



Bering Strait Comprehensive Economic Development Strategy: 2025-2030 DRAFT



Beach at Brevig Mission. Photo Credit: DCRA

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List of Acronyms

ACEP – Alaska Center for Energy and Power
ACS – American Community Survey
AEA – Alaska Energy Authority
AHFC – Alaska Housing Finance Corporation
ANCSA – Alaska Native Claims Settlement Act
ANTHC – Alaska Native Tribal Health Consortium
ARDOR – Alaska Regional Development Organizations
AVEC – Alaska Village Electric Cooperative
AVTEC – Alaska Vocational Technical Center
BEI – Business Enterprise Institute
BLM – Bureau of Land Management
BSDC – Bering Strait Development Council
BSNC – Bering Straits Native Corporation
NREL Alaska – National Renewable Energy Lab: Alaska Campus in Fairbanks
CDQ – Community Development Quota
CEDS – Comprehensive Economic Development Strategy
CFEC – Commercial Fisheries Entry Commission
DCRA – State of Alaska Division of Community and Regional Affairs
DNR – State of Alaska Division of Natural Resources
DOE – U.S. Department of Energy
DOLWD – State of Alaska Department of Labor and Workforce Development
EDA – Economic Development Administration
EMS – Emergency Medical Services
ENVS – Environmental Science
EOP – Emergency Operation Plans
FEMA – Federal Emergency Management Agency
HIP – Indian Affairs Housing Improvement Program
HMP – Hazard Mitigation Plan
HUD – U.S. Department of Housing and Urban Development
IRA – Indian Reorganization Act
KICY – Commercial radio station in Nome
KNOM – Non-commercial Catholic radio station in Nome
kWh – kilowatt hour
LEDP – Local Economic Development Priorities
LEPC – Local Emergency Planning Committee
MOA – Memorandum of Agreement
O&M – Operations and maintenance
NACTEC - Northwestern Alaska Career and Technical Center
NAHASDA – Native American Housing Assistance & Self Determination Act of 1996
NCA – Nome Census Area
NSEDCC – Norton Sound Economic Development Corporation
NSHC – Norton Sound Health Corporation
PCE – Power Cost Equalization
PFD – Permanent Fund Dividend

PSA – Public Service Announcement
SBDC – Alaska Small Business Development Center
SCERP – Small Community Emergency Response Plan
SNC – Solomon Native Corporation
SSBCI – State Small Business Credit Initiative
SWOT – Strengths Weakness Opportunities Threats
TPO – Tribal Police Officer
UAA – University of Alaska Anchorage
UACED – University of Alaska Center for Economic Development
UAF – University of Alaska Fairbanks
USCG – United States Coast Guard
USDA – United States Department of Agriculture
VPO – Village Police Officer
VPSO – Village Public Safety Officer

I. Introduction

The *Bering Strait Comprehensive Economic Development Strategy: 2025-2030* (CEDS) is the result of a continuous planning process at the local and regional level in the Nome Census Area (NCA) of Northwestern Alaska. The goal of this process is to provide for sustainable and responsible development that benefits the people of the Bering Strait Region and improves the quality of life through increased economic opportunity. The current CEDS builds on the work of previous strategy committees and provides strategic direction for organizations and stakeholders in the region for the next five years.

This version of the *Bering Strait Comprehensive Economic Development Strategy* updates and replaces the previous document, which was active from 2019 to 2024. It reflects more recent economic and demographic data, updated Local Economic Development Plans (LEDP's), and the requisite public process to ensure that the plan reflects the wishes of the broader region.

To adhere to the Economic Development Administration (EDA) criteria CEDS must undergo a comprehensive update on a 5-year cycle. Between those comprehensive update cycles, CEDS goes through an annual update cycle which allows for reflection, progress reports, and prioritization of future work.

The current document was developed with generous assistance from the UACED and the EDA.

CEDS Committee

The Bering Strait Development Council (BSDC) serves as the region's CEDS Committee. As stated in the BSDC bylaws, "the purpose of the BSDC is to serve the people, communities, and businesses of the Bering Strait Region of Alaska by promoting economic opportunities that improve the economic, social, and environmental quality of life. The Council is composed to represent the diverse social, economic, environmental, and political interests of the region."

The BSDC contributed to the planning process summarized in this document including contributions by the following individuals:

BSDC Board			
Seat	Sector Represented	Organization Name	Member Name
A	Transportation	Alaska Sea Grant	Gay Sheffield
B	Fisheries	NSEDC	Tyler Rhodes
C	Mining (Currently Vacant)	Graphite Mine	Nominee - Blake Bogart
D	Banking/Finance	Rural Credit Services	Lahka Peacock
E	Tourism	Northrim Bank	Drew McCann
F	Health	Norton Sound Health Corp.	Racheal Lee
G	Housing	Nome Eskimo Community	Teresa Kenick
H	City of Nome	City Clerk	Bryant Hammond
I	Kawerak Board Chair	Kawerak Board Chair	Frank Kachatag
J	Northern Sub-R	Wales IRA	Anna Oxerok
K	S. Central Sub-R	Elim IRA	Robert Keith
L	Southeast Sub-R	Shaktoolik IRA	Matilda Hardy
M	St. Lawrence Island	Gambell IRA	Bengamin Pungowiyi
N	Nome Sub-R	Council IRA	Barb Gray
O	Workforce Development	NACTEC	Doug Walrath
P	BSNC	Bering Straits Native Corp.	Vacant
Q	Education	Northwest Campus	Barb Amarok
R	Nome Chamber	Nome Chamber of Commerce	Paul Kosto

Table 1: BSDC Board
Source: Kawerak, Inc.

CEDS Process

The Bering Strait CEDS is derived from a continuous planning process that occurs at the community scale with the Bering Strait Region and is guided by the CEDS strategy committee described above.

Throughout this process, a neutral facilitator from outside the community convenes a series of meetings in which the committee reviews their recent accomplishments, re-evaluates their goals and objectives, and prioritizes projects that will assist in accomplishing their goals. The general public, as well as members of Indian Reorganization Act (IRA)/Traditional and city councils, corporate boards, and members of various organizations are encouraged to attend. The facilitator compiles background research and community input into a draft plan after the planning sessions. The draft is submitted to the committee for review. Suggestions and edits are incorporated before the plan is available for public review and comment. The draft plan is also submitted to key stakeholders, partners, and governing bodies for their review and comment.

The private sector in the Bering Strait is represented through the public review process. Business owners and managers are encouraged to share their perspectives on economic development needs and opportunities within the region. The private sector is represented on the BSDC board, which guides the CEDS process. Additionally, the program director of Community Planning and Development (support staff to BSDC) attends the Nome Chamber of Commerce meetings and coordinates with the Chamber of Commerce Executive Director.

BSDC reviews the region's local plans when formulating the CEDS. All analysis at the regional scale is informed by information collected at the community scale. The current CEDS document was formulated over the fall of 2024 and was available for public review and comment between **November XXth and December XXth, 2024.**

II. Background

The Bering Strait Region

The Bering Strait region is found in northwestern Alaska, between the latitudes of 63.5 degrees and 66.5 degrees north. The region encompasses a land area of 23,000 square miles, and is made up of the Seward Peninsula, St. Lawrence Island, King Island, Little Diomed Island, and the coastal lands on the eastern and southeastern shores of Norton Sound. The region contains 570 miles of coastline along the Bering Sea, Norton Sound, and the Chukchi Sea. The region comprises 16 communities, ranging in population from 100 to 3,700. The region extends north to Shishmaref, east to Koyuk, south to St. Michael, and west to Gambell. The City of Nome serves as the hub community. The (NCA) encompasses the entirety of the region, which does not have an organized boroughwide government.

The landscape of the region is varied, ranging from marshy tundra plains, dotted with lakes to gentle rolling hills between 0 and 2,000 feet, to craggy mountains with steep ridges and peaks surpassing 4,000 feet. The region has no glaciers and becomes ice-free for a brief period each year in late summer, yet it is underlain with permafrost.

The Bering Strait has a transitional climate, shifting from a maritime influence when the seas are ice-free to a continental influence over the winter and early spring months. Summer temperatures range from 30 to 50 degrees Fahrenheit. The average winter temperature is around zero but can range from a high of 30 to low of -50 degrees Fahrenheit. Snowfall ranges between 33 and 80 inches. Accumulation depends on the prevalence of wind-caused drifting. Wind speed averages 10 – 15 knots year-round.

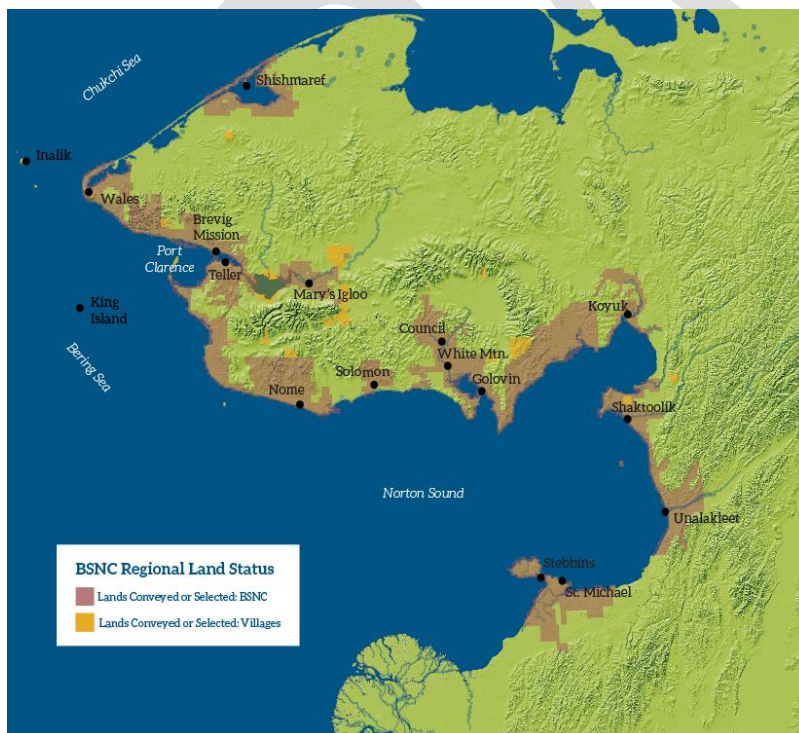


Figure 1: Bering Strait Region Land Status.
Source: BSNC Land and Resource Department.

Land Ownership

Land in the Bering Strait region is primarily owned by the federal government, the State of Alaska, Native Corporations, and private individuals.

The federal government is the largest landowner in the region. Some of that land, including the Bering Land Bridge National Preserve, is actively managed. The Bureau of Land Management (BLM) manages federally owned land. There is a local BLM office in Nome.

The State of Alaska is the second largest landholder in the region.

The Bering Straits Native Corporation (BSNC) is the primary private landowner in the region, with combined surface and subsurface rights equaling about two million acres. BSNC holdings include land on or near prospects in the region, which include Bluff, Mount Distin, Rock Creek, Lost River, Potato Mountain, and the Council mining district.

Each village corporation from the region holds title to the surface estate of lands surrounding the village. Generally, the total acreage owned by each village corporation is proportional to their respective village's population at the time the Alaska Native Claims Settlement Act (ANCSA) was passed. The exceptions to this are Elim, Gambell, and Savoonga. Elim Native Corporation owns the surface and subsurface rights to 330,000 acres, while Gambell and Savoonga collectively own the entirety of St. Lawrence Island.

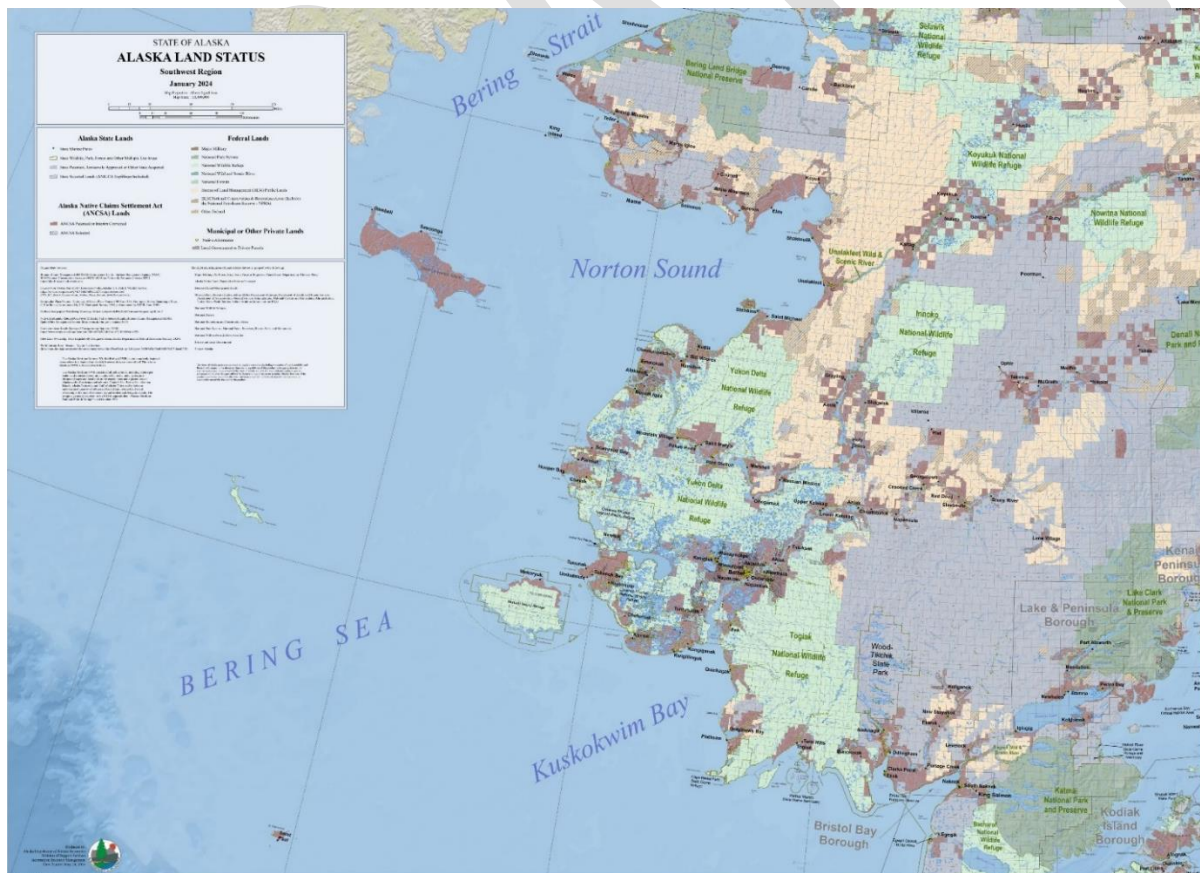


Figure 2: Bering Straits Region.

Source: Alaska Department of Natural Resources, 2024

Local Governing Bodies

All 16 communities in the Bering Strait region are in the unorganized borough and are each governed by three entities.

Each community has a municipal government, organized as a second-class city, except for Nome, a first-class city. Municipal governments provide basic services to community residents.

Each community also has at least one IRA Council or Traditional Council, which is the federally recognized tribal government. IRAs and Traditional Councils are similar; however, IRA constitutions follow stricter guidelines than Traditional Council constitutions.

While not necessarily a governing entity, each village also has an Alaska Native Corporation (and sometimes two or more, depending on the number of tribes living in the village). In 1971, the (ANCSA) was passed, creating regional corporations and village corporations in each region. The Village Native Corporations typically serve in a business capacity in each community, owning land surrounding the community, the local store, and fuel businesses. Regional Native Corporations are a significant part of the Alaskan economy. The 12 regional corporations are all counted among the “top 49ers”, according to Alaska Business Monthly’s annual ranking of the largest companies in the state by gross revenue. The Bering Strait Native Corporation ranked 12th in the state in the 2023 edition, with prior-year revenue of \$543,100,000.

III. Regional Economic Overview

Demographics

Located in one of the most remote parts of the world, the Bering Strait region is home to over 9,000 people,¹ most of whom have ancestral ties to the area dating back thousands of years. The region lies at the heart of a continental crossroads that has profoundly influenced life in the northern hemisphere. Alaska native people have lived in the region for at least 10,000 years, sustained by the area’s rich mosaic of arctic and sub-arctic animals and plants.²

In 2023, the NCA had a population of approximately 9,628. According to population estimates from the State of Alaska Department of Labor and Workforce Development (DOLWD), the population of the NCA grew from 2010 to 2016 and has declined each year since. A particularly large decline of more than 300 residents occurred between 2020 and 2021, likely due to the COVID-19 Pandemic.

Population in the Nome Census Area

Year-over-year population in the Nome Census Area, 2013 to 2022.

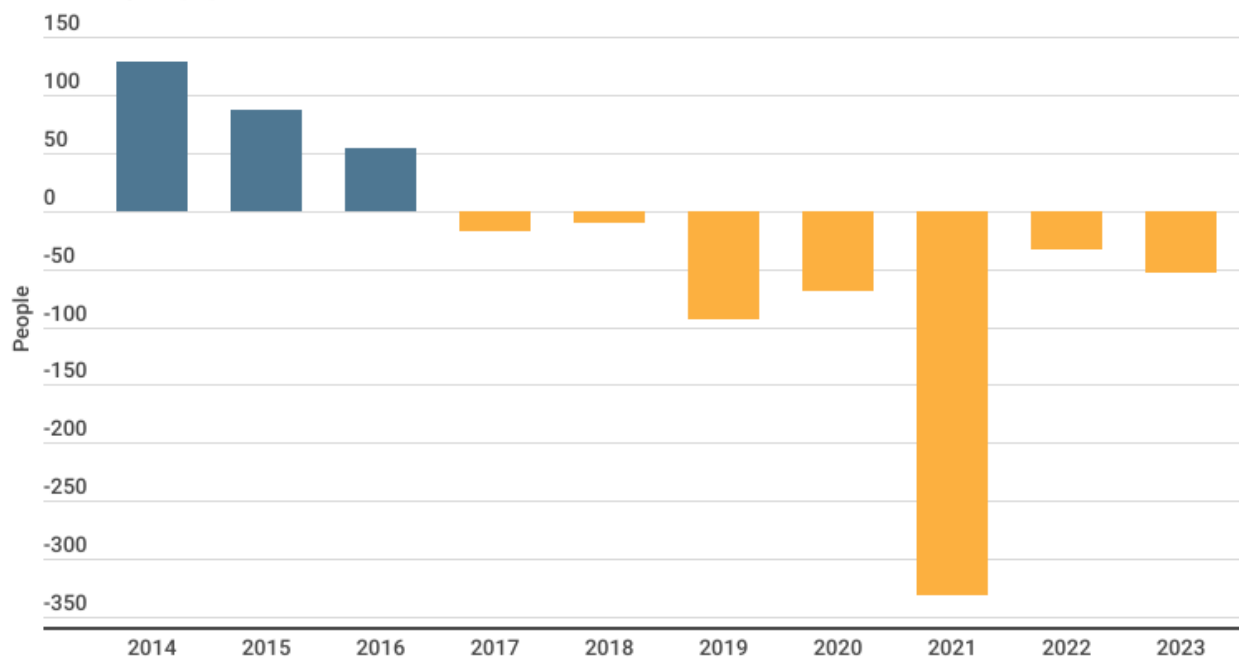


Figure 3: Year-Over-Year Population in NCA
Source: DOLWD and U.S. Census Bureau, 2014-2023.

A closer look at population at the community level shows that over the last five years, 11 of the communities in the region lost population, while four gained residents. Wales saw the largest decline in percentage terms with 25% of the population leaving between 2019 and 2023. White Mountain and Golovin both experienced the largest population increase as a percent of the total population. It should be noted that many communities in the region have small populations and, therefore, small changes to population can represent significant percentage change to the community’s total population. For example, the 25% population loss in Wales represents a decrease from 150 residents to 112 between 2019 and 2023, a decrease of 38 residents. However, while small in real terms, a decrease of that size in an already small community has a dramatic impact on the community’s economic health. Also notable is

the decrease in population in the areas of the NCA described as “Balance” in the DOLWD estimates. This most likely is attributable to residents gradually moving towards population centers.

Bering Strait Community Population Change, 2019 to 2023		
Community	Population, 2023	Percent Change, 2019-2023
Wales	112	-25.33%
Diomedede	75	-21.88%
Unalakleet	685	-12.52%
Koyuk	308	-12.00%
Teller	225	-8.54%
St. Michael	435	-6.25%
Shaktoolik	207	-5.48%
Nome	3,506	-4.47%
Brevig Mission	428	-4.46%
Savoonga	838	-2.22%
Stebbins	631	-2.02%
Gambell	630	0.00%
Elim	358	1.13%
Shishmaref	579	1.76%
White Mountain	211	4.98%
Golovin	184	6.36%
Balance	216	-17.24%
Total	9,628	-4.81%

*Table 2: Bering Strait Community Population Change.
Source: DOLWD, 2019-2023.*

In addition to migration within NCA, there is a significant amount of population exchange other Boroughs and Census Areas across the state. DOLWD collects and publishes data annually showing intrastate migration based on registrations for Permanent Fund Dividends (PFDs). This data shows that the largest source of people coming to the region from other parts of the state, and the most common destination for people leaving the region, is Anchorage. Between 2019 and 2023, 833 people left for Anchorage and 455 people came from Anchorage. The next two most-popular locations to move to and from are the Fairbanks North Star Borough and Matanuska-Susitna Borough. In most years, more people leave the NCA than enter. This is not surprising given the gradual but persistent decline in population. It is also worth noting that births and deaths are in the same category in this data as individuals who move in to or out of the state.

Migration To and From the NCA, 2019 to 2023		
Borough/Census Area	Out Migration	In Migration
Aleutians East Borough	1	3
Aleutians West Census Area	4	3
Anchorage Municipality	833	455
Bethel Census Area	24	47
Bristol Bay Borough	3	1
Chugach Census Area	16	2
Copper River Census Area	0	0
Denali Borough	2	1
Dillingham Census Area	27	28
Fairbanks North Star Borough	184	121
Haines Borough	4	0
Hoonah-Angoon Census Area	0	1
Juneau City and Borough	15	19
Kenai Peninsula Borough	96	58
Ketchikan Gateway Borough	4	8
Kodiak Island Borough	12	9
Kusilvak Census Area	37	61
Lake and Peninsula Borough	1	2
Matanuska-Susitna Borough	194	102
North Slope Borough	22	38
Northwest Arctic Borough	63	76
Petersburg Borough	12	1
Prince of Wales-Hyder Census Area	13	7
Sitka City and Borough	31	11
Skagway Municipality	1	0
Southeast Fairbanks Census Area	11	6
Wrangell City and Borough	0	0
Yakutat City and Borough	4	0
Yukon-Koyukuk Census Area	16	19
Out-of-State/Natural Increase or Decrease	2,858	3,004
Total	4,488	4,083

Table 3: Migration To and From NCA.
Source: DOLWD, 2019 to 2023.

The DOLWD performs annual population projections by borough and census area. Current projections for the NCA show the current trend in population decline continuing, with an estimated 4% decrease in population by 2050. This trend matches other trends of outmigration across Alaska.

Focusing in on trends among age groups, the population decline is anticipated to primarily come from the working age and youth populations, which are projected to decrease by 5% and 14% respectively. The population of people over the age of 65, however, is anticipated to increase by 43%. Trends of

outmigration among the working age population and an aging workforce signal challenges for a local economy and workforce.

Population in the Nome Census Area

Population projections for the Nome Census Area, 2023 to 2050.

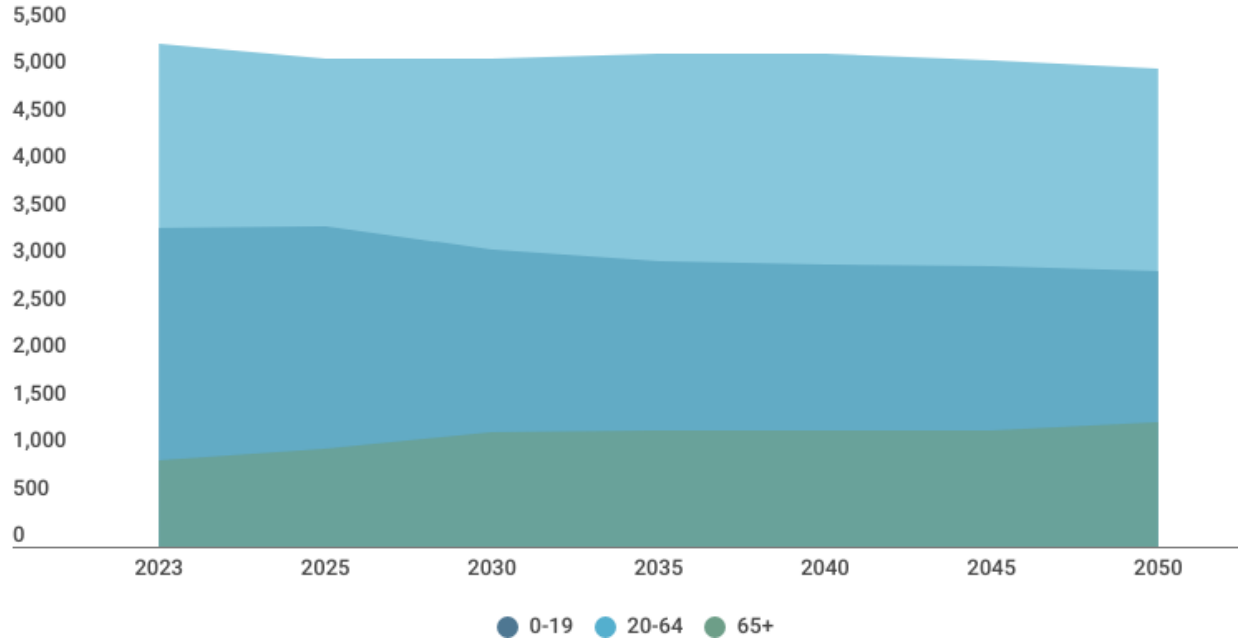


Figure 4: Population Projections for NCA.
Source: State of Alaska DOLWD, 2023-2050.

Residents of the region primarily identify as Alaska Native (alone or in combination with other races), making up 76% of the population in 2023. People identifying as white are the second largest race group in the region, making up 19% of the total population.

Population in the Nome Census Area

Population by race and hispanic origin, 2023.

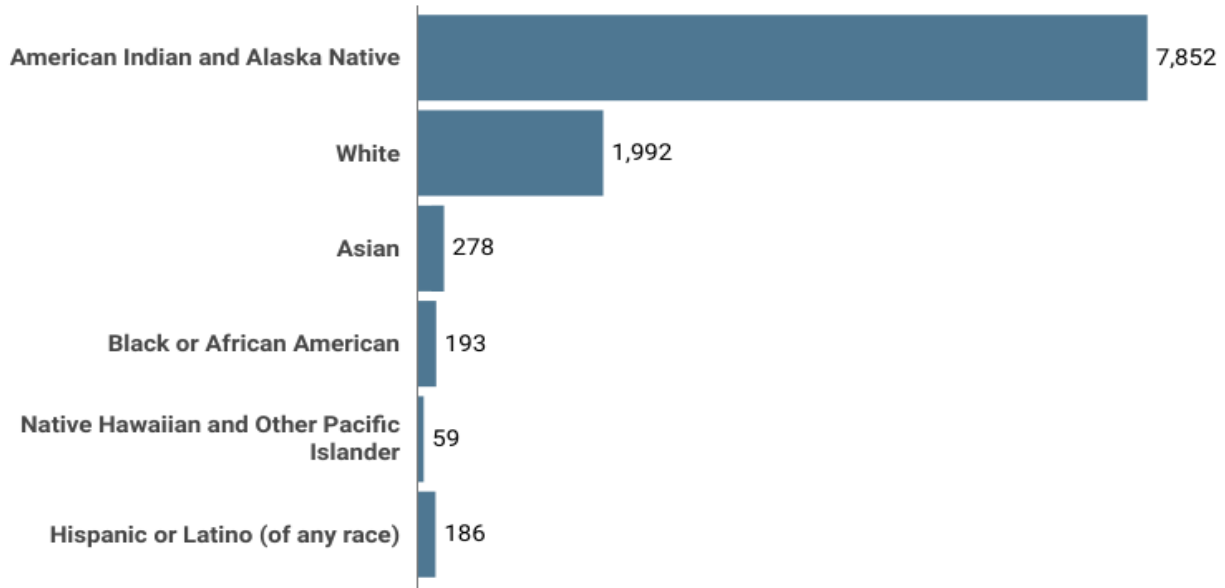


Figure 5: Population by Race and Hispanic Origin.
Source: State of Alaska DOLWD, 2023.

Looking at age across the Bering Strait region, the population skews toward being younger than statewide averages. Approximately 35% of the residents of the region are under the age of 19. The majority of the population are working age, with 55% of the residents between the ages of 20 and 64.

Population in the Bering Strait Region

Population by age group in Nome Census Area, 2023

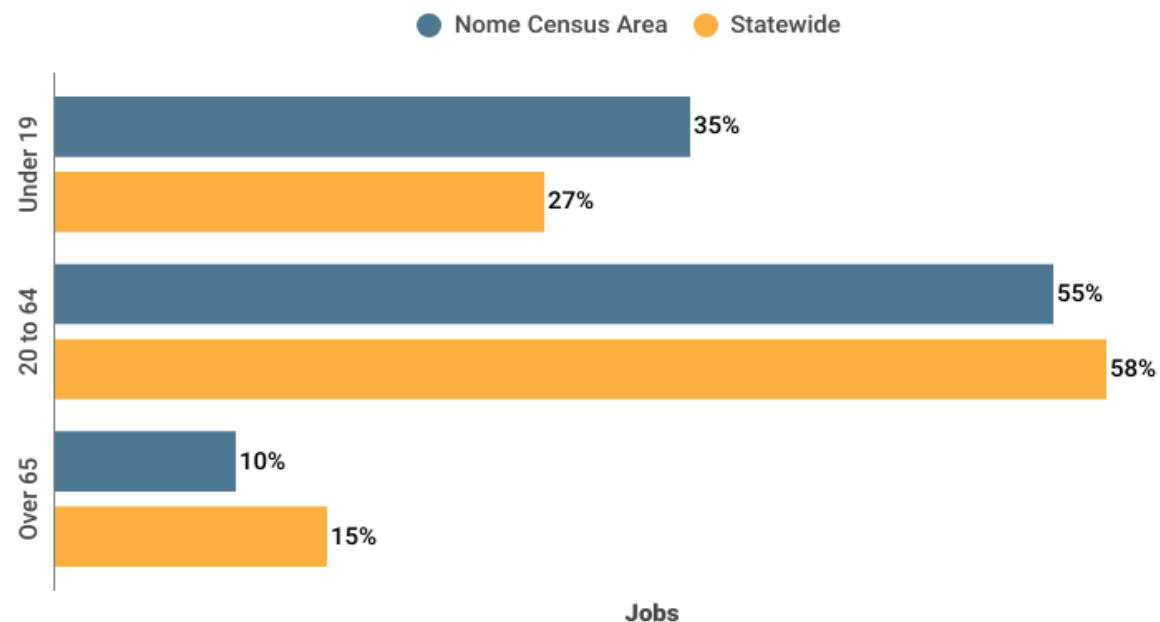


Figure 6: Population by Age Group in NCA.
Source: State of Alaska DOLWD, 2023.

Employment and Income

The NCA has a mixed economy based on cash and subsistence practices. Most employment opportunities in the region are found in government, healthcare, education, transportation, and utilities. Of these, the local government provides the most opportunity for employment with healthcare and educational services provide significant opportunities for employment, as well. Together, these two sectors account for a majority of all employment opportunities in the region's villages outside Nome.

Conventional employment opportunities in the region can be limited, especially in the smaller communities outside the regional hubs of Nome and Unalakleet. Many residents engage in subsistence activities, which play an important economic and cultural role in the region. The region also has a robust native arts sector which provides a source of income to many residents.

The city of Nome serves as the hub for the region. With its larger population and workforce, Nome offers more diverse employment opportunities. However, local government, health care, and education still account for a large share of Nome employment.

Top Employer Industries in Nome Census Area

Employment by industry in Nome Census Area, 2023

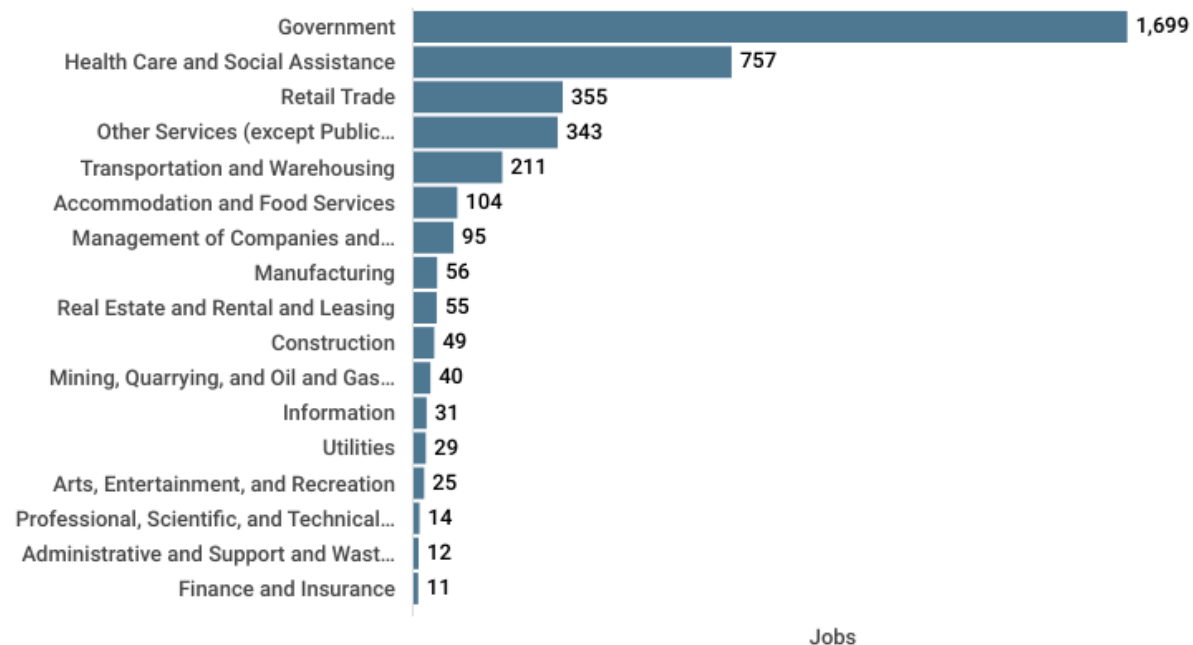


Figure 7: Employment by Industry in NCA.
Source: LightCast, 2024.

Like many regions of Alaska, the Bering Strait regional economy was impacted by the COVID-19 pandemic. In 2020, job losses were among the worst in recent history before recovery began. However, employment in the region has since rebound. As of January 2024, the total number of jobs in the region was only 57 fewer than in January 2019.

Employment Change in the Nome Census Area

Year-over-year change in employment in Nome Census Area, 2015 to 2024.



Figure 8: Year-Over-Year Change in Employment in NCA.

Source: DOLWD QCEW, 2015-2024

The region’s unemployment rate slowly declined after the pandemic but has since started increasing slightly after reaching a low of 5.4% in December 2022. This is a divergence from statewide trends, which show unemployment rates continuing to remain near all-time lows. The overall unemployment rate in the region historically sits several points above the statewide level.

Unemployment in the Nome Census Area

Unemployment rate in Nome Census Area compared to Alaska, 2018 to 2024

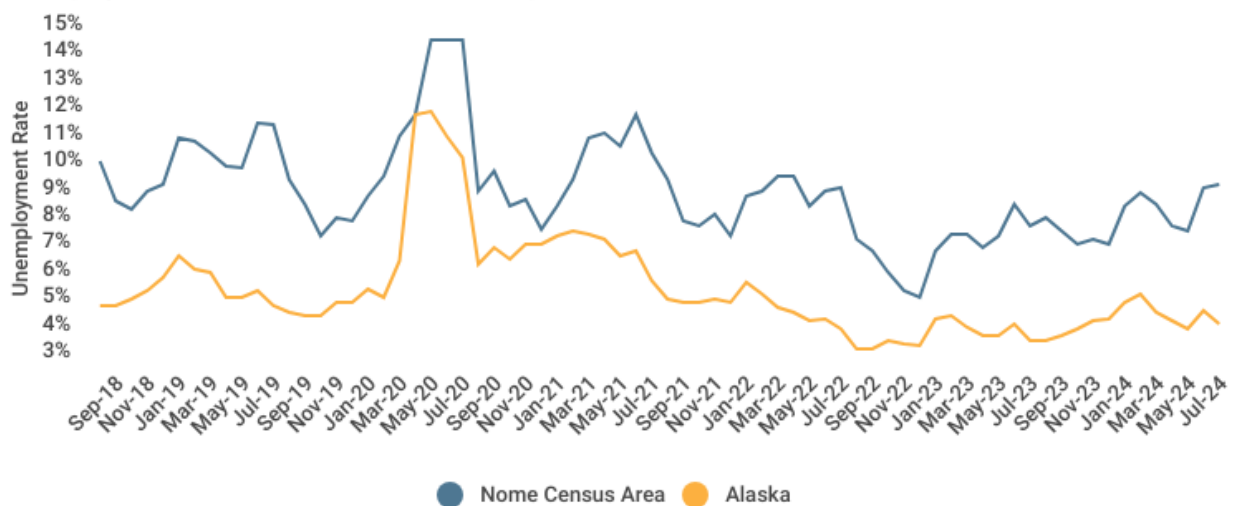


Figure 9: Unemployment in NCA Compared to Alaska.

Source: DOLWD, 2018-2024.

Data regarding several phenomena aid in understanding income in the Bering Strait region. The average wage, per capita income, and household income all give different insights into the region's overall income changes. It is important to note that for many residents, the cash economy only makes up a

piece of the economic puzzle. Many residents also engage in subsistence activities, which play an essential traditional, cultural, and economic role but are harder to quantify in monetary terms.

It should also be noted that income across the regions is highly variable from community to community. Incomes tend to be higher in the regional hubs of Nome and Unalakleet and lower in smaller communities like Diomed and Teller. In addition, a handful of high-wage earners can skew averages, making income levels appear inflated in some cases.

In 2023, the average annual wage in the NCA was \$69,579, an increase of 0.2% over the previous year in real terms. In nominal dollars, wages increased by 4%, showing that the majority of wage increases in the region were offset by the effects of inflation.

Wages in the Nome Census Area

Average annual wages in the Nome Census Area in real 2023 dollars, 2014 to 2023

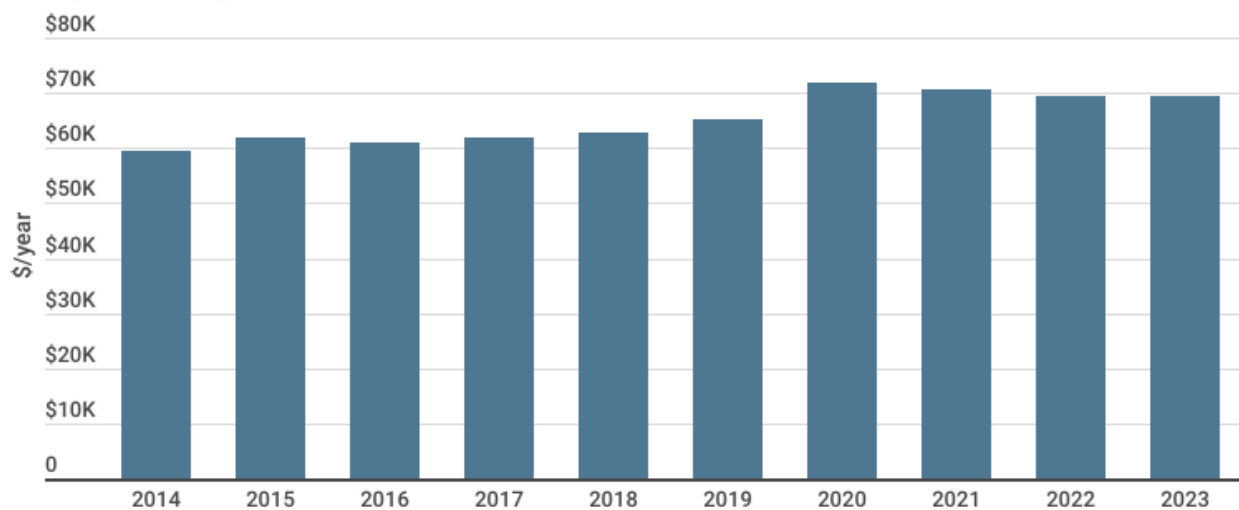


Figure 10: Average Annual Wages in the NCA in Real 2023 Dollars.
Source: DOLWD QCEW, 2014-2023.

Another income indicator, per capita income, also increased to \$28,678 in 2022, an increase of 11%.³ This is a positive indicator but is somewhat at odds with the other data presented in this section. The source of the disagreement is not immediately clear. Being that this data comes from a survey and has an appreciable margin of error, it is possible that this figure is somewhat inflated compared to reality.

Finally, median household income in the NCA increased by 10% to \$70,121.⁴ However, when looking at household income on the community level, this trend is driven predominantly by Nome which has the highest median household income in the region and the largest population. The median household income in Nome was \$103,542 in 2021. In other, smaller, communities, the median household income is estimated to range from \$34,167 in Wales to \$84,375 in Unalakleet. It should be noted that this data is survey-based and shows high variability or inaccuracies in the smaller communities in the region, where the margin of error is significantly higher.

Community Level Household Income, 2022		
Community	2022 Household Income	% Change 2021-2022
Nome	103,542	13%
Unalakleet	84,375	1%
Shaktolik	62,500	13%
Brevig Mission	58,438	1%
Shishmaref	56,875	13%
Golovin	54,167	1%
Savoonga	53,125	13%
White Mountain	53,125	1%
Stebbins	52,500	13%
St. Michael	46,875	1%
Gambell	39,375	13%
Koyuk	35,313	1%
Elim	35,000	13%
Teller	34,688	1%
Wales	34,167	13%
Diomede	-	-
NCA	63,977	10%

Table 4: Community Level Household Income.

Source: ACS, 2022 5-year Estimates.

Notes: Data for the community of Diomede was not available in the source material.

The labor force participation rate—the percent of the population between the ages of 16 and over who are working or actively seeking work—in the NCA was estimated at 65.6% in 2022.⁵ The region falls slightly below the statewide rate of 66.7%.

Workforce Participation in the Nome Census Area

Labor force participation rate in Nome Census Area compared to Alaska, 2010 to 2022

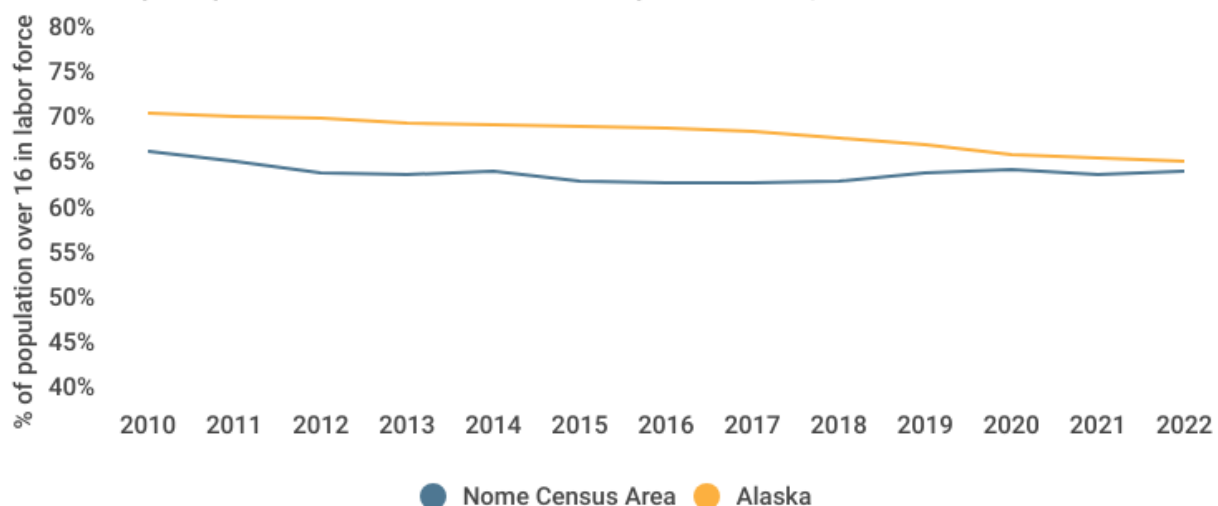


Figure 11: Labor Force Participation Rate in NCA Compared to Alaska.

Source: ACS, 2010 to 2022 5-Year Estimates.

Education

Educational attainment in remote areas of Alaska can be lower than average, and the Bering Strait region follows this trend. According to the 2022 American Community Survey (ACS)—the most recent data—educational attainment levels improved slightly. The percentage of NCA residents over 25 with at least a high school diploma increased slightly, from 87.6% in 2021 to 88.2%. Between 2021 and 2022, the percentage of residents with at least a bachelor’s degree remained relatively the same, at 18.3%.

Educational Attainment in Nome Census Area

Highest level of educational attainment of population over 25 in Nome Census Area and Alaska, 2022

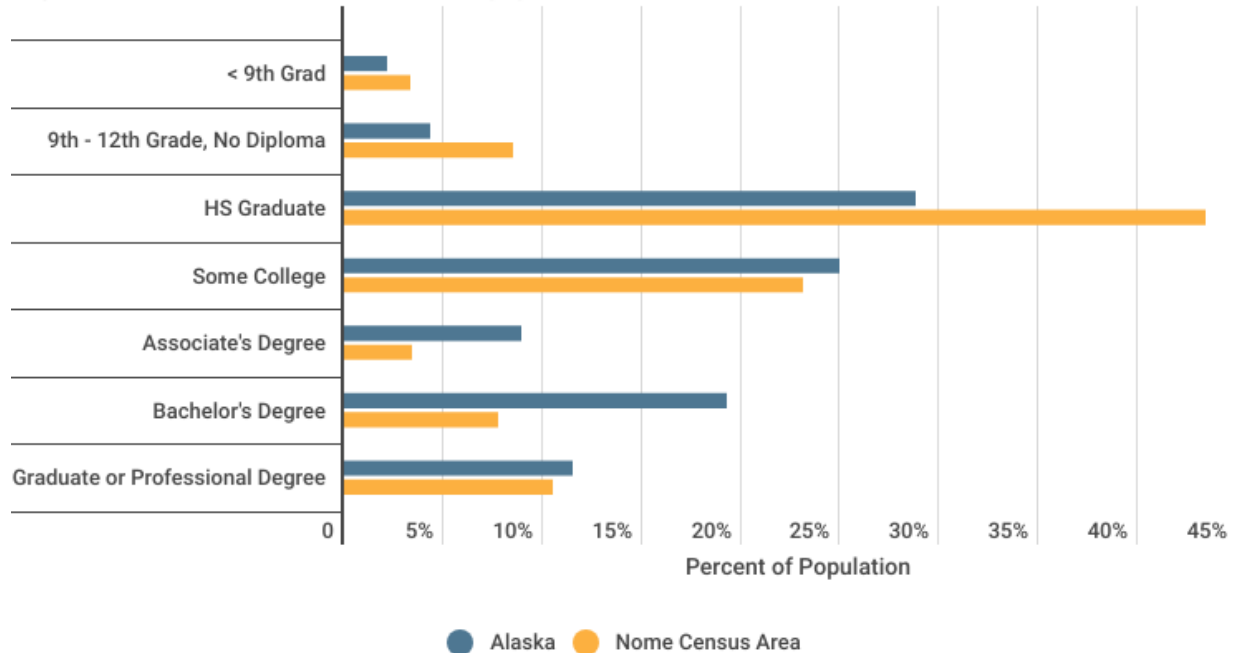


Figure 12: Highest Level of Educational Attainment of Population over 25 in NCA and Alaska.
Source: ACS, 2022 5-Year Estimates.

Since 2018 school enrollment has decreased on an annual basis, reaching its lowest point in over a decade in 2023.

Enrollment in Nome Census Area School Districts

Student enrollment in Nome and Bering Strait School Districts, 2014 to 2023

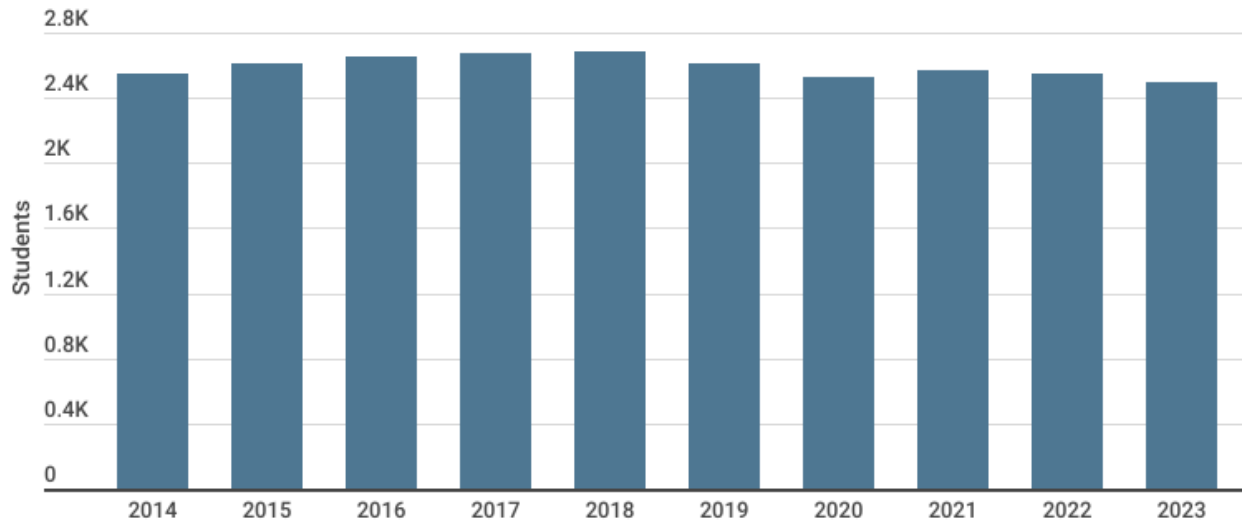


Figure 13: Student Enrollment in Nome and Bering Strait School Districts.
Source: State of Alaska Department of Education and Early Childhood Development, 2014-2023.

Business

There are 531 active business licenses in the NCA. This is a decrease of 1.7% from 2023. Most of the registered businesses in the region are in Nome, with 400 (76%) active business licenses recorded there in August 2024. The State of Alaska Department of Commerce, Community, and Economic Development (DCCED) tracks active business licenses, which provides a snapshot of the region's business community at a given time. However, the database that is publicly accessible does not allow users to look at historical data. Consequently, it is not possible to determine the exact number of business licenses which were active at various points in the past.

Business in Bering Straits Region Communities

Active registered business licenses by community, August 2024

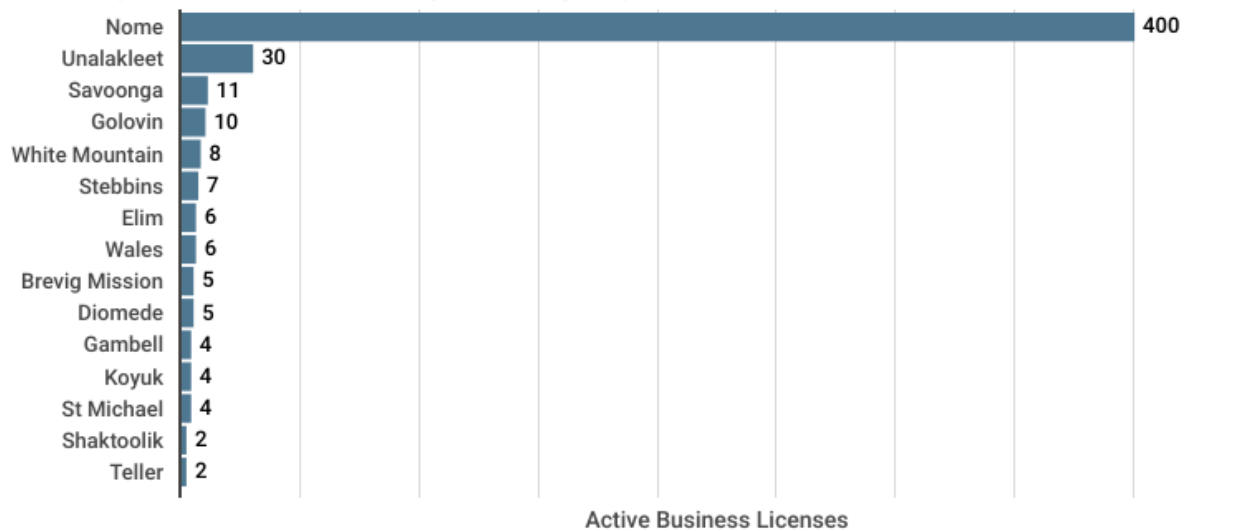


Figure 14: Active Registered Business Licenses by Community.

Source: DCCED, August 2024.

Cost of living

The cost of living in the region remains high, with 24.8% of the households in the NCA considered cost burdened or severely cost burdened. Many variables factor into this, including high housing costs, energy costs, costs of goods and services, and lower average income.

Several factors drive high housing costs in the region. Limited supply and the cost of importing building materials are two key variables influencing housing costs. In the NCA, median rent costs were estimated to be \$1,349 monthly in 2022, the most recent data year. This represents approximately a 7% increase over the previous year.

Limited housing stock drives the region's rate of overcrowding. An estimated 31% of households in the NCA are considered overcrowded, compared to 6% statewide. Despite this, construction of new housing units in the region remains low. However, progress is being made in some communities with 14 new housing units constructed in Stebbins in 2023.

NCA Select Housing Characteristics		
	Indicator	% Change Over Previous Year
Median Rent Cost (\$/month, 2022)	\$1,349	7.32%
Median Mortgage Cost (\$/month, 2022)	\$1,669	1.95%
New Housing Construction (units/year, 2023)	14	250%
Percent of Households Cost Burdened (2022)	30%	5.5%

Table 5: NCA Select Housing Characteristics.

Source: ACS, 2022 5-Year Estimates; Alaska Housing Finance Corporation (AHFC), 2023.

Energy costs are high across all types of usage: electricity, heating, and transportation. All communities in the region participate in the Power Cost Equalization (PCE) program, which lowers the cost of electricity for residents and some community facilities. However, businesses and commercial power

users do not qualify for the programs, making the cost of doing business higher. The PCE program also limits the amount of electricity for which residents can receive a subsidy to 500 kilowatt hours (kWh) per month. This is approximately the average consumption for residential households and means that adoption of technologies which would result in greater usage of electricity would raise the average cost of electricity for households in the region.

Most space heating in the region is fueled by heating oil with residents utilizing small, diesel fueled heaters referred to as “Toyostoves” for household heating. Heating oil costs in communities across the region are high. The State of Alaska Division of Community and Regional Affairs (DCRA) conducts a statewide, biannual fuel price survey that collects price information for heating oil and unleaded gasoline which gathers data for 10 of the 16 communities in the region.

During the summer of 2024, heating oil prices in the region ranged from \$4.45 per gallon in Brevig Mission to \$8.09 per gallon in Stebbins. Gasoline prices follow similar trends to heating fuel. Gasoline prices in the region ranged from \$4.75 in Brevig Mission to \$7.02 per gallon in Stebbins. Across the region, fuel prices in 2024 increased over the previous year.

Community Energy Costs, 2023 and 2024				
Community	Electric Cost - Pre PCE (\$/kWh)	Electric Cost – Post PCE (\$/kWh)	Heating Fuel (\$/gallon)	Unleaded Gasoline (\$/gallon)
Elim	\$ 0.72	\$ 0.26	N/A	N/A
Shishmaref	\$ 0.70	\$ 0.25	\$ 4.94	\$ 5.29
Gambell	\$ 0.68	\$ 0.27	\$ 6.70	\$ 6.70
Savoonga	\$ 0.68	\$ 0.25	\$ 6.70	\$ 6.90
Wales	\$ 0.68	\$ 0.25	\$ 6.38	\$ 6.89
Koyuk	\$ 0.67	\$ 0.25	\$ 6.34	\$ 5.68
Shaktoolik	\$ 0.66	\$ 0.27	N/A	N/A
Diomedede	\$ 0.65	\$ 0.27	N/A	N/A
Stebbins	\$ 0.63	\$ 0.25	\$ 8.09	\$ 7.02
St. Michael	\$ 0.63	\$ 0.25	\$ 7.99	\$ 7.02
Unalakleet	\$ 0.63	\$ 0.32	\$ 6.03	\$ 5.74
Golovin	\$ 0.56	\$ 0.33	\$ 5.85	\$ 5.95
White mountain	\$ 0.55	\$ 0.22	\$ 5.78	\$ 5.25
Teller	\$ 0.51	\$ 0.08	\$ 7.16	\$ 6.44
Brevig Mission	\$ 0.51	\$ 0.25	\$ 4.45	\$ 4.75
Nome	\$ 0.46	\$ 0.28	N/A	N/A

Table 6: Community Energy Costs.
Source: AEA, 2023; and DCRA, 2024.

Poverty

Poverty levels can be high in rural Alaska, and the Bering Strait region is no exception. Low educational attainment levels and limited employment opportunities are drivers of this phenomenon.

Poverty Rate

The poverty line in the U.S. is defined as a measure of monetary income required to support a family's basic needs, adjusted for size and a handful of other factors. In Alaska and Hawaii, the federal poverty level was \$32,270 annually for a family of three. All families and individuals earning less than the federally mandated minimum are below the poverty line.

In the NCA, 21% of the population is considered below the poverty line. Poverty rates are higher than average for children and for Alaska Native residents.⁶

Percent of Population Below the Poverty Line by Age Group, 2022		
	NCA	Alaska
Under 18 years old	24.5%	13%
18 to 64	19.5%	10%
65 and older	18.9%	7.8%

Table 7: Percent of Population Below the Poverty Line by Age Group.
Source: ACS, 2022 5-Year Estimates.

Percent of Population Below the Poverty Line by Race, 2022		
	NCA	Alaska
Alaska Native or American Indian	26%	23.2%
White	4.5%	7.4%
Black	10%	13.6%
Hispanic or Latino Origin	7%	10.5%

Table 8: Percent of Population Below the Poverty Line by Race.
Source: ACS, 2022 5-Year Estimates.

Distressed Communities

One means of assessing poverty levels in the region is through the Denali Commission's Distressed Community List. Distressed status is determined by measuring a community's labor market against three criteria, listed below. Any community that meets two or three of these criteria is classified as "Distressed."

It is important to note that, while the Census Bureau and DOLWD both show real wages increasing in the NCA, the Denali Commission shows a noticeable decline in real wages between 2013 and 2018. The most significant decline was in Wales (32%). This discrepancy can likely be attributed to a difference in data collection methods. In addition to using PFD data instead of Census data, the Denali Commission incorporates Alaska Commercial Fisheries Entry Commission (CFEC) total fish value data to arrive at their estimation average market income in each community.⁷

Distressed Community Criteria

- The community has an average market income that is lower than the threshold.
- The community has more than 70% of residents, ages 16 and older, earning less than the threshold.
- Fewer than 30% of community residents, ages 16 and older, worked all four quarters in the previous year.

Community Poverty Indicators, 2024					
Community	2017 Status	2024 Status	Earnings	Individuals Below Threshold	Employed All 4 Quarters
Brevig Mission	Distressed	Distressed	\$16,033	73%	33%
Diomede	Non-Distressed	Non-Distressed	\$15,997	53%	53%
Elim	Distressed	Distressed	\$18,472	72%	34%
Gambell	Distressed	Distressed	\$11,563	79%	34%
Golovin	Non-Distressed	Non-Distressed	\$36,551	57%	46%
Koyuk	Distressed	Distressed	\$16,372	72%	32%
Nome	Non-Distressed	Non-Distressed	\$46,147	47%	52%
Savoonga	Distressed	Distressed	\$13,155	82%	22%
Shaktoolik	Distressed	Non-Distressed	\$22,869	67%	39%
Shishmaref	Distressed	Distressed	\$15,752	79%	34%
St. Michael	Distressed	Distressed	\$17,328	77%	27%
Stebbins	Distressed	Distressed	\$9,854	84%	28%
Teller	Distressed	Distressed	\$17,968	74%	36%
Unalakleet	Non-Distressed	Non-Distressed	\$32,394	58%	44%
Wales	Distressed	Distressed	\$17,900	70%	46%
White Mountain	Distressed	Non-Distressed	\$23,456	62%	48%

Table 9: Community Poverty Indicators.
Source: Denali Commission, 2024.

Subsistence

Subsistence activities play an essential role in food security, economic participation, and traditional culture in communities across the region. The products of subsistence harvests provide nourishment for residents and replaces groceries and other processed food products that would otherwise be imported at a high cost from outside of the region and the state. Residents harvest marine mammals, fish, seabird eggs, game, and many different plants and berries.

Data around subsistence harvesting and replacement value is limited and has not been updated in recent years. Therefore, it is difficult to analyze changes to harvests in recent years. However, climate change continues to impact both access to subsistence resources and the quantity of harvest in the region. For example, changes to the winter ice pack have changed the way residents hunt on the ice. In addition, warming waters in the Bering Sea are making pink salmon runs more prolific.

Economic Drivers

Jobs in the Bering Strait region are largely service based, with government, educational, health, and social services making up most of the employment opportunities throughout the region. Major employers in the region include Bering Strait School District, Norton Sound Health Corporation, and Kawerak, Inc.⁸ Each of these organizations either directly employs or supports staff in each of the region’s villages. Tribal and City governments make up most of the remaining employment opportunities in the region’s villages. Business and other professional services provide employment in Nome. There

are other economic drivers in the region, however, which have historically played an important role in the regional economy or are growing in economic importance. These include:

- Mining;
- Seafood;
- Tourism;
- Logistics and Transportation; and,
- Cultural Arts and Cultural Products.

Mining

- 89 offshore lease tracts in Nome.⁹
- 56 active applications for permits to mine with suction and mechanical and 42 for upland placer mining in summer 2024.¹⁰
- 22.5 million tonne graphite deposit under development.

When gold was discovered in Nome in 1898, the resulting rush of miners flooding the area in search of wealth was one of the largest gold rushes in Alaska. Between 1898 and 1907 nearly \$50 million (in contemporary dollars) in gold was mined from the Seward Peninsula.¹¹ While the boom of the original mining rush quickly subsided, gold mining continued in the region and still constitutes a significant sector around Nome in the present day.

Modern mining in the area is primarily offshore suction mining of the “gold sands” from the seafloor. The State of Alaska Division of Natural Resources (DNR) administers 89 offshore lease tracts around Nome. During the summer 2024 mining season the State reported 56 active applications for permits to mine offshore and 42 applications for placer mining upland in local waterways.

In recent years new mining applications have been disputed by local Alaska Native organizations. One example of this was opposition to the 2022 Army Corps of Engineers approval of a dredging permit for mining east of Nome in an estuary heavily used for subsistence harvesting by local residents.¹²

The region is mineral rich outside of gold deposits as well. A graphite deposit outside of Nome is currently under development. The deposit is the highest grade and largest known graphite deposit in the U.S. Graphite is considered a critical mineral because of its use in lithium-ion batteries.

Graphite Creek is currently in the development stages. The mine plans to extract ore and perform primary processing at the mine site before shipping the ore concentrate out of state for secondary processing before it can be used.

The mine has faced opposition from some local residents. However, development has progressed. Most recently a 75% cost share agreement was announced with the Department of Defense to cover expenses related to the mine exploring feasibility. Feasibility work continued through summer 2024.¹³

Tourism

- 10 scheduled cruise ship stops in Nome in 2024.¹⁴
- The City of Nome collected more than \$208,000 in bed tax revenues in 2023.¹⁵

The Bering Strait Region’s Native culture, natural resources, sporting events, and unique history provide excellent tourism opportunities with Nome serving as a hub and a major attractor to both out-of-state

and in-state tourists. The Seward Peninsula is a unique destination in rural Alaska because it has over 250 miles of state-maintained roads, which allow access to several sightseeing and recreational opportunities for tourists. Many communities recognize tourism, as well as the qualities of the region that attract tourists, as an existing strength or a potential opportunity.

While the Nome Convention and Visitors Center maintains a sign-in book, collecting names, place of origin, and comments, it does not systematically collect detailed information on visitors arriving in Nome on an annual basis. One method of assessing visitor trends is examining the year-over-year bed and sales tax revenues collected by the City of Nome. However, this indicator is less reliable when assessing tourism in the villages. Most of the villages in the NCA do not assess a bed tax. Some do not have sales tax either. For the villages that do have a sales tax, it is difficult to differentiate the sales generated by tourism and the sales generated by residents' daily economic activities.

Nome does tend to be the focus of most tourist activities in the region. Despite recent challenges posed by fires at local hotels in Nome, bed tax revenues to the city have grown significantly since COVID-19 pandemic lows. Revenues in 2023 were 13% higher than the previous year.

Bed Tax Revenue in Nome

City of Nome bed tax revenue, 2016 to 2023.

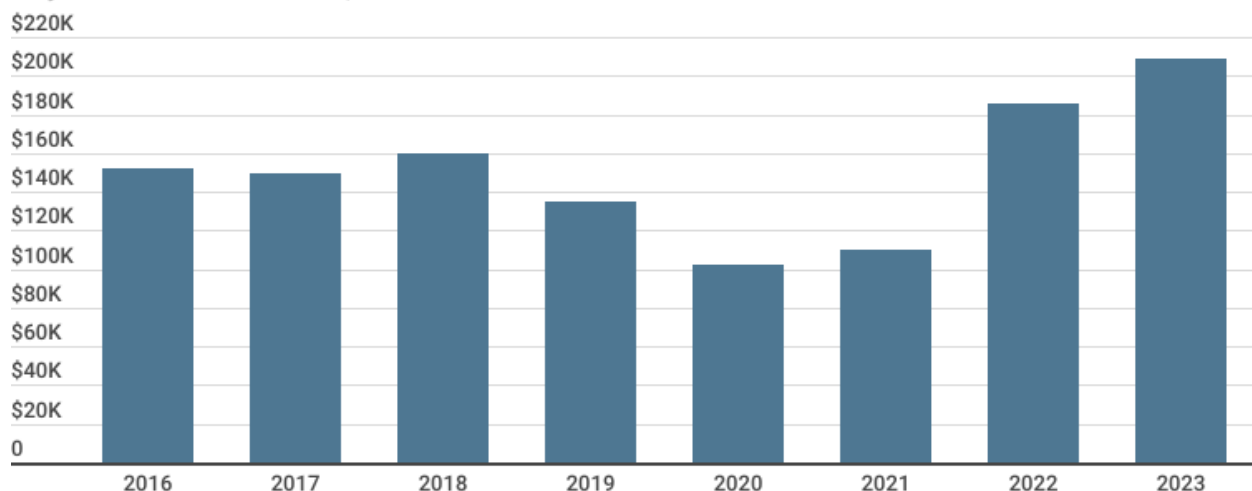


Figure 15: City of Nome Bed Tax Revenue.

Source: Alaska Taxable, 2016 to 2023

Yet another indicator of tourism activity is the number of cruise ships passing through the region each summer. In 2024, 10 cruise ships were scheduled to stop at Nome. Historically, movements to the sea ice have cancelled late season scheduled stops, however scheduled ports of call have remained consistent. Cruise ship visitors spend money in the community on local businesses and cultural crafts, providing a valuable source of outside income.

Scheduled Cruise Ship Stops in Nome

Annual cruise ship stops scheduled at the Port of Nome, 2016 to 2024

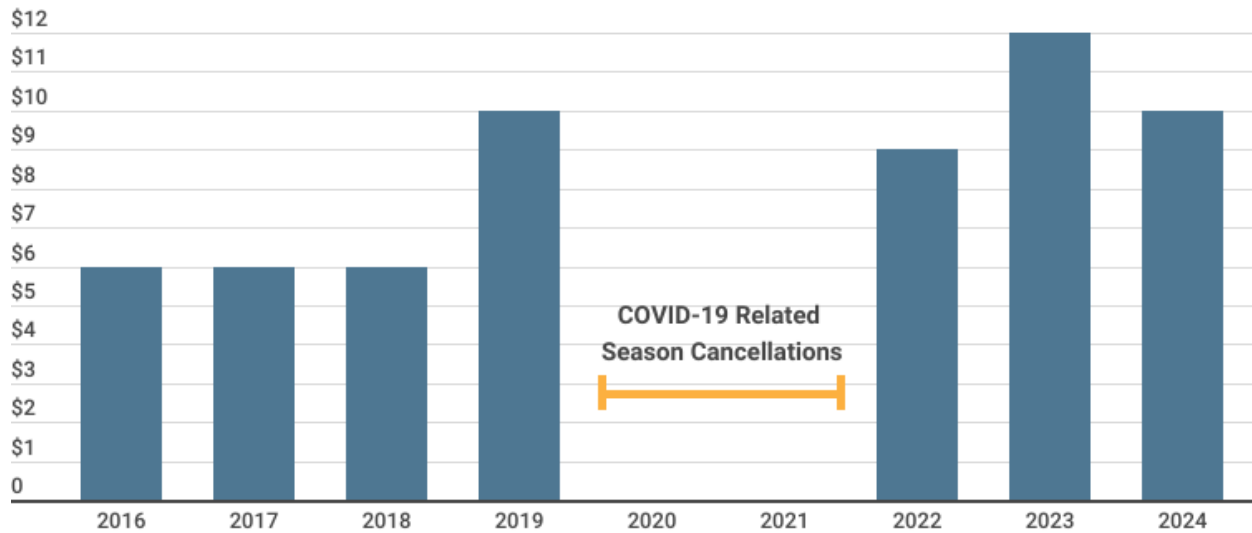


Figure 16: Annual Cruise Ship Stops Scheduled at the Port of Nome.

Source: Cruise Line Agencies of Alaska, 2024

Fisheries

- 117 fishers harvested 600,000 lbs. of seafood through the Community Development Quota (CDQ) program in 2023.¹⁶
- Prevalence of closures in the crab fishery is growing.¹⁷
- Commercial salmon harvests are declining, with only 21,700 salmon harvested in 2024, a decrease of 95% in the last five years.¹⁸

Another important set of natural resources is the region's fisheries. The Bering Strait has limited commercial fisheries opportunities compared to the southern coastal parts of the state. All five species of salmon found in Alaska are found in the Bering Strait region; however, Chinook and Sockeye runs are relatively small. The primary species harvested commercially are chum and pink. There is a small king crab fishery in Norton Sound that is exploited both for commercial and subsistence purposes. Restricted to small boats, this fishery is designated super exclusive, which does not allow vessels registered in Norton Sound to participate in other king crab fisheries. Climate change and commercial fishing practices have made a noticeable impact on Bering Sea crab population, with steep population declines in recent years. The snow crab fishery was closed for the 2023-2024 season but reopened for the 2024-2025 season.

Norton Sound Red King Crab Harvest

Pounds of red king crab harvested annually from Norton Sound fishery, 2009 to 2024.

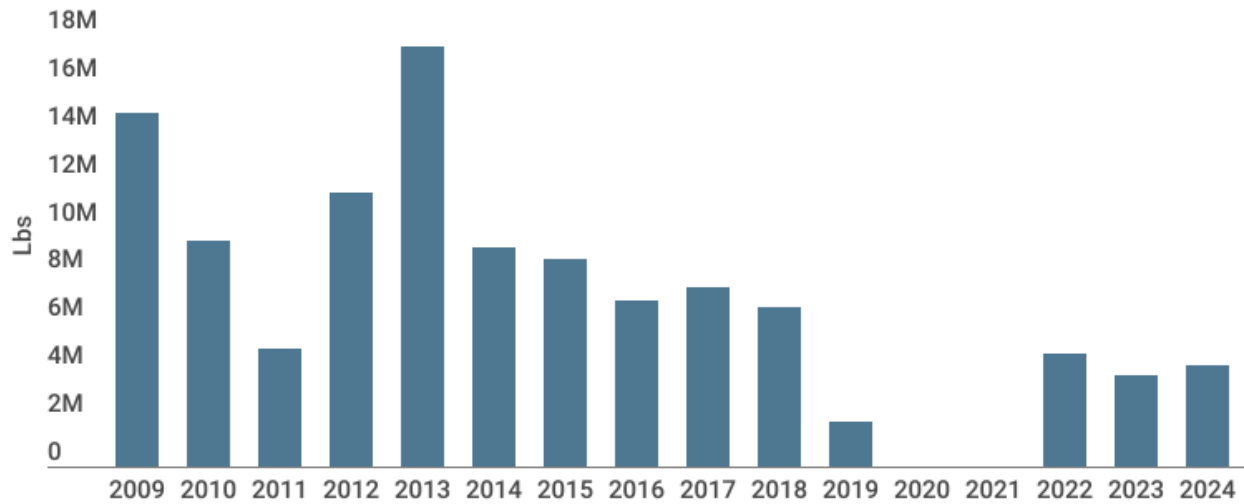


Figure 17: Pounds of Red King Crab Harvested Annually from Norton Sound Fishery. Source: State of Alaska Department of Fish and Game, 2009 to 2024.

The herring fishery is the largest in the Arctic, Yukon, and Kuskokwim region; however, the remoteness and late opening relative to other herring fisheries present challenges to connecting with outside markets.

King salmon and chum runs in certain areas of the Norton Sound, have been classified as stocks of concern by the Alaska Board of Fisheries. In 2024, because of projected weak runs of King, Chum, and Coho salmon, commercial fishing in select fisheries was limited or disallowed. In the Port Clarence District subsistence fishing was limited in June 2024. The Shaktoolik and Unalakleet subdistricts saw closures to conserve salmon populations.¹⁹

Norton Sound Commercial Salmon Harvest

Salmon harvested from the Norton Sound commercial salmon fishery, 2005 to 2024.

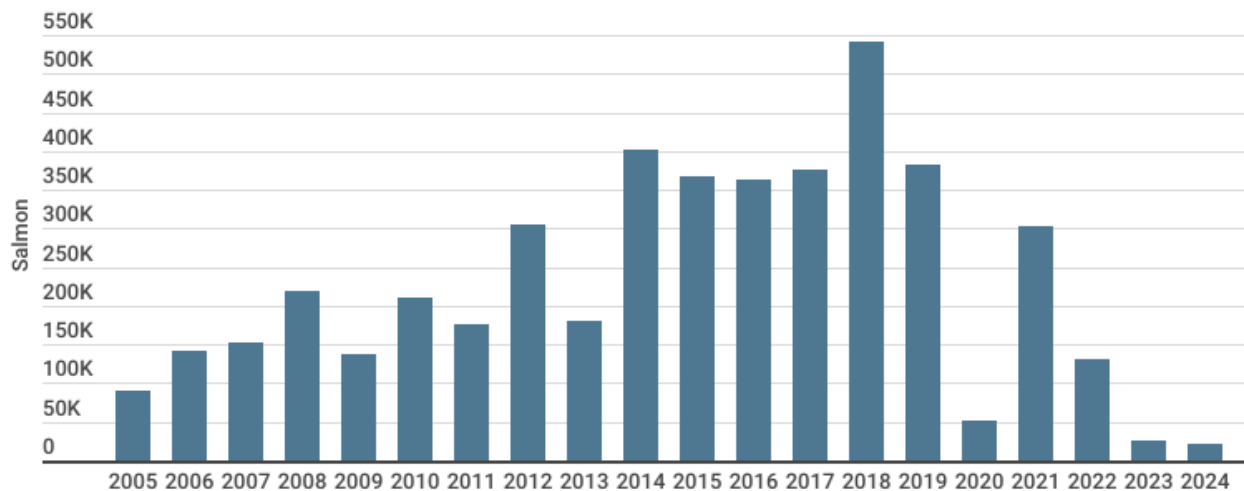


Figure 18: Salmon Harvested From the Norton Sound Commercial Salmon Fishery. Source: State of Alaska Department of Fish and Game, 2005 to 2024.

Research shows that local ownership of commercial fishing permits has a measurable positive economic impact on rural communities.²⁰ Across Alaska, local commercial fishing permit ownership has been declining. Across communities in region only 16 Alaska Commercial Fishing Entry Commission permits were owned by residents of the region, a number that has slowly shrank over time.

The Bering Strait region participates in the Western Alaska CDQ program which was created to:

- Provide eligible western Alaska villages with the opportunity to participate and invest in fisheries in the Bering Sea and Aleutian Islands Management Area;
- Support economic development in western Alaska;
- Alleviate poverty and provide economic and social benefits for residents of western Alaska; and
- Achieve sustainable and diversified local economies in western Alaska.

The Norton Sound Economic Development Corporation (NSEDC) is the CDQ for the Bering Strait Region. In 2023 NSEDC supported 117 fishers across the region which earned \$3.05 million for 600,000 lbs. of salmon, crab, and halibut. The CDQ's activities supports reinvestment in the region's communities, including:²¹

- \$2.25 million distributed through the Community Benefit Share program;
- \$1.4 million in energy subsidies awarded to Bering Strait households;
- \$433,000 in Outside Entity Fund grants awarded to seven local organizations;
- \$2.1 million for water and sewer infrastructure projects; and,
- \$744,000 awarded for large infrastructure projects.

Transportation and Logistics

- 681 vessels traversed the strait in 2023.²²
- 601 employed in the Trade, Transportation, and Utilities sector in 2023.²³
- The Port of Nome saw 156 unique vessel calls in 2023, handled 28,627 tons of cargo and 11,000 gallons of fuel.²⁴

Transportation and logistics are a major component of the regional economy, as distance, weather, and lack of land-based infrastructure present challenges to moving people and products. Nome serves as the hub of the region, complemented in this role somewhat by Unalakleet. Nearly all of the goods and materials distributed to communities in the region move through Nome or Unalakleet. Both communities host infrastructure to enable this distribution network with developed port and air infrastructure.

Port of Nome Cargo and Fuel Volumes

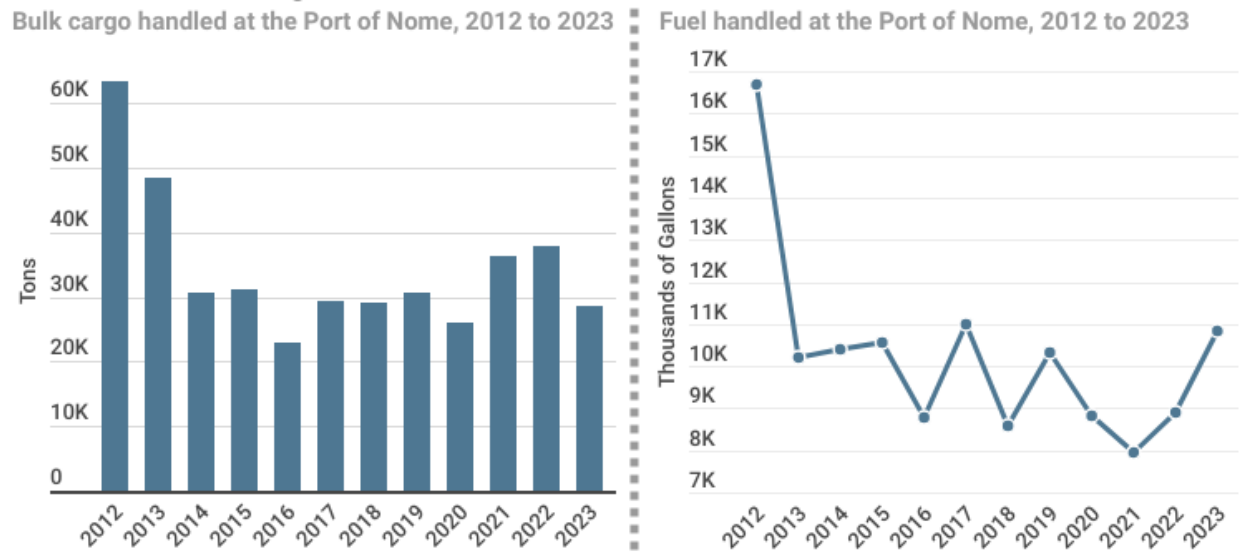


Figure 19: Bulk Cargo and Fuel Volumes Handled at the Port of Nome.
Source: Port of Nome, 2012 to 2023.

As the extent of the summer sea ice in the Arctic Ocean decreases, greater numbers of vessels have been passing through the Bering Strait. The increase in potential shipping through the Strait presents an opportunity for new infrastructure and business development. Conversely, more shipping brings an increased risk of an oil spill, marine mammal disturbance, and the potential for invasive species.

At present, the closest deep-draft port is situated in Unalaska, over 700 miles to the south of Nome. This presents logistical problems for operations exploring the outer continental shelf, as well as other vessels carrying freight through the strait. In addition to the lack of a port with commercial marine services, safety concerns have arisen as well. The nearest United States Coast Guard (USCG) base is on Kodiak, even further from the region than Unalaska. Planned development of the Port of Nome would potentially both increase safety and response time while allowing for additional economic activity with outside organizations.

Over recent years, traffic has increased through the Bering Strait. Many of these vessels are research and energy exploration ships, but vessels carrying bulk fuel and cargo have started using the Northern Sea Route across the north of Russia as the water opens. Smaller recreational vessels are also starting to travel the Northwest Passage through the Canadian Arctic.

Foreign military activity in the Bering Sea is also increasing. Chinese and Russian vessels have both been reported performing military training exercises in the area. In 2020 Russian naval vessels engaged the U.S. fishing fleet while fishing in the U.S. exclusive economic zone.²⁵ Russian air and sea exercises have continued,²⁶ and in 2024 the Chinese coast guard reported operations in the Bering Sea to support Chinese commercial activities in the Northern Sea Route.²⁷

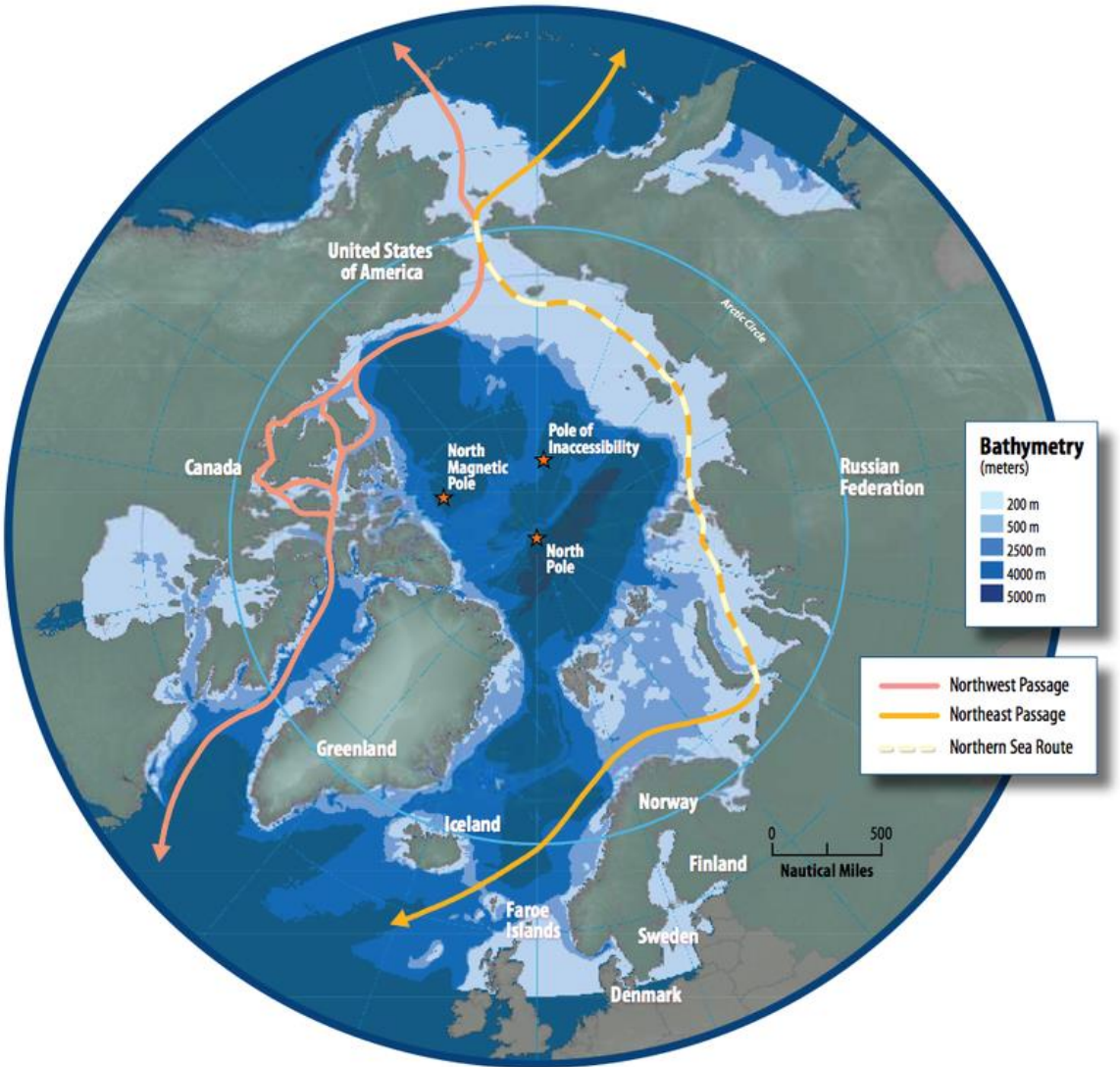


Figure 20: Arctic Shipping Routes.
Source: Wikimedia Commons.

Native Arts and Cultural Products

- 54% of artists in the region sell out of their homes.
- Carving of baleen, bone, and ivory is the most common type of art, followed by skin sewing and beadwork.²⁸

Many Native residents of the Bering Strait region supplement their annual income by producing arts and crafts. These products range from goods produced using marine mammal materials, as well as non-marine marine mammal-based goods. Alaska Natives are the only people in the United States allowed to harvest marine mammals such as seals, walrus, whale, and polar bear. Such species are harvested for subsistence purposes and provide a valuable food source in rural villages where store-bought food can be prohibitively expensive and low in nutritional value. Alaska Natives are also allowed to use the harvested raw materials (such as ivory, pelts, bone, and baleen) for arts and crafts purposes. Examples

of such products are jewelry, mittens, hats, mukluks, ivory carvings, masks, dolls, grass baskets, dolls, dance accouterments, kayaks, and slippers.

Most artists in the region sell their work from the home or locally to visiting professionals (54% and 50% respectively). Some artists do market their products over the internet, selling on Facebook, Instagram, Etsy, Shopify, etc. (29%). Smaller percentages of artists sell at local bazaars or craft fairs or travel outside of their communities to sell at regional or statewide.²⁹

Pricing artwork is not always straightforward. A recent survey of artists in the region found that many artists will sell at reduced prices when selling locally. Artists also report large gaps between wholesale and retail pricing. High shipping costs to customers outside the region also eats into artist profits.

Infrastructure

Telecommunications

Access to high speed, affordable internet across Alaska can be limited, and this is no different in the Bering Strait region. Access to internet in communities across the region can be limited, and those with access often struggle with high costs and poor service quality.

In the last decade though, access to internet services in the Bering Strait has improved. Completion of the Quintillion network provides Nome with high-speed broadband access. Further, GCI's TERRA network connects many other communities in the region to internet services with microwave towers. Other unserved communities in the region have access to internet through Starlink, a low-earth-orbit satellite internet provider.

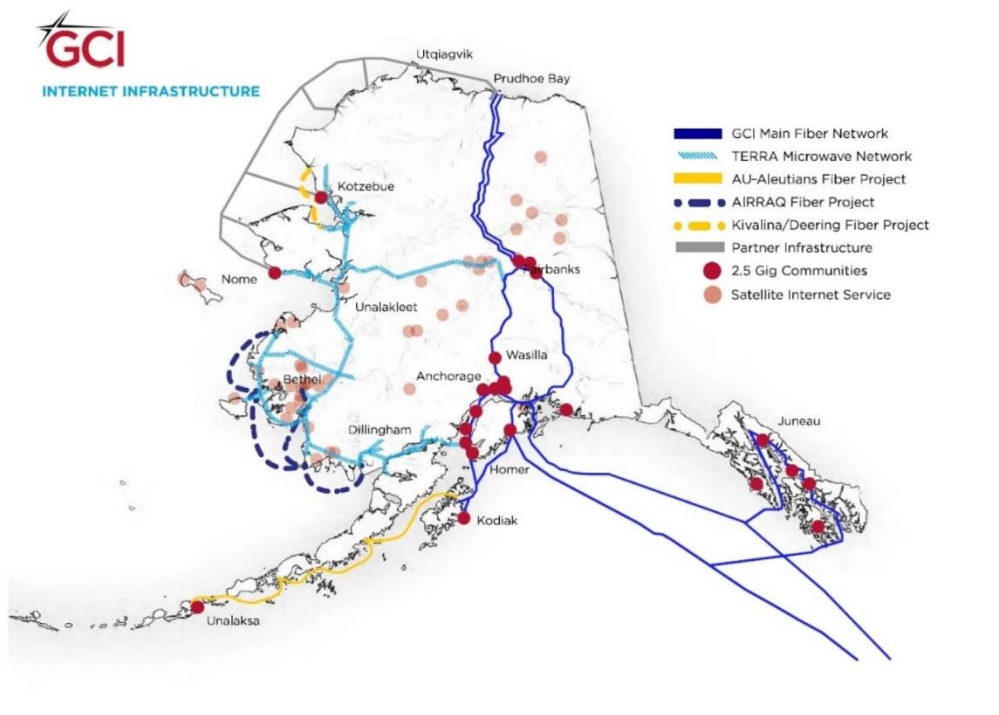


Figure 21: Alaska Internet Infrastructure.
Source: GCI TERRA Network.

While access to internet in the region is improving, reliance on single source service providers means that reliability can be challenged. In June 2023 Quintillion’s undersea cable was damaged, causing internet and cellular outages across the North Slope and Northwest regions of Alaska. Sea ice prevented repairs to the cable until August, with service returned to the region in September 2023.³⁰ Outages, like the one in 2023, impact business, government services, healthcare, education, and more.

With the recent outflow of federal funding dedicated to improving broadband access and resiliency, the Bering Strait region stands to see dramatic improvements in access to connectivity. The region was awarded \$2 million in Round 1 of the Tribal Broadband Connectivity Program grant distributions. One proposal for funding in the region is the Bering Strait Broadband project would connect St. Lawrence Island, and the communities of Shishmaref and Gambell, to Nome via an extension of Quintillion’s undersea fiber network.³¹



*Figure 22: Proposed Fiber Connection to St. Lawrence Island.
Source: Kawerak, Inc.*

Ports and Harbors

The Bering Strait region is dependent on maritime infrastructure to support its industry and supply chain. Barge deliveries provide fuel and materials to every community in the region in the summer months. Nome hosts the largest port in the region, followed by Unalakleet and Savoonga which both host fish processing plants. Nome has been identified as the site for a construction of the first Arctic deep water port in the U.S. and planning is underway, with the Federal government awarding \$663 million to support construction in 2024. Construction is expected to commence in 2025, however the U.S. Army Corps of Engineers canceled a bid request for the project’s first phase of construction after estimated came in over the budgeted amount.³²

Other communities in the region rely on beach landings, sometimes with land transfers in communities without sufficient beach access.

Community Port Infrastructure	
Community	Port Infrastructure Type
Brevig Mission	Beach Landing
Diomedede	Beach Landing
Elim	Beach Landing
Gambell	Beach Landing
Golovin	Beach Landing
Koyuk	Beach Landing with Land Transfer
Nome	Cargo Dock/Ramp/Small Boat Harbor
Savoonga	Beach Landing with Land Transfer
Shaktoolik	Beach Landing
Shishmaref	Beach Landing with Land Transfer
St. Michael	Dock/Ramp/Beach Landing
Stebbins	Beach Landing with Land Transfer
Teller	Protected Harbor/Beach Landing
Unalakleet	Dock/Ramp/Beach Landing
Wales	Beach Landing with Land Transfer
White Mountain	Beach Landing

Table 10: Community Port Infrastructure.

Transportation

Travel and freight transportation by air is the only means to efficiently access the Bering Strait year-round. However, during the ice-free months between June and November, barges can deliver freight to the region. There are hundreds of miles of roads in the region. Many of these roads extend north, east, and west from Nome, connecting the Taylor mining area, Council, and Teller, respectively. Other roads in the region connect Stebbins and St. Michael, Wales, and Tin City and serve as evacuation roads from Shaktoolik and Gambell. Ground transportation between villages is primarily accomplished by snow-machine in the winter and ATV in the summer.³³

Nome serves as the transportation hub of the region, with two Alaska Airlines jets coming through the airport daily. Jets carrying air cargo also land daily in Nome. Bering Air, Era Alaska, and Ryan Air provide service from Nome to the region’s villages. Era Alaska makes a daily flight between Unalakleet and Anchorage as well.

Apart from Diomedede, each community in the Bering Strait region has a year-round runway. Most runways are gravel and owned by the State of Alaska. Diomedede has a concrete heliport at the edge of the village. When the sea ice becomes thick enough, the village maintains an ice runway in the strait between Little and Big Diomedede Islands.³⁴

NCA Air Travel Infrastructure in 2024		
	Primary Runway	
	Size (ft)	Surface
Brevig Mission	2,990x100	Gravel
Council	3,000x60	Turf
Diomedede	64x64 (helipad)	Concrete
Elim	3,401x60	Gravel/Dirt
Gambell	4,499x96	Asphalt/Concrete
Golovin	4,000x75	Gravel
Koyuk	3,002x60	Gravel/Dirt
Nome	6,176x150	Asphalt
Savoonga	4,400x100	Gravel
Shaktoolik	4,001x75	Gravel/Dirt
Shishmaref	4,997x73	Asphalt
St. Michael	4,001x75	Gravel
Solomon	1,150x35	Gravel/Dirt
Stebbins	2,999x60	Gravel/Dirt
Teller	3,000x60	Gravel
Unalakleet	5,900x150	Asphalt
Wales	3,990x75	Gravel
White Mountain	3,000x60	Gravel

Table 11: NCA Air Travel Infrastructure in 2024

Source: Federal Aviation Administration

Water and Sewer

Water and sanitation utilities are typically locally owned and operated by the city or the Tribe. The owner is often supported by an outside entity such as the Alaska Native Tribal Health Consortium (ANTHC) or Village Safe Water, which support project development, securing grant funding, and assistance in carrying out projects.

Significant needs remain in terms of water and sewer infrastructure in the region. Except for teacher housing, there is no water and sewer service available in the communities of Diomedede, Wales, Shishmaref, Stebbins, and Teller. Residents wash clothes at the washeteria and haul water for use in their homes. In the remaining 10 villages, most of the residents are served; however, several homes in each community still do not have service.³⁵

According to the State of Alaska Department of Environmental Conservation there are 32 communities across Alaska that are unserved by access to water and sewer services. To be considered 'unserved' a community must have 45% or more homes that have not been served either via pipe, septic tank and well, or covered haul system to provide water and sewer services. Of those 32 communities across Alaska, five are in the NCA. These communities include:

- Wales
- Shishmaref
- Diomedede

- Stebbins
- Teller

NCA Community Water and Sewer Infrastructure				
	Water		Sewer	
Brevig Mission	Circulating	Buried	Gravity	Buried
Diomede	Washateria	None	Honey-bucket	None
Elim	Circulating	Buried	Gravity	Buried
Gambell	Circulating	Buried	Gravity	Buried
Golovin	Circulating	Buried	Gravity	Buried
Koyuk	Circulating	Buried	Gravity	Buried
Nome	Circulating	Buried	Gravity	Buried
St. Michael	Circulating	Above	Vacuum	Above
Savoonga	Circulating	Above	Vacuum	Above
Shaktolik	Circulating	Buried	Gravity	Buried
Shishmaref	Haul	None	Haul	None
Solomon	Individual Haul	None	Honey-Bucket	None
Stebbins	Washateria	None	Honey-Bucket	None
Teller	Washateria	None	Honey-Bucket	None
Unalakleet	Circulating	Buried	Gravity	Buried
Wales	Washateria	None	Honey-Bucket	None
White Mountain	Circulating	Buried	Gravity	Buried

Table 12: NCA Community Water and Sewer Infrastructure
Source: DCRA

Sewer and water systems are costly to construct and maintain in an arctic environment, partly due to the amount of energy needed to keep the system from freezing up and special design considerations required for permafrost. Existing water and sewer have recently been increasingly put at risk from the impacts of climate change, with storms, erosion, and permafrost threatening community infrastructure.

Energy

Across the region, community energy systems are made up of microgrids. Only two communities are interconnected – Stebbins and St. Michael. Diesel fuel provides the majority of the power and heat productions, with a handful of wind-diesel hybrid systems and a limited number of solar installations.

Because of the remoteness and scale of energy systems across the region energy costs are high. Fuel for power and heat production is barged in and is often delivered in bulk once a year in the ice-free summer months, making communities sensitive to swings in oil prices.

Community Level Energy Costs				
Community	Heating Fuel	Unleaded Gasoline	Pre-PCE Residential Rate	Post-PCE
Elim			\$ 0.72	\$ 0.26
Shishmaref	\$ 4.94	\$ 5.29	\$ 0.70	\$ 0.25
Gambell	\$ 6.70	\$ 6.70	\$ 0.68	\$ 0.27
Savoonga	\$ 6.70	\$ 6.90	\$ 0.68	\$ 0.25
Wales	\$ 6.38	\$ 6.89	\$ 0.68	\$ 0.25
Koyuk	\$ 6.34	\$ 5.68	\$ 0.67	\$ 0.25
Shaktoolik			\$ 0.66	\$ 0.27
Diomede			\$ 0.65	\$ 0.27
Stebbins	\$ 8.09	\$ 7.02	\$ 0.63	\$ 0.25
St. Michael	\$ 7.99	\$ 7.02	\$ 0.63	\$ 0.25
Unalakleet	\$ 6.03	\$ 5.74	\$ 0.63	\$ 0.32
Golovin	\$ 5.85	\$ 5.95	\$ 0.56	\$ 0.33
White mountain	\$ 5.78	\$ 5.25	\$ 0.55	\$ 0.22
Teller	\$ 7.16	\$ 6.44	\$ 0.51	\$ 0.08
Brevig Mission	\$ 4.45	\$ 4.75	\$ 0.51	\$ 0.25
Nome			\$ 0.46	\$ 0.28

Table 13: Community Level Energy Costs.

Source: DCRA, 2024, and Alaska Energy Authority (AEA), 2023.

The Bering Strait region has implemented a climate action plan outlines greenhouse gas emission reduction goals with targeted strategies at reducing energy consumption in building energy consumption and electricity generation and distribution to be implemented by 2032. The plan outlines specific actions around:

- Residential, community, and commercial building energy efficiency,
- Utility efficiency and infrastructure upgrades,
- Line loss improvements,
- Utility heat recovery upgrades,
- Community scale solar PV construction, and
- Community scale wind system construction.³⁶

Housing

Every community in the Bering Strait region struggles with housing costs and availability. Housing stock quality, construction costs, access to capital, climate change, and other factors play roles in limiting the number of available housing units in communities and driving the cost of housing upward.

Across the region the median rent in 2022 was recorded at \$1,349 per month and the median mortgage payment was \$1,669. However, with low-income levels across the region and high unemployment rates, the affordability of housing is a critical issue. Nearly a quarter of housing units in the NCA were considered cost burdened or severely cost burdened.

Cost of Living in the Bering Strait Region

Percent of households considered cost burdened in Nome Census Area and Statewide, 2022.

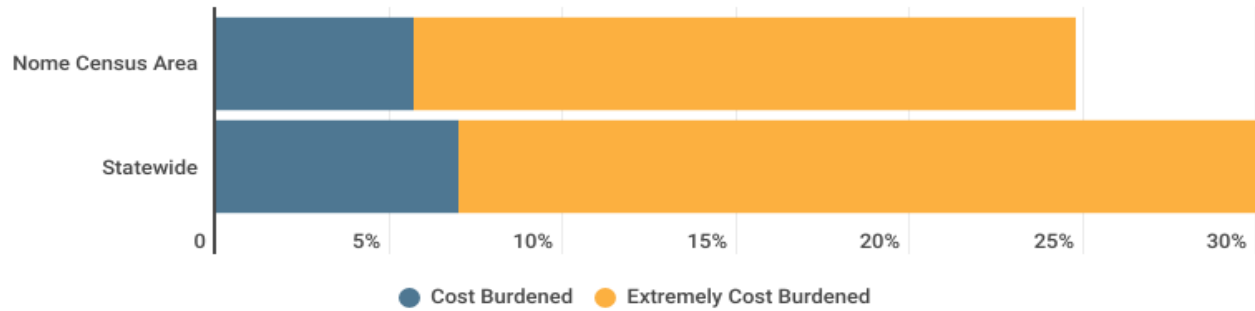


Figure 23: Percent of Households Considered Cost Burdened in NCA and Statewide.
Source: ACS, 2022 5-Year Estimate

The cost and availability of housing units in communities can lead to families combining resources with multigenerational homes, contributing to overcrowding in the region. Thirty-one percent of the housing units in the region are considered overcrowded or severely overcrowded.

Despite obvious need for new housing construction in the region, home construction remains low. However, early data for 2023 shows more construction activity than in years previous – specially in Stebbins.

Housing Development in the Nome Census Area

Total new homes built in the Nome Census Area, 2018 to 2023.

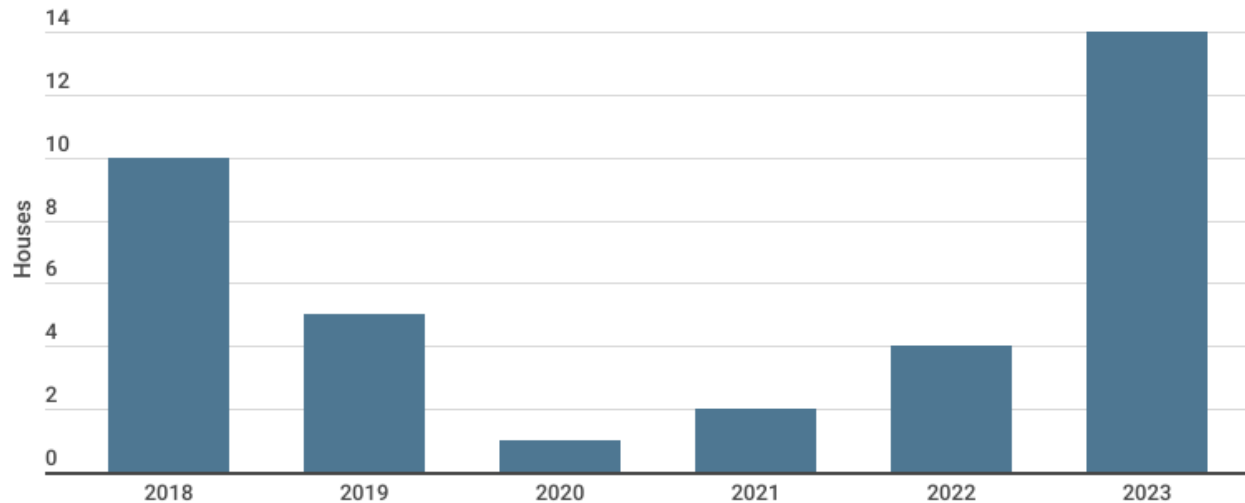


Figure 24: Total New Homes Built in the NCA.
Source: DOLWD, 2018 to 2023.

Existing housing stock in the region continues to be adversely affected by the impacts of climate change. Permafrost thaw shifts foundation, erosion destroys homes along the coast and rivers, and increasingly powerful storm damage buildings and inundate dwellings with water—leading to mold, rot, and other safe issues. These challenges were recently exacerbated by Typhoon Merbok in 2022, which in addition to flooding and wind damage, many homes were filled with sediment brought in by the storm.

IV. Communities and Tribal Local Economic Development Priorities

Since the publishing of the 2019-2024 CEDS, Kawerak has been working to update Local Economic Development Priorities (LEDP) for each of the 18 tribes in the region. This section provides a brief overview of each community—including a selection of key indicators—and an overview of the region’s LEDP, which are used to guide the goals and objectives of the regional CEDS.

Brevig Mission

Brevig Mission is located at the mouth of Shelman Creek on Port Clarence Bay, 5 miles northwest of Teller, and 65 miles northwest of Nome. The people of Brevig Mission are predominantly Inupiat and subsist on fish, moose, reindeer, seal, walrus, and beluga whales. The primary employers are the city and the school district. Year-round jobs are scarce, unemployment is high, and seasonal jobs in mining and construction are becoming limited due to a depressed minerals market. Cultural arts and crafts provide some cash income.

Brevig Mission Community Indicators	
Population (2023)	428
Median household income (2022)	\$58,438
Labor force participation rate (2022)	52.50%
Unemployment rate (2022)	20.50%
Poverty rate (2022)	53.90%
Residential electricity cost before PCE (\$/kWh, 2023)	\$0.72
Residential electricity cost after PCE (\$/kWh, 2023)	\$0.26
Heating fuel cost (\$/gallon, 2024)	\$0.00
Households with complete plumbing facilities (2022)	83.72%
Households overcrowded (2022)	53.49%
Distressed community status (2024)	Distressed
Number of CFEC permits owned by residents (2024)	0

Table 14: Brevig Mission Community Indicators.

Source: DOLWD, 2023; ACS, 2022 5-Year Estimates; AEA, 2023; DCRA, 2024; Denali Commission, 2024; CFEC, 2024.

Infrastructure

Brevig Mission’s water supply comes from Shelman Creek. It is treated and stored in a 100,000-gallon tank at the washeteria and is filled monthly. Completed in 2007, the piped sewer and water system serves most homes.

Brevig Mission’s electric needs are met by the Alaska Village Electric Cooperative (AVEC), which owns and operates the local electric utility which uses imported diesel fuel. In 2008, plans to install an intertie between Brevig Mission and Teller began, and the project was nearly completed in 2010. However, a storm damaged the undersea cable, and the project was never finished. The community has considered installing wind and solar technology or a heat recovery system. Power costs in the community are high and the community participates in the PCE program.

Space heating is predominantly powered by “Toyostove” systems with some households utilizing wood-burning stoves for supplemental heat. Driftwood can be collected and burned for heat, although the source is not reliable, and the quality of the wood is low.

The City of Brevig Mission buys fuel from NSEDC's Bulk Fuel Purchase Program. Between, the Alaska Army National Guard, AVEC, Bering Strait School District, Brevig Church, and the City of Brevig Mission the community hosts 260,900 gallons of bulk fuel storage capacity.

In fall 2022 Typhoon Merbok hit the western coast of Alaska damaging infrastructure in many villages in the NCA, damaging infrastructure in some communities. Brevig Mission avoided most of the force of the storm, only experiencing minor flooding. Some boats and cabins were lost along the coast, but most homes escaped undamaged.³⁷

Priority Projects—2020-2024

1. Housing
2. Recreation Center/High School Building
3. Tannery
4. Road Drainage/Maintenance
5. Relocate Landfill
6. Runway Expansion
7. Holding Cell
8. Mechanic Shop
9. More available Internet Services
10. Water & Sewer System Upgrade
11. Carving/Sewing Shop

Council

Council is located at the Nome/Council road terminus, 60 miles northeast of Nome. It lies on the left bank of the Niukluk River. The area encompasses 21.8 sq. miles of land and 0.3 sq. miles of water. Council has a continental climate with maritime influences when Norton Sound is ice-free. Its inland location gives greater daily variation in temperatures than nearby coastal communities.³⁸

Historically, the site was a fish camp for the Fish River Tribe, who originally lived 12 miles downriver. Gold was first discovered here in 1897. During the summers of 1897-99, the population of "Council City" population was estimated at 15,000. The discovery of more gold at Nome in 1900 caused many of the boomers to leave; however, the population during 1910 was still relatively large at 686 residents. The depletion of gold, the flu epidemic of 1918, the depression, and World War II all contributed to the decline of the population. By 1950, only nine people remained. There was postal service until 1978. Today, the community is not occupied year-round. Council is a seasonal fish camp. Several Nome residents have homes in Council, used for summer subsistence food-gathering activities and recreation.³⁹

Infrastructure

Community infrastructure is limited. Households haul their own water from locations outside Council. There is no centralized power distribution system. Residents use either generators or alternative energy resources to generate power for seasonal needs. Most homes in Council are seasonal residences and require minimal space heating. Some residents have diesel-fueled monitor heaters, while many others have woodstoves, utilizing the abundant wood in and around the community.

In the fall of 2022, Typhoon Merbok hit the western coast of Alaska damaging infrastructure in many villages in the NCA. The typhoon damaged the road between Nome and Council; however, repairs have since been made.

Priority Projects—2016-2021

1. Transportation
2. Environmental Protection and Programs
3. Fire Safety and Protection
4. Energy Programs
5. Natural Resources.
6. Elders, Youth, and Cultural Activities
7. Cemetery Renovations
8. Education, Business Training, and Economic Development
9. Community Cooperation
10. Dumpsite/Landfill Improvements

Diomedes

Diomedes is located on the west coast of Little Diomedes Island in the Bering Strait, 135 miles northwest of Nome. It is only 2.5 miles from Big Diomedes Island, Russia, and the international boundary lies between the two islands. The Bering Strait is generally frozen between mid-December and mid-June.⁴⁰

Diomedes is a traditional Ingalikmiut village. The 1880 Census counted 40 people in the village of "Inalet." During World War II, Little Diomedes residents who strayed into soviet waters were taken captive. When the Iron Curtain was formed, Big Diomedes became a Soviet military base, and all residents were moved to mainland Russia.⁴¹ The City was incorporated in 1970.

Seal, polar bear, crab, walrus, and whale meat are the preferred foods. Mainland indigenous peoples come to Diomedes to hunt polar bears. Hides are used to make individual clothing items, parkas, hats, mukluks, and furs and skins for trade.⁴² Employment is limited to the city and school. The Diomedes people are excellent ivory carvers; the city serves as a wholesale agent for the ivory.⁴³

Diomedes Community Indicators	
Population (2023)	75
Median household income (2022)	-
Labor force participation rate (2022)	70.40%
Unemployment rate (2022)	15.80%
Poverty rate (2022)	53.20%
Residential electricity cost before PCE (\$/kWh, 2023)	\$0.70
Residential electricity cost after PCE (\$/kWh, 2023)	\$0.25
Heating fuel cost (\$/gallon, 2024)	N/A
Households with complete plumbing facilities (2022)	0.00%
Households overcrowded (2022)	35.00%
Distressed community status (2024)	Non-Distressed
Number of CFEC permits owned by residents (2024)	0

Table 15: Diomedes Community Indicators.

Source: DOLWD, 2023; ACS, 2022 5-Year Estimates; AEA, 2023; DCRA, 2024; Denali Commission, 2024; CFEC, 2024.

Infrastructure

Due to constant winds from the north, accessibility by air to Little Diomedes is often limited. Weekly flights by helicopter are available year-round, weather permitting. Due to the steep slopes and rocky terrain, there is no airstrip, so ski planes must land on an ice strip in winter. Regular flights are scheduled from Nome, weather permitting. Cargo barge stops are irregular due to sea or ice conditions, but they are delivered at least annually.

Transportation on Little Diomedes is primarily by foot on a system of boardwalks and trails. The boardwalks are owned by the city, though they are maintained by the IRA through Bureau of Indian Affairs (BIA) funding.

The City of Diomedes and Diomedes Joint Utilities are responsible for the management of a seasonal washeteria serviced by a septic system and seepage pit, water treatment plant, and 434,000-gallon steel water storage tank/watering point. The water tank is fed by water drawn from a mountain spring that is then filtered and chlorinated at the water treatment plant prior to being stored in the tank. Community

residents use a watering point to self-haul water during the winter months. There is a distribution system that allows residents to access hydrants throughout the community rather than going to the centralized watering point. The local clinic is connected to the washeteria septic system. Waste is disposed of on the beach to the north of the community in the summer and on the sea ice in the winter. ANTHC has received funding from the Indian Health Service to plan sanitation enhancement, such as water and wastewater improvements, to increase the community of Diomedé's level of service.

The City of Diomedé and Diomedé Joint Utilities operates a seasonal washeteria, a water treatment plant, a water storage/watering point, and a local power utility. The small power plant runs two diesel generators, one primary and one backup. Diomedé participates in the PCE program. Residents heat their homes predominantly with small diesel heaters or "Toyostove" systems. Between the Diomedé Native Store, City of Diomedé, and BSSD the community hosts 163,000 gallons of bulk fuel storage capacity.

In the fall of 2022, Typhoon Merbok hit the western coast of Alaska damaging infrastructure in many villages in the NCA. Diomedé was largely protected from the storm, only experiencing limited damage to the seawall.

In 2023 the governor declared a disaster for Diomedé after the city building partially collapsed into the school. The damage caused the school to temporarily close, however, it has since reopened.

Priority Project—2020-2024

1. Transportation Improvements
2. Water and Sewer
3. New Housing and Improvement of Existing Structures
4. Public Safety
5. Elder Care Programs
6. Local Disaster Plan
7. Revive Tradition & Culture

Elim

Elim is located on the northwest shore of Norton Bay on the Seward Peninsula, 96 miles east of Nome. It lies 460 miles northwest of Anchorage. Elim has a subarctic climate with maritime influences. Norton Sound is ice-free generally between mid-June and mid-November.

The site of the community was formerly the site of the village of Nuviakchak. The area became a federal reindeer reserve in 1911. In 1914 a mission and school were established. The city was incorporated in 1970. When the ANCSA was passed in 1971, Elim decided not to participate and instead opted for the title to the 298,000 acres of land in the former Elim Reserve. The Iditarod Sled Dog Race passes through Elim each year.⁴⁴

Elim is an Inupiat village. The economy relies on subsistence harvests. Residents rely on fish, seals, walrus, beluga whales, reindeer, moose, and home gardens.⁴⁵ Employment is largely limited to fishing, the city, and the school. Unemployment, like many villages in the region, is high.⁴⁶

Elim Community Indicators	
Population (2023)	358
Median household income (2022)	\$35,000
Labor force participation rate (2022)	62.10%
Unemployment rate (2022)	44.40%
Poverty rate (2022)	36.50%
Residential electricity cost before PCE (\$/kWh, 2023)	\$0.68
Residential electricity cost after PCE (\$/kWh, 2023)	\$0.27
Heating fuel cost (\$/gallon, 2024)	N/A
Households with complete plumbing facilities (2022)	70.59%
Households overcrowded (2022)	50.00%
Distressed community status (2024)	Distressed
Number of CFEC permits owned by residents (2024)	32

Table 16: Elim Community Indicators.

Source: DOLWD, 2023; ACS, 2022 5-Year Estimates; AEA, 2023; DCRA, 2024; Denali Commission, 2024; CFEC, 2024.

Infrastructure

The community's water and sewer water treatment systems were built in the 1970s and features piped water and sewer service to residences and community buildings. However, upgrades to the system are needed. The current system provides residents with piped water and sewer, indoor water heaters, and in-home washers and dryers. Waste flows to a sewage treatment plant with ocean outfall.⁴⁷

A new water source is needed. Residents must conserve water and shortages occur. Some updates to sanitation facilities have been made, but more are needed.⁴⁸ In 2023, NSEDC awarded funds to the City of Elim for water and sewer repairs.

Elim's power utility is owned and operated by AVEC and utilizes a diesel generator system. The community participates in the PCE program. The community has a GARN biomass boiler to heat the water treatment plant and storage tank facility. The community is also exploring local geothermal resource potential in partnership with the National Renewable Energy Laboratory.

Most residents heat their homes with small diesel monitor heaters, “Toyostove” systems, or wood-burning stoves for primary and/or supplemental heat.⁴⁹ Many residents also have wood-burning stoves for primary and/or supplemental heat. There is an abundant wood resource, mainly black spruce, and cottonwood, in and around the community.⁵⁰

Between BSSD, AVEC, the City of Elim, Alaska Army National Guard, and the Alaska Department of Transportation the community hosts 278,290 gallons of bulk fuel storage capacity.

In the Fall of 2022, Typhoon Merbok hit the western coast of Alaska damaging infrastructure in many villages in the NCA, destroying or damaging local infrastructure. Elim was heavily impacted, experiencing large scale coastal erosion, sewer and road wash outs, and destruction of homes.⁵¹

Priority Projects – 2018-2022

1. Housing
2. Water and Sewer
3. Rock Quarry
4. Boat Harbor
5. Protecting Language, Culture, and Subsistence
6. Timber Development
7. NSEDC OEF
8. Landfill
9. Old Highschool Building
10. Teen Center

Gambell

Gambell is located on the northwest cape of St. Lawrence Island, 200 miles southwest of Nome, in the Bering Sea. The city is 36 miles from the Chukotka Peninsula, Siberia.

In the 18th and 19th centuries, over 4,000 people inhabited the island in 35 villages. Sivuqaq is the St. Lawrence Island Yupik name for the village and for the island. The city was renamed for Mr. and Mrs. Vene C. Gambell. A tragic disease decimated the population between 1878 and 1880. In 1900, reindeer were introduced to the island for local use, and in 1903, President Roosevelt established a reindeer reservation. During the 1930s, some residents moved to Savoonga to establish a permanent settlement there.

The city was incorporated in 1963. When ANCSA was passed in 1971, Gambell and Savoonga decided not to participate, and instead opted for the title to the 1.136 million acres of land in the former St. Lawrence Island Reserve. Savoonga and Gambell jointly own the island.⁵² Gambell’s isolation has helped residents maintain their traditional Siberian Yupik culture and language. Many residents are largely bilingual.⁵³

The economy in Gambell is largely based upon subsistence harvests from the sea: seal, walrus, fish, and bowhead and gray whales. Some reindeer roam free on the island, but most harvesting occurs out of Savoonga. Revenue from ivory carving is a popular source of income. The abundant number of seabird colonies provides an opportunity for tourism from birdwatchers.⁵⁴

Gambell Community Indicators	
Population (2023)	630
Median household income (2022)	\$39,375
Labor force participation rate (2022)	58.40%
Unemployment rate (2022)	31.50%
Poverty rate (2022)	35.40%
Residential electricity cost before PCE (\$/kWh, 2023)	\$0.68
Residential electricity cost after PCE (\$/kWh, 2023)	\$0.25
Heating fuel cost (\$/gallon, 2024)	\$6.70
Households with complete plumbing facilities (2022)	47.58%
Households overcrowded (2022)	31.45%
Distressed community status (2024)	Distressed
Number of CFEC permits owned by residents (2024)	0

Table 17: Gambell Community Indicators.
 Source: DOLWD, 2023; ACS, 2022 5-Year Estimates; AEA, 2023; DCRA, 2024; Denali Commission, 2024; CFEC, 2024.

Infrastructure

Gambell’s water supply is derived from wells and Troutman Lake and is treated and stored in three storage tanks. There are no more community-wide water shortage issues due to a new water tank. The community has suffered many sewer problems and freeze ups. Many people in town self-haul water from various places near the village. Residents self-haul their own honey-buckets.⁵⁵ In 2021 Gambell was awarded funds from NSEDC for water treatment system upgrades.

Gambell’s electric utility is owned and operated by AVEC, which maintains a hybrid wind-diesel system in the community. The community participates in the PCE program. Most residents heat their homes with small diesel monitor heaters, or “Toyostove” systems. Gambell Native Corporation buys fuel from NSEDC’s Bulk Fuel Purchase Program. Between the Presbyterian Church, Seventh Day Adventist Church, BSSD, AVEC, the Native Store, City of Gambell, and the National Guard Armory the community hosts 643,600 gallons of bulk fuel storage capacity.

In the Fall of 2022, Typhoon Merbok hit the western coast of Alaska damaging infrastructure in many villages in the NCA, destroying or damaging local infrastructure. Gambell reported being mostly spared from the storm. However, cabins outside of town were displaced.

Priority Projects—2012-2017

1. Housing and Renewable Energy
2. Public Safety
3. Health Care
4. Transportation
5. Waste Management
6. Multi-purpose Building
7. Education
8. Economy
9. Processing Plant
10. Cultural Center
11. Storage and Workshop Facility

Golovin

Golovin is located on a point of land between Golovin Bay and Golovin Lagoon on the Seward Peninsula. It is 70 miles east of Nome.

Indigenous peoples originally settled the village of "Chinik," which later became Golovin. Golovin was named for Captain Vasili Golovnin of the Russian Navy. In 1887, a church and school were established. Around 1890, a trading post became the center for prospecting information for the entire Seward Peninsula. When gold was discovered in 1898 at Council, Golovin became a supply point for the gold fields. Supplies were shipped from Golovin to Council. A post office was opened in 1899. Reindeer herding was an integral part of the missions in the area in the 1900s. The city was incorporated in 1971.⁵⁶

The community's economy is reliant on subsistence activities, reindeer herding, fish processing, and commercial fishing. The salmon fishery and reindeer herding offer some potential income to augment subsistence food harvests. Fish, beluga whales, seals, moose, and reindeer are the main sources of meat.⁵⁷

Golovin Community Indicators	
Population (2023)	184
Median household income (2022)	\$54,167
Labor force participation rate (2022)	71.30%
Unemployment rate (2022)	16.50%
Poverty rate (2022)	14.60%
Residential electricity cost before PCE (\$/kWh, 2023)	\$0.68
Residential electricity cost after PCE (\$/kWh, 2023)	\$0.25
Heating fuel cost (\$/gallon, 2024)	\$6.38
Households with complete plumbing facilities (2022)	86.76%
Households overcrowded (2022)	27.94%
Distressed community status (2024)	Non-Distressed
Number of CFEC permits owned by residents (2024)	19

Table 18: Golovin Community Indicators.

Source: DOLWD, 2022; ACS, 2021 5-Year Estimates; AEA, 2022; DCRA, 2023; Denali Commission, 2022; CFEC, 2023.

Infrastructure

The city has finished the development of a community-wide piped water and sewer system. Water is pumped from Chinik Creek, treated, and stored in three large tanks. Approximately 98% of homes have plumbing.

Golovin's electric utility is owned and operated by Golovin Power Utilities, under the City of Golovin. The powerhouse operates four diesel generator sets. In spring 2024, the City of Golovin received a grant to purchase two new diesel generators. The community participates in the PCE program.

Most residents heat their homes with small diesel monitor heaters, or "Toyostove" systems. The City of Golovin buys fuel through NSEDC's Bulk Fuel Purchase Program.⁵⁸ Between the City of Golovin and BSSD the community hosts 156,400 gallons of bulk fuel storage capacity.

In the Fall of 2022, Typhoon Merbok hit the western coast of Alaska damaging infrastructure in many villages in the NCA. Golovin experienced significant flooding, with damage to homes and community buildings.

Priority Projects—2020-2024

1. Water and Sewer
2. Power and Utility
3. Post Office and ZIP Code
4. 14(c)(3)
5. Increase Store Inventory/Quality
6. City Building
7. Youth Center
8. Climate Mitigation and Environmental Science (ENVS) Protection
9. Wellness and Safety
10. Housing
11. Crosswind runway
12. Alternative Energy
13. Rock Quarry

Koyuk

Koyuk is located at the mouth of the Koyuk River, at the northeastern end of Norton Bay on the Seward Peninsula, 90 air miles northeast of Nome. Koyuk has a subarctic climate with a maritime influence.⁵⁹

The site of "Eyeteeth" on Cape Denbigh to the south has archeological evidence tracing back 6,000 to 8,000 years. The villagers were historically nomadic. Around 1900, the present townsite began to be populated, where supplies could easily be lightered to shore. Two boomtowns grew up in the Koyuk region around 1914: Dime Landing and Haycock. The "Norton Bay Station," 40 miles upriver, was established to supply miners and residents in 1915. In addition to gold, coal was mined a mile upriver to supply steamships and for export to Nome. The first school began in the church in 1915; the U.S. government built a school in Koyuk in 1928. The city was incorporated in 1970.⁶⁰

Koyuk is a traditional Unalit and Malemute Inupiaq village that speaks a dialect of the Inupiat language. The Koyuk economy is based on subsistence, supplemented by limited part-time jobs. Unemployment is high. There is a little commercial fishing, primarily for herring, and some income is derived from reindeer herding. The primary meat sources are fish, reindeer, seal, beluga whale, and moose.⁶¹

Koyuk Community Indicators	
Population (2023)	308
Median household income (2022)	\$35,313
Labor force participation rate (2022)	41.60%
Unemployment rate (2022)	16.70%
Poverty rate (2022)	39.70%
Residential electricity cost before PCE (\$/kWh, 2023)	\$0.67
Residential electricity cost after PCE (\$/kWh, 2023)	\$0.25
Heating fuel cost (\$/gallon, 2024)	\$6.34
Households with complete plumbing facilities (2022)	76.77%
Households overcrowded (2022)	34.34%
Distressed community status (2024)	Distressed
Number of CFEC permits owned by residents (2024)	13

Table 19: Koyuk Community Indicators.

Source: DOLWD, 2023; ACS, 2022 5-Year Estimates; AEA, 2023; DCRA, 2024; Denali Commission, 2024; CFEC, 2024.

Infrastructure

A water and sewer distribution system serve the community. A system for piped water and sewer service was recently completed for the town. A washeteria and central watering point also serve the community. The soft ground in some areas still causes problems with pipes and freeze ups and in 2023 the community experienced water service outages for months due to pipes freezing.⁶² In 2021, NSEDC awarded Koyuk funding for upgrades to the community's well.

AVEC operates the power utility in Koyuk, which runs solely on diesel generators. The community participates in the PCE program.

Most residents heat their homes with small diesel monitor heaters, or "Toyostove" systems. Many homes also utilize wood-burning stoves, as there is an abundant wood resource in and around the community. The Koyuk Native Corporation buys fuel from NSEDC's Bulk Fuel Purchase Program.

Between BSSD, Koyuk Native Corporation, AVEC, City of Koyuk, and Alaska DOT the community hosts 261,050 gallons of bulk fuel storage capacity.

In the Fall of 2022, Typhoon Merbok hit the western coast of Alaska damaging infrastructure in many villages in the NCA. Koyuk experienced flooding and storm damage that washed out roads, damaged foundations, oil spillage, and power outages.

Priority Projects—2022-2027

1. Housing
2. Heavy Equipment
3. Washateria
4. Roads Improvements/Airport
5. Sanitation Facilities/Landfill
6. Search and Rescue
7. New Head Start Building
8. Youth Cultural Center
9. Elder Care Program/Patient Advocate
10. Tribal Court
11. Develop Tribal Capacity & Education/Employment

Nome

Nome was built along the Bering Sea, on the south coast of the Seward Peninsula, facing Norton Sound. It is 539 air miles northwest of Anchorage, a 75-minute flight. It is 102 miles south of the Arctic Circle, and 161 miles east of Russia.

Indigenous Alaskans have occupied the Seward Peninsula for thousands of years, with a well-developed culture adapted to the environment. Around 1870 to 1880, the caribou declined on the Peninsula, and the Eskimos changed their diets. Gold discoveries in the Nome area had been reported as far back as 1865. But it was a \$1,500-to-the-pan gold strike on tiny Anvil Creek in 1898 by three Scandinavians that brought thousands of miners to the "Eldorado." Almost overnight, an isolated stretch of tundra fronting the beach was transformed into a tent-and-log cabin city of 20,000 prospectors, gamblers, claim jumpers, saloonkeepers, and prostitutes. The gold-bearing creeks had been almost completely staked when some entrepreneurs discovered the "golden sands of Nome." With nothing more than shovels, buckets, rockers, and wheelbarrows, thousands of idle miners descended upon the beaches. Two months later, the golden sands had yielded one million dollars in gold (at \$16 an ounce). A narrow-gauge railroad and telephone line from Nome to Anvil Creek was built in 1900. The City of Nome was formed in 1901. By 1902 the more easily reached claims were exhausted, and large mining companies with better equipment took over the mining operations. Since the first strike on tiny Anvil Creek, Nome's goldfields have yielded \$136 million. The gradual depletion of gold, a major influenza epidemic in 1918, the depression, and finally, World War II, each influenced Nome's population. A disastrous fire in 1934 destroyed most of the city.⁶³

Today the population of Nome is a mixture of mostly Inupiat and non-Natives. Although many employment opportunities are available, subsistence activities are prevalent in the community. Residents of King Island relocated to Nome in the 1960s. Nome is the finish line for the 1,100-mile Iditarod Sled Dog Race from Anchorage, held each March. The city is the Bering Strait region's supply, service, and transportation center. Government services provide most of the employment. Retail services, transportation, mining, medical, and other businesses provide year-round income.

Nome Community Indicators	
Population (2023)	3,506
Median household income (2022)	\$103,542
Labor force participation rate (2022)	74.40%
Unemployment rate (2022)	8.40%
Poverty rate (2022)	6.10%
Residential electricity cost before PCE (\$/kWh, 2023)	\$0.66
Residential electricity cost after PCE (\$/kWh, 2023)	\$0.27
Heating fuel cost (\$/gallon, 2024)	N/A
Households with complete plumbing facilities (2022)	99.57%
Households overcrowded (2022)	21.06%
Distressed community status (2024)	Non-Distressed
Number of CFEC permits owned by residents (2024)	31

Table 20: Nome Community Indicators.

Source: DOLWD, 2023; ACS, 2022 5-Year Estimates; AEA, 2023; DCRA, 2024; Denali Commission, 2024; CFEC, 2024.

Infrastructure

Nome Joint Utilities System provides community water, sewer, and electric services. Most of the residents currently have complete plumbing. The water source is the Moonlight Springs aquifer, which is classified as a groundwater source. Water to the community is provided by three artesian wells located north of the Nome-Beltz High School at the base of Anvil Mountain. These wells are capable of adequately supplying Nome's year-round water needs. The infiltration gallery previously used is no longer connected to the distribution system. It could be reactivated in the event of an emergency and is available to provide an additional source of firefighting water to the facilities in the vicinity of the high school.

The community operates a wind-diesel hybrid system and recently installed newer, higher-efficiency turbines, which enable the community to reduce diesel consumption. Nome participates in the PCE program which helps to lower the cost of power for residents and community facilities.

Most residents heat their homes with small diesel monitor heaters or "Toyostove" systems. Many homes also utilize wood-burning stoves. Many homes also utilize wood-burning stoves and collect their firewood from surrounding communities and driftwood resources throughout the year. There is a limited number of pellet stove used throughout the town.

In the Fall of 2022, Typhoon Merbok hit the western coast of Alaska damaging infrastructure in many villages in the NCA. The typhoon caused flooding, high winds, and storm surge, damaging roads, seawalls, homes and businesses, and other infrastructure.

Priority Projects

Nome Eskimo Community 2022-2027

1. Attract, retain, and recruit competitively to hire qualified applicants for the Nome Eskimo Community, fill staff vacancies, and promote within.
2. Improve housing opportunities for tribal members.
3. Improve access to childcare for tribal members.
4. Increase the number of foster care hosts, and support to existing foster families.
5. Develop wellness and education programs to increase the health, well-being, and employability of youth and young adults.
6. Start a food support program to assist needy tribal members improve access to healthy foods.
7. Provide more education and job training opportunities for tribal members.
8. Work with partners to establish a tribal E-library with an internet workstation for tribal members.
9. Implement dust control projects for pavements and sidewalks in Nome.
10. Complete the East End road project in Nome.

King Island Native Community 2014-2019

1. Community Hall
2. King Island Grant Writer
3. More Housing and Housing Improvement
4. Continue Road Project
5. Elders and Youth Services
6. Strengthen Cultural Activities
7. Encourage Technical and Trade Schools
8. General Assistance
9. Relocate Cape Wooley Camps
10. Transportation Services for Community Members

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Savoonga

Savoonga is located on the northern coast of St. Lawrence Island in the Bering Sea, 164 miles west of Nome. Savoonga has a subarctic maritime climate with some continental influences during the winter.

The island had numerous villages with a total population of around 4,000 by the 19th century. A tragic famine occurred on the island in 1878-80, severely reducing the population. In 1900 a herd of reindeer was moved to the island, and by 1917, the herd had grown to over 10,000 animals. A reindeer camp was established in 1916 at the present village site, where grazing lands were better, and the herd tended to remain. Good hunting and trapping in the area attracted more residents. A post office was established in 1934. The City was incorporated in 1969. When ANCSA was passed in 1971, Gambell and Savoonga decided not to participate, and instead opted for the title to the 1.1 million acres of land in the former St. Lawrence Island Reserve. The villages of Savoonga and Gambell jointly own the island.⁶⁴

The community is a traditional St. Lawrence Island Yupik village. Savoonga is hailed as the "Walrus Capital of the World." Whales, seals, walrus, and reindeer comprise 80% of the local diet. Due to the island's isolation, the community has retained many of its cultural and linguistic traditions. Most residents are bilingual. Siberian Yupik is still the first language. Residents have successfully mixed the past with the present. The economy of Savoonga is largely based upon subsistence hunting of walrus, seal, fish, and bowhead, and gray whale, with some cash income. Norton Sound Seafood Products operates in Savoonga. Reindeer harvests occur, but the herd is not managed. Locals are known for their quality ivory carvings. Some birding tourism activities occur in Savoonga.⁶⁵

Savoonga Community Indicators	
Population (2023)	838
Median household income (2022)	\$53,125
Labor force participation rate (2022)	50.70%
Unemployment rate (2022)	31.80%
Poverty rate (2022)	33.80%
Residential electricity cost before PCE (\$/kWh, 2023)	\$0.65
Residential electricity cost after PCE (\$/kWh, 2023)	\$0.27
Heating fuel cost (\$/gallon, 2024)	\$0.00
Households with complete plumbing facilities (2022)	86.06%
Households overcrowded (2022)	51.52%
Distressed community status (2024)	Distressed
Number of CFEC permits owned by residents (2024)	0

Table 21: Savoonga Community Indicators.

Source: DOLWD, 2023; ACS, 2022 5-Year Estimates; AEA, 2023; DCRA, 2024; Denali Commission, 2024; CFEC, 2024.

Infrastructure

The water and sewer utilities are operated and maintained by the Alaska Rural Utility Collaborative. Well water is treated and stored in a 100,000-gallon tank at the washeteria. A circulating water and sewer utilidor system, including household plumbing, came on-line in January 1999. In 2004, the washeteria was closed, as revenues were unable to cover operating expenditures. Most of the homes in the community are on the water and sewer system, including 20 new U.S. Department of Housing and Urban Development (HUD) housing units on the west side are plumbed but need to be connected to the

system. The clinic and school have independent wells and septic systems. They must conserve water at certain times of the year.

Savoonga’s power utility is owned and operated by AVEC which manages a hybrid wind-diesel system. The community participates in the PCE program which helps to lower the cost of power for residents and community facilities.

Most residents heat their homes with small diesel monitor heaters, or “Toyostove” systems. The Native Village of Savoonga buys fuel from NSEDC’s Bulk Fuel Purchase Program. Between the City of Savoonga, BSSD, AVEC, Native Village of Savoonga, Alaska DOT, Alaska National Guard, and the Presbyterian Church the community hosts 616,000 gallons of bulk fuel storage capacity.

In the Fall of 2022, Typhoon Merbok hit the western coast of Alaska damaging infrastructure in many villages in the NCA. Savoonga was largely spared from the impacts of the storm.

Priority Projects—2018-2022

1. Evacuation Road and Shelter
2. Housing
3. New Landfill
4. Meat Processing Plant
5. Tribal Police
6. Multipurpose Building (Youth/Elder/Community Center)
7. Airport Relocation
8. Bypass Mail Storage Facility
9. Museum/Tourism Center

Shaktoolik

Shaktoolik is located on the east shore of Norton Sound. Shaktoolik has a subarctic climate with maritime influences when Norton Sound is ice-free.⁶⁶

Shaktoolik was the first and southernmost Malemiut settlement on Norton Sound, occupied as early as 1839. Twelve miles northeast, on Cape Denbigh, is "Iyatayet," a site that is 6,000 to 8,000 years old. Reindeer herds were managed in the Shaktoolik area around 1905. The village was originally located six miles up the Shaktoolik River and moved to the mouth of the River in 1933. This site was prone to severe storms and winds, however, and the village relocated to its present, more sheltered location in 1967. The city was incorporated in 1969.⁶⁷

The local economy is based on subsistence, supplemented by part-time wage earnings. The development of a new fish processing facility is a village priority. Reindeer herding also provides income and meat. Fish, crab, moose, beluga whale, caribou, seal, rabbit, geese, cranes, ducks, ptarmigan, berries, greens, and roots are also primary food sources.⁶⁸

Shaktoolik Community Indicators	
Population (2023)	207
Median household income (2022)	\$62,500
Labor force participation rate (2022)	63.40%
Unemployment rate (2022)	35.00%
Poverty rate (2022)	12.50%
Residential electricity cost before PCE (\$/kWh, 2023)	\$0.63
Residential electricity cost after PCE (\$/kWh, 2023)	\$0.25
Heating fuel cost (\$/gallon, 2024)	N/A
Households with complete plumbing facilities (2022)	95.95%
Households overcrowded (2022)	40.54%
Distressed community status (2024)	Non-Distressed
Number of CFEC permits owned by residents (2024)	45

Table 22: Shaktoolik Community Indicators.

Source: DOLWD, 2023; ACS, 2022 5-Year Estimates; AEA, 2023; DCRA, 2024; Denali Commission, 2024; CFEC, 2024.

Infrastructure

Water is pumped three miles from the Togoomenik River to the pumphouse, where it is treated and stored in an 848,000-gallon insulated tank adjacent to the washeteria. The dump's location is a concern because it could harm the water source. A piped water and sewage collection system serves most homes. In 2021, the community received funding for a water and sewer project from NSEDC.

AVEC operates and maintains Shaktoolik's utility, which is a hybrid wind-diesel system. The community participates in the PCE program.

Most residents heat their homes with small diesel monitor heaters, or "Toyostove" systems, although some have woodstoves for supplemental heating.⁶⁹ Between BSSD, AVEC, and Shaktoolik Native Corporation the community hosts 327,100 gallons of bulk fuel storage capacity.

In the Fall of 2022, Typhoon Merbok hit the western coast of Alaska damaging infrastructure in many villages in the NCA. The typhoon washed away almost all of Shaktoolik's berm and damaged lights at the airport.

Priority Projects—2013-2018

1. Emergency Road
2. Bulk Fuel Storage Facility/Power Plant
3. New Water Storage Tank
4. Multi-purpose Facility
5. Heavy Equipment Garage
6. Dust Control and Snow Fencing
7. New Clinic
8. Shaktoolik Boat Harbor
9. Fish Processing Plant/Buying Station
10. Early Childhood Education

Shishmaref

Shishmaref is located on Sarichef Island, in the Chukchi Sea, just north of the Bering Strait. Shishmaref is five miles from the mainland, 126 miles north of Nome, and 100 miles southwest of Kotzebue. The village is surrounded by the 2.6 million-acre Bering Land Bridge National Reserve. It is part of the Beringian National Heritage Park, endorsed by Presidents Bush and Gorbachev in 1990. The community is severely impacted by erosion and continues to explore relocation.

The original name for the island is "Kigiktaq." In 1816, Lt. Otto Von Kotzebue named the inlet "Shishmarev," after a member of his crew. Excavations at "Keekiktuk" by archaeologists around 1821 provided evidence of indigenous habitation from several centuries ago. Shishmaref has an excellent harbor, and around 1900 it became a supply center for gold mining activities to the south. The village was named after the Inlet, and a post office was established in 1901. The city government was incorporated in 1969.⁷⁰

In October 1997, a severe storm eroded over 30 feet of the north shore, requiring 14 homes and the National Guard Armory to be relocated. Five additional homes were relocated in 2002. Other storms have continued to erode the shoreline, an average of seven and a half feet per year. In July 2002, residents voted to relocate the community. Another storm in 2005 caused a large amount of land loss, after which the US Army Corps of Engineers built a new seawall as a temporary solution. Another vote was held in 2016, and residents again expressed their desire to relocate the community.⁷¹

Shishmaref is a traditional Inupiat village. The economy is based on subsistence, supplemented by part-time wage earnings. Year-round jobs are limited. Residents rely on fish, walrus, seals, polar bears, rabbits, and other subsistence foods. Two reindeer herds are managed from here. Reindeer skins are tanned locally, and meat is available at the village store. The Friendship Center, a cultural center and carving facility, was recently remodeled for local artisans.⁷²

Shishmaref Community Indicators	
Population (2023)	579
Median household income (2022)	\$56,875
Labor force participation rate (2022)	52.30%
Unemployment rate (2022)	28.40%
Poverty rate (2022)	31.50%
Residential electricity cost before PCE (\$/kWh, 2023)	\$0.63
Residential electricity cost after PCE (\$/kWh, 2023)	\$0.25
Heating fuel cost (\$/gallon, 2024)	\$7.99
Households with complete plumbing facilities (2022)	29.33%
Households overcrowded (2022)	37.33%
Distressed community status (2024)	Distressed
Number of CFEC permits owned by residents (2024)	0

Table 23: Shishmaref Community Indicators.

Source: DOLWD, 2023; ACS, 2022 5-Year Estimates; AEA, 2023; DCRA, 2024; Denali Commission, 2024; CFEC, 2024.

Infrastructure

Water is derived from a surface source and is treated and stored in a tank. The existing water supply and storage tanks are in poor condition and do not have the capacity to meet community needs. The sewage lagoon is vulnerable to storm surge and erosion.⁷³

The Shishmaref electrical utility is operated and maintained by AVEC. The powerhouse runs on diesel generator sets. The community participates in the PCE program. There are no community renewable energy systems in Shishmaref. Several years ago, wind turbines were installed by ANTHC on the water treatment plant to reduce the amount of diesel used to heat the water storage tanks. The turbines are no longer functional and are planned to be removed. There is also a small wind turbine system integrated into the Shishmaref Tannery facility, the only other renewable energy system in the town.

Most residents heat their homes with small diesel monitor heaters, or “Toyostove” systems.⁷⁴ Between BSSD, the IRA Native Store, City of Shishmaref, AVEC, U.S. Fish and Wildlife, Nayokpuk Trading Post, Lutheran Church, and Alaska National Guard the community hosts 504,300 gallons of bulk fuel storage capacity.

In the Fall of 2022, Typhoon Merbok hit the western coast of Alaska damaging infrastructure in many villages in the NCA, damaging or destroying local infrastructure. Shishmaref largely avoided major impacts from the storm due to the direction of the winds.

Priority Projects—2018-2022

1. Multi-Purpose Building
2. Water and Sewer
3. Cultural Center and Activities
4. Human and Health Services
5. Alternative Energy Development
6. Community Training Center
7. Youth Programs
8. Housing, Apartments, and Rentals
9. Promote Online Sales of Local Arts and Crafts
10. Erosion Prevention

Solomon

Solomon was settled by Inupiaq Eskimos of the Fish River Tribe and was noted on maps as “Erok” in 1900. Erok was a summer fish camp for the Fish River Tribe and later became a permanent settlement.

The original site was situated in the delta of the Solomon River and was moved to a place known as Jerusalem Hill. Solomon was a fast-growing community in the gold rush days of 1899 and 1900 when gold fever was the instigation for expansion on the Seward Peninsula. During the big strike for gold there were anywhere from three to seven enormous dredges scouring the Solomon area for the precious yellow metal. By 1904, this gold rush boom town was the supply center for the Solomon River miners and was the third largest Seward Peninsula town. It was also the southern terminus of the Council City and Solomon City Railroad. After the gold mine rush Solomon returned to a predominately Alaska Native community of subsistence reindeer herders and miners. The BIA School shut down in 1956 requiring all families with children to relocate to Nome or Anchorage. Many families returned to Solomon during the summer months for subsistence activities. There were a handful of people that continued to live in Solomon year-round. Solomon had year-round residents until 2005 when the surviving original residents permanently relocated to Nome.

Solomon comes alive in the summer with the operation of the Solomon Bed and Breakfast/Community Center and family subsistence camps. Solomon was incorporated as Solomon Native Corporation (SNC) in 1975. There were 37 original shareholders of SNC, owning a total of 67,000 acres of in and around Solomon. SNC provides campsites to its shareholders and engages in land use agreements for material sales, mining exploration and production. The original shareholders of SNC were also recognized under the Village of Solomon, and many current shareholders and their descendants/relatives are also Tribal members. The Village of Solomon was organized under the Indian Reorganization Act (IRA) of 1993 as a Federally Recognized Tribe. The Village of Solomon’s initial authority was mainly political as the tribal governing body. The primary purpose of the Village of Solomon is to design and implement programs for increased quality of life and well-being of its family and tribal members who reside in Nome and elsewhere. The Village of Solomon currently has about 140 tribal members.

Almost all of the tribal members who live in the region live in Nome year-round. Nome was historically inhabited by Alaska Natives, but the discovery of gold in 1898 brought thousands of non-Natives to the area. The city was incorporated in 1969. The current population is 3,502.

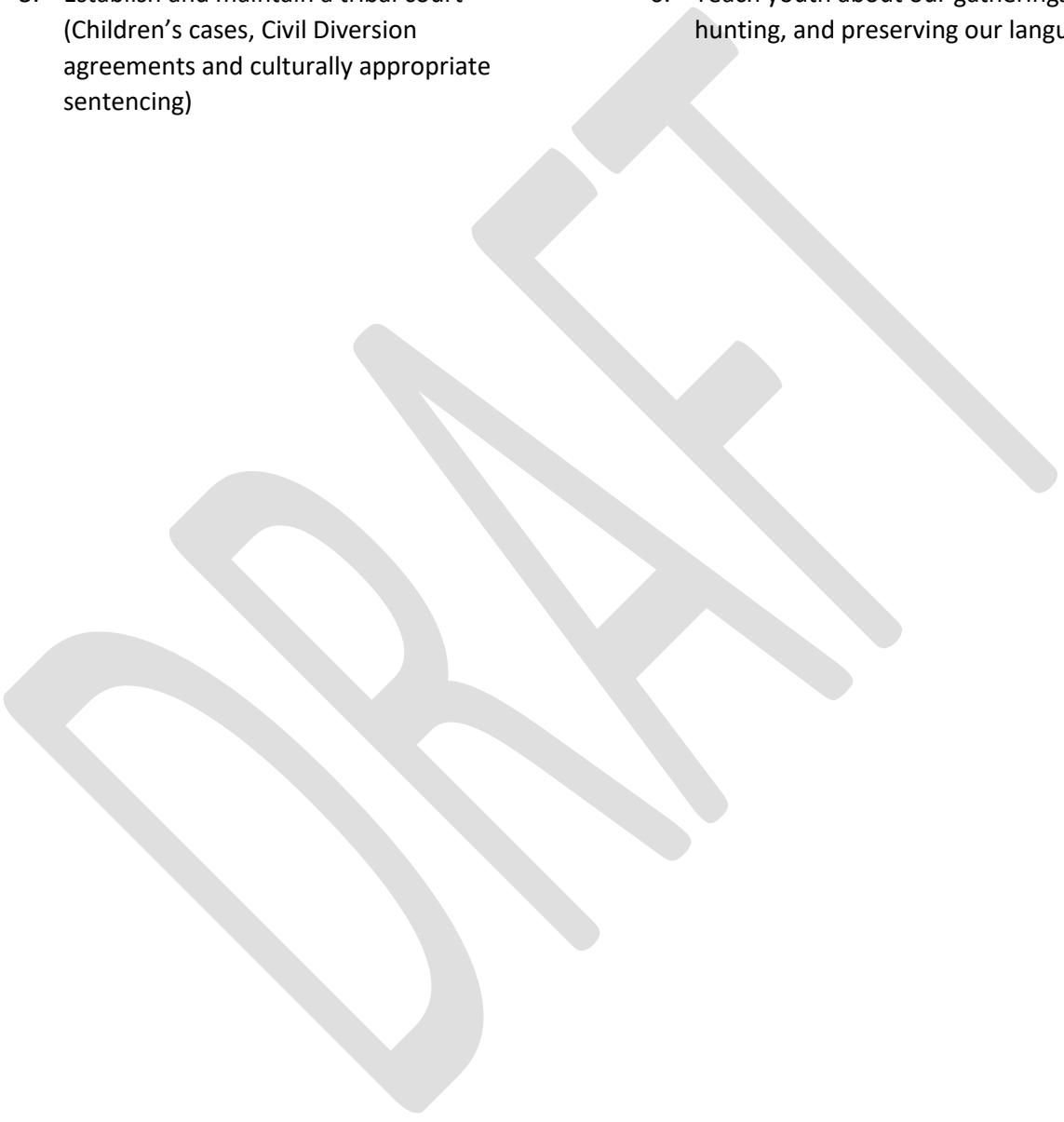
Infrastructure

There are no public facilities in Solomon. Residents haul water from Manilla Creek, Jerusalem Creek, or the Solomon River, and use honey-buckets.⁷⁵

There is no centralized power distribution system located in Solomon. Residents use small personal generators to produce power for their seasonal needs. Most homes in Council are seasonal residences and require minimal space heating. Some residents have diesel-fueled monitor heaters, while others have woodstoves that utilize driftwood or logs from the nearby Council area.

Priority Projects—2021-2026

1. Increase connection to the tribe
(Holding youth camp regularly)
2. Establish & maintain affordable housing
(including logistics like water, sewer, electricity)
3. Establish and maintain a tribal court
(Children’s cases, Civil Diversion agreements and culturally appropriate sentencing)
4. Protect and maintain the environment,
protecting watershed habitats including protection from mining
5. Increased focus on health and well-being of tribal members
6. Teach youth about our gatherings, food, hunting, and preserving our language



Stebbins

Stebbins is located on the northwest coast of St. Michael Island, on Norton Sound. It lies 8 miles north of St. Michael and 120 miles southeast of Nome. They have a subarctic climate with a maritime influence during the summer.

The Russian-American Company built Redoubt St. Michael nearby the village of St. Michael in 1833. The U.S. Coast and Geodetic Survey recorded the village of “Atroik” or “Atowak” north of St. Michael in 1898. The Yup'ik name for the village is "Tapraq." The name Stebbins was first recorded in 1900. The first U.S. Census occurred in 1950, indicating 80 Native Alaskans lived in Stebbins. The city government was incorporated in 1969.⁷⁶

Stebbins is a Yup'ik village. The economy is based on subsistence harvests supplemented by part-time wage earnings. The city and schools provide the only full-time positions. The commercial herring fishery has become increasingly important, including fishing on the lower Yukon. Residents subsist upon fish, seal, walrus, reindeer, and beluga whale. Gardens provide vegetables during the summer months.

Stebbins Community Indicators	
Population (2023)	631
Median household income (2022)	\$52,500
Labor force participation rate (2022)	62.10%
Unemployment rate (2022)	27.40%
Poverty rate (2022)	28.00%
Residential electricity cost before PCE (\$/kWh, 2023)	\$0.56
Residential electricity cost after PCE (\$/kWh, 2023)	\$0.33
Heating fuel cost (\$/gallon, 2024)	\$5.85
Households with complete plumbing facilities (2022)	4.27%
Households overcrowded (2022)	50.00%
Distressed community status (2024)	Distressed
Number of CFEC permits owned by residents (2024)	16

Table 24: Stebbins Community Indicators.

Source: DOLWLD, 2023; ACS, 2022 5-Year Estimates; AEA, 2023; DCRA, 2024; Denali Commission, 2024; CFEC, 2024.

Infrastructure

Community water is obtained from Big Clear Lake, 3 miles east of Stebbins. During the summer months, water is pumped from the lake and carried to Stebbins. During the summer months, water is pumped from the lake and carried to Stebbins via a 4-inch pipeline and stored in two tanks, one with a million-gallon capacity, the other 500,000-gallon capacity. The Stebbins water treatment system has a peak day design capacity of 10,000 to 50,000 gallons per day. There is a central water distribution point at the washeteria distributed from the tanks via a plastic pipeline. The washeteria is operated by the City of Stebbins. The washeteria serves as a water distribution point and laundromat, and as a place where community members can bathe or shower. Sewage is collected in the homes in 5-gallon buckets and carried by hand to centrally located steel-framed plastic collection bins (honey buckets), which are transported to the sewage lagoon.⁷⁷

The local utility is owned and operated by AVEC, which maintains a hybrid wind-diesel system with an inertia, providing power to St. Michael. The community participates in the PCE program.

Most residents heat their homes with “Toyostove” systems, although some have woodstoves for supplemental heat, using driftwood from the beaches. Stebbins buys fuel (gasoline and heating oil) from NSEDC’s Bulk Fuel Purchase Program. Between AVEC, BSSD, City of Stebbins, Ferris General Store, Alaska Army National Guard, Charlie Steves, and Alaska DOT the community hosts 361,000 in bulk fuel storage capacity.

In fall 2022 Typhoon Merbok hit the western coast of Alaska damaging infrastructure in many villages in the NCA, damaging or destroying infrastructure. Stebbins experienced large amount of flooding which combined with sand from the storm destroyed foundations, damaged streets and power poles, and washed out the road between Stebbins and St. Michael.

In November 2022 a fire destroyed Stebbins’ only grocery store and main fuel console.⁷⁸ In June 2024 another fire destroyed the community’s school and teacher housing.⁷⁹

Priority Projects—2017-2022

1. Water and Sewer Projects
2. Cultural Heritage Preservation
3. <https://alaskapublic.org/2024/06/27/st-ebbins-fire-destroys-school-several-buildings/> Job Training Awareness
4. Seawall
5. Volunteer Fire Department
6. Teen Center
7. Multipurpose Evacuation Center
8. Suicide Prevention Program
9. Safe Homes
10. City Heavy Equipment Garage

St. Michael

St. Michael is located on the east coast of St. Michael Island in Norton Sound. It lies 125 miles southeast of Nome and 48 miles southwest of Unalakleet. St. Michael has a subarctic climate with maritime influences during the summer.⁸⁰

The Russian-American Company built a fortified trading post called "Redoubt St. Michael" at this location in 1833. When the Russians left Alaska in 1867, several of the post's traders remained. "Fort St. Michael," a U.S. military post, was established in 1897. During the gold rush of 1897, it was a major gateway to the interior via the Yukon River. It was estimated that 10,000 people were said to live in St. Michael during the gold rush. The village was also a popular trading post for Alaska Natives to trade their goods for Western supplies. Centralization of many Yup'ik people from the surrounding villages intensified after the measles epidemic of 1900 and the influenza epidemic of 1918. The village remained an important trans-shipment point until the Alaska Railroad was built. The city government was incorporated in 1969.⁸¹

St. Michael's population is primarily Yup'ik, with many residents who are descendants of Russian traders. Seal, beluga whale, moose, caribou, fish, and berries are essential staples. The St. Michael economy is based on subsistence food harvests supplemented by part-time wage-earning. Most employment is through in city government, the IRA council, the village corporation, schools, and local stores. The Stebbins/St. Michael Reindeer Corral Project was completed in 1993 for a herd on Stuart Island. The reindeer are essentially unmanaged.⁸²

St. Michael Community Indicators	
Population (2023)	435
Median household income (2022)	\$46,875
Labor force participation rate (2022)	59.00%
Unemployment rate (2022)	36.90%
Poverty rate (2022)	21.60%
Residential electricity cost before PCE (\$/kWh, 2023)	\$0.63
Residential electricity cost after PCE (\$/kWh, 2023)	\$0.32
Heating fuel cost (\$/gallon, 2024)	\$6.03
Households with complete plumbing facilities (2022)	67.69%
Households overcrowded (2022)	58.46%
Distressed community status (2024)	Distressed
Number of CFEC permits owned by residents (2024)	7

Table 25: St. Michael Community Indicators.

Source: DOLWD, 2023; ACS, 2022 5-Year Estimates; AEA, 2023; DCRA, 2024; Denali Commission, 2024; CFEC, 2024.

Infrastructure

Water comes from Clear Lake. It is treated and stored in a 1.2-million-gallon tank. A new sanitation system was recently finished to provide water delivery and holding tanks for homes, a piped gravity & vacuum sewer system with septic treatment, and household plumbing. Residents without service currently haul treated water and use honey-buckets.

AVEC operates the electric utility in St. Michael and is connected by a 10-mile intertie to the nearby village of Stebbins. Most of the two communities' electricity is produced in Stebbins, and the St. Michael

facility is maintained as a back-up. AVEC operates a hybrid wind-diesel system. The community participates in the PCE program.

Most residents heat their homes with small diesel monitor heaters, or “Toyostove” systems, although some have woodstoves for supplemental heat, using driftwood from the beaches. St. Michael buys fuel (gasoline and heating oil) from NSEDC’s Bulk Fuel Purchase Program. Between AVEC, BSSD, City of St. Michael, Alaska Army National Guard, the Alaska Commercial Company, and the Alaska DOT the community hosts 215,500 gallons of bulk fuel storage capacity.

In the Fall of 2022, Typhoon Merbok hit the western coast of Alaska damaging infrastructure in many villages in the NCA, damaging or destroying infrastructure. St. Michael experience large amounts of erosion which threatened or destroyed homes. One of the community’s roads was washed out as well as the road connecting the community to Stebbins.

Priority Projects—2023-2028

1. Local bulk fuel
2. Water and sewer
3. Heavy equipment
4. Public safety
5. Teen center
6. More housing
7. Reindeer facilities
8. Electrical replacement for individual homes

Teller

Teller is located on a spit between Port Clarence and Grantley Harbor, 72 miles northwest of Nome, on the Seward Peninsula. The maritime climate, when the harbor is ice-free, changes to a continental climate after freezing. Grantley Harbor is generally ice-free from early June to mid-October.⁸³

Port Clarence is west of Teller on the Seward Peninsula. It was built on the northern tip of a sands-spit in Port Clarence. The 1893 U.S. Census listed a collective village at this site with a population of 485, of which 236 were native. Their descendants are the residents of nearby Brevig Mission, Teller, and Wales. Port Clarence is currently a USCG LORAN station. All residents live in private rooms in a group quarter's facility.⁸⁴

An Alaska Native fishing camp called "Nook" was reported 20 miles south of Teller in 1827. A Western Union Telegraph expedition wintered at the present site in 1866 and 1867; it was then called "Libbyville" or "Libby Station." The U.S. Government at a nearby site from 1892 to 1900 operated the Teller Reindeer Station. A mission was built in 1900 across the harbor at the current site of Brevig Mission. It was renamed Brevig Mission in 1903. Present-day Teller was also established in 1900 after the Bluestone Placer Mine discovery 15 miles to the south. During these boom years, Teller had a population of about 5,000. In May 1926, bad weather caused the dirigible "Norge" to detour to Teller on its first flight over the North Pole from Norway to Nome. The city was formed in 1963.⁸⁵

Teller is a traditional Kauwerak village. Many residents today were originally from Mary's Igloo. Seals, beluga whales, fish, reindeer, and other local resources are utilized. The Teller economy is based on subsistence activities supplemented by part-time wage earnings. Fish, seal, moose, beluga whale, and reindeer are the primary meat sources. There is a herd of over 1,000 reindeer in the area. The annual roundup provides meat and a cash product, sold mainly on the Seward Peninsula. Over one-third of households produce crafts or artwork for sale, and some residents trap fox.⁸⁶

Teller Community Indicators	
Population (2023)	225
Median household income (2022)	\$34,688
Labor force participation rate (2022)	46.20%
Unemployment rate (2022)	10.40%
Poverty rate (2022)	34.40%
Residential electricity cost before PCE (\$/kWh, 2023)	\$0.55
Residential electricity cost after PCE (\$/kWh, 2023)	\$0.22
Heating fuel cost (\$/gallon, 2024)	\$5.78
Households with complete plumbing facilities (2022)	26.97%
Households overcrowded (2022)	23.60%
Distressed community status (2024)	Distressed
Number of CFEC permits owned by residents (2024)	0

Table 26: Teller Community Indicators.

Source: DOLWD, 2023; ACS, 2022 5-Year Estimates; AEA, 2023; DCRA, 2024; Denali Commission, 2024; CFEC, 2024.

Infrastructure

Teller draws water seasonally from Coyote Creek (2 miles via pipe) approximately 1000 feet upstream from the Coyote Creek Subdivision and stores it in a one-million-gallon storage tank. Water is treated at

a plant run jointly by the city and the school. Distribution to individual homes is available by request from the city water truck, where residents fill home storage tanks. Water is piped to the school and teacher housing. Individuals haul water from a central watering point at the Laundromat, at no cost. Springtime rationing occasionally decreases water usage. Some residents used their own ATV's or snow machines to haul water and/or melt ice from area creeks. Woolley Lagoon and Gold Run River (about 20 miles southwest and southeast of town, respectively) are used for this purpose. The school operates its own sewage system to which teacher housing is connected. Most households use honey buckets.

AVEC operates and maintains Teller's power utility, which operates a diesel generator system. In 2008, plans to install an intertie between Brevig Mission and Teller began, and the project was nearly completed in 2010. However, the project was never completed, due to the undersea intertie cable being blown out by a storm. The community participates in the PCE program.

Most residents heat their homes with small diesel monitor heaters, or "Toyostove" systems. Teller Native Corporation buys its fuel (gasoline and heating oil) from the BIA Bulk Fuel Purchase Program. Between Teller Native Corporation, AVEC, City of Teller, BSSD, Teller Lutheran Church, Army National Guard, Alaska DOT, and private owners the community hosts 374,700 gallons in bulk fuel storage capacity.

In the Fall of 2022, Typhoon Merbok hit the western coast of Alaska damaging infrastructure in many villages in the NCA, damaging or destroying infrastructure. Teller experienced damage from the storm in the form of erosion and damage to the seawall.

Priority Projects

Teller 2013-2018

1. Seawall
2. Water and Sewer
3. Evacuation Road
4. Tank Farm
5. Roads
6. More Housing
7. Weatherization
8. Crosswind Runway
9. Emergency Equipment
10. Landfill
11. Multi-Purpose Building
12. Reindeer Husbandry
13. Power Plant

Mary's Igloo 2016-2021

1. More Housing and Rental Units
2. Bulk Fuel Improvements
3. Heavy Equipment and Storage
4. Alternative Sanitation Solutions for Teller
5. Climate Change Coalition and Subsistence Advocacy
6. Improve Public Safety
7. Build a Community Hall
8. Local Job Training and Local Job Database
9. Alternative Energy Development Projects
10. Re-Establish the Tribe at Mary's Igloo Seasonally

Unalakleet

Unalakleet is located on Norton Sound at the mouth of the Unalakleet River, 148 miles southeast of Nome, and 395 miles northwest of Anchorage. Unalakleet has a subarctic climate with considerable maritime influences when Norton Sound is ice-free, usually from May to October. Winters are cold and dry.⁸⁷

Archaeologists have dated house remnants along the beach ridge from 200 B.C. to 300 A.D. The name Unalakleet means "place where the east wind blows." Unalakleet has long been a major trade center as the terminus for the Kaltag Portage, an important winter travel route connecting to the Yukon River. The Russian-American Company built a post here in the 1830s. In 1898, reindeer herders from Lapland were brought to Unalakleet to establish sound herding practices. In 1901, the Army Signal Corps built over 605 miles of telegraph line from St. Michael to Unalakleet, over the Portage to Kaltag and Fort Gibbon. The city was incorporated in 1974.⁸⁸

Unalakleet has a history of diverse cultures and trade activities. The local economy is the most active among Norton Sound villages, along with a traditional Unaligmiut subsistence lifestyle. Fish, seal, caribou, moose, and bear are utilized.⁸⁹ Both commercial fishing for herring, and herring roe, and subsistence activities are major components of Unalakleet's economy. NSEDC operates a fish processing plant here. Government and school positions are relatively numerous. Bering Strait School District is based out of Unalakleet. Unalakleet is the "southern hub" of the region. Tourism is becoming increasingly popular, as world-class silver fishing is available in the area.⁹⁰

Unalakleet Community Indicators	
Population (2023)	685
Median household income (2022)	\$84,375
Labor force participation rate (2022)	75.00%
Unemployment rate (2022)	7.70%
Poverty rate (2022)	12.50%
Residential electricity cost before PCE (\$/kWh, 2023)	\$0.51
Residential electricity cost after PCE (\$/kWh, 2023)	\$0.08
Heating fuel cost (\$/gallon, 2024)	\$7.16
Households with complete plumbing facilities (2022)	94.34%
Households overcrowded (2022)	26.42%
Distressed community status (2024)	Non-Distressed
Number of CFEC permits owned by residents (2024)	129

Table 27: Unalakleet Community Indicators.

Source: DOLWD, 2023; ACS, 2022 5-Year Estimates; AEA, 2023; DCRA, 2024; Denali Commission, 2024; CFEC, 2024.

Infrastructure

Unalakleet's water and sewer systems were developed and installed by the U.S. Public Health Service between 1964 and 1976 and are operated by the city public works department. In 2021, Unalakleet declared a disaster locally due to the community's failing water and sewer system.

The community's electric utility is operated and maintained by the Unalakleet Valley Electric Cooperative. The utility operates a hybrid wind-diesel system. The community participates in the PCE program. There are various residential and small-commercial solar arrays in Unalakleet. The community

is the only utility in the region that allows net-metering, and the residents are very knowledgeable about their own energy systems.

Most residents heat their homes with small diesel monitor heaters, or “Toyostove” systems. Some also use woodstoves for primary or secondary heat. Unalakleet Native Corporation buys fuel (gasoline and heating oil) from the NSEDC Bulk Fuel Purchase Program. Between West Coast Aviation, AVEC, UNK Native Corporation, City of Unalakleet, ATS, Alaska DOT, Alaska Commercial Company, Covenant Church, and BSSD the community hosts 1,193,000 million gallons of bulk fuel storage capacity.

In the Fall of 2022, Typhoon Merbok hit the western coast of Alaska damaging infrastructure in many villages in the NCA, damaging or destroying infrastructure. Unalakleet saw damages to the road to the community’s water source, to the community’s power grid, erosion and damage to the seawall fortifications, and more.

Priority Projects—2023-2027

1. Construct a New Water/Sewer System
2. Rehabilitate Roads to Both Subdivisions
3. SAR & VFD Funding
4. Acquire & Maintain City Heavy Equipment
5. Sub-Regional Clinic Fully Staffed
6. Evacuation/Recreation Center
7. More Housing
8. Construct New Access Roads
9. Replace Boat Ramps
10. Continued Monitoring of Contaminated Sites

Wales

Wales is located on Cape Prince of Wales, at the western tip of the Seward Peninsula, 111 miles northwest of Nome. After the freeze, there is an abrupt change to a cold continental climate. Frequent fog, wind, and blizzards limit access to Wales.⁹¹

A burial mound of the "Birnik" culture (500 A.D. to 900 A.D.) was discovered near Wales and is now a national landmark. In 1827 the Russian Navy reported the Eskimo villages of "Eidamoo" near the coast and "King-a-ghe" further inland. In 1890, the American Missionary Association established a mission here, and in 1894 a reindeer station was organized. A post office was established in 1902. Wales became a major whaling center due to its location along migratory routes, and it was the region's largest and most prosperous village, with more than 500 residents. The influenza epidemic in 1918-19 claimed the lives of many of Wales' finest whalers. The city government was incorporated in 1964.⁹²

Wales has a strong traditional Kingikmiut whaling culture. Ancient songs, dances, and customs are still practiced. Little Diomed residents travel between the two villages in large traditional skin boats, during the summer months. The economy of Wales is based on subsistence hunting and fishing, trapping, Native arts, and crafts, and some mining. A private reindeer herd is managed from Wales, and residents are employed to assist in the harvest.

Wales Community Indicators	
Population (2023)	112
Median household income (2022)	\$34,167
Labor force participation rate (2022)	64.40%
Unemployment rate (2022)	14.70%
Poverty rate (2022)	29.50%
Residential electricity cost before PCE (\$/kWh, 2023)	\$0.51
Residential electricity cost after PCE (\$/kWh, 2023)	\$0.25
Heating fuel cost (\$/gallon, 2024)	\$4.45
Households with complete plumbing facilities (2022)	4.65%
Households overcrowded (2022)	48.84%
Distressed community status (2024)	Distressed
Number of CFEC permits owned by residents (2024)	0

Table 28: Wales Community Indicators.

Source: DOLWD, 2023; ACS, 2022 5-Year Estimates; AEA, 2023; DCRA, 2024; Denali Commission, 2024; CFEC, 2024.

Infrastructure

Two new groundwater wells have been drilled. Residents haul treated water from a 500,000-gallon storage tank at the washeteria. Almost all residents use honey-buckets. Almost all residents use honey-buckets. A honey-bucket haul system is in place. A few homes have plumbing. The school, clinic, and City building are served by piped water. There are two septic systems: one for the school and a second for teacher housing, the clinic, and the city building. A master plan to implement a piped system has been completed.

The AVEC and the City of Wales operate and maintain the electric utility, using a diesel generation source. The community participates in the PCE program. There are remnants of a high-penetration wind generation system in Wales, installed by the Department of Energy National Renewable Energy Lab

(NREL) in partnership with Kotzebue Electric Association, AVEC, and AEA in 2001. A battery storage system was also tested but had many issues with operation and maintenance. The system is no longer functional.⁹³

Most residents heat their homes with small diesel monitor heaters, or “Toyostove” systems. Some also use woodstoves for secondary heating. Wales Native Store buys fuel from the NSEDC Bulk Fuel Purchase Program. Between Wales Native Store, City of Wales, AVEC, and BSSD the community hosts 222,478 gallons of bulk fuel storage capacity.

In the Fall of 2022, Typhoon Merbok hit the western coast of Alaska damaging or destroying infrastructure in many villages in the NCA. Compared to other communities Wales experienced minimal damage, with minor flooding and some wind damage.

Priority Projects—2022-2027

1. Address bulk fuel issues (compliance, annual bulk fuel purchase, and new bulk fuel tank for community fuel and gas)
2. Improve airport, roads, and trails
3. Build a community center with a playground, greenhouse, and basketball court
4. Improve honey bucket lagoon and dumpsite
5. Build a seawall and boat harbor, and improve fishing access
6. Repair old housing units
7. Improve public safety (VPSO housing/facilities, and fire/SAR equipment)
8. Heavy equipment storage
9. Water and sewer, water line
10. Rebuild church with room for youth activities and improve the cemetery
11. Long- and short-term housing
12. Increase access to childcare and job training opportunities
13. Rock Mining
14. Communications (phone, cellphone, internet and television)
15. Tribal sovereignty-disaster declarations, food security, and enforcing TERO.
16. New power plant

White Mountain

White Mountain is located on the west bank of the Fish River, near the head of Golovin Lagoon, on the Seward Peninsula. It is 63 miles east of Nome. White Mountain has a transitional climate with less extreme seasonal and daily temperatures than Interior Alaska. Continental influences prevail in the ice-bound winter.

The fish camp of "Nutchirviq" was located here. The bountiful resources of both the Fish and Niukluk Rivers supported the area's Native populations. White Mountain grew after the influx of prospectors during the gold rush of 1900. It was the site of a government-subsidized orphanage, which became an industrial school in 1926. A post office was opened in 1932. The city government was incorporated in 1969.⁹⁴

White Mountain is a Kauwerak village, with historical influences from the gold rush. The entire population depends on subsistence hunting and fishing, and most spend the entire summer at fish camps. Salmon, other fish, beluga whale, seal, moose, reindeer, caribou, and brown bear are utilized. The school, native store, post office, city, IRA, and airline agents provide the only local employment. Construction outside of town and firefighting provide seasonal employment. Ivory and bone carvings contribute some cash. One of the residents runs a reindeer farm.⁹⁵

White Mountain Community Indicators	
Population (2023)	211
Median household income (2022)	\$53,125
Labor force participation rate (2022)	64.20%
Unemployment rate (2022)	26.30%
Poverty rate (2022)	21.60%
Residential electricity cost before PCE (\$/kWh, 2023)	\$0.46
Residential electricity cost after PCE (\$/kWh, 2023)	\$0.28
Heating fuel cost (\$/gallon, 2024)	\$0.00
Households with complete plumbing facilities (2022)	77.14%
Households overcrowded (2022)	17.14%
Distressed community status (2024)	Non-Distressed
Number of CFEC permits owned by residents (2024)	1

Table 29: White Mountain Community Indicators.

Source: DOLWD, 2023; ACS, 2022 5-Year Estimates; AEA, 2023; DCRA, 2024; Denali Commission, 2024; CFEC, 2024.

Infrastructure

Water is derived from a well near the Fish River and is treated. The community has a distributed water and sewer system which serves most households.

The City of White Mountain operates and maintains the local electric utility. The electric generation source is diesel. The community participates in the PCE program.

Most residents heat their homes with small diesel monitor heaters, or "Toyostove" systems. Some also use woodstoves for primary or secondary heating. There are abundant wood resources in and around the community. Between the Native Store, BSSD, WMO Lodge, Alaska DOT, and the Reindeer Farm the community hosts 185,000 gallons of bulk fuel storage capacity.

In the Fall of 2022, Typhoon Merbok hit the western coast of Alaska damaging or destroying infrastructure in many villages in the NCA.

Priority Projects—2013-2018

- | | |
|-------------------------------|--------------------------------|
| 1. Gravel Source | 10. Environmental Programs |
| 2. New Store | 11. Elder and Youth Activities |
| 3. Firebreak Around Village | 12. Tribal Healers |
| 4. Housing | 13. VPO |
| 5. Utility Upgrades | 14. Enforce Subsistence Rights |
| 6. City Building Improvements | 15. Enlarge Tribal Building |
| 7. Head Start Building | 16. Funding Resources |
| 8. New and Improved Roads | 17. Cultural Activities |
| 9. Language Preservation | |

V. Resiliency

Resiliency can be defined in a myriad of ways and have many meanings to communities and people. Resilience is the ability to adapt to challenging situations and condition. In economic terms this means that communities, businesses, and people are capable of planning for and weathering disruptions to residents' economic well-being. These can include shocks to industries, changing economic climates, or, increasingly, the impacts of climate change.

Communities in the Bering Strait region have been challenged by a growing number of shocks. The region has undergone a number of planning efforts to address challenges around resiliency, including developing a stand-alone economic resiliency plan. However, climate change and the global forces continue to unveil new challenges for the region and highlight the immediacy of ongoing concerns in new ways. These threaten quality of life, economic vitality, and cultural practices.

Ongoing Resiliency Threats (Persistent Economic Challenges)

The Bering Strait region has thrived for millennia through the subsistence lifestyle and the resiliency of the Yup'ik and Inupiaq cultures. To this day, cultural ties remain a strength for the region, and subsistence continues to exist as a vital supplement to a Western cash economy. That cash economy rests on health care, mining, fisheries, tourism, and local government.⁹⁶ In the last century, the people of the Bering Strait have withstood the depletion of some game, disease, famine, and economic busts.⁹⁷ Today, hazards continue to exist. This section describes some of the major hazards and develops a framework to address them.

Housing

As in most of rural Alaska, housing in the NCA is expensive, and the supply is limited. More than a quarter of homes in the region meet the HUD definition of overcrowding. In the villages, overcrowding rates are even higher.⁹⁸ The high cost of construction increases the difficulty of building more homes.

Energy

Villages in the region pay as much as \$0.72 per kWh for electricity, compared to less than \$0.22 in Southcentral Alaska.⁹⁹ Heating oil often exceeds \$6.00 per gallon, generating a heavy burden on cash-constrained households.¹⁰⁰ High energy costs also make it difficult for residents to start businesses.

High rates of unemployment

Like other rural parts of Alaska, unemployment in the NCA is persistently higher than the state and national averages. In July 2024, the NCA had an unemployment rate of 9.5%, compared to a statewide level of 4.4%. The rural villages almost always have even higher rates than Nome.¹⁰¹ Limited employment opportunities translate into lower incomes for households and high rates of out-migration.

Skills shortages

A shortage of trained locals means that jobs in mining, health care, education, and other fields are often held by non-locals who relocate to the region. Employers can struggle to find qualified applicants, even as unemployment remains stubbornly high.

Geography and distance

The Bering Strait region depends on air and seasonal barge transportation for the movement of people and goods. The region's isolation from other parts of Alaska and the Lower 48 raises the costs of basic

supplies like groceries, consumer goods, energy, and building materials. This also increases the difficulty of doing business in the region.

Infrastructure limitations

Many communities in the region lack the funds to build or update water/wastewater systems, electrical infrastructure, and community facilities. The region also has limited access to cellular telephone service and broadband internet.

Healthcare access

Access to healthcare in the region is limited. Nome hosts a hospital, but capacity for critical or specialized care is often restricted or unavailable. The region relies on facilities in Anchorage and Fairbanks to meet many needs. The COVID-19 pandemic highlighted issues with access to preventative care, creating a backlog to address those needs.

Supply chain disruptions

Pandemic related supply chain issues throttled the economy across the U.S.; the immediate impact of those disruptions was felt most severely in rural, remote areas. Communities in the Bering Strait region were hit especially hard by the lack of access to essential supplies during the pandemic. Supply chain disruptions further impact subsistence capabilities, limiting residents' ability to engage in subsistence activities when supplies are limited or unavailable. While initially pandemic related, supply chain challenges in the U.S. persist.

Labor shortages

Workforce shortages linked to COVID have also impacted the region and labor challenges remain ongoing. Seasonal seafood processors and construction workers are predominantly hired from outside the region. Travel restrictions and impacts to the H1B visa program limit access to a larger workforce which in turn restricts processor and construction projects from operating at full capacity.

Hazards on the Horizon

In addition to ongoing efforts to address persistent challenges, the Bering Strait region must be prepared for sudden shocks and disasters. These might be economic in nature, but many have strong impacts on community health and cultural practices. This section discusses some of these hazards and the work being done to mitigate them.

Commodity price swings

Commodity price swings have periodically created economic pain for Alaskans, and the Bering Strait region is no exception. With a history of mining, the regional economy has seen booms and busts related to the price of gold. Although no oil or gas is produced in the NCA, the region still feels the effects of oil price shocks when they result in cuts to state spending. Conversely, high oil prices may be good for state coffers, but they cause home heating costs to skyrocket.

Fisheries disasters

Weak salmon runs can harm commercial fishing communities and subsistence uses. The status of king salmon stocks forces shutdowns of other fisheries in Norton Sound. The region also has some exposure to Bering Sea groundfish through the CDQ program, which experiences cycles in the biomass and markets.

Subsistence threats

In addition to fluctuations in seafood stocks, game populations are also subject to declines due to natural or anthropogenic causes. Access to fish and game is central to the maintenance of subsistence economies in the Bering Strait. Moose, caribou, muskoxen, seals, walruses, and other animals have seen their numbers rise and fall, from human predation or natural factors. State regulations limiting the amount of subsistence by-products that can be traded or sold to \$500 are an economic barrier; they also reduce the ability of local native communities to share and keep up with the demand for traditional foods.

Climate change impacts

These take a variety of forms, not all of which are well understood. Coastal erosion, ocean acidification, floods, sea ice changes, and other disruptive phenomena have been tied to climate change. Many of these occurrences have important implications for subsistence and cash economies.

Natural disasters

The Bering Strait is known for extreme storms that sometimes erode the shoreline and damage homes and buildings. This type of erosion is a major reason for communities like Shishmaref to consider relocation.

Environmental contamination

Soils contaminated from buried and above ground fuel tanks have been a health and environmental hazard on St. Lawrence Island, Unalakleet, and other communities in the NCA. Resource development activities in the region and shipping through the Bering Strait carry additional risks of fuel spills and other pollutant discharges. They can also introduce invasive species that harm existing flora and fauna.

Travel disruptions

COVID related travel disruptions in 2020 highlighted how dependent the Bering Strait region's economy is on visitors. The shuttering of the cruise industry in Alaska in response to the pandemic halted the budding cruise industry in Nome for the 2020 and 2021 cruise seasons. The Iditarod has historically provided a boost to the local economy. The dog sled race was severely impacted in 2020 and 2021 because of the pandemic but returned in 2022. Travel restrictions further impacted local school and basketball leagues' ability to travel for games and residents' ability to travel to receive health care.

Resiliency Planning Efforts

The Bering Strait region has conducted a handful of planning efforts in recent years which intersect with resiliency. These plans each influence the goals and objectives laid out in this CEDS. In addition, themes around economic resilience are woven throughout this document and can be observed in discussions around education, workforce, economic engines, infrastructure, and the Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis.

Natural Disaster Planning

As the Bering Strait region faces impacts from climate change, increased ship traffic, coastal erosion, severe storms, and other disasters, preparedness takes on high importance. The ability to respond to these types of events is a key aspect of the region's resiliency.

Kawerak has worked with tribes and communities to develop Small Community Emergency Response Plans (SCERP). In 2021, Kawerak started receiving funds from the Bureau of Indian Affairs to assist with

completion of tribal Hazard Mitigation Plans (HMP) which would cover tribal infrastructure. This funding opportunity is entering the second phase but has not been completed yet. The completion of an HMP is useful in two ways:

- They provide for a planned response to hazardous disasters or events,
- Having one on file makes the community eligible to receive pre-disaster planning funds from the U.S. Federal Emergency Management Agency (FEMA) for further response planning efforts.

The second phase of the project started in late 2023/early 2024 and identified five Tribes in the region (Wales, Nome Eskimo Community, Solomon, King Island, Council) to complete HMPs. The Native Village of Wales invited the City of Wales to join their planning effort. The planning teams anticipate submitting their HMPs for approval in the summer of 2024.

Tribes participating in this project include:

- Chinik Eskimo Community
- King Island Native Community
- Native Village of Council
- Native Village of Diomedede
- Native Village of Elim
- Native Village of Gambell
- Native Village of Koyuk
- Native Village of Brevig Mission
- Native Village of Stebbins
- Native Village of St. Michael
- Native Village of Savoonga
- Native Village of Solomon
- Native Village of Teller
- Native Village of Unalakleet
- Native Village of Wales
- Native Village of White Mountain
- Nome Eskimo Community

Status of Natural Disaster Response Plans in NCA Communities as of 2024		
Community	SCERP	HMP
Brevig Mission	Complete	Tribal/City (Complete)
Diomedede	Complete	Tribal/City (Complete)
Elim	In Progress	Tribal/City (Complete)
Gambell	Expired	Tribal/City (Complete)
Golovin	Complete	Tribal/City (Complete)
Koyuk		Tribal/City (Complete)
Nome		Tribal (In Progress)
St. Michael	Complete	Tribal (Complete)
Savoonga	Complete	Tribal (In Progress)/City (Complete)
Shaktoolik	Complete	City (Complete)
Shishmaref	Complete	City (Complete)
Stebbins	Expired	City (Expired)
Teller	In Progress	Tribal (Complete)
Unalakleet	Emergency Operations Plan	Tribal/City (Complete)
Wales	Expired	Tribal/City (In Progress)
White Mountain	Complete	Tribal/City (Complete)

Table 30: Status of Natural Disaster Response Plans in NCA Communities.

Bering Strait Resiliency Planning

Recognizing the danger posed by unexpected negative shocks and the challenges to the region exposed by the pandemic, Kawerak engaged in a wider economic focused resiliency planning effort in 2020. As part of this effort Kawerak work with communities to develop a standalone regional Resiliency Plan. Kawerak's BSDC approved the plan in August 2023. The goal of the project was to collaboratively lay out a framework for resiliency across the region which incorporates elements of the definition of resiliency for Native Alaskan communities across the Bering Strait region.

Recommendations from the plan were drawn from surveys of businesses and organizations across the Bering Strait region and pulled from economic resiliency tool kits developed to respond to the economic impacts of the COVID-19 pandemic. Key themes of the plan include how to support and plan for include resilient businesses and local economies. This included planning for immediate response to events which impact business operations in the region.

Bering Strait Region Priority Climate Action Plan

In 2024 Kawerak published the *Bering Strait Region – Priority Climate Action Plan* which was designed to create a roadmap for reducing greenhouse gas emissions by developing specific and impactful projects. While the intent of the plan is not specifically to address economic goals for the region, many of the priorities outlined thread throughout the region's CEDS and intersect with economic challenges experienced by communities. The plan also acknowledges a direct response to many of the threats to the region's economic resiliency.

Many of the projects outlined within the climate action plan could have a real economic impact on communities, supporting new jobs, reducing or stabilizing energy costs, and building out more resilient infrastructure. Projects prioritized in the plan include:

- Improving residential, commercial, and community building energy efficiency.
- Implementing diesel utility efficiency upgrades.
- Reducing line loss.
- Building out new energy systems including heat recovery, renewable energy, energy storage.
- Conducting Brownfield restoration and mine reclamation.
- Establishing Community Resilience Hubs.
- Developing a waste management plan.

VI. Strengths, Weaknesses, Opportunities, and Threats



The following section discusses the regions Strengths, Weaknesses, Opportunities, and Threats, internal and external attributes which impact the Bering Strait economy and communities. This discussion is grouped into themes and those themes were used to develop the goals and strategies described in the following section.

Strengths

- Culture: respect, elders, and subsistence
- Youth participation in local government
- Resource-rich (ex. reindeer, marine resources, renewables)
- Community participation-especially in the local planning process
- Local governing bodies and self-determination
- Volunteer community
- Regional organizations/regional collaboration
- Subsistence: health benefits of local foods
- School spaces (such as the gym) are open to the community for other events in Nome and some villages
- Education and workforce partnerships: University of Alaska Fairbanks (UAF) Northwest Campus, Northwestern Alaska Career and Technical Center (NACTEC), Alaska Vocational Technical Center (AVTEC), Kawerak
- Citizen-Led Public Safety Advisory Committee
- Day shelter and overnight facility/resources for the homeless population
- Local arts and artisans
- FCC/Broadband Funding
- Technical Assistance
- Strong local/regional disaster response: NSHC, City of Nome, Kawerak, NSEDC
- Environmental cleanup jobs
- Port of Nome

Cultural Heritage

At the heart of Nome's strength lies a deep respect for the region's cultural heritage. This culture of respect, the contributions of elders, and traditional subsistence practices, forms the backbone of the region's social fabric. In many communities, infrastructure limitations contribute to high cost of living and reduced access to outside goods and services. This is coupled with the effects of living and working in an Arctic climate, forces communities to have a deep connection to their surroundings, environment, and to each other. This contributes to a strong self-reliance among residents of the region, sustaining a strong sense of community and heavy value placed on subsistence harvesting.

Community Engagement and Collaboration

Community participation is high, as evidenced by active involvement in local planning processes and a strong volunteer spirit. These attributes foster a sense of ownership and pride, encouraging community members to engage actively with local governance, support local initiatives, and serve on boards.

Communities in the region also benefit from strong regional organizations and regional collaborations. These give the region a stronger cohesive voice in accessing services and funding opportunities, advocating for the interests of the region as a whole, and providing services across all of the

communities in the region. These organizations provide healthcare, technical assistance, workforce support, and more. They help the region have strong and rapid responses to disasters like the COVID-19 pandemic and Typhoon Merbok.

Resource Abundance

Nome is endowed with valuable natural resources, including minerals and living resources from the lands and waters. The rich mineral deposits of the region have historically supported a robust gold mining industry. More recent exploration is leading to the potential development of a graphite mine just outside of Nome.

The living resources of the region—both on land and from the oceans and rivers—not only sustain traditional cultural practices but also support the local economy. The benefits of these local foods are invaluable, contributing to the local food system, and providing community well-being and independence. In addition, commercial harvest of fisheries resources, specifically, is an important economic driver.

Environmental Stewardship

Efforts in environmental cleanup serve as critical avenues for employment and environmental stewardship, addressing historical contamination while enhancing local infrastructure. Together, these assets underscore Nome's potential for sustainable resource management, which is a cornerstone for long-term economic and environmental health.

Education Partnerships

The region has strong education and workforce partnerships, notably with the UAF Northwest Campus, the NACTEC, Alaska Vocational Technical Center (AVTEC), and Kawerak. These institutions provide essential technical assistance, workforce training, and educational opportunities that empower residents to advance professionally and support local residents filling local jobs.

Public Health and Safety

Nome has demonstrated considerable strength in public health and safety, highlighted by robust responses to challenges such as COVID-19 and Typhoon Merbok, with agencies like the Norton Sound Health Corporation (NSHC), local governments, and Kawerak providing critical support. The presence of a Citizen-Led Public Safety Advisory Committee and resources for the homeless population, including a day shelter and overnight facilities, reflects the community's dedication to protecting its most vulnerable members.

Local Arts and Artisans

Across the region, local artisans create and preserve cultural value within their communities, while also supporting their families and themselves by supplementing their incomes from the sale of arts. In communities with limited formal jobs, these activities play a crucial economic role.

New Investments in Infrastructure

Recent investments in infrastructure in the region are improving the economic competitiveness and resiliency of communities. The recent flood of broadband funding will continue to support middle and last mile infrastructure investments. The expansion of the Starlink system further improves resiliency of connectivity in the region through redundant service providers in some areas. In addition, investment in

the Port of Nome builds out a piece of infrastructure that is already an asset for the region, supporting vessel traffic in the Bering Sea and Arctic Ocean.

Weaknesses

- Transportation: all forms (only one regional airline)
- Community participation in meetings/decisions
- Lack of housing
- Lack of justice system (local police force, VPO/TPO)
- Food insecurity/food safety
- Systemic educational issues, particularly for Alaska Native students
- Unorganized borough
- Lack of public services (high-speed internet in villages, sewer and water, waste management) and high cost
- Limited local control in village school curriculum
- No reservations (like in the lower 48)-barrier to federal funding for infrastructure projects
- Lack of financial services and capital
- Not enough professionals from local region
- Workforce shortages in all fields
- Sustaining village economies
- Broadband availability/quality
- Digital literacy/technical training
- Childcare availability
- Insufficient alternative medical spaces
- Limited lodging for visitors
- Limited commercial ship traffic emergency response capability
- Limited elder care and elder housing
- Shortage of short-term lodging
- Representation on the larger stage
- Mail distribution system (zip coding system, lag in delivery, taxation going to Nome for online sales)
- Lack of local climate data and capacity to collect and analyze the data (lack of federal and state presences)

Infrastructure and Public Services

A significant challenge in the NCA is the limited infrastructure. Transportation issues impact all forms of mobility, from access within villages to connectivity with external markets and services. Many villages face gaps in essential utilities, such as high-speed internet, reliable water and sewer systems, and waste management facilities, which are not only limited but also costly to maintain and operate. Additionally, broadband availability and quality remain inconsistent, limiting digital access and exacerbating issues related to digital literacy and technical training. These constraints affect both daily life and economic opportunities, creating obstacles for workforce training, small business creation, telemedicine, and educational access.

Limited infrastructure further impacts emergency response capabilities for ships operating in or passing through the Bering Sea. With commercial ship traffic in the region growing, this is a growing challenge.

Workforce and Economic Challenges

Nome struggles with significant workforce and economic barriers, including a severe housing shortage and a shortage of professionals across multiple fields. The lack of adequate housing is a major impediment to retaining workers, attracting professionals, and accommodating visitors, resulting in limited lodging availability for those coming from outside the region. Often scale plays a role, with small community sizes impacting the justification for keeping schools open or supporting full time employment. Often there are not enough local professionals in a region with necessary technical skill set to fill jobs, which remain empty for long periods of time. This is further complicated by the scarcity of financial services and local capital. Many community members face food insecurity and economic instability, underscoring the importance of developing sustainable, resilient economic structures that provide basic needs and job opportunities for residents.

Housing

Housing stock is limited in every community in the Bering Strait region and costs are expensive for the stock that is present. Overcrowding high while the cost of new construction limits new housing development to reduce the burden in communities. This poses a health and safety risk for many residents, impacting quality of life and contributing to outmigration. Elder care and elder housing, specifically, is limited, as well as short term lodging which impacts visitors and residents traveling to Nome for healthcare. The limited housing stock further limits new economic development as it restricts the workforce in communities.

Limited Commercial and Business Spaces

With the cost of construction remaining high, few communities have sufficient commercial spaces constructed to accommodate businesses. This presents a specific challenge for healthcare space availability and childcare availability, where service availability can be limited by access to space in addition to other containing factors.

Gaps in Education and Social Services

Educational disparities are pronounced, particularly for Alaska Native students who face systemic barriers and limited local control over school curricula in village schools. In addition, the region suffers from inadequate justice and safety resources, with a lack of local police presence, Village Public Safety Officers (VPSOs), and Tribal Police Officers (TPOs), leaving many areas without sufficient law enforcement or judicial services. Childcare availability is another critical gap, limiting employment opportunities for families and placing additional strain on local resources.

Limited Government Financial Support

Due to the unorganized borough structure, the NCA faces unique obstacles in accessing funding for critical infrastructure projects. Without an organized regional government, the region lacks the power to levy taxes and utilize other financing mechanisms designed to raise and facilitate funding for large capital projects.

Opportunities

- Potential for a borough

- Federal funds for infrastructure expansion
- Re-design public systems (ex. tribal courts, justice system, education system)
- Development (mining, fish products, renewable energy)
- Responsible natural resource development
- Tourism (Cruises, cultural tourism)
- Continuing education
- Waste management (including recycling programs)
- Safe and healthy places for youth
- Funding for energy audits
- Financial management education
- Opportunity Zone
- Increased maritime traffic
- Childcare opportunities
- Agriculture and food security
- Broadband infrastructure development
- Increased federal funding, including infrastructure
- Military investment in potential deepwater port
- Community based data collection
- Scientific research and community data collection
- Regional guidance for development opportunities
- Data mining on local communities, hosted locally
- Comprehensive collection, compilation, archiving, and distribution of existing local datasets
- Build more housing to meet the needs of visitors (tourism, construction, etc.)
- Opportunities to build community buildings

Economic Development and Resource Utilization

The Bering Strait region has considerable potential for economic development through responsible natural resourced development. Opportunities for growth exist in mining, fisheries, and renewable energy, offering avenues to create jobs and enhance local revenue while prioritizing environmental stewardship. Additionally, tourism represents a promising industry, with potential for growing cultural tourism and increased cruise traffic, which can bring economic benefits to local businesses and artisans. Further, work continues to grow the farm at Pilgrim Hot Springs, which is creating jobs and improving food security in the area. The establishment of an Opportunity Zone could further attract investments and incentivize development that aligns with the region’s goals.

Opportunities exist for the region to expand its participation in conversations about issues which impact them, including data collection for local communities, resource development projects, scientific research conducted in the region, new military investments tied to the Port of Nome, and increased maritime traffic.

Infrastructure and Federal Investment

Infrastructure expansion is another critical area of opportunity for Nome, with increased federal funding available to support essential projects. Funding for broadband infrastructure can improve digital connectivity, addressing longstanding issues of access and enabling better access to education,

telemedicine, and remote work. New funding for energy projects will allow the region to continue its work improving energy efficiency and investing in renewable energy. The new expansion of the Port of Nome will support increased vessel traffic through the region, supporting both commercial and research vessels and establishing Nome as a hub for Arctic shipping. And military investment in Nome tied to the deepwater port may increase federal investment regional and contribute to workforce growth.

Community Well-being and Public Services

Re-designing public services, such as tribal courts, justice systems, and educational structures has the potential to improve quality of life in the Bering Strait region. By investing in these areas, communities could increase access to justice, tailor educational curricula to local needs, and improve social services. Expanding waste management efforts to include recycling programs can address environmental concerns, while funding for energy audits offers a pathway to reduce energy costs and promote sustainability. Additionally, creating safe and healthy spaces for youth, coupled with expanded childcare services, can foster a supportive environment for families and encourage youth engagement in community activities.

One key area of investment to improve community wellbeing is investing in constructing more housing. Housing which supports residents also frees up resources to enable visitors as well, not just for tourists but also healthcare workers, construction workers, and residents of outlying communities seeking healthcare.

Research, and Data Collection

Growing focus on Arctic sciences and climate change present a new opportunity to develop awareness of the region's economy, environment, and culture. Scientific research and community-based data collection efforts present another valuable opportunity, enabling residents to participate in research that directly impacts their environment and quality of life.

Threats

- Increasingly rapid effects of climate change
- Legacy of trauma (homelessness, mental health, suicide, overcrowding, housing quality)
- Lack of trauma response capacity in terms of mass casualties
- Lack of local police force
- Development - invasive species from increased shipping traffic
- Increasing dependence on a "digital" world
- High cost of living and energy
- State's financial climate
- Inequitable political power
- Diminishing subsistence resources, difficulty of access for elders
- Risk to environmental health (marine mammals, birds, algae blooms)
- Health emergencies
- Foreign influence
- Dependence on federal aid
- Human emigration
- Loss of elders
- Inadequate infrastructure to sustain population growth and economy

- Extreme weather and storms
- Lingering health and natural disaster impacts
- Lack of coordination with Russia over waterways
- Large scale accidents at sea
- Potential military conflicts
- Resilience on a largely external supply chain
- Outside capitalization of local resources
- Polarized political climate (stalled decision making)
- Regulatory status changes for subsistence and commercial activities at the federal level

Social Challenges and Trauma

The area continues to grapple with a legacy of trauma, reflected in persistent issues of homelessness, mental health struggles, and high suicide rates. This history of trauma underscores a critical need for responsive mental health and support services. Additionally, the loss of elders presents a profound threat, as it represents not only a decline in population but also the erosion of cultural knowledge and traditions that are vital to community identity. Typhoon Merbok highlighted the need for trauma response capacity in a different setting. The lack dedicated trauma response centers in most communities means that many communities are unable to respond to mass casualty events.

Environmental and Climate-Related Threats

Climate change poses an existential risk to the region, bringing extreme weather events, rising sea levels, and increased storm severity that threaten infrastructure, livelihoods, and natural resources. Diminishing subsistence resources, combined with the difficulty elders face in accessing these resources, jeopardizes food security and the cultural tradition of subsistence. Increased maritime traffic and development also raise the risk of introducing invasive species, which could disrupt local ecosystems which the local economy depends on and further strain subsistence resources. Moreover, the lack of coordinated efforts with Russia over shared waterways adds uncertainty to the management of these critical resources.

Economic and Political Vulnerabilities

Nome's economic stability is undermined by a high cost of living, particularly due to elevated energy prices and limited economic diversification. The state's precarious financial climate, including uncertainties surrounding programs like the PCE, amplifies economic pressures on residents. Heavy dependence on federal aid adds another layer of risk, as any changes in federal policy or funding could deeply impact essential services and local programs. Inequitable political power also threatens to marginalize the region's needs at the state and national levels, limiting its influence over policies that directly impact the community. Outside capitalization of local resources underscores this threat, removing control over the economic future of the region from the hands of the residents.

Public Infrastructure Deficiencies

Infrastructure limitations present a fundamental barrier to both growth and resilience in the Bering Strait region. Inadequate infrastructure, particularly in housing, public facilities, and transportation, limits the area's capacity to sustain population growth and support economic expansion. Public safety is another critical concern, with the absence of a local police force and the lack of coordinated trauma response capabilities, leaving communities vulnerable to emergencies and violence and decreasing

quality of life. Health emergencies and the lingering impacts of COVID-19 further strain these limited resources, posing a risk to community health and safety.

Shifts in Global and Digital Landscapes

Global forces and a growing reliance on digital systems present unique challenges to Nome. Nationally and globally, increasing dependence on digital connectivity, coupled with limited broadband infrastructure at the local level, risks widening the digital divide and alienating those without access or technical skills.

VII. Goals and Action Plan Updates

In September and November 2024, BSDC members and local leaders convened for a meeting and work session to discuss the *Bering Strait CEDS: 2025-2030*. At the session, the board reviewed the 2025-2030 CEDS goals and action plan, and specific actions were identified for the coming five-year period. The table below discusses the goals and actions identified in the 2025-2030 planning session. Goals lined out in the CEDS are not prioritized, each is considered to be of equal importance.

Goal 1: Improve community services to increase resiliency and quality of life.			
Objective	Activities and Tasks	Performance Measures	Key Partners
1.1 Increase housing availability, affordability, and accessibility.	<ul style="list-style-type: none"> • Research barriers to financing new construction and land ownership in Rural Alaska. • Advocate for increased federal funds for housing, such as Native American Housing Assistance & Self Determination Act of 1996 (NAHASDA), Indian Affairs Housing Improvement Program (HIP), and United States Department of Agriculture (USDA) funding. • Explore establishing a Self-Help Housing program in Nome. • Develop case studies of regional individuals that have financed and/or built their own homes or multifamily housing. • Examine the viability of increasing the amount of transient housing. • Explore the possibility of working with non-profit groups such as Habitat for Humanity, to increase housing capacity. • Conduct needs assessment of future housing needs (in Nome and villages). • Encourage all key partners to work together to develop new housing. 	<ul style="list-style-type: none"> • Decreased persons per household in communities and region • Increased construction projects year over year • Number of construction jobs created • Number of 5-star energy homes that have been built • Number and cost of building permits (Nome only) • Number of renovations to existing homes 	<ul style="list-style-type: none"> • Kawerak, Inc. • BSNC • Sitnasuak Corporation • Tribal entities • HUD • AHFC • Nome Community Center • Norton Sound Health Corporation (NSHC) • USDA • Village Corporations • NAHASDA • BSDC • NSEDC • Bureau of Indian Affairs/HIP • Rural CAP/Self-Help Program • NREL Alaska • Private lenders

<p>1.2 Improve public safety and community resiliency.</p>	<ul style="list-style-type: none"> • Review and update Hazard Mitigation Plans (HMP), Emergency Operation Plans (EOP), and Small Community Emergency Response Plans (SCERP). • Support communities/ responders in actively developing plans through research and advocacy. Assist grant writers and administrators region-wide in obtaining funding for public safety projects. • Documenting/tracking “outside of Nome” Emergency Medical Service (EMS) provided. • Develop MOAs between Nome EMS and village entities. Support the development of community adaptation plans. • Support communities in developing public safety commissions. • Attend the Local Emergency Planning Committee (LEPC) meetings bi-monthly. 	<ul style="list-style-type: none"> • Number of completed plans • Number of projects implemented at the regional and community level • Number of MOAs in place between Nome EMS and village entities that want them • Number of communities with VPSOs or other public safety presence 	<ul style="list-style-type: none"> • Kawerak, Inc. • Alaska State Troopers • Alaska Division of Homeland Security and Emergency Management • Alaska Red Cross • NSHC • Municipal governments • Norton Sound Economic Development Corporation • Volunteer Fire/Search & Rescue/EMS Departments • LEPC • VPSO • USCG
<p>1.3 Implement Bering Strait Resiliency Planning</p>	<ul style="list-style-type: none"> • Implement EDA-funded Bering Strait Resilience Plan • Provide technical assistance and capacity building for member organizations, local businesses, and other local stakeholders impacted by human and wildlife health emergencies. • Establish an Economic Resilience Task Force (ERTF) to plan for, and coordinate the response to, resilience shocks such as natural disasters. 	<ul style="list-style-type: none"> • Number of businesses served • Amount of relief funding obtained for communities and organizations • Number of users on BeringStrait.biz 	<ul style="list-style-type: none"> • Kawerak, Inc. • Tribal entities • Local governments • Nome Chamber of Commerce • Local businesses • LEPC

Goal 2: Strengthen our economy in ways that preserve and enhance our quality of life while ensuring our environment is not harmed.

Objective	Activities and Tasks	Performance Measures	Key Partners
<p>2.1 Educate and train residents for employment in growing industries</p>	<ul style="list-style-type: none"> • Provide region-wide and village-based training opportunities. • Assist residents of the region with documented disabilities in improving job-related skills. • Explore and promote collaboration on apprenticeship and technical-level type programs for priority industries. Such as: <ul style="list-style-type: none"> ○ Environmental and safety ○ Business and tribal governance ○ Early childhood, K-12 and post-secondary education ○ Healthcare (health aide, nursing) ○ Project management ○ Aviation ○ Construction trades (electrician, carpentry, plumbing, welding) ○ Engineer (environmental, mechanical, etc.) ○ Diesel engine mechanics ○ Utility management and operations (electrical, fuel, sewer, renewable energy and energy auditors) ○ Maritime industry (processing, cruise industry, cargo, port operations, cargo/tankers) ○ Heavy equipment operations ○ Fisheries ○ Scientific research and monitoring ○ Emergency response (including EMT) ○ Natural resource occupations • Coordinate among entities to provide scholarships for regional residents. 	<ul style="list-style-type: none"> • Number of trainings offered • Number of certified technicians/completions of programs • Number jobs secured because of the training • Number of residents assisted in gaining job-related skills • Number of scholarships provided 	<ul style="list-style-type: none"> • Kawerak, Inc. • NSEDC • NSHC • BSNC • Bering Strait village corporations • DOLWD • UAF Northwest Campus • Bering Strait School District • Nome Public Schools • NACTEC • AVEC • Tribes • UAF Alaska Sea Grant • Denali Commission

	<ul style="list-style-type: none"> • Pursue zero waste initiatives (recycling, backhaul, etc.) • Collaboration with Bering Strait School District and Nome School District to pursue improvements in regional education outcomes 		
<p>2.2 Support entrepreneurship and the arts. Provide business planning and research assistance.</p> <p>Champion Kawerak Business Planning Specialist</p>	<ul style="list-style-type: none"> • Promote tuition assistance to individuals interested in new or expanding businesses. • Seek new partners and funding to conduct and promote general business startup workshops covering areas such as business planning, marketing, and accounting principles. • Promote an environment in which small businesses will succeed by creating networks of resources and business owners. • Promote e-commerce by supporting training workshops and educating individuals and tribes on the use of the internet as a business and marketing tool. Continue to seek out funding to promote e-commerce. • Promote Norton Sound Economic Development Corporation small business seed money competitions and provide technical assistance. 	<ul style="list-style-type: none"> • Number of individuals completing business-related classes • Number of businesses workshops held in the region • Amount of investment in new or expanding businesses • Number of businesses starts • Number of jobs created • Continued visitor surveys 	<ul style="list-style-type: none"> • Kawerak, Inc. • Alaska Small Business Development Center (SBDC) • NSEDC • Tribal entities • UACED • Nome Chamber of Commerce • SBA • UAF Northwest Campus • University of Alaska Anchorage (UAA) Business Enterprise Institute (BEI) • Tribal State Small Business Credit Initiative (SSBCI)
<p>2.3 Capitalize on natural resources in environmentally responsible ways.</p>	<ul style="list-style-type: none"> • Work with the Nome Chamber of Commerce to incorporate village concerns and needs into regional tourism planning. Provide technical assistance to villages that have identified tourism as a priority, including Pilgrim Hot springs. • Work with NSEDC to explore the feasibility of salmon and other fisheries enhancement programs and novel fisheries enhancement technology. • Explore the feasibility of seismic work (like what is being done in Kotzebue) toward finding enough natural gas to run a power plant and for residential use. 	<p>Tax revenue</p> <p>Gold production and price</p> <p>Fisheries harvest #'s and price</p> <p>Other mineral production and price</p> <p>Number of tribes interested in starting a fish hatchery in Norton Sound</p> <p>Number of contaminated sites</p>	<ul style="list-style-type: none"> • Kawerak, Inc. • NSEDC • BSNC • Bering Strait village corporations • Tribal councils • The City of Nome • DNR • Alaska Department of Fish and Game • Private Sector • Regional Aquaculture • NSHC

	<ul style="list-style-type: none"> • Identify and provide support services for responsible resource development. • Relying on and supporting research activities in a way that practices self-determination and is collaborative with tribal entities and communities. • Evaluate environmental impacts of proposed development. • Support and advocate for the natural resources which the subsistence economy depends on (land/sea animal materials, gardening, hydroponics, reindeer feed, and harvesting roots/greens/berries, etc.) 		<ul style="list-style-type: none"> • Nome Chamber of Commerce • UAF Sea Grant • EPA, General Assistance Program
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Goal 3: Promote economic stability by creating, maintaining, and upgrading infrastructure and regional collaboration to adequately meet our current and anticipated needs.

Objective	Activities and Tasks	Performance Measures	Key Partners
3.1 Improve and increase access to utility infrastructure.	<ul style="list-style-type: none"> • Complete local water and sewer plans for Bering Strait communities, including assessments of the current systems. Also, provide training on how to perform maintenance. • Support utilities and municipalities with pricing and management. • Creation of utility O&M plans and follow through. • Review of current tech around energy and sanitation to see if they could be implemented. • Improve best practice scores with ANTHC and VHS to reach the minimum standard to obtain funding and technical assistance for water/sewer and power infrastructure. • Implement renewable or low-carbon power systems and efficiency upgrades in communities when feasible. • Work with local, state, and federal partners to perform bulk fuel farm upgrades. 	<ul style="list-style-type: none"> • Number of communities with completed local plans • Number of communities with sufficient sewer and water systems • Percent of homes served in each community • Cost of water, sewer, and electrical service by community • Number of communities following O&M plans 	<ul style="list-style-type: none"> • Kawerak, Inc. • NSHC • Community Utility Assistance Program (from NSEDC) • Rural Utility Business Advisor • ANTHC • DCCED • Denali Commission • USDA Rural Development • UAF Alaska Center for Energy and Power (ACEP) • Engineering Ministries International • AEA • Department of Environmental Conservation

	<ul style="list-style-type: none"> • Work with communities to assess and address needs regarding landfill facilities, including the need for backhaul of hazardous or other materials not suitable for landfill disposal. • Assess the status of community leach fields, and fund and perform upgrades, repairs, and/or relocation as needed. 	<ul style="list-style-type: none"> • Amount invested in water/sewer and power infrastructure • Life remaining on current landfill facilities • Amount of funding dedicated to leach field projects 	
3.2 Increase internet speeds and decrease costs.	<ul style="list-style-type: none"> • Follow the state and national broadband task forces and advocate for Bering Strait community interests. • Explore the possibility of a tribal government negotiating government rates with telecom companies. • Work with our state and federal legislators and local providers. • Be involved in tribal consultation as broadband policies are being developed. • Document the costs of broadband in rural communities. • Look at the feasibility of a tribally owned communication system. 	<ul style="list-style-type: none"> • Price per internet plan • Upload/download speeds • Bandwidth capacity • Number of providers participating in the conversation (GCI, TelAlaska, etc.) • Percent of homes with access to broadband internet 	<ul style="list-style-type: none"> • Kawerak, Inc. • Alaska Broadband Task Force • GCI • TelAlaska • Quintillion, LLC. • Starlink • Alaska Regional Development Organizations • Alaska Tribal Spectrum
3.3 Explore the feasibility of a regional governance model to capture the benefits of resource development projects.	<ul style="list-style-type: none"> • Explore the economic feasibility of a Borough. • Explore the economic feasibility of a Port Authority. 	<ul style="list-style-type: none"> • Measure regional interest levels on collaboration models 	<ul style="list-style-type: none"> • City of Nome • Tribes • Regional Municipalities • Kawerak, Inc.
3.4 Improve and develop other community building infrastructure/facilities (other than housing)	<ul style="list-style-type: none"> • Fund and implement building upgrades to bring community facilities up to code (tribal offices, clinics, washeteria, community centers, etc.). • Develop and implement operations and maintenance plans for shared community facilities. • Review local emergency and hazard mitigation plans to identify community needs for new or existing physical built infrastructure to support emergency response. 	<ul style="list-style-type: none"> • Amount of funding dedicated to develop/redevelop community structures • Number of plans in effect for building maintenance. 	<ul style="list-style-type: none"> • Kawerak, Inc. • Alaska Energy Authority (AEA) • Department of Defense • Bering Strait School District • Tribes • Local City Governments

Goal 4: Decrease the cost of energy			
Objective	Activities and Tasks	Performance Measures	Key Partners
4.1 Conduct ongoing energy audits on community and commercial buildings throughout the region.	<ul style="list-style-type: none"> Find out which buildings were not audited. Identify sources of funding to assist with this work. Make a “Plan of Action” for each community on how to tackle the audits (which buildings should be done first). 	<ul style="list-style-type: none"> Number of audits completed Improvements made to structures Reduced energy consumption measured by kWh and gallons of fuel oil 	<ul style="list-style-type: none"> Kawerak, Inc. BSNC NSEDC AEA RurAL CAP Tribal entities Bering Straits Regional Housing Authority Municipal governments ANTHC Denali Commission NREL Alaska U.S. Department of Energy (DOE) DCCED AHFC
4.2 Improve the energy efficiency of homes and buildings.	<ul style="list-style-type: none"> Collect and maintain energy usage data for community buildings and residences. Complete energy audits for home, public, and commercial buildings. Provide energy-specific information to regional grant writers. Develop an appliance replacement program. Fund home energy upgrade program 	<ul style="list-style-type: none"> Amount of fuel oil consumption by building and community kWh usage by building and community Dollars distributed in funding for energy upgrades 	<ul style="list-style-type: none"> Kawerak, Inc. BSNC NSEDC RurAL CAP AEA ANTHC Bering Straits Regional Housing Authority Tribal entities USDA-Rural Development Denali Commission DCCED United Way DOE

<p>4.3 Explore and evaluate the feasibility of alternative energy projects and energy upgrade projects.</p>	<ul style="list-style-type: none"> • Fund the Bering Strait Regional Energy Plan 2025 update and Energy Steering Committee. • Explore and fund a regional independent power producer for community renewable energy projects. • Work with local, regional utilities to identify suitable alternative energy sites and sources. • Work with local, state, and federal partners to explore feasibility and construct community solar projects. • Work with communities to implement Bering Strait GRID Resiliency Group and deploy funding to tribes. 	<ul style="list-style-type: none"> • Number of community energy action plans completed • Number of identified community projects • Amount of funding dedicated to projects in the region 	<ul style="list-style-type: none"> • Kawerak, Inc. • Unuatuq, LLC. • BSNC • AVEC • Village corporations • ACEP • NSEDC • U.S. Department of Energy • AEA • NREL Alaska • Tribal entities • DCCED • DNR • EDA • ANTHC • DOE
<p>4.4 Increase local knowledge of community energy systems and ways to reduce the costs of energy use (residents and utilities).</p>	<ul style="list-style-type: none"> • Bring EnergyWise curriculum to schools in the region. • Monitor and advocate for new energy efficiency programs. • Develop and distribute flyers on energy-saving tips. • Develop PSAs on energy efficiency strategies. • Work with local utilities to share information on energy efficiency improvements and clean energy projects. • Continue to advocate to protect the PCE program. • Update Community Energy Profile priority energy projects. 	<ul style="list-style-type: none"> • Number of outreach materials developed and distributed • Number of residents participating in energy efficiency programs • Number of communities with current energy priority lists 	<ul style="list-style-type: none"> • Kawerak, Inc. • RurAL CAP • NSEDC • BSNC • Tribal entities • Municipalities • KNOM • KICY • The Nome Nugget • AVEC • Unalakleet Valley Electric Cooperative • AEA

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