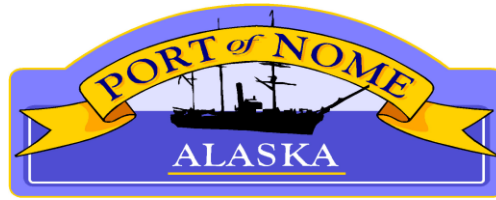


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**NOME PORT COMMISSION
WORK SESSION
WEDNESDAY, JUNE 28, 2023 @ 6:00 PM
COUNCIL CHAMBERS IN CITY HALL**

WORK SESSION – 6:00PM:

- Strategic Development Plan Update
 - Review and discuss scope of work and overall focus of update
- Rate Study Analysis & Projections
 - Review and discuss historical studies to inform scope of work

PORT OF NOME

STRATEGIC DEVELOPMENT PLAN UPDATE

1. SCOPE OF WORK

In 2016, the City of Nome commissioned a Strategic Development Plan for the Port & Harbor. That plan discussed existing facilities, planned maintenance projects and recommendations for improvements based on current level of use, conditions and assessments of anticipated needs. This solicitation will source professional consultants to identify future development needs, economic feasibility, funding alternatives, conceptual plans, cost estimating, and other related professional services to update the Port of Nome Strategic Development Plan.

Areas of focus and detail will include updates to the following:

- Statistical data, commodities and growth
- Tourism, Research and Oil & Gas
- Completed projects
- Development Landscape
 - Replacement of aging floats in the Small Boat Harbor
 - Completion of moorage and haul out facility in the Snake River
 - Identifying sites for improved parking and locations for marine service businesses in port and harbor
 - Identifying marine storage needs
 - Identifying transshipment customers and needs
 - Identifying cruise ship reception areas, public services, connectivity and access to downtown area
 - Expansion of facility surveillance system
 - Small boat facilities east/west of inner harbor entrance
 - Small Boat Harbor power pedestals and waste oil/fueling station
 - Evaluating local capacity for onboard vessel repairs and mid-size ship haul out
 - Waste removal and incineration?

Knowing there are often-times competing interests between industry, and tourism or between long-time residents, newcomers, and tourists, there is need to balance all interests for the betterment and long-term viability of the Port and community.

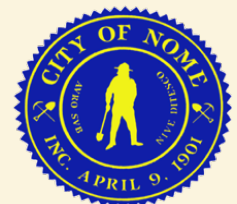
The City seeks to identify opportunities to improve commercial fisheries and other water-dependent use so industries that currently exist within the Nome Port & Harbor may continue and expand into the future.



Port of Nome

Strategic Development Plan

January 2016



Port of Nome Strategic Development Plan

Prepared for:
City of Nome

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January 2016

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Chapter One: Introduction

The Port of Nome, located just south of the Arctic Circle, is strategically positioned to serve national, state, regional, and local needs. Nome is the regional transshipment hub for many Western Alaska communities that rely on the port for movement of heating oil and gasoline, construction supplies, non-perishable food, gravel, and other cargo. Recently selected by the Corps of Engineers (COE) as the Arctic Deep Draft Port (DDP) site, Nome is poised to play an increasingly important role in a changing Arctic. This document describes the Port of Nome and its activities, summarizes industrial activity in the region facilitated by the port, details the recent COE Deep Draft Port designation, and identifies ways the port can position itself for continued growth and stimulate further regional economic development.

Nome is a town of 3,800 residents situated on the shore of the Bering Sea near the southern end of Seward Peninsula. Nome's most significant employment sectors include state and local government (27 percent of jobs); education and health services (26 percent); and trade, transportation, and utilities (17 percent).¹ By the regional standard in Western Alaska, Nome is a well-developed regional hub offering daily jet service; a port and network of roads; relatively reliable telecommunications; and water, wastewater, and sewage services. The community offers a level-four trauma center, fire department, and expects to receive upgraded fiber optic connectivity by 2016.²

The cost of living in Nome is elevated relative to state and national levels. Groceries cost 60 percent more in Nome than in Anchorage. A gallon of gas often exceeds \$5.00 per gallon, and the average home costs \$8,457 to heat per year, more than triple the cost of the average Anchorage home.³



While the ice-free season is gradually increasing, Nome's port is typically closed six months of the year when seasonal ice prevents vessel operations.⁴ Consequently, the ice-free period between June and December is very busy, with vessels bringing goods to be utilized in Nome or transshipped to communities throughout the region. Commercial fishing activity in the port increases in the summer when harvesters target primarily salmon, halibut, and king crab.

¹ State of Alaska Department of Labor, 2014.

² <http://www.adn.com/article/20150510/arctic-spanning-fiber-optic-project-moves-ahead-alaska>.

³ <https://www.ahfc.us/efficiency/research-information-center/housing-assessment/>.

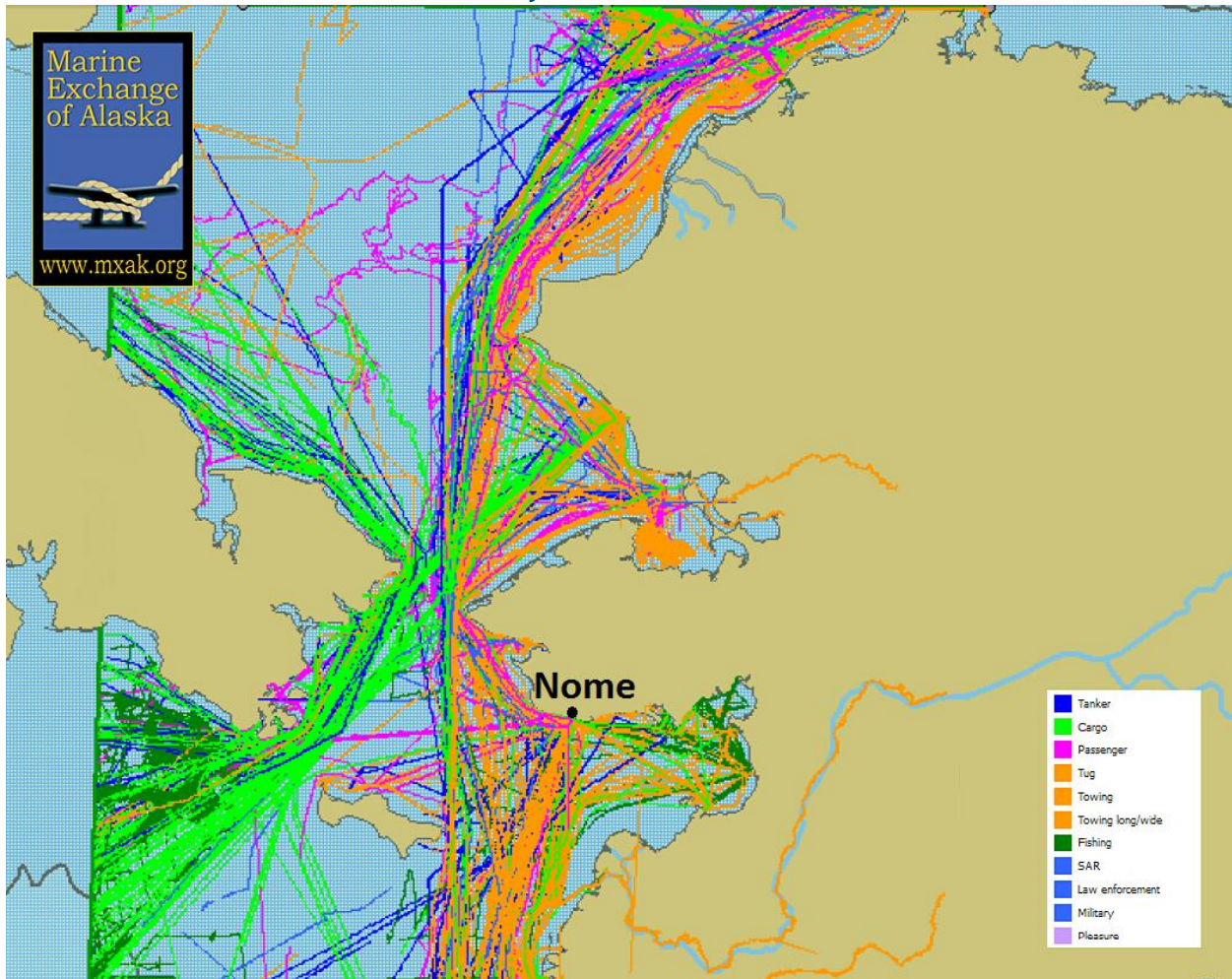
⁴ Personal Communication, Joy Baker, Port Director, City of Nome, December, 2015.

Improvements have been made to the Port of Nome for nearly a century. Construction of Nome's original jetties began in 1919 and were complete by 1923.⁵ A seawall protecting Nome was constructed in the early 1950s and the 3,000 ft. armor stone causeway was built in 1985. Two sheet pile docks located on the causeway were operational by the early 1990s, currently providing a port depth of -22 feet mean lower low water (MLLW).

The addition of the east breakwater in 2006 significantly increased port capabilities by decreasing the number of days port operations were limited due to weather. Completion of the 210-foot Middle Dock in 2015 added much needed moorage space. Expected construction of a Deep Draft Port facility on Nome's existing causeway would add significant cargo capacity and allow larger vessels to moor at the port.

Located in close proximity to the Bering Strait, residents of Nome and nearby communities are observing increased vessel traffic due to industrial and recreational activity. In 2009, 280 vessels transited the Bering Strait; just four years later, this figure increased to a record 480 vessels. Vessel traffic from the Russian side of the Bering Strait has increased as well. In 2014, 53 vessels used the Northern Sea Route; a sizeable increase over 2010 when just four vessels used this route.⁶

Vessel Activity in Northwest Alaska, 2015



Source: Marine Exchange.

⁵ <http://www.poa.usace.army.mil/Portals/34/docs/operations/RH/nome/2012NomeHarborPIProject.pdf>.

⁶ Marine Exchange, 2015.

Chapter Two: Nome Port and Harbor Facilities

The Port of Nome offers the most developed and capable maritime infrastructure in Western Alaska. This chapter describes the port's infrastructure, role in the region, and activity.

Description of Port and Harbor

Since the early 1900's, the Port of Nome has served as a regional hub for commerce and community development. After a century of activity and investments, Nome's port facilities serve a wide variety of customers, including subsistence and commercial fishermen, gold dredgers, regional shippers, tourism operators, public research and enforcement vessels, and vessels engaged in operations north of the Arctic Circle.

Nome's outer harbor is composed of a 3,000-foot causeway, three sheet pile docks, and a breakwater to the east. Shipping companies use these docks for loading and unloading cargo, gravel, and refined petroleum products. The shallower inner harbor is located at the mouth of the Snake River and includes the Small Boat Harbor and Snake River development. This harbor supports smaller vessels including gold dredging operations, commercial fishing, and recreation travelers. In general, the outer harbor is used for incoming cargo and fuel and outgoing gravel. The inner harbor facilitates redistribution of these and other supplies to outlying communities.

Port of Nome, 2015



Source: City of Nome.⁷

⁷ Note: Unless otherwise specified, all photos in report are used with permission from the City of Nome or Garrett Evridge.

As a public port, Nome is open for all commercial and non-commercial users. The COE conducts annual dredging of the navigation channels and maneuvering basins. The City of Nome is responsible for dredging of berthing areas in front of the sheet pile docks. Vessel activity at the outer harbor typically occurs following breakup in June and concludes in November. The inner harbor usually freezes over in October and the outer harbor is iced-in by December. Nome residents use the frozen port as a transportation corridor for commuting, hunting, and fishing.

A major advantage of the port is a narrow tidal range, generally no more than 1.5 feet. However, during storm events, tidal surges can significantly affect water levels. During heavy southerly storms, vessels are prevented from mooring at causeway docks because of wave action. The water level at the port fluctuates significantly depending on the direction and duration of wind. A sustained southerly wind can increase water levels in the port by six feet while a northerly wind can reduce water levels by the same amount.

Recognizing that the port is critical to regional sustainability and economic development, there has been a longstanding commitment by local, state, and federal partners to make continuous improvements to the port and related infrastructure. Major improvements are noted in the table below.

Table 1. Port of Nome Development Projects

Year Completed	Project	Year Completed	Project
1925	Sheet Pile Jetty (Harbor Entrance Channel)	2006	East Breakwater
1951	Town Seawall Construction	2007	Small Boat Harbor South Dock (COE Improvements)
1985	Causeway (West Breakwater)	2008	Small Boat Harbor East Dock (COE Improvements)
1985	Industrial Pad	2008	Small Boat Harbor Low Level Dock
1988	Causeway Pipeline	2008	Inner Harbor Dredging (Deepen Basin)
1989	West Gold Dock	2008	Small Boat Harbor East Floating Dock
1991	City Dock	2012	Causeway High Mast Lights
1999	Small Boat Harbor Fish Dock	2013	Inner Harbor High Ramp Construction/Dredging
1999	Small Boat Harbor West Floating Dock	2013	New Snake River Bridge
2005	60-foot Concrete Barge/Launch Ramp	2015	Middle Dock
2005	Outer Harbor Dredging (Basin Expansion)		

Source: City of Nome.

Outer Harbor

The outer harbor handles the majority of cargo and refined products moving through the port. Three docks offering -22.5 feet MLLW are located on a 3,000-foot causeway. The 200-foot City Dock is equipped with marine headers to handle bulk fuel deliveries. It can also be used to fuel vessels and load barges destined for regional communities. The City Dock is currently the primary location for unloading mainline cargo barges. Completed in 2015, the 210-foot Middle Dock is situated between the City Dock and the West Gold Dock and will also be used for unloading mainline cargo. Construction concluded in 2015, and after minor dredging of the berthing area, the dock will be in service by spring of 2016.



The West Gold Dock is 190 feet; it handles nearly all of the rock and gravel movement for the region. It is also the primary location to load and unload heavy equipment. A significant challenge is that gravel ramps must be built for roll-on/roll-off (RoRo) equipment with frequent conflicts due to differing heights of the barges and the fixed height of the dock. Completion of the Middle Dock has solved this problem by providing a ramp sloped at 10 percent built into the dock.

The opening between the breakwater and the causeway is approximately 500 feet at 0 feet MLLW. It serves as the access to both causeway docks and the Snake River entrance into the Small Boat Harbor. Buoys outline the -12 feet MLLW navigation channel from the outer harbor entrance into the inner harbor. Vessels can shelter in the outer harbor to avoid weather.

Inner Harbor

The inner harbor is comprised of the Small Boat Harbor, various dock faces, and development along the Snake River, including a 60-foot wide concrete launch ramp and an elevated RoRo high ramp. The Nome Small Boat Harbor has a depth of -10 feet MLLW and offers protected mooring for small vessels alongside sheet pile and floating docks. Smaller cargo vessels and landing craft load and unload cargo, equipment, and gravel at the inner harbor sheet pile docks and ramps. Refined petroleum products are discharged and loaded at the inner harbor's east dock for export to surrounding villages.

The launch ramp and adjacent high ramp provides bulk cargo carriers with a suitable location closer to the causeway and industrial pad to trans-load freight to landing craft and RoRo equipment barges. The location also has approximately two acres of uplands for container, gravel, vessel, and equipment storage. The high ramp was built in 2013 to add capacity for efficient loading and unloading of landing craft.

A fish processing plant owned by Norton Sound Economic Development Corporation (NSEDC) is located in the inner harbor. Approximately 100 gold dredges, 25 fishing vessels, and 25 other vessels (tugs, sailboats, and subsistence fishing boats), comprise the inner harbor fleet. This fleet operates locally and in Norton Sound.

Uplands

The Port of Nome currently has approximately 43 acres of uplands available for vessel haul out, storage, and other uses by commercial users. A wide array of vessels, including gold dredges, commercial fishing vessels, tenders, and landing crafts, are pulled from the water using trailers or airbags to overwinter on shore. As port activity increased, and as more vessels have been hauled out, additional uplands



have been sought. The City is in the process of acquiring seven acres of land, previously owned by the Air Force, to expand uplands. Additional uplands will eventually be developed from an 18-acre site located north of the tank farm.

Nome's Middle Beach is zoned open space/recreation and commercial, and portions may eventually be used for development of marine related services. The area next to the harbor itself is zoned commercial, while the area to the west of the new inner harbor entrance and along the west bank of Snake River is zoned industrial. The area along the east side of the Snake River (also known as Belmont Point) is zoned general use.

A Strategic Regional Port

Nome plays a vital role in Northwest Alaska, serving as a transportation hub for air, road, and marine activities. Nome is a staging ground for operations north of the Bering Strait. In the spring, equipment and materials are brought to Nome in anticipation of the ice-free season. In the fall, Nome serves as a demobilization center for companies operating in the Arctic. Dutch Harbor, located approximately 800 miles to the south, is the closest port offering deep-water maritime facilities. Both Bethel and Dillingham offer relatively developed shallow-water facilities.

Lynden Transport offers scheduled freight service to Nome, including the *Alaska Provider* and the *Nenana Provider*, barges measuring 250 X 70 and 400 X 100 feet, respectively. Alaska Logistics provides monthly barge service from Seward and Seattle, typically from June to October. Western Towboat provides seasonal tug service in the region with four tugs, the largest of which is 120 feet. Crowley specializes in distribution of refined petroleum products. In addition to operating a 4.6 million gallon tank farm in Nome, Crowley operates a fleet of barges used to transport refined products from offshore tankers to Nome and smaller communities. Crowley also provides spill response and support services to the oil and gas industry. Both Delta Western and Vitus Marine also provide shipping services for movement of refined products into Nome.

Bonanza Fuel, a subsidiary of the Sitnasuak Native Corporation, also operates a commercial petroleum tank farm in Nome with storage capacity of 5.9 million gallons. Bonanza provides trucked delivery of fuel and propane products to Nome and the surrounding road system, aviation fuel wing delivery at the Nome airport, and is the primary supplier of marine grade fuel to vessels at the Nome port & harbor.

Nome’s aviation connectivity is an important regional asset with considerable movement of passengers and freight. Two paved runways (6,000 and 6,175 feet, respectively) at the Nome Airport facilitate regional flights, daily service from Anchorage, and occasional charter flights to Russia. In 2014, nearly 60,000 passengers flew into and out of the Nome Airport on scheduled carriers. Freight volume totaled nearly 13 million pounds and more than 22 million pounds of mail moved through the airport. The 1,950 foot gravel strip at the Nome City Field is used mainly by smaller, privately owned single-engine planes.

Table 2. Aviation Activity at Nome Airport, 2014

Category	Inbound	Outbound
Passengers	57,984	58,228
Freight (lbs.)	9,146,519	3,841,584
Mail (lbs.)	15,299,443	6,710,602
Origin/destinations*	51	64

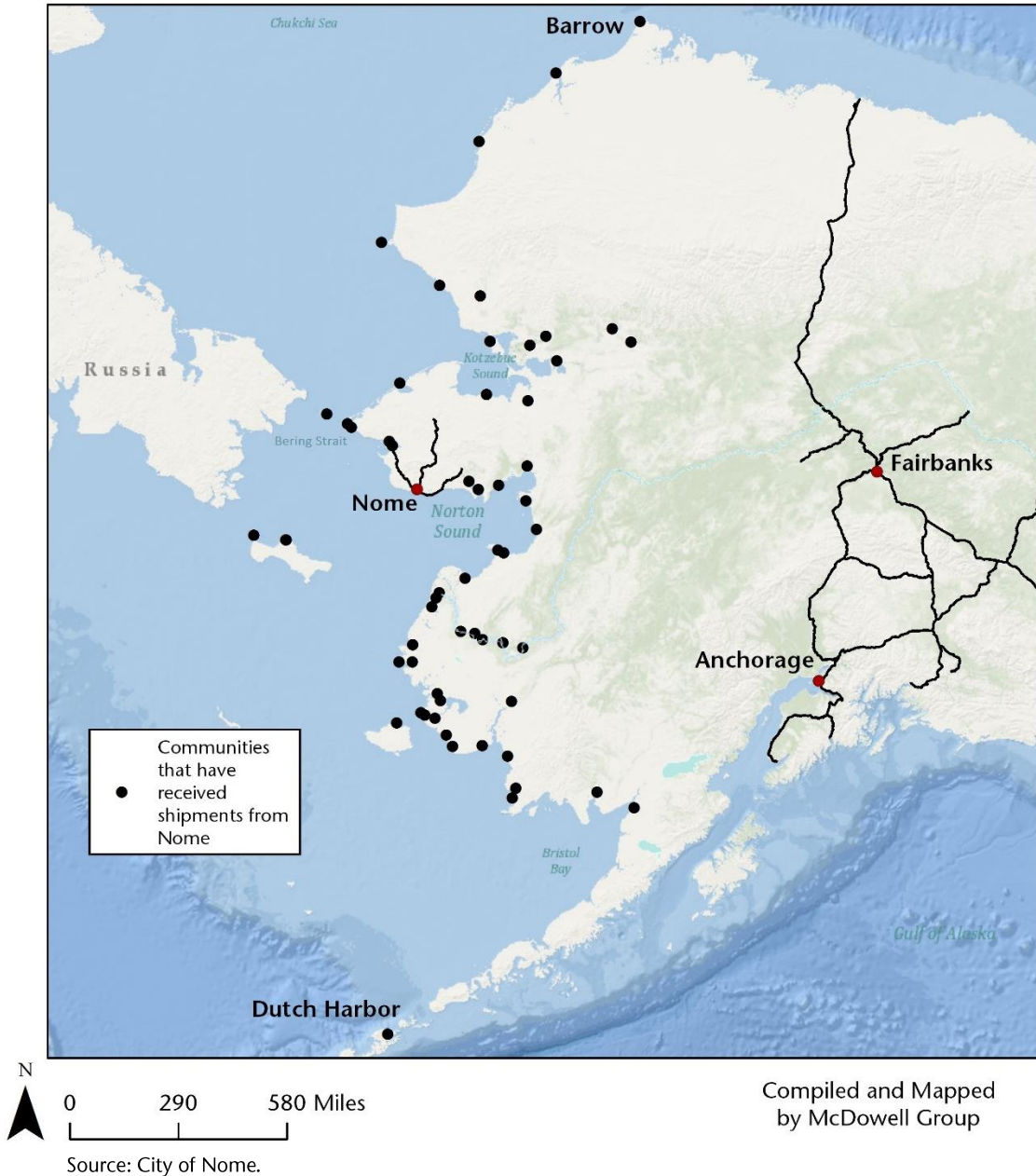
*Includes both direct international and domestic flights.
Source: BTS.

Nome is connected to nearby communities, camps, and industrial sites by more than 230 miles of road. Three main routes are open seasonally and terminate in Teller, Council, and at the Kougarok River. The State of Alaska has explored the construction of a new transportation corridor between Nome and interior Alaska. The proposed road or railway would provide access between numerous regional communities and mineral deposits to the State’s road, rail, and port system. The State estimates that residents in affected communities would realize annual savings of \$19.1 million, or \$3,900 per person. Improved access to mineral deposits, such as Illinois Creek, a potential placer mine, and deposits in the Ambler mining district, would save mining operations \$120 million annually in the transport of fuel, freight, and mine concentrates. In addition to these economic benefits and potential for new high-paying jobs, the corridor would improve access to public services for residents in currently isolated communities.⁸

Approximately 60 communities ranging from Dutch Harbor to Barrow have received shipments from the Port of Nome in recent years. Gravel, sand, and rock comes from local gravel pits or the Cape Nome Quarry, located 12 miles east of Nome. Additionally, vessels destined for the North Slope often utilize Nome for fueling or minor provisioning. For example, Shell’s recent exploration activity in the Chukchi Sea resulted in an increase of vessel calls in Nome.

⁸ http://www.dot.alaska.gov/stwdplng/cip/stip/projects/Assets/Western_Access_COC.pdf.

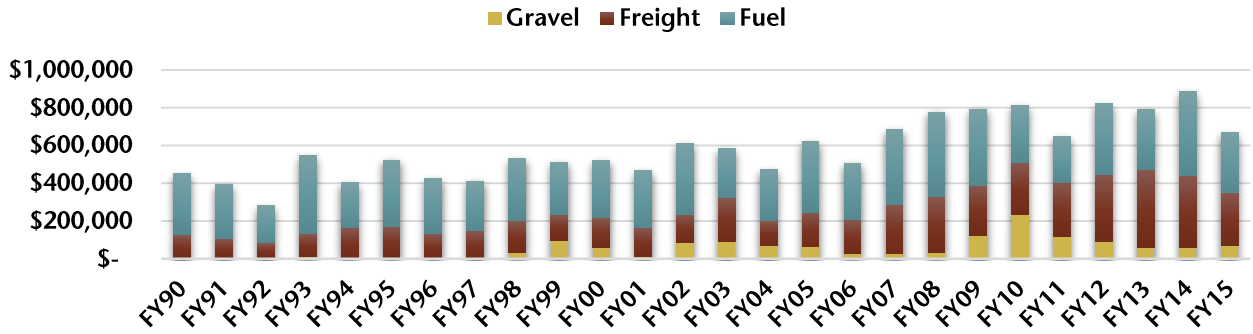
Communities Connected to the Port of Nome



Port Activity

Movement of fuel, freight, and gravel are the main sources of revenue and activity at the Port of Nome. Over the last ten years, the port has handled an annual average of 53,000 tons of gravel, rock, and sand; 34,000 tons of freight; and 13.1 million gallons of refined products. This port activity has generated more than \$700,000 annually during this period. While gravel, rock, and sand volume tends to fluctuate due to construction project demand, shipments of refined products have been relatively stable. Freight volume has grown steadily over the last ten years, climbing to a record 56,500 tons in FY2013.

Figure 1. Port of Nome Revenue by Source, FY1990—FY2015



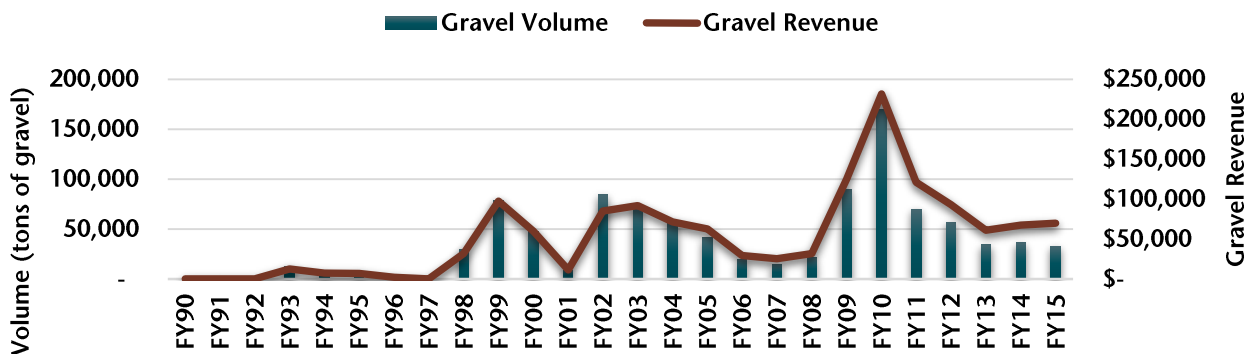
Source: City of Nome.

Gravel, Sand, and Rock

Shipments of materials (including gravel, sand, and rock) from Nome throughout the region and as far south as Dutch Harbor are an important, but volatile, portion of Port of Nome activity. Volume is driven by construction activity in the region, and is closely tied to the State of Alaska’s capital budget. The Cape Nome quarry, located 12 miles from Nome, is an important source of armor rock which is used throughout the region for seawalls, breakwaters, and causeways. Containing approximately one hundred years of supply, rock from the site is high-grade and durable, properties difficult to find in the region.⁹

Materials are mined near Nome, trucked to the causeway, loaded onto barges using a conveyer system, and transported to final markets. Demand for these shipments is driven primarily by capital construction projects, including harbor and airport development. The relationship between the State capital budget and gravel shipments was evident after materials volume fell drastically following nearly 170,000 tons shipped in FY2010. While volume is likely to be modest in the near future due to continued small capital budgets, it is expected materials from Nome will continue be utilized for construction projects in the region. In the event State capital budgets increase, volume will likely increase to previous levels.

Figure 2. Port of Nome Gravel Total Volume and Revenue, FY1990—FY2015



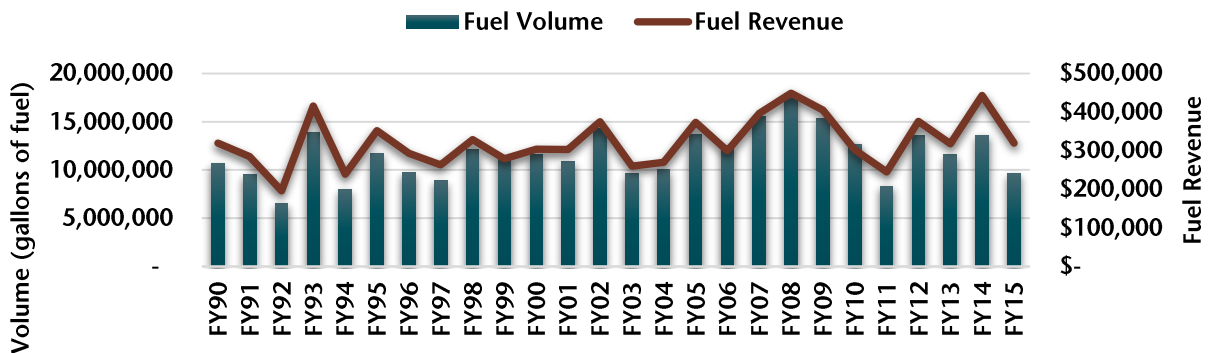
Note: Figures include both inbound and outbound shipments.
Source: City of Nome.

⁹ Personal Communication, Joy Baker, Port Director, City of Nome, December, 2015.

Refined Products

Refined petroleum products are transported from the port to tank farms through a city-owned pipeline. Crowley, Bonanza Fuel, and the Nome Joint Utility System maintain the three tank farms connected to the pipeline. While the majority of fuel stored in local tank farms is used in Nome, the pipeline can be used to load fuel barges and fuel vessels. Port officials indicate marine retail fuel sales are increasing as more vessels are transiting the area. Since 2000, approximately one-third of all refined products brought through the port are either redistributed to other communities or used to fuel vessels.

Figure 3. Port of Nome Fuel Total Volume and Revenue, FY1990—FY2015



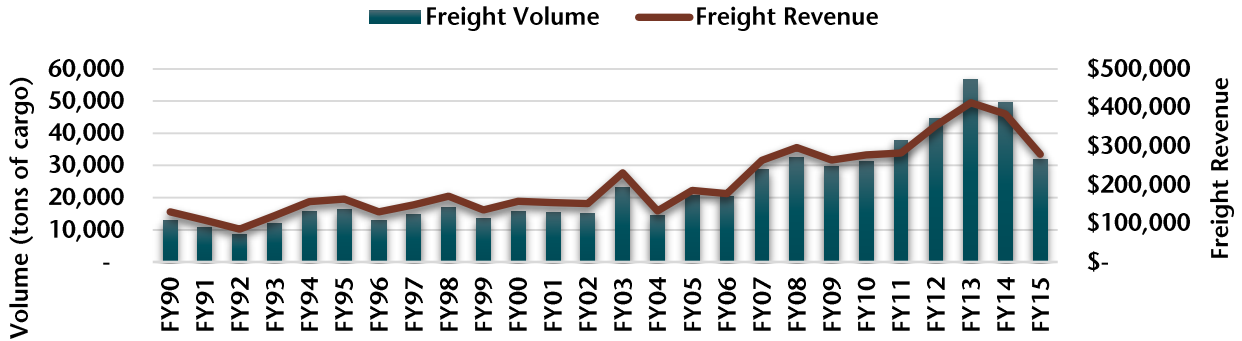
Note: Figures include both inbound and outbound shipments.
Source: City of Nome.

Freight

Freight shipments have grown steadily since the late 1980s, peaking in FY2013 at slightly more than 56,500 tons. Customers pay the port between \$5.78 and \$11.55 per ton in tariffs. Freight volume has increased due to outbound shipments of contaminated soils, and inbound and outbound shipments of construction materials for projects around the region. Since 2000, approximately 40 percent of all inbound freight is redistributed to smaller communities. Freight is typically unloaded from barges using forklifts, or when possible, a RoRo configuration is used. Shippers provide their own stevedoring and unloading services.



Figure 4. Port of Nome Freight Total Volume and Revenue, FY1990—FY2015



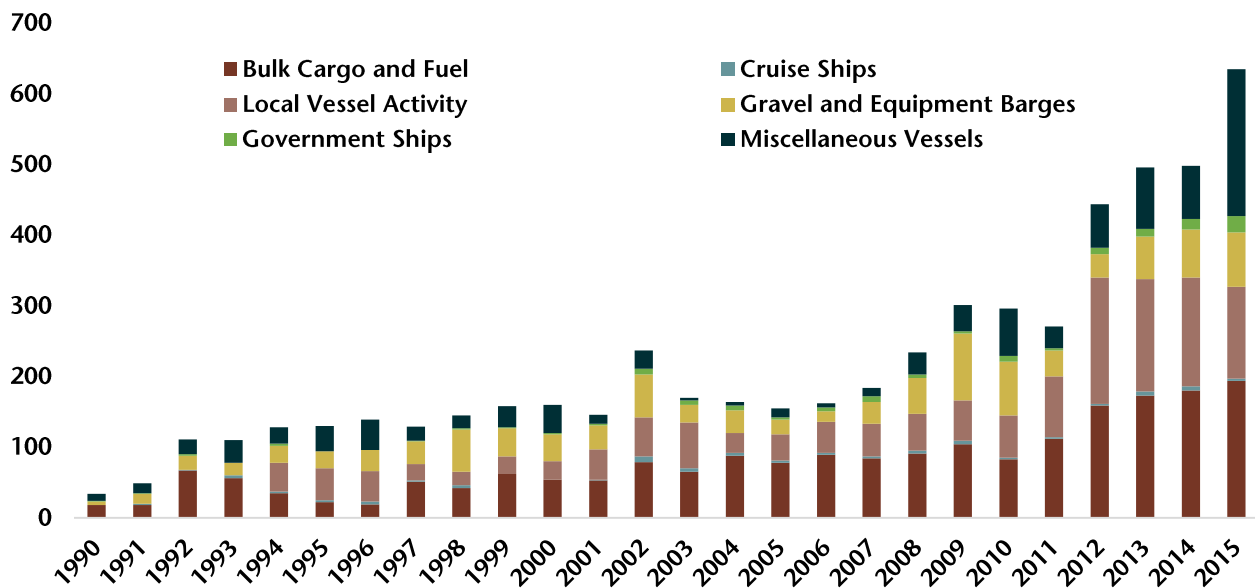
Note: Figures include both inbound and outbound shipments.
Source: City of Nome.

Vessel Operations

Vessel traffic has increased substantially, from 34 vessels in 1990 to 635 in 2015. The increase was driven by fuel and cargo, recreational, government, and dredge activity. This vessel activity provides the community of Nome with important economic activity when crew and visitors spend money at restaurants, hotels, and stores.

With the outer harbor dredged to -22.5 MLLW, many larger vessels anchor and use smaller skiffs or inflatables to come ashore. Additionally, as vessel traffic increases, congestion forces some vessels to anchor until space is available. Approximately 12 vessels anchored offshore in 2007, increasing to a record 123 vessels in 2015.

Figure 5. Port of Nome Total Vessel Port Calls, by Type, 1990—2015



Source: City of Nome.

The offshore gold mining fleet has increased drastically in recent years, rising from five in 2008 to more than 100 in 2015. The remainder of the local fleet includes approximately 25 commercial fishing vessels and 25 other miscellaneous vessels.

Table 3. Port of Nome Total Vessel Port Calls, 1990—2015

Year	Total Calls	Year	Total Calls	Year	Total Calls
2015	635	2006	162	1997	129
2014	498	2005	155	1996	139
2013	496	2004	164	1995	130
2012	444	2003	170	1994	128
2011	271	2002	237	1993	110
2010	296	2001	146	1992	111
2009	301	2000	160	1991	49
2008	234	1999	158	1990	34
2007	184	1998	145		

Note: These figures do not include vessels anchored offshore.
Source: City of Nome.

Chapter Three: Development Landscape

This chapter includes an overview of regional development activities that have current and future implications for the Port of Nome.

Fisheries

Nome is the regional hub for commercial fisheries in the Norton Sound region. The fishing fleet of approximately 25 local vessels harvest crab, salmon, and halibut. In the last decade, the number of fishermen harvesting seafood has nearly doubled from 99 in 2005 to 184 in 2014. Over the same time period, seafood harvest volume has fluctuated, while overall earnings and value have increased. The increase in earnings is due mainly to increased king crab and salmon harvests.



Table 4. Nome Census Area Commercial Fishing Activity, 2005—2014

Year	Number of Fishermen Who Fished	Total Pounds Landed	Estimated Gross Earnings
2005	99	3,675,242	\$1,950,620
2006	109	2,503,126	\$1,848,108
2007	116	1,693,153	\$2,143,879
2008	126	1,980,283	\$3,298,712
2009	125	1,673,268	\$2,781,989
2010	168	3,102,448	\$3,324,156
2011	178	3,284,769	\$4,165,684
2012	199	1,842,563	\$4,046,342
2013	216	2,792,756	\$4,196,135
2014	184	2,642,235	\$4,409,997

Source: CFEC.

Norton Sound Seafood Products

Norton Sound Seafood Products (NSSP) is the main processor in Norton Sound. The operation is located at the port. In 2015, NSSP processed more than three million pounds of king crab, salmon, and halibut in Nome, Unalakleet, and Savoonga with buying stations in Shaktoolik, Golovin, Moses Pt. (Elim), and Koyuk. More than \$4.5 million was paid to resident crab, halibut, and salmon fishermen in the 2015 commercial fishing season and another \$2.1 million in wages were paid to 267 NSSP employees.

Table 5. Norton Sound Seafood Products Harvest, 2015

Fishery	Number of Harvesters	Total Harvest (pounds)	Amount Paid to Harvesters
Crab	36	428,656	\$2,353,826
Salmon	137	2,496,834	\$1,927,552
Halibut	24	52,994	\$230,446

Source: Norton Sound Seafood Products.

Most of NSSP’s salmon processing occurs in Unalakleet, while crab, halibut, and small amounts of salmon are processed in NSSP’s Nome facility. In Savoonga, small amounts of halibut are processed. Six vessels support commercial fishing operations including tendering of seafood from harvest grounds to processing plants. A seventh vessel, a new 49-foot shallow draft tender, is being built in Homer which is expected to be operational by summer of 2016.

Mining Activity

Mining has played a vital role in Nome’s development and will continue to do so in years to come. Since 1880, the Nome mining district has produced the state’s third largest quantity of gold, behind Fairbanks (Fort Knox Mine) and Juneau (Kensington and Greens Creek mine).¹⁰ In addition to a long history of placer mining in the region, there are a number of mining prospects in the region that could stimulate shipment of equipment, supplies, and construction materials through the port if they progress to advanced exploration or development.

In recent years, the discovery of a high-grade graphite deposit has attracted attention from developers and investors. Several other deposits, most of them gold deposits, have attracted exploration programs during the past five years by established world-class mineral exploration and development companies. Described below are some key prospects that could impact port operations during mineral exploration, development, and operation.



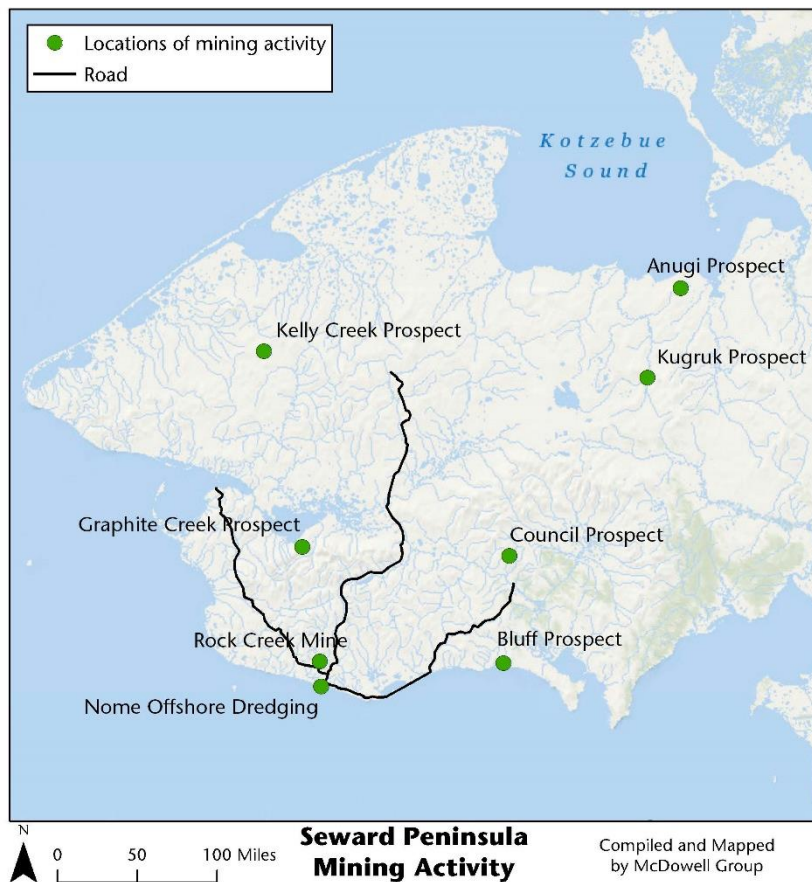
Offshore dredging around Nome is conducted by a wide variety of mainly floating dredges, including small pontoon vessels to large barges. Highlighted by the Discovery Channel’s Bering Sea Gold television show, record gold prices and availability of offshore leases resulted in a significant increase in active gold dredges, from just three in 2004 to a record 128 in 2012.¹¹ Today, roughly 100 dredges mine in two recreation areas along the coast or in dedicated leases. While most mining activity occurs in the ice-free summer months, some mining occurs from the ice during the winter.

¹⁰ Alaska’s Mineral Industry 2014, Special Report 70. Alaska Department of Natural Resources Division of Geological & Geophysical Surveys.
¹¹ City of Nome.

Graphite Creek prospect is currently the nation's largest and highest grade large flake graphite deposit. Graphite One Resources is exploring the deposit and working to advance the project beyond exploration to develop an operating mine. Production is anticipated to begin in 2017.¹²

Rock Creek Mine is an open-pit gold mine located 6 miles north of Nome with probable reserves of 325,000 ounces of gold. NovaGold Resources Inc. operated the mine briefly for two months in 2008, but then halted operation and eventually divested themselves from the project. In 2012, Bering Straits Native Corporation (BSNC) purchased the mine and land. However, in 2015, BSNC entered into an agreement to sell the mine equipment and completed reclamation of the disturbed ground.¹³

Seward Peninsula Mining Activity, 2015



The region surrounding the Kugruk Prospect has produced more than 500,000 ounces of placer gold. NANA Regional Corporation is currently exploring the prospect and has identified underground zones of significant gold mineralization. The Anugi Prospect was recently the site of exploration in 2010 and 2012 by NANA. Primary mineralization of the region includes zinc, lead, and silver.

The Bluff Prospect and Council Prospect first saw mining activity in the early 1900s during the Nome gold rush. Most recently, in 2010 and 2011, Millrock Resources Inc. explored the Bluff Prospect for gold through drilling and geophysical exploration programs. Between 2010 and 2012, Millrock Resources Inc. and Kinross Gold

¹² Alaska Deep Draft Arctic Port System Feasibility Study: A Subset of the Alaska Regional Ports Study, Economics Appendix B; U.S. Army Corps of Engineers; January 2015.

¹³ <http://www.adn.com/article/20151117/gold-dreams-scrapped-defunct-mine-near-nome>

Corporation conducted geochemical and drilling exploration programs on the Council Prospect. The Kelly Creek Prospect hosts gold mineralization and was explored through drilling programs in 2010 and 2011 by Graphite One Resources (then named Cedar Mountain Exploration). While exploration efforts ceased in 2012-2013, these prospects still offer potential.

Visitor Industry

Alaska attracts nearly 2 million visitors annually, with the vast majority traveling during the five-month summer period. Data in the table below is the most current information published by the State of Alaska on estimated visitor volume; the summer period is 2014 and the winter is October 2014 to April 2015. Cruise passengers represented nearly 60 percent of summer visitation. Preliminary estimates for summer 2015 reflect growth in cruise and air travel.

Table 6. Alaska Visitor Volume, by Transportation Market, 2014

	Summer	Winter	Annual
Cruise	967,500	0	967,500
Air	623,600	274,900	898,500
Highway/ferry	68,500	11,900	80,400
Total	1,659,600	286,800	1,946,400

Source: *Alaska Visitor Statistics Program VI (AVSP)*.

Notes: Summer refers to May-September; winter refers to October-April. Air visitors entered and exited Alaska by air; cruise passengers spent at least one night onboard a cruise ship; highway/ferry visitors entered or exited Alaska by highway or ferry.

Visitor Traffic

The last time out-of-state visitation to Nome was measured was in summer 2011, when visitor volume was estimated at 4,000.¹⁴ Visitors who traveled to the Far North region (including Nome, Kotzebue, and Barrow) spent an average of \$1,820 per person while in Alaska, compared to an average of \$941 per person for visitors traveling to other regions in Alaska. Of this amount, an estimated \$251 per person was spent in the Far North region.

Cruise ships calling at Nome have historically been small ships with capacity of less than 250 passengers. The 2015 schedule saw five calls including the *L'Austral*, *Le Soleal*, and *Le Boreal* (Ponant Cruises), *Bremen* (Hapag Lloyd Cruises), and *Silver Discoverer* (of Silversea Cruises). The 2016 cruise season is projecting growth for visitation in Nome with four port calls, including one by the 1,080 passenger *Crystal Serenity*. In addition to the passengers reflected in the table below, crew accounts for another 30 percent to 70 percent of visitor volume, depending on the cruise line and vessel.

¹⁴ *Alaska Visitor Statistics Program VI*, prepared by McDowell Group for Alaska Department of Commerce, Community, and Economic Development.

Table 7. Nome Cruise Ship Traffic, 2006—2015 (2016 proj.)

	Passengers	Port Calls
2006	621	5
2007	500	5
2008	640	5
2009	949	8
2010	308	2
2011	528	4
2012	522	3
2013	1,039	8
2014	1,218	8
2015	640	5
2016 (proj.)	1,504	4

Source: Cruise Line Agencies of Alaska.

Regional Cruise Traffic Outlook

Cruise traffic in western and northern Alaska communities reflect vessels transitioning between Alaska and Asia markets as well as vessels sailing on Arctic itineraries. Although regional cruise traffic is relatively small when compared to the overall Alaska market, response capabilities are limited in Western Alaska. A vessel emergency could have tremendous impact on the port and the community’s emergency response capabilities.

Table 8. Western and Northern Alaska Cruise Traffic, 2015

Port	Passengers	Port Calls
Adak	90	1
Attu	90	1
Dutch Harbor/Unalaska	4,112	8
Kodiak	13,559	12
Nome	640	5
Point Barrow	120	1
St. Mathew	477	3
St. Paul	305	2

Source: Cruise Line Agencies of Alaska.

The 2016 cruise season includes the following activity in Nome:

- The *Crystal Serenity* (1,080 passengers and 655 crew) of Crystal Cruises will stop once in Nome as part of a 32-day voyage from Seward through the Northwest Passage, ending in New York City. Other Alaska port calls include Kodiak and Dutch Harbor. Arctic port calls include villages in Northwest Territories, Nunavut, and Greenland. The *Crystal Serenity* is the first large cruise ship to sail the Northwest Passage, and will cost approximately \$24,000 per passenger.
- The *Silver Discoverer* (120 passengers and 30 crew) of Silversea Cruises will call once at Nome, as part of a 12-day voyage that starts in Nome before sailing to the Russian Far East, returning to Alaska via

the St. Paul Islands, Dutch Harbor, and several Alaska Peninsula villages before completing the cruise in Seward. The 12-day voyage costs around \$10,000 per person.

- The *Soleal* (264 passengers and 139 crew) of Ponant Cruises will begin a 12-day voyage in Nome, ending in Seward. Other ports on the itinerary include Kodiak, Dutch Harbor, St. Paul, and Anadyr (Russia), among other villages. Passenger fares begin at approximately \$6,400 per person.
- The *Hanseatic* (175 passengers and 125 crew) of Hapag-Loyd Cruises will sail on a 30-day voyage from Nome to Norway, via Russia. Passenger fares start around \$27,000 per person.

Additional cruise activity in the Arctic in 2016 includes the voyages listed below. While most of the Arctic cruise activity is in Norway, Iceland, and Greenland, it is important to recognize the growing interest in Arctic cruise experiences.

- Lindblad Expeditions (the cruise line associated with National Geographic) will offer seven Arctic cruise itineraries in 2016. Destinations include Norway, Greenland, Iceland, Baffin Island, and Ellesmere Islands.
- Royal Caribbean will offer an 11-night Arctic Circle cruise that includes Norway and Denmark along with scenic destinations above the Arctic Circle.
- Ponant Cruises will offer ten Arctic itineraries (in addition to their one Alaska itinerary) that stop in Norway, Iceland, Greenland, and Svalbard Islands.
- Hurtigruten, a Norway-based shipping and cruise line, will offer seven Arctic itineraries, including ports in Norway, Greenland, and Iceland.
- Hapag-Loyd will offer six Arctic itineraries (in addition to their one Alaska itinerary) that stop in Norway, Greenland, Iceland, and the Canadian Arctic.
- Quark Expeditions will offer over a dozen Arctic itineraries that explore the Russian and Canadian Arctic, Greenland, Iceland, Svalbard Islands, and Norway.

National Security and Public Safety

U.S. Coast Guard

Coast Guard operations in Nome date back to the community's early beginnings during the Gold Rush at the start of the 20th Century. In 1905, the Coast Guard opened a station in Nome and endowed it with the mission to protect sailors and vessels in regional waters. At that time, the Coast Guard worked just in waters proximal to Nome. The station remained active until 1949.

Today, burgeoning economic activity in the Arctic has driven the Coast Guard to expand its presence beyond Nome to encompass waters even outside of U.S. territorial waters. Nome continues to contribute to the Coast Guard's mission in the Arctic, although no large facilities or year-round personnel have been installed in the community



Photo Credit: U.S. Coast Guard, Petty Officer 1st Class Sara Francis.

since the Coast Guard closed the Nome station in 1949. Rather, the Coast Guard transports supplies and personnel north on a seasonal, as-needed basis.

Nome, located on the Seward Peninsula along Alaska's western coast, and with more developed infrastructure than other regional communities, is uniquely capable to support the Coast Guard's Arctic fleet. Resupply cargo as well as Coast Guard personnel arrive in Nome by transport on C-130 aircraft. In 2015, six different Coast Guard vessels called on Nome nine times, totaling 15 days in port. While the *Maple*, *Alex Haley*, and *Sycamore* could moor in the outer harbor, the *Sherman*, *Healy*, and *Munro* anchored offshore, primarily because of depth restrictions.

Another Coast Guard mission in Nome is the inspection and regulation of local marine vessels. The service brings north personnel and equipment from other Alaska bases for seasonal and temporary assignment to oversee local fishing and dredge mining vessels. Additionally, Nome hosts a Coast Guard transmitter that boosts communication between the Coast Guard, vessels, and helicopters in the Arctic.

Elsewhere in the Arctic, the Coast Guard provides seasonal emergency support, typically consisting of helicopters and support personnel. Located in Kotzebue, Barrow, and Deadhorse, these efforts are relatively small, and rely heavily on distant bases, such as the Kodiak Air Station which is located more than 1,000 nautical miles from Nome.

The Coast Guard is working on establishing shipping lanes in the Bering Strait which will concentrate vessel activity. Additionally, the Coast Guard is actively pursuing acquisition of additional ice-breaking capacity as two of its three icebreakers are nearly 40 years old. President Obama's visit to Alaska in 2015 brought attention to the relative lack of U.S. icebreakers. In addition to other Arctic-specific policy goals announced during his visit, the President supports accelerating the timeline of accruing an additional Coast Guard ice-breaker, from 2022 to 2020.¹⁵

National Guard

Nome hosts a detachment of an aviation unit of the Alaska Army National Guard. The unit operates Black Hawk helicopters in support of search and rescue missions throughout the state. Both full-time and part-time personnel make up Nome's National Guard presence. National Guard facilities include an armory, a vehicle maintenance facility, and an aviation operating facility.

Research

With the potential for commercial, transit, national security, search and rescue, cruise tourism, and other maritime activities, there are a number of important research initiatives that have a direct impact on Arctic planning, maritime infrastructure needs, and port development in Nome. The port was called on 140 times in 2015 from vessels conducting research in the Arctic and Sub-Arctic.

One incident in 2012 drew international attention when the Coast Guard cutter *Healy*, the U.S.'s only operating polar ice breaker, escorted a Russian tanker to deliver an emergency fuel delivery through more than 300 miles

¹⁵ <https://www.whitehouse.gov/the-press-office/2015/09/01/fact-sheet-president-obama-announces-new-investments-enhance-safety-and>

of ice to reach Nome. *Healy* broke a path to within a half mile of the Nome port entrance as it was unable to get closer to shore due to the shallow draft. With this incident, the Institute of Northern Engineering and the Alaska University Transportation Center created the Marine North research program to focus on Arctic maritime transportation, in collaborative efforts with UAF's Geophysical Institute and International Arctic Research Center.¹⁶

Navy

U.S. Navy vessels have used the Port of Nome sparingly. In 2012, the USNS *Sumner*, an oceanographic survey vessel, anchored offshore, unable to dock due to draft limitations. If able, the Navy would use the port to refuel, transship cargo, and shelter from storms.

National Oceanographic and Atmospheric Administration (NOAA)

In the Arctic, NOAA conducts extensive hydrographic surveys to chart the ocean floor. NOAA vessels involved in this mission include the R/V *Fairweather* and R/V *Rainier*, which stopped a combined five times in Nome for logistical support during the 2015 season. Hydrographic surveying commands the scope of NOAA's current Arctic activity, but the administration supports other oceanographic research that could play a role in future Arctic efforts.

University of Alaska Fairbanks

The recently constructed R/V *Sikuliaq* (operated by the University of Alaska Fairbanks and homeported in Seward) traveled to the Arctic Ocean in 2015, stopping in Nome three times for a total of 12 days.

Oil and Gas Support

According to the U.S. Geological Survey, the area north of the Arctic Circle has an estimated 90 billion barrels of undiscovered, technically recoverable oil, 1,670 trillion cubic feet of technically recoverable natural gas, and 44 billion barrels of technically recoverable natural gas liquids in 25 geologically defined areas. These resources account for about 22 percent of the undiscovered, technically recoverable resources in the world. The Arctic accounts for about 13 percent of the undiscovered oil, 30 percent of the undiscovered natural gas, and 20 percent of the undiscovered natural gas liquids in the world. About 84 percent of the estimated resources are expected to occur offshore.¹⁷ The Outer Continental Shelf (OCS) waters off of Alaska's northern coastline encompass the Chukchi Sea and the Beaufort Sea. The Chukchi Sea is believed to hold about 15 billion barrels of recoverable oil and about 76 trillion cubic feet of recoverable natural gas.

In February 2008, Shell successfully bid \$2.1 billion to acquire 275 lease blocks in the Chukchi Sea, in addition to its \$44 million bid in 2005, for 84 leases in the Beaufort Sea. In mid-August 2015, Shell was granted permission to drill. However, as of the summer of 2015, only two wells had been drilled, one each in the Chukchi (Burger) and Beaufort (Sivulliq) prospects. Results from the drilling program were deemed insufficient

¹⁶ <http://ine.uaf.edu/autc/2012/08/20/marine-north-research-program-on-arctic-maritime-infrastructure-needs/>.

¹⁷ http://www.usgs.gov/newsroom/article.asp?ID=1980#_VkONAL-nGwg.

to continue, and Shell announced they would be abandoning OCS exploration "for the foreseeable future" in the October 2015.¹⁸

During the same February 2008 lease sale, Statoil acquired 16 leases, 14 of which were joint bids with ENI Petroleum, in the Chukchi Sea (about 37 miles north of Shell's Burger prospect). ConocoPhillips acquired leases to its Devil's Paw prospect, also in the Chukchi Sea. Both Statoil (Amundsen prospect) and ConocoPhillips announced in 2012 they are deferring any work on their respective Alaska OCS leases. In the fall of 2015, Statoil announced it was ending its exploration efforts in Alaska. Many of these companies' leases are valid until 2018.

Oil and gas development in the region will increase activity at the Port of Nome. Port calls would increase from vessels traveling through the region, refined product throughput could increase, and construction of industrial sites in the region and to the north may mean increased cargo throughput.

Deep Draft Arctic Port

Beginning in 2008, the COE and State of Alaska Department of Transportation and Public Facilities began efforts to identify an optimal site for development of a DDP capable of handling increased maritime traffic and industrial activity in the Alaska Arctic. In 2012 the Alaska Deep Draft Arctic Port System Study began to examine a study area which included more than 3,000 miles of coastline stretching from Kuskokwim Bay to the U.S./Canadian border.



In addition to benefits connected to oil and gas development activity, the study identified other positive changes resulting from the establishment of a DDP. These benefits include local and regional economic growth, increased public and environmental safety, and a strategic U.S. presence in the Arctic.¹⁹ A total of 13 different sites were examined and compared using the following considerations:

- **Mission Proximity:** How far is the site from offshore oil and gas leases, existing and potential mining operations, shipping lanes, and distribution hubs?
- **Intermodal Connections:** What kind and capacity does the site offer in terms of intermodal connections (E.g., airport, road, rail, port)?
- **Uplands Support:** How developed is the site? Does the site already offer capacity to distribute goods to regional communities?

¹⁸ <http://www.shell.us/about-us/projects-and-locations/shell-in-alaska/shell-in-alaska-news-and-media-releases/2015-media-releases/shell-updates-on-alaska-exploration.html>.

¹⁹ Alaska Deep Draft Arctic Port System Feasibility Study: A Subset of the Alaska Regional Ports Study, Economics Appendix B; U.S. Army Corps of Engineers; January 2015.

- **Water Depth:** How far offshore the site is -35/-45 feet MLLW?
- **Navigation Accessibility:** To what degree does icing, predominant winds, tidal fluctuations, waves, or currents limit the site's ability for maritime operations?

Following these comparisons and other analysis, in February of 2015 Nome was selected as the preferred site for a DDP. Nome's Causeway would be extended by 2,150 feet, a 450-foot dock will be added, and dredging to -28 feet MLLW will allow larger vessels access to the port. According to the COE, this project will cost an estimated \$211 million with the City of Nome paying approximately \$113 of the total. Analysis conducted in 2015 by Rodell Consulting indicates the City of Nome does not have the financial means to independently finance its portion.²⁰ The City is currently evaluating potential strategies for public-private partnerships, as well as legislatively decreasing Nome's cost sharing proportion.

In the fall of 2015, Shell's decision to suspend exploration activity in the Arctic prompted the COE to "pause" the ADAPSS as much of the positive benefits resulting from development of an Arctic port are connected to oil and gas activity. However, the City of Nome is confident the benefits of this project will ensure eventual completion.²¹ These benefits include national security and sovereignty, life safety, environmental protection, economic growth, and cultural sustainability.²² Consequently, the City is pursuing funding which will allow completion of design work, and help facilitate eventual construction of the DDP. Detailed drawings of this expansion are located in the appendix.

²⁰ City of Nome — Deep Draft Arctic Port Finance Strategy; Rodell Consulting; October 2015.

²¹ http://www.nomealaska.org/egov/documents/1445642239_09478.pdf.

²² Personal communication, Joy Baker, Port Director, City of Nome, December, 2015.

Chapter Five: Port Development Strategies

Competitive Position

The following summary of strengths and challenges are based on input from Port of Nome officials, industry, and community leaders; and review of Nome Comprehensive Plan 2020 and other port and community development plans.

Strengths

- Nome serves as a critical hub including:
 - Industrial support services.
 - Medical facilities and emergency response.
 - Regional transportation linkages including road, air, and marine systems.
 - International air connections, including Russia.
- Given the coastal location, the port is ice-free sooner and longer than other ports in the region.
- Municipal support for the port and regional development.
- Regional economic assets include minerals, seafood, and sand/gravel/rock.
- A growing commercial fishing sector.
- Arctic shipping activity and local fleet growth.
- National recognition of infrastructure gaps in the U.S. Arctic.
- COE selection of Nome as the preferred location for the DDP.
- Available area for additional uplands.
- Partnership opportunities with Alaska Native Claims Settlement Act corporations, Community Development Quota groups, port customers, and Nome Chamber to support infrastructure development, attract investment, acquire equipment, provide services, and marketing.

Challenges

- Underdeveloped port potential.
- Harbor congestion.
- Ice precludes operation during winter and spring months.
- Significant financial resources are needed to pursue construction of the DDP, and possibly alternative business operations model.
- Higher energy and operating costs affect regional economic development potential.
- The State of Alaska's near-term fiscal situation will likely result in modest capital budgets, potentially reducing throughput at the port.

Capital Projects

The following projects have been identified by City and Port officials as priorities.

Short-term (up to one year)

- **Security:** The Port was recently awarded a \$202,000 grant from the Department of Homeland Security to install security cameras in the port and harbor.
- **Seawall Repair:** The seawall protecting the City of Nome is located just east of the port facility, and runs along the coastline of the downtown area. Completed in 1951 by the COE, the seawall is in need of repair to replace missing armor stone and core rock damaged by 65 years of Bering Sea storms. The port anticipates repairs will be made just prior to breakup in the late spring of 2016.
- **Cape Nome Jetty:** Damaged in 2011 by a large-scale winter storm, the city-owned jetty is in need of repair. This repair qualifies for funding from the Federal Emergency Management Service (FEMA), with work tentatively scheduled for 2016.
- **Deep Draft Port Planning:** In addition to collection of bathymetry and wave data, existing design and construction planning efforts for the DDP should be maintained. Current state capital requests total \$3.25 million.

Medium-term (two to five years)

- **Travel Lift and Haul-out:** As the local commercial fishing and dredge fleet has grown, a travel lift and haul-out facility is of increasing importance. Anticipated to be located along the west wide of the Snake River in the inner harbor, the infrastructure and shore-side facility would cost an estimated \$4.5 million, with another \$300K-\$450K for a 150-ton travel lift. NSEDC has expressed interest potentially in supporting this project at some level.
- **Uplands:** Two new sites are slated for use as uplands, and will increase the port's capacity for maritime operations. A seven-acre site currently owned by the Air Force is in progress of being conveyed to the City of Nome, and should be operational by 2016/17. An 18-acre site located north of the port pad fuel tank farms, was acquired from Nome Gold in 2012. This area will require a significant amount of fill (possibly 500,000 yards) to level and prepare for port activity.
- **Dredging:** In addition to the annual maintenance dredging of the navigation channel and outer harbor basin by the Corps of Engineers, the Port performs periodic dredging of the outer and inner harbor berthing areas along the docks. In an effort to reduce damages to the inner harbor fleet during routine late summer and fall low water events, the Port is seeking Congressional authorization to have the Corps of Engineers dredge the federal area to -12' MLLW. Dredging the berthing area adjacent to the newly-constructed Middle Dock to -22.5 MLLW is expected to be done in the late spring of 2016. A portion of the West Snake River area close to the proposed travel lift and Snake River Floats has been dredged to -4' MLLW, but should be dredged deeper in anticipation of eventual development.
- **Port Road Project:** Listed in the Statewide Transportation Improvement Plan, a nearly one-mile section of road that bisects the port will be widened and resurfaced. Drainage will be improved, and various safety and pedestrian-specific upgrades will be completed. The work is estimated to cost \$6.8 million with the City of Nome responsible for \$268,000.

- **Garco Building:** Built by Kiewit in 1985 and transferred to city-ownership in 1988, the Garco Building is one of the few covered areas available for port activity. The building is in need of maintenance and upgrades, and is currently under evaluation for improvements.
- **Stevedoring:** Consider establishing a training program so the port can provide longshore labor to port users.

Long-term (more than five years)

- **Snake River Floats:** Located just north of the area identified for the travel lift and haul-out facility, floating docks are needed to support small vessel operations, both recreational and commercial, to alleviate congestion in the Small Boat Harbor floating docks system.
- **Pump-out Station:** A pump-out stations for vessel wastewater and sewage is needed.
- **Small-vessel Fuel Station:** A station located in the inner harbor where vessels can purchase gasoline, diesel, and lubricants is needed. This would reduce the risk of spills from vessel operators transporting fuel on their own.
- **Small Boat Launch Facility:** Located on the Snake River, this facility will be used to launch/stage small dredges and recreation and subsistence boats. The likelihood of accidents will decrease as smaller vessels would be concentrated in the river, away from larger vessels in the inner harbor.
- **Small Watercraft Moorage:** Vessels small enough to travel under the Snake River Bridge will be able to use this facility to moor. Users are expected to be primarily small subsistence and recreation boats.
- **Maritime Industrial Services:** Designate the area on the West side of Snake River in the inner harbor as a Harbor Industrial Development Zone for vessel services such as diving, welding, machine shop, ship's chandlery, vessel agent, and other marine service offices.
- **Breasting Dolphins:** Located in the outer harbor and south of the extended causeway, breasting dolphins will function primarily as protected moorage, assisting vessels waiting for dock facilities or needing to provision/exchange crew.
- **Outer Harbor Dock Expansion:** An additional dock, constructed north of the West Gold dock, will increase moorage capacity and reduce port congestion. Dredging will need to be conducted in the berthing and approach areas.
- **Storage and Bonded Warehouse:** Monitor warehouse availability for port-related activity.

Port Engagement and Outreach

Attracting commercial activity to Nome and the port is not a task to be undertaken by the port alone. In all industry sectors, it is important to build relationships and provide information about the Port of Nome and community assets early in the planning process. The following strategies are recommended:

- Mitigate the potential loss of momentum and institutional knowledge on the DDP project by maintaining communication and visibility with officials at the COE, Arctic Port Studies Group, congressional delegation, Coast Guard, and other key federal agencies.
- Coordinate with Nome legislators; the Alaska Department of Transportation & Public Facilities, Commerce, and Military and Veterans Affairs; and the Office of the Governor on infrastructure needs,

capital budget requests, and changes in Port and community capabilities. Special emphasis should be placed on securing funding for the DDP development

- Secure agreements with users of the Northern Sea Route and Northwest Passage to use Nome as a way station and administrative/emergency response center.
- Showcase Nome and Western Alaska infrastructure and services to groups leading on Arctic policy development such as the Arctic Council, Alaska Arctic Policy Commission, and International Maritime Organization. Monitor Coast Guard efforts to develop shipping lanes in the Bering Strait.
- Market port and community facilities to vessels engaged in resource development, research, tourism, and recreation.
- Maintain regular communications with vessel and industry service providers including Marine Exchange, marine pilots, Cruise Line Agencies of Alaska, and Cruise Lines International Association.
- Coordinate with City, Chamber, and business community representatives to ensure visibility at key forums that can affect Port activity. Examples include the Resource Development Council annual conference, Alaska Travel Industry Association convention, Mineral Exploration Roundup in Vancouver, and selected Arctic development forums.
- Continue to work with the Alaska Department of Environmental Conservation and Coast Guard on proper use of emergency tow packages. Pursue establishment of Nome as a test site for evolving response technology, such as sea anchors.²³
- Explore potential for natural gas deliveries to Nome and outlying communities.
- Coordinate with NSEDC on opportunities for facility and vessel expansion, storage, equipment needs, and other services.
- Develop plan for land accreting at the Sand Spit that will rise above the flood plain and be available for commercial development.
- Ensure that Port priorities are reflected in community documents including comprehensive plans, capital budget requests, emergency and disaster response strategies, and economic development plans.

²³ <http://glosten.com/project-spotlight-emergency-ship-arrest-sea-anchor/>.

Port Development Graphics

The following graphics detail the Port of Nome's current and future infrastructure.

PORT OF NOME

RATE STUDY, ANALYSIS & PROJECTIONS

SCOPE OF WORK

- Update historical information from previous studies:
 - Revenue, expenses, and graphics
 - Vessel traffic and vessel classes
 - Commodity movements
 - Rate structure changes
 - Maintenance, repairs & capital costs

- Review sections of Port Modification Feasibility Study to:
 - Confirm assumptions on economic trends
 - Review projections on vessel traffic growth
 - Evaluate commodity load factors analysis

- Analyze economic trends within:
 - Vessel classes
 - Marine industries
 - Port operations

- Forecast demand and growth within:
 - Operations
 - Maintenance/repair
 - Vessel traffic
 - Commodity movement
 -

- Conduct scenario analysis with low, medium, and high forecast projections.

- Identify and recommend:
 - Sustainable rate structure
 - Annual growth rate/percent
 - Capital replacement strategies
 -

- Provide draft for review by Port Staff and Port Commission
- Address comments and incorporate edits to final report

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.

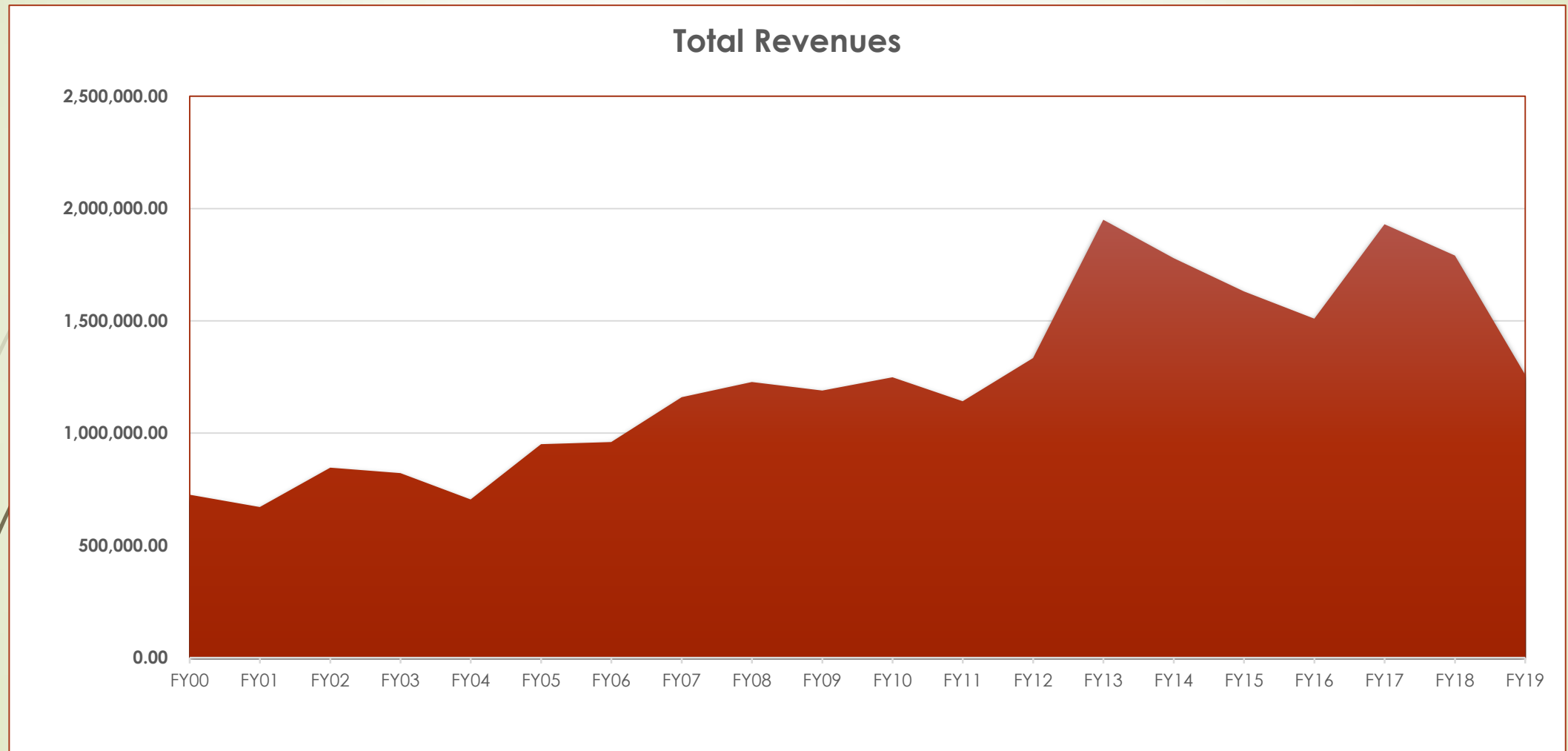
This report is the first phase of work that examines historic revenues and expenses, forecasts vessels and commodities, conducts financial analysis of future conditions, and makes recommendations for rate structure modifications. This first phase forms the baseline from which future work will be compared. 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.

Revenues

Revenue Category	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19
Dockage	53,807.00	62,765.50	68,155.00	87,094	75,296	68,249	98,213	106,647	95,942	126,503	162,469	174,162	98,768
Dock permits	19,008.85	21,342.90	20,863.00	46,841	47,747	66,957	117,485	118,167	133,967	119,163	109,447	125,371	75,036
Fuel Whfg	396,912.42	448,747.78	404,531.88	302,304	244,876	375,836	302,944	443,231	319,647	259,306	321,187	364,891	249,080
Cargo Whfg	263,030.87	296,566.53	263,771.09	277,346	280,540	353,312	407,008	374,843	277,249	252,243	232,950	288,245	193,547
Gravel Whfg	25,301.51	31,962.00	125,035.48	231,658	123,020	93,104	60,390	68,341	70,067	75,956	241,752	111,772	63,213
Storage Rental	52,840.37	74,547.81	82,220.51	92,236	135,378	139,270	173,522	246,946	227,463	227,990	246,984	282,836	282,148
Land leases	173,071.39	152,114.73	158,055.40	140,047	153,398	152,046	210,761	250,038	244,472	237,725	238,203	204,620	214,272
Utility Sales	12,668.00	14,165.05	17,197.50	25,721	19,912	15,282	27,840	26,471	16,533	20,288	49,890	31,833	16,358
Misc revenue	6,500.00	16,595.00	27,110.00	25,795	36,877	36,570	511,540	84,944	81,038	144,011	267,872	79,405	48,217
Interest earnings	156,714.38	109,041.71	22,234.51	7,615	7,542	5,873	11,217	7,609	7,311	17,126	21,152	30,474	19,436
STAK PERS reimbursement				11,709	17,268	27,835	28,920	52,126	157,214	28,730	38,133	96,944	0
Total revenues	1,159,854.79	1,227,849.01	1,189,174.37	1,248,365	1,141,853	1,334,332	1,949,839	1,779,364	1,630,903	1,509,042	1,930,039	1,790,553	1,260,073

Note: FY19 is preliminary through 3/31/19

Total Revenues - Historical



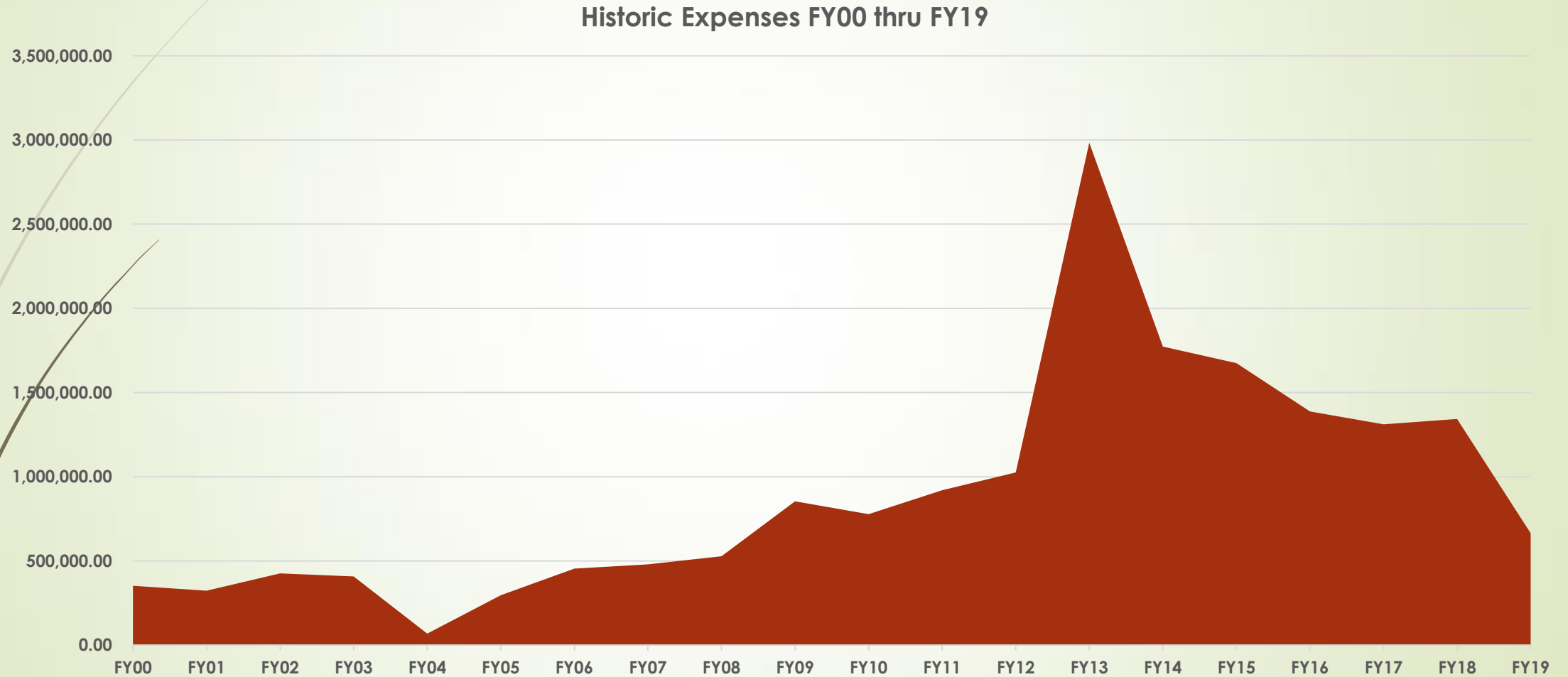
Note: FY19 is preliminary through 3/31/19

Expenses

Expense Category	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19
Labor and benefits	279,443	355,543	416,653	479,776	610,871	697,789	601,089	676,356	663,942	284,013
Utilities	21,451	31,926	24,026	23,750	29,307	33,452	38,349	50,823	50,679	25,470
Supplies	38,501	23,757	52,305	69,847	42,074	42,672	36,582	42,922	31,441	23,267
Insurance	19,100	28,626	28,526	28,624	42,473	43,143	46,329	54,000	53,069	52,951
Professional services	74,767	116,115	144,596	511,551	572,392	327,732	269,423	248,013	263,786	117,612
Repairs and Maintenance	45,260	37,750	22,350	1,574,678	209,283	197,553	161,718	41,989	38,335	24,241
Equipment rental	350	335	585	0	0	0	0	0	0	0
Bad debt expense	(3,787)	(1,905)	(3,127)	90,197	37,595	88,973	3,077	(28,013)	8,745	8,601
Principal/Interest expense	283,812	284,184	151,636	147,612	159,998	164,064	159,526	157,798	149,883	102,280
Other/Misc expense	3,406	23,241	157,629	24,165	34,493	42,201	37,737	34,654	27,482	26,055
Payment in Lieu of Taxes (PILT)	15,479	20,323	30,244	33,268	34,606	37,032	33,947	32,834	55,625	0
Subtotal	777,782	919,894	1,025,422	2,983,467	1,773,091	1,674,610	1,387,776	1,311,376	1,342,988	664,490

Note: FY19 is preliminary through 3/31/19

Historic Expenses



Note: FY19 is preliminary through 3/31/19