Vessels up to 200-ft in length	1.21					
Dockage - vessels over 200-ft	1.82					
Anchorage	0.61					
Vessels up to 500-ft LOA		0.74				
Vessels 500-ft and over		0.74				
All vessels			0.89			
0 to 100-ft LOA				194.00		
100-150-ft LOA				275.00		
150-200-ft LOA				375.00		
200-250-ft LOA				525.00		
250-300-ft LOA				898.00		
300-350-ft LOA				1,266.00		
0-40-ft LOA					60.00	
41-99-ft LOA					1.56	
100-299-ft LOA					1.20	
300-1,000-ft LOA					0.78	
0 to 150-ft LOA						2.00
151 to 300-ft LOA						2.30

In addition to these dockage fees, the Port of Nome has more detailed fees for smaller vessels. The Ports of Seward and Unalaska also provided additional fees schedules for smaller vessels.

Table 5 – Dockage rate comparison for vessels staying longer term

Category	Nome	Seward – per foot per day	Unalaska – per foot per 12 hours
Weekly Rate			
Vessels 32-ft and under	90.96		
Vessels over 32-ft to 52-ft	36.38		
Vessels over 52-ft to 72-ft	50.03		
Vessels over 72-ft to 92-ft	59.12		
Vessels over 92-ft	68.22		
Monthly Rate			
Vessels 32-ft and under	272.87	0.37	0.445
Vessels over 32-ft to 52-ft	68.22	0.37	0.445
Vessels over 52-ft to 72-ft	95.50	0.37	0.445
Vessels over 72-ft to 92-ft	122.79	0.37	0.445
Vessels over 92-ft	150.08	0.37	0.445
Season Rate			
Vessels 32-ft and under	788.29		
Vessels over 32-ft to 52-ft	118.24		
Vessels over 52-ft to 72-ft	197.07		
Vessels over 72-ft to 92-ft	275.90		
Vessels over 92-ft	354.73		

Port tariff rates are based on the needs of different customers. Amenities offered will also be determined because of customer needs and the desire of the Port to attract those customers. In addition, Port management can negotiate different rates for customers the Ports would like to encourage. Making a direct comparison between Ports can be somewhat problematic when there are different customer bases. Having said that however, a couple examples comparing actual Port of Nome invoices to other Alaska port rates can highlight some potential issues.

Table 6 – Dockage Fee Comparison

Qty	Description	Unit price	UoM	Nome	Seward	Unalaska	Dillingham	Kodiak
				Fees due	Fees due	Fees due	Fees due	Fees due
1	Docking permit - weekly in river	90.96	1	90.96	72.52	174.44	60.00	112.00
1	Sales Tax - Hrbr	0.05	1	4.55	2.90	5.23	5.22	6.72
Total				**95.51**	**75.42**	**179.67**	**65.22**	**118.72**
				100%	79%	188%	68%	124%
Qty	**Description**	**Unit price**	**UoM**	**Fees due**	**Fees due**	**Fees due**	**Fees due**	**Fees due**
1	Days Dockage	1.82	424	771.68	627.52	1,373.59	9,360.00	2,204.80
1	Sales Tax - Hrbr	0.05	1	38.58	25.10	41.21	814.32	132.29
Total				**810.26**	**652.62**	**1,414.80**	**10,174.32**	**2,337.09**
				100%	81%	175%	1256%	288%

Note: Dockage rate comparison includes Alaska Ports only – The Port of Bellingham has been removed from this comparison because of obvious differences in the Port's customer base. Sales tax rates for Nome is 5%, Seward is 4%, Unalaska is 3%, Dillingham is 6%, and Kodiak is 7%. Green-shaded percentages indicate fees that are less than Nome rates while red-shaded cells indicate Ports that would charge more for similar invoices.

As can be seen from the example, Nome's dockage fees for small vessels (example shows a 28-foot vessel) are greater than the rates charged by Seward and Dillingham but less than the rates charged by Unalaska and Kodiak. Nome's dockage fees for larger vessels (example shows a 424-ft vessel) are greater than Port of Seward rates but less than Unalaska, Dillingham[3], and Kodiak.

[3] Dillingham Harbor may not be able to accommodate a 424-ft vessel, perhaps explaining why their rate structure shows much higher fees for dockage.

Gravel

Next, we examine an actual gravel barge billing and compare the rates. Using posted tariffs, we find that Nome's rates for a typical gravel vessel invoice is higher than the posted rates for Seward and Kodiak but lower than the posted rates for Unalaska and Dillingham. See Table 7.

Table 7 – Gravel Vessel Rate Comparison

Qty	Description	Unit price	UoM	Nome	Seward	Unalaska	Dillingham	Kodiak
				Fees Due	Fees Due	Fees Due	Fees Due	Fees Due
1	Days dockage at Westgold Dock	1.82	255	464.10	188.70	453.90	3,600.00	1,173.00
6456.9	Gravel Tons >40K Out at Westgold Dock	1.64	1	10,589.32	6,456.90	29,920.44	9,685.35	6,715.18
1	Fresh Water 1K Gallon flat Rate	181.91	1	181.91	58.82	38.10	50.00	130.00
2024	Fresh Water Gallons <10K at Cswy	0.06	1	121.44	65.29	40.67	80.96	131.95
1	Garbage Dumpster fee - Cswy	42.45	1	42.45	56.94	101.94	15.00	110.00
1	Sales Tax - Cswy	0.05	1	40.50	32.40	24.30	48.59	56.69
Total				**11,439.71**	**6,859.05**	**30,579.35**	**13,479.90**	**8,316.82**
				100%	60%	267%	118%	73%

Note: Sales tax rates for Nome is 5%, Seward is 4%, Unalaska is 3%, Dillingham is 6%, and Kodiak is 7%. Green-shaded percentages indicate fees that are less than Nome rates while red-shaded cells indicate Ports that would charge more for similar invoices.

Cargo

For the cargo vessel comparison, we use two typical invoices, one a 344-ft vessel and the other a 147-ft vessel. Nome's rates for the 344-ft vessel were less than posted tariffs for Seward and Dillingham but greater than the Unalaska and Kodiak rates. Nome rates for the 147-ft vessel are less than the other Alaska ports compared in this analysis.

Table 8 – Cargo Vessel Rate Comparison

Qty	Description	Unit price	UoM	Nome	Seward	Unalaska	Dillingham	Kodiak
				Fees Due	Fees Due	Fees Due	Fees Due	Fees Due
2	Days dockage at City Dock	1.82	344	1,252.16	509.12	1,224.64	18,720.00	3,164.80
1262.9	Cargo tons in at City Dock	11.55	1	14,586.50	3,914.99	6,028.04	9,398.33	8,208.85
1009.44	Cargo tons through Harbor	5.78	1	5,834.56	18,087.15	4,862.12	7,512.11	6,561.36
1	Garbage Dumpster fee - Cswy	42.45	1	42.45	56.94	101.94	15.00	110.00
1	Sales Tax - Cswy	0.05	1	64.73	51.78	38.84	77.68	90.62
Total				**21,780.40**	**22,619.98**	**12,255.58**	**35,723.11**	**18,135.63**
				100%	104%	56%	164%	83%

Qty	Description	Unit price	UoM	Nome	Seward	Unalaska	Dillingham	Kodiak
				Fees Due	Fees Due	Fees Due	Fees Due	Fees Due
1	Days dockage at City Dock	1.21	147	177.87	108.78	261.66	3,600.00	588.00
11	Cargo tons in at City Dock	11.55	1	127.05	34.10	269.30	81.86	71.50
71.28	Cargo tons through at Harbor	11.55	1	823.28	2,552.18	546.59	530.46	463.32
1	Garbage Dumpster fee	42.45	1	42.45	56.94	101.94	15.00	110.00
1	Sales Tax - Cswy	0.05	1	11.02	8.81	6.61	13.22	15.42
Total				**1,181.67**	**2,760.82**	**1,186.10**	**4,240.54**	**1,248.24**
				100%	234%	100%	359%	106%

Note: Sales tax rates for Nome is 5%, Seward is 4%, Unalaska is 3%, Dillingham is 6%, and Kodiak is 7%. Green-shaded percentages indicate fees that are less than Nome rates while red-shaded cells indicate Ports that would charge more for similar invoices.

Fuel

Nome is a hub serving Western Alaska communities, and as such, is vital for efficient delivery of an entire year's worth of fuel for many. This being the case, Nome can probably treat fuel customers to lesser rates than other Alaska ports accepting and delivering lesser quantities. That said, of the ports compared in this analysis, only Dillingham has rates higher than Nome for a typical fuel vessel calling at the port.

Table 9 – Fuel Vessel Rate Comparison

Qty	Description	Unit price	UoM	Nome	Seward	Unalaska	Dillingham	Kodiak
				Fees Due	Fees Due	Fees Due	Fees Due	Fees Due
2	Days dockage at East Dock	1.82	226	822.64	334.48	804.56	7,200.00	2,079.20
0.85	Cargo tons in at East Dock	11.55	1	9.82	2.64	222.61	6.33	5.53
39500	Gallons ULSD#1 at East Dock	0.035	1	1,382.50	169.29	1,008.70	1,422.00	310.36
46327	Gallons RUL In at East dock	0.035	1	1,621.45	286.79	1,145.24	1,667.77	364.00
1	Garbage Dumpster fee - Hrbr	42.45	1	42.45	56.94	101.94	15.00	110.00
1	Sales Tax - Hrbr	0.05	1	43.25	15.66	27.20	432.90	153.24
Total				**3,922.11**	**865.79**	**3,310.25**	**10,744.00**	**3,022.32**
				100%	22%	84%	274%	77%

Note: Sales tax rates for Nome is 5%, Seward is 4%, Unalaska is 3%, Dillingham is 6%, and Kodiak is 7%. Green-shaded percentages indicate fees that are less than Nome rates while red-shaded cells indicate Ports that would charge more for similar invoices.

Government Vessel

Government vessels are known to call on Alaska ports that are convenient and help to serve their mission. Nome's strategic location for entry to the Arctic and deeper depths than most Western Alaska ports provides an advantage that government vessels will continue to utilize for refueling, crew changes, and minor repairs. Nome's rates are higher than Seward and Unalaska for the first government vessel comparison and lower than Seward, about the same as Unalaska, and lower than Dillingham and Kodiak for both examples. See Table 10.

Table 10 - Government Vessel Rate Comparison

Qty	Description	Unit price	UoM	Nome	Seward	Unalaska	Dillingham	Kodiak
				Fees Due	Fees Due	Fees Due	Fees Due	Fees Due
4	Days dockage at City Dock	1.82	283	2,060.24	837.68	503.74	16,723.20	5,207.20
1	Fresh Water 1K Gallon flat Rate	181.91	1	181.91	58.82	38.10	4.00	6.50
5312	Fresh Water Gallons <10K at Cswy	0.06	1	318.72	86.07	35.59	212.48	345.80
1	Line Handling Fee - City Dock	1030.84	1	1,030.84	1,030.84	1,030.84	1,030.84	1,030.84
1	Unregulated Refuse - per truck - Cswy	424.46	1	424.46	56.94	101.94	15.00	110.00
Total				**4,016.17**	**2,070.35**	**1,710.21**	**17,985.52**	**6,700.34**
				100%	52%	43%	448%	167%

Qty	Description	Unit price	UoM	Nome	Seward	Unalaska	Dillingham	Kodiak
				Fees Due	Fees Due	Fees Due	Fees Due	Fees Due
1	Days dockage at Middle Dock	1.82	261	475.02	193.14	464.58	4,114.80	1,200.60
2	Days dockage at City Dock	1.82	261	950.04	386.28	929.16	7,200.00	2,401.20
1	Garbage dumpster fee - Cswy	42.45	1	42.45	56.94	101.94	15.00	110.00
1	Line Handling Fee - Cswy	1030.84	1	1,030.84	1,030.84	1,030.84	1,030.84	1,030.84
Total				**2,498.35**	**1,667.20**	**2,526.52**	**12,360.64**	**4,742.64**
				100%	67%	101%	495%	190%

Note: The line handling fee is the same for all of the Ports as Nome is the only Port with this tariff item. Other ports handle these fees by charging a cost-plus for personnel and equipment. Green-shaded percentages indicate fees that are less than Nome rates while red-shaded cells indicate Ports that would charge more for similar invoices.

Container Storage

Ports may offer container storage as part of their tariff or rely on private entities to develop and operate this business. In this case, Dillingham and Kodiak did not include posted rates in their tariffs for container storage while Seward and Unalaska did. Nome's rates for container storage are less than both Seward and Unalaska.

Table 11 – Container Storage Rate Comparison

Qty	Description	Unit price	UoM	Nome Fees Due	Seward Fees Due	Unalaska Fees Due
52.1	Weeks Container Storage on IP - 7/1/16 to 6/30/17	0.06	160	500.16	576.00	1,752.00
52.1	Weeks Container Storage on IP - 7/1/16 to 6/30/17	0.06	160	500.16	576.00	1,752.00
52.1	Weeks Container Storage on IP - 7/1/16 to 6/30/17	0.06	160	500.16	576.00	1,752.00
52.1	Weeks Container Storage on IP - 7/1/16 to 6/30/17	0.06	160	500.16	576.00	1,752.00
Total				**2,000.64**	**2,304.00**	**7,008.00**
				100%	115%	350%

Note: Green-shaded percentages indicate fees that are less than Nome rates while red-shaded cells indicate Ports that would charge more for similar invoices.

Rate Change Considerations

As can be seen from the previous examples, fees charged to individual vessels visiting Alaska ports are not a straight forward examination as fee structures are as varied as the number of ports in Alaska. However, a couple items were revealed after examining other Port tariffs that the City of Nome might consider. They are as follows:

1. Add a fee for capital replacement. The City currently takes depreciation on its infrastructure investment which helps to minimize losses in any given year. However, once the infrastructure is fully depreciated, the City would need to raise funds or successfully receive grants to replace these items. The City of Seward charges a Capital Renewal and Replacement Fee that ranges from $5 to $20 per month depending on the size of the vessel. These funds could then be set aside for eventual infrastructure repair and replacement.
2. Add a Cruise ship passenger fee. As global climate change continues to make the Arctic more accessible, the City of Nome can expect to have more passengers visiting the City for brief periods of time. Initiating this fee would allow the City to recoup expenses associated with police, fire, transportation, and other services provided. The City of Seward for instance, charges a $3.50 fee for each passenger.
3. Change security, line handling, and other harbor staff assist rates to a cost-plus structure. This will allow the City to capture changes in personnel and equipment costs in future years without having to repeatedly revisit the tariff. Of the tariffs reviewed for this analysis, many have taken this approach and charge actual expenses with a 25-50 percent premium.
4. Allow dockage, wharfage, and storage rates to automatically increase based on Anchorage Consumer Price Index. Regular small increases are going to be much more palatable to the Port's customers and will allow the City to recoup the ever-increasing operations at the Port. Table 12 shows the percent change in the Anchorage Consumer

Price Index for recent years. Some ports have taken this approach while other ports have taken the approach of regular increases and posting tariff rates that cover future years.

Table 12 – Anchorage CPI

	Anchorage	
Year	Annual	Percent Change
2015	216.909	0.5
2014	215.805	1.6
2013	212.381	3.1
2012	205.916	2.2
2011	201.427	3.2
2010	195.144	1.8

5. Investigate partnering with other entities for infrastructure improvements, port enhancements, or port expansion. Often referred to as public/private partnerships or P3 structures, these negotiated contracts are becoming more attractive for port projects, especially during fiscally tight times as State and Federal funds will assuredly be limited in the near future. Examples of potential P3 arrangements are:
    a. Contractual arrangement with a fuel terminal operator to install and operate an additional fuel header at the Causeway for an agreed tariff rate for throughput gallons.
    b. An end-user fiber communication program for vessels requiring data transfers while at the dock.
    c. Dock expansion with a preferential treatment for vessel companies willing to contribute construction funds.

References

Alaska Department of Labor and Workforce Development, Research and Analysis Section for Anchorage CPI - http://live.laborstats.alaska.gov/cpi/index.cfm

Port of Bellingham Terminals Tariff No. 800 – last updated July 1, 2015
http://portofbellingham.com/DocumentCenter/view/5850

Port of Dillingham Terminal Tariff No. 1 – revised May 2015
http://www.dillinghamak.us/vertical/sites/%7BC84DE958-9EE4-4CFE-90E3-D1666668A90E%7D/uploads/Port_of_Dillingham_Terminal_Tariff_No._1_-_9.16.2015.pdf

Port of Dutch Harbor Unalaska Marine Center terminal tariff effective July 1, 2011
http://www.unalaska-ak.us/portsandharbors/page/terminal-tariff-6-july-1-2011

Port of Kodiak Terminals Tariff No. 12 – effective May 20, 2016
http://www.city.kodiak.ak.us/sites/default/files/fileattachments/port_and_harbors/page/252/final_tariff_12fmc_posted_5-20-16.pdf

Port of Nome Tariff No. 12 – adopted March 8, 2016
http://www.nomealaska.org/egov/documents/1465925420_09292.pdf

Port of Seward – 2016 Port & Harbor Tariff Regulations – effective January 1, 2016
http://www.cityofseward.us/DocumentCenter/View/2552

Appendix Tables

Table 13 – Individual Vessel Calls Historic

Year	Cargo	Gravel	Fuel	Miscellaneous	Pleasure - Cruise	Pleasure - Sailing Vessel	Government Ships	Research
2012	93	33	58	14	2	20	20	37
2013	70	52	41	9	5	21	16	28
2014	63	34	35	5	6	16	10	22
2015	63	76	45	15	5	15	22	45
2016	47	54	59	46	6	19	10	17
Average	**67.2**	**49.8**	**47.6**	**17.8**	**4.8**	**18.2**	**15.6**	**29.8**

Note: This table represents calls by vessels, not the days at the dock.

Table 14 – Individual Vessel Calls – Flat Forecast

Year	Cargo	Gravel	Fuel	Miscellaneous	Pleasure - Cruise	Pleasure - Sailing Vessel	Government Ships	Research
2017	61	58	46	18	5	18	16	30
2018	61	58	46	18	5	18	16	30
2019	61	58	46	18	5	18	16	30
2020	61	58	46	18	5	18	16	30
2021	61	58	46	18	5	18	16	30
2022	61	58	46	18	5	18	16	30
2023	61	58	46	18	5	18	16	30
2024	61	58	46	18	5	18	16	30
2025	61	58	46	18	5	18	16	30
2026	61	58	46	18	5	18	16	30
2027	61	58	46	18	5	18	16	30
2028	61	58	46	18	5	18	16	30
2029	61	58	46	18	5	18	16	30
2030	61	58	46	18	5	18	16	30
2031	61	58	46	18	5	18	16	30
2032	61	58	46	18	5	18	16	30
2033	61	58	46	18	5	18	16	30
2034	61	58	46	18	5	18	16	30
2035	61	58	46	18	5	18	16	30

Table 15 – Individual Vessels Calls – Moderate Forecast

Year	Cargo	Gravel	Fuel	Miscellaneous	Pleasure - Cruise	Pleasure - Sailing Vessel	Government Ships	Research
2017	72	69	51	18	5	18	16	30
2018	74	71	51	19	5	19	16	30
2019	77	73	51	20	5	19	16	31
2020	79	75	51	21	5	19	17	32
2021	82	76	51	22	5	20	17	32
2022	85	78	51	23	5	20	17	33
2023	87	80	51	24	5	20	18	34
2024	90	82	51	25	6	21	18	34
2025	92	84	51	26	6	21	18	35
2026	95	86	52	27	6	22	19	36
2027	97	88	52	28	6	22	19	36
2028	100	90	52	29	6	23	19	37
2029	102	92	52	30	6	23	20	38
2030	105	93	52	31	6	24	20	39
2031	108	95	52	32	6	24	21	39
2032	110	97	52	33	6	24	21	40
2033	113	99	52	34	7	25	21	41
2034	115	101	52	35	7	25	22	42
2035	118	103	52	36	7	26	22	43

Table 16 – Individual Vessel Calls– High Forecast

Year	Cargo	Gravel	Fuel	Miscellaneous	Pleasure - Cruise	Pleasure - Sailing Vessel	Government Ships	Research
2017	75	72	56	18	5	18	16	30
2018	78	74	56	19	5	19	16	31
2019	81	76	56	20	5	20	17	33
2020	83	78	56	21	6	21	18	34
2021	86	80	56	22	6	22	19	36
2022	89	82	56	23	6	23	20	38
2023	91	84	57	24	6	24	21	40
2024	94	86	57	25	7	26	22	42
2025	97	88	57	26	7	27	23	44
2026	100	90	57	28	7	28	24	46
2027	102	92	57	29	8	30	25	49
2028	105	94	57	30	8	31	27	51
2029	108	96	57	32	9	33	28	54
2030	110	98	57	34	9	34	29	56
2031	113	100	57	35	10	36	31	59
2032	116	102	57	37	10	38	32	62
2033	118	104	57	39	10	40	34	65
2034	121	106	57	41	11	42	36	68
2035	124	108	57	43	12	44	38	72

Table 17 – Total Vessel Days at Dock – Flat Forecast

Vessel Classification	FY17	FY18	FY19	FY20	FY22	FY24	FY26	FY28	FY30	FY31	FY32	FY33	FY34	FY35
Bulk Cargo	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5
Fuel	198.5	198.5	198.5	198.5	198.5	198.5	198.5	198.5	198.5	198.5	198.5	198.5	198.5	198.5
Gravel & Equipment	126.6	126.6	126.6	126.6	126.6	126.6	126.6	126.6	126.6	126.6	126.6	126.6	126.6	126.6
Miscellaneous	87.8	87.8	87.8	87.8	87.8	87.8	87.8	87.8	87.8	87.8	87.8	87.8	87.8	87.8
Pleasure - Cruise	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
Pleasure - Sailing Vessel	152.0	152.0	152.0	152.0	152.0	152.0	152.0	152.0	152.0	152.0	152.0	152.0	152.0	152.0
Government Ships	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4
Research	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6
Total Vessel Days	**851.5**	**851.5**	**851.5**	**851.5**	**851.5**	**851.5**	**851.5**	**851.5**	**851.5**	**851.5**	**851.5**	**851.5**	**851.5**	**851.5**

Note: Total vessel days at dock takes the individual calls at dock and multiplies by the average number of days at dock from Table 2 for each of the vessels types.

Table 18 – Total Vessel Days at Dock – Moderate Forecast

Vessel Classification	FY17	FY18	FY19	FY20	FY22	FY24	FY26	FY28	FY29	FY30	FY31	FY32	FY34	FY35
Bulk Cargo	160.8	166.5	172.2	177.9	189.3	200.7	212.2	223.6	229.3	235.0	240.7	246.4	257.8	263.5
Fuel	223.1	223.3	223.5	223.7	224.0	224.4	224.7	225.1	225.2	225.4	225.6	225.8	226.1	226.3
Gravel & Equipment	150.3	154.4	158.5	162.6	170.8	179.1	187.3	195.5	199.6	203.7	207.8	211.9	220.1	224.2
Miscellaneous	87.8	92.8	97.9	102.9	113.0	123.0	133.1	143.1	148.2	153.2	158.2	163.3	173.3	178.4
Pleasure - Cruise	7.2	7.3	7.5	7.6	7.9	8.3	8.6	9.0	9.1	9.3	9.5	9.7	10.1	10.3
Pleasure - Sailing Vessel	155.4	158.5	161.7	164.9	171.6	178.5	185.7	193.2	197.1	201.0	205.0	209.1	217.6	221.9
Government Ships	48.4	49.4	50.4	51.4	53.4	55.6	57.8	60.2	61.4	62.6	63.9	65.1	67.8	69.1
Research	94.6	96.5	98.4	100.4	104.4	108.7	113.1	117.6	120.0	122.4	124.8	127.3	132.5	135.1
Total Vessel Days	**927.6**	**948.8**	**970.0**	**991.4**	**1,034.5**	**1,078.2**	**1,122.4**	**1,167.2**	**1,189.9**	**1,212.6**	**1,235.6**	**1,258.7**	**1,305.3**	**1,328.9**

Note: Total vessel days at dock takes the individual calls at dock and multiplies by the average number of days at dock from Table 2 for each of the vessels types.

Table 19 – Total Vessel Days at Dock – High Forecast

Vessel Classification	FY17	FY18	FY19	FY20	FY22	FY24	FY26	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
Bulk Cargo	168.8	174.8	180.8	186.8	198.8	210.8	222.8	234.8	240.7	246.7	252.7	258.7	264.7	270.7	276.7
Fuel	245.4	245.6	245.8	246.0	246.4	246.8	247.2	247.6	247.8	248.0	248.2	248.4	248.5	248.7	248.9
Gravel & Equipment	157.8	162.1	166.4	170.8	179.4	188.0	196.6	205.3	209.6	213.9	218.2	222.5	226.8	231.1	235.4
Miscellaneous	87.8	92.2	96.8	101.6	112.1	123.5	136.2	150.2	157.7	165.6	173.8	182.5	191.7	201.2	211.3
Pleasure - Cruise	7.2	7.6	7.9	8.3	9.2	10.1	11.2	12.3	12.9	13.6	14.3	15.0	15.7	16.5	17.3
Pleasure - Sailing Vessel	155.4	163.2	171.3	179.9	198.3	218.7	241.1	265.8	279.1	293.0	307.7	323.1	339.2	356.2	374.0
Government Ships	48.4	50.8	53.4	56.0	61.8	68.1	75.1	82.8	86.9	91.3	95.8	100.6	105.7	110.9	116.5
Research	94.6	99.3	104.3	109.5	120.7	133.1	146.8	161.8	169.9	178.4	187.3	196.7	206.5	216.8	227.7
Total Vessel Days	**965.5**	**995.7**	**1026.8**	**1059.0**	**1126.7**	**1199.1**	**1276.9**	**1360.4**	**1404.6**	**1450.4**	**1498.0**	**1547.4**	**1598.8**	**1652.3**	**1707.8**

Note: Total vessel days at dock takes the individual calls at dock and multiplies by the average number of days at dock from Table 2 for each of the vessels types.

Table 20 – Commodities Forecast

				Forecast - Flat			Forecast - Moderate			Forecast - High		
Year	Cargo	Gravel	Fuel	Cargo (tons)	Gravel (tons)	Fuel (gallons)	Cargo (tons)	Gravel (tons)	Fuel (gallons)	Cargo (tons)	Gravel (tons)	Fuel (gallons)
2012	63,327	36,841	16,682,950									
2013	48,478	26,449	10,200,367									
2014	30,633	21,287	10,392,336									
2015	31,144	50,312	10,546,893									
2016	22,918	135,958	8,770,411									
2017				35,659	63,669	10,820,821	42,013	75,580	12,165,291	44,114	79,359	13,381,820
2018				35,659	63,669	10,820,821	43,504	77,645	12,174,906	45,680	81,527	13,392,397
2019				35,659	63,669	10,820,821	44,996	79,710	12,184,522	47,246	83,695	13,402,974
2020				35,659	63,669	10,820,821	46,488	81,775	12,194,138	98,812	85,864	13,413,552
2021				35,659	63,669	10,820,821	47,979	83,840	12,203,754	100,378	88,032	13,424,129
2022				35,659	63,669	10,820,821	49,471	85,905	12,213,370	101,944	90,201	13,434,706
2023				35,659	63,669	10,820,821	50,962	87,970	12,222,985	103,510	92,369	13,445,284
2024				35,659	63,669	10,820,821	52,454	90,036	12,232,601	105,076	94,537	13,455,861
2025				35,659	63,669	10,820,821	103,945	92,101	12,242,217	106,643	96,706	13,466,439
2026				35,659	63,669	10,820,821	105,437	94,166	12,251,833	108,209	98,874	13,477,016
2027				35,659	63,669	10,820,821	106,928	96,231	12,261,448	109,775	101,042	13,487,593
2028				35,659	63,669	10,820,821	108,420	98,296	12,271,064	111,341	103,211	13,498,171
2029				35,659	63,669	10,820,821	109,911	100,361	12,280,680	112,907	105,379	13,508,748
2030				35,659	63,669	10,820,821	111,403	102,426	12,290,296	114,473	107,548	13,519,325
2031				35,659	63,669	10,820,821	112,895	104,491	12,299,912	116,039	109,716	13,529,903
2032				35,659	63,669	10,820,821	114,386	106,556	12,309,527	117,605	111,884	13,540,480
2033				35,659	63,669	10,820,821	115,878	108,622	12,319,143	119,172	114,053	13,551,057
2034				35,659	63,669	10,820,821	117,369	110,687	12,328,759	120,738	116,221	13,561,635
2035				35,659	63,669	10,820,821	118,861	112,752	12,338,375	122,304	118,389	13,572,212

Table 21 – Historical Revenue FY97 through FY06

Revenue Category	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06
Dockage	19,526.50	34,491.50	24,280.00	23,908.50	19,781.00	22,315.50	27,722.50	23,790.50	52,320.00	44,473.00
Docking permits	11,005.69	9,254.80	9,821.55	10,995.45	11,256.15	14,302.35	11,985.25	16,066.25	18,683.50	22,593.25
Wharfage/Fuel	262,956.24	328,716.21	279,291.67	304,072.74	302,883.19	374,796.68	260,041.48	269,525.38	373,475.90	300,012.60
Wharfage/Cargo	148,274.11	169,978.46	134,812.62	156,824.45	153,404.27	151,001.77	230,889.65	132,386.23	185,094.21	177,114.22
Wharfage/Gravel		31,877.42	97,664.04	59,990.41	11,402.84	85,041.10	91,826.79	71,286.25	62,509.46	29,394.00
Storage Rental	77,606.12	42,946.92	32,172.22	37,961.68	37,077.25	58,822.72	38,762.71	28,361.27	52,933.26	47,609.29
Land leases	36,374.49	104,065.57	116,363.66	125,365.28	131,342.00	134,606.92	143,900.55	145,954.99	147,300.49	144,981.60
Utility Sales	0.00	0.00	0.00	0.00	0.00	12.50	72.50	675.00	3,614.15	2,743.75
Misc revenue	0.00	0.00	0.00	1,500.00	500.00	0.00	0.00	2,400.00	4,550.00	4,060.00
Interest earnings	7,404.80	5,277.29	15,265.57	5,031.40	3,029.58	4,798.99	16,790.51	13,812.68	49,958.48	187,481.42
STAK PERS reimbursement										
Port of Nome Use Fund Balance										
Total revenues	**563,147.95**	**726,608.17**	**709,671.33**	**725,649.91**	**670,676.28**	**845,698.53**	**821,991.94**	**704,258.55**	**950,439.45**	**960,463.13**

Note: The "Port of Nome Use Fund Balance" is noted here to show when surpluses from previous years were used to counter deficits in current years.

Table 22 – Historical Revenue FY07 through FY16

Revenue Category	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16
Dockage	53,807.00	62,765.50	68,155.00	87,093.75	75,295.50	68,248.50	98,212.50	106,647.44	95,941.51	126,503.25
Docking permits	19,008.85	21,342.90	20,863.00	46,840.50	47,746.50	66,957.10	117,484.67	118,166.53	133,967.29	119,162.92
Wharfage/Fuel	396,912.42	448,747.78	404,531.88	302,304.43	244,875.79	375,836.07	302,944.27	443,231.49	319,647.28	259,306.24
Wharfage/Cargo	263,030.87	296,566.53	263,771.09	277,346.26	280,540.07	353,311.67	407,008.41	374,843.39	277,248.88	252,242.84
Wharfage/Gravel	25,301.51	31,962.00	125,035.48	231,657.71	123,020.34	93,103.74	60,389.78	68,341.01	70,066.73	75,955.69
Storage Rental	52,840.37	74,547.81	82,220.51	92,236.31	135,377.55	139,270.34	173,522.46	246,946.28	227,462.73	227,990.37
Land leases	173,071.39	152,114.73	158,055.40	140,046.68	153,397.68	152,045.64	210,760.98	250,037.77	244,472.16	237,725.18
Utility Sales	12,668.00	14,165.05	17,197.50	25,720.60	19,911.85	15,281.53	27,839.92	26,471.29	16,533.23	20,287.86
Misc revenue	6,500.00	16,595.00	27,110.00	25,795.00	36,877.06	36,569.80	511,539.66	84,943.54	81,037.51	144,011.20
Interest earnings	156,714.38	109,041.71	22,234.51	7,614.98	7,542.23	5,872.79	11,216.99	7,609.17	7,310.93	17,126.08
STAK PERS reimbursement				11,709.13	17,268.19	27,834.56	28,919.68	52,126.38	157,214.39	28,730.33
Port of Nome Use Fund Balance							1,033,664.55	472,589.45	555,779.17	0.00
Total revenues	**1,159,854.79**	**1,227,849.01**	**1,189,174.37**	**1,248,365.35**	**1,141,852.76**	**1,334,331.74**	**2,983,503.87**	**2,251,953.74**	**2,186,681.81**	**1,509,041.96**

Note: The "Port of Nome Use Fund Balance" is noted here to show when surpluses from previous years were used to counter deficits in current years.

Table 23 –Revenues - Flat Forecast

Revenue Category	FY17	FY18	FY20	FY22	FY24	FY26	FY28	FY30	FY32	FY34	FY35
Dockage	$98,300	$98,300	$98,300	$98,300	$98,300	$98,300	$98,300	$98,300	$98,300	$98,300	$98,300
Docking permits	111,100	111,100	111,100	111,100	111,100	111,100	111,100	111,100	111,100	111,100	111,100
Wharfage/Fuel	373,600	373,600	373,600	373,600	373,600	373,600	373,600	373,600	373,600	373,600	373,600
Wharfage/Cargo	362,500	362,500	362,500	362,500	362,500	362,500	362,500	362,500	362,500	362,500	362,500
Wharfage/Gravel	129,800	129,800	129,800	129,800	129,800	129,800	129,800	129,800	129,800	129,800	129,800
Storage Rental	234,100	234,100	234,100	234,100	234,100	234,100	234,100	234,100	234,100	234,100	234,100
Land leases	235,700	235,700	235,700	235,700	235,700	235,700	235,700	235,700	235,700	235,700	235,700
Utility Sales	21,300	21,300	21,300	21,300	21,300	21,300	21,300	21,300	21,300	21,300	21,300
Misc revenue	171,600	171,600	171,600	171,600	171,600	171,600	171,600	171,600	171,600	171,600	171,600
Interest earnings	9,800	9,800	9,800	9,800	9,800	9,800	9,800	9,800	9,800	9,800	9,800
Total revenues	**$1,747,800**	**$1,747,800**	**$1,747,800**	**$1,747,800**	**$1,747,800**	**$1,747,800**	**$1,747,800**	**$1,747,800**	**$1,747,800**	**$1,747,800**	**$1,747,800**

Note: Only selected years are shown here. All revenue categories have been rounded to the nearest $100.

Table 24 –Revenues - Moderate Forecast

Revenue Category	FY17	FY18	FY20	FY22	FY24	FY26	FY28	FY30	FY32	FY34	FY35
Dockage	$107,000	$109,500	$114,400	$119,400	$124,400	$129,500	$134,700	$139,900	$145,300	$150,600	$153,400
Docking permits	116,700	122,500	135,000	148,900	164,100	180,900	199,400	219,900	242,400	267,200	280,600
Wharfage/Fuel	420,100	420,400	421,100	421,700	422,400	423,100	423,700	424,400	425,000	425,700	426,000
Wharfage/Cargo	427,100	442,200	472,500	502,900	533,200	1,071,700	1,102,100	1,132,400	1,162,700	1,193,000	1,208,200
Wharfage/Gravel	154,000	158,200	166,700	175,100	183,500	191,900	200,300	208,800	217,200	225,600	229,800
Storage Rental	245,800	258,100	284,600	313,700	345,900	381,400	420,500	463,600	511,100	563,500	591,700
Land leases	235,700	235,700	235,700	235,700	235,700	235,700	235,700	235,700	235,700	235,700	235,700
Utility Sales	23,600	24,200	25,400	26,600	27,800	29,000	30,200	31,400	32,700	33,900	34,600
Misc revenue	171,600	171,600	171,600	171,600	171,600	171,600	171,600	171,600	171,600	171,600	171,600
Interest earnings	9,800	9,800	9,800	9,800	9,800	9,800	9,800	9,800	9,800	9,800	9,800
Total revenues	**$1,911,400**	**$1,952,200**	**$2,036,800**	**$2,125,400**	**$2,218,400**	**$2,824,600**	**$2,928,000**	**$3,037,500**	**$3,153,500**	**$3,276,600**	**$3,341,400**

Note: Only selected years are shown here. All revenue categories have been rounded to the nearest $100.

Table 25 –Revenues - High Forecast

Revenue Category	FY17	FY18	FY20	FY22	FY24	FY26	FY28	FY30	FY32	FY34	FY35
Dockage	$111,400	$114,900	$122,200	$130,000	$138,400	$147,300	$157,000	$167,400	$178,500	$190,600	$197,000
Docking permits	122,300	134,500	162,800	197,000	238,400	288,400	348,900	422,200	510,800	618,100	679,900
Wharfage/Fuel	462,100	462,400	463,200	463,900	464,600	465,400	466,100	466,800	467,600	468,300	468,600
Wharfage/Cargo	448,400	464,300	1,004,400	1,036,200	1,068,100	1,099,900	1,131,800	1,163,600	1,195,400	1,227,300	1,243,200
Wharfage/Gravel	161,700	166,200	175,000	183,800	192,700	201,500	210,400	219,200	228,000	236,900	241,300
Storage Rental	257,500	283,300	342,800	414,800	501,900	607,300	734,800	889,100	1,075,800	1,301,700	1,431,900
Land leases	235,700	235,700	235,700	235,700	235,700	235,700	235,700	235,700	235,700	235,700	235,700
Utility Sales	24,700	25,400	27,000	28,700	30,500	32,300	34,300	36,400	38,600	40,900	42,200
Misc revenue	171,600	171,600	171,600	171,600	171,600	171,600	171,600	171,600	171,600	171,600	171,600
Interest earnings	9,800	9,800	9,800	9,800	9,800	9,800	9,800	9,800	9,800	9,800	9,800
Total revenues	**$2,005,200**	**$2,068,100**	**$2,714,500**	**$2,871,500**	**$3,051,700**	**$3,259,200**	**$3,500,400**	**$3,781,800**	**$4,111,800**	**$4,500,900**	**$4,721,200**

Note: Only selected years are shown here. All revenue categories have been rounded to the nearest $100.

Table 26 –Expenses – Flat Forecast

Expense Category	FY17	FY18	FY20	FY22	FY24	FY26	FY28	FY30	FY32	FY34	FY35
Labor and benefits	$601,100	$607,100	$619,300	$631,800	$644,500	$657,400	$670,600	$684,100	$697,800	$711,800	$718,900
Utilities	43,700	46,200	51,300	56,400	61,400	66,500	71,500	76,600	81,700	86,700	89,200
Supplies	49,700	50,700	52,700	54,900	57,100	59,400	61,800	64,300	66,900	69,600	71,000
Insurance	48,500	52,100	59,200	66,300	73,400	80,500	87,700	94,800	101,900	109,000	112,600
Professional services	235,500	235,500	235,500	235,500	235,500	235,500	235,500	235,500	235,500	235,500	235,500
Repairs and Maintenance	199,000	209,000	230,500	254,100	280,100	308,800	340,400	375,300	413,800	456,200	479,000
Equipment rental	500	500	500	500	500	500	500	500	500	500	500
Bad debt expense	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Principal/Interest expense	186,900	186,900	186,900	186,900	186,900	186,900	186,900	186,900	186,900	186,900	186,900
Other/Misc expense	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000
Payment in Lieu of Taxes	34,700	34,700	34,700	34,700	34,700	34,700	34,700	34,700	34,700	34,700	34,700
Subtotal	**$1,435,600**	**$1,424,000**	**$1,471,900**	**$1,522,400**	**$1,575,400**	**$1,631,500**	**$1,690,900**	**$1,754,000**	**$1,821,000**	**$1,892,200**	**$1,929,600**

Note: Only selected years are shown here. All expense categories have been rounded to the nearest $100.

Table 27 –Expenses – Moderate Forecast

Expense Category	FY17	FY18	FY20	FY22	FY24	FY26	FY28	FY30	FY32	FY34	FY35
Labor and benefits	$601,100	$607,100	$619,300	$631,800	$644,500	$657,400	$670,600	$684,100	$697,800	$711,800	$718,900
Utilities	44,600	47,100	52,300	57,500	62,600	67,800	72,900	78,100	83,300	88,400	91,000
Supplies	50,700	51,700	53,800	56,000	58,200	60,600	63,000	65,600	68,200	71,000	72,400
Insurance	48,500	52,100	59,200	66,300	73,400	80,500	87,700	94,800	101,900	109,000	112,600
Professional services	247,300	247,300	247,300	247,300	247,300	247,300	247,300	247,300	247,300	247,300	247,300
Repairs and Maintenance	208,500	229,400	277,500	335,800	406,300	491,600	594,900	719,800	871,000	1,053,900	1,159,300
Equipment rental	500	500	500	500	500	500	500	500	500	500	500
Bad debt expense	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Principal/Interest expense	186,900	186,900	186,900	186,900	186,900	186,900	186,900	186,900	186,900	186,900	186,900
Other/Misc expense	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000
Payment in Lieu of Taxes	34,700	34,700	34,700	34,700	34,700	34,700	34,700	34,700	34,700	34,700	34,700
Subtotal	**$1,458,800**	**$1,492,800**	**$1,567,500**	**$1,652,800**	**$1,750,400**	**$1,863,300**	**$1,994,500**	**$2,147,800**	**$2,327,600**	**$2,539,500**	**$2,659,600**

Note: Only selected years are shown here. All expense categories have been rounded to the nearest $100.

Table 28 –Expenses – High Forecast

Expense Category	FY17	FY18	FY20	FY22	FY24	FY26	FY28	FY30	FY32	FY34	FY35
Labor and benefits	$601,100	$607,100	$619,300	$631,800	$644,500	$657,400	$670,600	$684,100	$697,800	$711,800	$718,900
Utilities	45,900	48,500	53,900	59,200	64,500	69,800	75,100	80,400	85,800	91,000	93,700
Supplies	52,200	53,200	55,300	57,600	60,000	62,400	64,900	67,500	70,200	73,100	74,600
Insurance	48,500	52,100	59,200	66,300	73,400	80,500	87,700	94,800	101,900	109,000	112,600
Professional services	259,100	259,100	259,100	259,100	259,100	259,100	259,100	259,100	259,100	259,100	259,100
Repairs and Maintenance	217,900	250,600	331,400	438,300	579,600	766,500	1,013,700	1,340,700	1,773,100	2,345,000	2,696,800
Equipment rental	500	500	500	500	500	500	500	500	500	500	500
Bad debt expense	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Principal/Interest expense	186,900	186,900	186,900	186,900	186,900	186,900	186,900	186,900	186,900	186,900	186,900
Other/Misc expense	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000
Payment in Lieu of Taxes	34,700	34,700	34,700	34,700	34,700	34,700	34,700	34,700	34,700	34,700	34,700
Subtotal	**$1,482,800**	**$1,528,700**	**$1,636,300**	**$1,770,400**	**$1,939,200**	**$2,153,800**	**$2,429,200**	**$2,784,700**	**$3,246,000**	**$3,847,100**	**$4,213,800**

Note: Only selected years are shown here. All expense categories have been rounded to the nearest $100.

Table 29 –Net Revenues – Three Scenarios

Flat Projections

Net Revenues	FY17	FY18	FY20	FY22	FY24	FY26	FY28	FY30	FY32	FY34	FY35
Operations summary	$312,200	$323,800	$275,900	$225,400	$172,400	$116,300	$56,900	$ (6,200)	$ (73,200)	$(144,400)	$(181,800)

Moderate Projections

Net Revenues	FY17	FY18	FY20	FY22	FY24	FY26	FY28	FY30	FY32	FY34	FY35
Operations summary	$452,600	$459,400	$469,300	$472,600	$468,000	$961,300	$933,500	$889,700	$825,900	$737,100	$681,800

High Projections

Net Revenues	FY17	FY18	FY20	FY22	FY24	FY26	FY28	FY30	FY32	FY34	FY35
Operations summary	$522,400	$539,400	$1,078,200	$1,101,100	$1,112,500	$1,105,400	$1,071,200	$997,100	$865,800	$653,800	$507,400

Note: Only selected years are shown here. Net Revenues have been rounded to the nearest $100.

PRELIMINARY ENGINEERING REPORT REQUIREMENTS FOR THE

PORT OF NOME – PORT RECEPTION FACILITIES (SHIP'S WASTE)

1) PROJECT PLANNING

Describe the facilities and area under consideration. The description should include information on the following:

a) Location: Provide scale maps and photographs of the project planning area and any existing service areas. Include legal and natural boundaries and a topographical map of the service area.

b) Environmental Resources Present: Provide maps, photographs, and/or a narrative description of environmental resources present in the project planning area that affect design of the project. Environmental review information that has already been developed to meet requirements of NEPA or a state equivalent review process can be used here.

c) Population Trends: Provide U.S. Census or other population data (including references) for the service area for at least the past two decades if available. Population projections for the project planning area and concentrated growth areas should be provided for the project design period. Base projections on historical records with justification from recognized sources.

d) Vessel Traffic Trends: Review historic data of the vessel traffic using the Port of Nome and provide areas where increased vessel traffic is expected in the future. (Cruise ships, freighters, U.S. Coast Guard, etc.)

a) Community Engagement: Describe the City's approach used (or proposed for use) to engage the community in the project planning process. The project planning process should help the community develop an understanding of the need for the project, the utility operational service levels required, funding and revenue strategies to meet these requirements, along with other considerations.

2) EXISTING FACILITIES

Describe each part of the existing facility and include the following information:

a) Location Map: Provide a map and a schematic process layout of all existing facilities. Identify facilities that are no longer in use or abandoned. Include photographs of existing facilities.

b) History: Indicate when major system components were constructed, renovated, expanded, or removed from service. Discuss any component failures and the cause for the failure. Provide a history of any applicable violations of regulatory requirements.

c) Condition of Existing Facilities: Describe present condition; adequacy of current facilities (available space on causeway, etc.); the treatment, storage, and disposal capacities. Describe the existing capacity of the Nome Joint Utility System (NJUS) wastewater lagoon and solid waste landfill. Describe and reference compliance with applicable federal, state, and local laws.

d) Financial Status of any Existing Facilities: Provide information regarding current rate schedules for wastewater and solid waste disposal, annual O&M cost (with a breakout of current energy

costs), other capital improvement programs, and tabulation of users by monthly usage categories for the most recent typical fiscal year. Give status of existing debts and required reserve accounts.

e) Wastewater/Energy/Solid Waste Audits

3) NEED FOR PROJECT

Describe the needs in the following order of priority:

a) Health, Sanitation, and Security: Describe concerns and include relevant regulations and correspondence from/to federal and state regulatory agencies. Include copies of such correspondence as an attachment to the Report.

b) Aging Infrastructure: Describe the concerns and indicate those with the greatest impact. Describe treatment or storage needs, management adequacy, inefficient designs, and other problems. Describe any safety concerns.

c) Accommodate Expected Reasonable Growth: Describe the reasonable growth capacity that is necessary to meet needs during the planning period. Facilities proposed to be constructed to meet future growth needs should generally be supported by additional revenues. Consideration should be given to designing for phased capacity increases. Provide number of new customers committed to this project.

d) Lack of Arctic Port Reception Facilities for waste (Marine Pollution = MARPOL) meeting International Maritime Organization (IMO) Guidance. Especially important with the opening of shipping lanes in the Northwest Passage. Specific waste categories to address include:

   i. MARPOL Annex I: oil, oily waste, oily bilge water, sludge, etc.
   ii. MARPOL Annex IV: Sewage
   iii. MARPOL Annex V: Garbage

4) ALTERNATIVES CONSIDERED

This section contains a description of the alternatives that were considered in planning a solution to meet the identified needs. Alternative approaches to ownership and management, system design, and sharing of services, including various forms of partnerships, should be considered. (City/Port/NJUS operated). Technically infeasible alternatives that are considered should be mentioned briefly along with an explanation of why they are infeasible, but do not require full analysis. For each technically feasible alternative, the description should include the following information:

a) Description: Describe the facilities associated with every technically feasible alternative. Describe source, conveyance, treatment, and storage facilities for each alternative.

b) Design Criteria. State the design parameters used for evaluation purposes. These parameters should comply with federal, state, and agency design policies and regulatory requirements.

c) Map. Provide a schematic layout map to scale and a process diagram if applicable. If applicable, include future expansion of the facility.

d) Environmental Impacts. Provide information about how the specific alternative may impact the environment. Describe only those unique direct and indirect impacts on floodplains, wetlands, other important land resources, endangered species, historical and archaeological properties, etc., as they relate to each specific alternative evaluated. Include generation and management of residuals and wastes.

e) Land Requirements. Identify property and easements required. Further specify whether these properties are currently owned, to be acquired, leased, or have access agreements.

f) Potential Construction Problems. Discuss concerns such as subsurface rock, high water table, limited access, existing resource or site impairment, or other conditions which may affect cost of construction or operation of facility.

g) Sustainability Considerations. Sustainable utility management practices include environmental, social, and economic benefits that aid in creating a resilient utility.
   i. Energy Efficiency. Discuss energy efficient design (i.e. reduction in electrical demand), and/or renewable generation of energy, and/or minimization of carbon footprint, if applicable to the alternative. Alternatively, discuss the energy usage for this option as compared to other alternatives.
   ii. Other. Discuss any other aspects of sustainability (such as resiliency or operational simplicity) that are incorporated into the alternative, if applicable.

h) Cost Estimates. Provide cost estimates for each alternative, including a breakdown of the following costs associated with the project: construction, nonconstruction, and annual O&M costs. A construction contingency should be included as a non-construction cost. Cost estimates should be included with the descriptions of each technically feasible alternative. O&M costs should include a rough breakdown by O&M category (see example below) and not just a value for each alternative. Information from other sources, such as the recipient's accountant or other known technical service providers, can be incorporated to assist in the development of this section. The cost derived will be used in the life cycle cost analysis described in Section 5 a.

Example O&M Cost Estimate	
Personnel (i.e. Salary, Benefits, Payroll Tax, Insurance, Training)	
Administrative Costs (e.g. office supplies, printing, etc.)	
Water Purchase or Waste Treatment Costs	
Insurance	
Energy Cost (Fuel and/or Electrical)	
Process Chemical	
Monitoring & Testing	
Short Lived Asset Maintenance/Replacement	
Professional Services	
Residuals Disposal	
Miscellaneous	
Total	

5) SELECTION OF AN ALTERNATIVE

Selection of an alternative is the process by which data from the previous section, "Alternatives Considered" is analyzed in a systematic manner to identify a recommended alternative.

a) Life Cycle Cost Analysis. A life cycle present worth cost analysis (an engineering economics technique to evaluate present and future costs for comparison of alternatives) should be completed to compare the technically feasible alternatives.
   1. The analysis should convert all costs to present day dollars;
   2. The planning period to be used is recommended to be 20 years, but may be any period determined reasonable by the engineer and concurred on by the City, state or federal agency;
   3. The total capital cost (construction plus non-construction costs) should be included;
   4. Annual O&M costs should be converted to present day dollars.

5. Short lived asset costs should also be included (Pumps, controls, meters, etc.) in the life cycle cost analysis if determined appropriate by the consulting engineer or agency. Life cycles of short lived assets should be tailored to the facilities being constructed and be based on generally accepted design life.

b) Non-Monetary Factors. Non-monetary factors, including social and environmental aspects (e.g. sustainability considerations, operator training requirements, permit issues, community objections, wetland impacts) should also be considered in determining which alternative is recommended and may be factored into the calculations.

6) PROPOSED PROJECT (RECOMMENDED ALTERNATIVE)

The engineer should include a recommendation for which alternative(s) should be implemented. This section should contain a fully developed description of the proposed project based on the preliminary description under the evaluation of alternatives. Include a schematic for any treatment processes, a layout of the system, and a location map of the proposed facilities. At least the following information should be included as applicable to the specific project:

a) Preliminary Project Design

i. MARPOL Annex I: oil, oily waste, oily bilge water, sludge, etc.
Collection system. Identify general location of collection facilities and piping: sizes of collection facility, length and sizes of piping and key components.
Pumping stations. Identify size, type, site location, special power requirements.
Treatment. Describe treatment process (oil/water/grit separation), identify location of treatment units and site of any discharges. Identify capacity of treatment plant (i.e. Average Daily Flow).

ii. MARPOL Annex IV: Sewage
Collection system. Identify general location of collection facilities and piping: sizes of collection facility, length and sizes of piping and key components.
Pumping stations. Identify size, type, site location, special power requirements.
Treatment. Describe treatment process (NJUS wastewater lagoon), identify location of treatment facility and site of any discharges.. Identify capacity of treatment plant (i.e. Average Daily Flow) and identify necessary expansion to existing treatment facility.

iii. MARPOL Annex V: Garbage
Collection. Describe process in detail and identify quantities of material (in both volume and weight), length of transport, location and type of transfer facilities, and any special handling requirements.
Storage. If any, describe capacity, type, and site location.
Processing. If any, describe capacity, type (separation of quarantine waste), and site location.
Disposal. Describe process in detail and identify permit requirements, quantities of material, recycling processes, location of discharge (Beam Road Landfill).

b) Project Schedule Identify proposed dates for submittal and anticipated approval of all required documents, land and easement acquisition, permit applications, advertisement for bids, loan closing, contract award, initiation of construction, substantial completion, final completion, and initiation of operation.

c) Project Phasing Describe how the project may be broken up into phases as project funding allows. Identify the sequence in which components of the system should be completed for proper operation and temporary usage. (i.e.: upgrades to or construction of the treatment facilities first so truck haul could be implemented prior to installation of piping and pump stations.)

d) Permit Requirements Identify any construction, discharge and capacity permits that will/may be required as a result of the project.

e) Sustainability Considerations
   i. Energy Efficiency. Discuss energy efficient design (i.e. reduction in electrical demand), and/or renewable generation of energy, and/or minimization of carbon footprint, if applicable to the selected alternative.
   ii. Other. Discuss any other aspects of sustainability (such as resiliency or operational simplicity) that are incorporated into the selected alternative.

f) Total Project Cost Estimate (Engineer's Opinion of Probable Cost)
Provide an itemized estimate of the project cost based on the stated period of construction. Include construction, land and right-of-ways, legal, engineering, construction program management, funds administration, interest, equipment, construction contingency, refinancing, and other costs associated with the proposed project. The construction subtotal should be separated out from the non-construction costs. The non-construction subtotal should be included and added to the construction subtotal to establish the total project cost. An appropriate construction contingency should be added as part of the non-construction subtotal.

g) Annual Operating Budget
Provide itemized annual operating budget information.
   i. Income. Provide information about all sources of income for the system including a proposed rate schedule. Project income realistically for existing and proposed new users separately, based on existing user billings and other sources of income.
   ii. Annual O&M Costs. Provide an itemized list by expense category and project costs realistically. Provide projected costs for operating the system as improved. Include facts in the Report to substantiate O&M cost estimates. Include personnel costs, administrative costs, water purchase or treatment costs, accounting and auditing fees, legal fees, interest, utilities, energy costs, insurance, annual repairs and maintenance, monitoring and testing, supplies, chemicals, residuals disposal, office supplies, printing, professional services, and miscellaneous as applicable.
   iii. Debt Repayments. Describe existing and proposed financing with the estimated amount of annual debt repayments from all sources. All estimates of funding should be based on loans, not grants.
   iv. Short-lived Asset Reserves. A table of short lived assets should be included for the system. The table should include the asset, the expected year of replacement, and the anticipated cost of each. Prepare a recommended annual reserve deposit to fund replacement of short-lived assets, such as pumps, controls, meters, etc.

7) CONCLUSIONS AND RECOMMENDATIONS

Provide any additional findings and recommendations that should be considered in development of the project. This may include recommendations for special studies, highlighting of the need for special coordination, a recommended plan of action to expedite project development, and any other necessary considerations.