



Tribal Community Utility Assistance Program (CUAP)

2022-2027

B *usiness* Plan

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Introduction

The purpose of the Community Utility Assistance Program is to support quality drinking water and dependable sewer services in Norton Sound region communities. The business plan 2022-2027 guides regional investment, cooperative management, and affordability of community water and sewer systems to the 15 regional communities.

NSHC would like to thank the Rasmuson Foundation and the Helmsley Charitable Trust for their support with the CUAP pre-development phase.

Native Way of Life

The Bering Strait region is home to Yup'ik, St. Lawrence Island Yupik, and Iñupiaq communities that have called the region home for millennia.

Shishmaref, while threatened by coastal erosion, is home to several of the region's most distinguished ivory carvers. Stebbins, Wales, Diomedea, King Island, Savoonga, Gambell, and Teller continue centuries old traditions of drumming and dancing, hosting dance festivals throughout the year.

One of the largest marine mammal migrations in the world, including bowhead whales, walrus, and seals migrate twice a year from the Pacific Ocean to the Arctic Ocean through the Bering Strait. The lands, wetlands, and rivers are home to migratory birds, salmon species, moose, musk ox, reindeer, and caribou. A report by Kawerak and Oceana notes that 3,760 pounds of Native foods were harvested in 2014. 68% of the harvest was marine mammals, including walrus and bearded, ringed, spotted, and ribbon seals.

The spirituality, well-being, and health of families and extended families is directly tied to their ability to hunt and fish. This environment of wealth has sustained communities.

Quick Facts

10,046 people live in the Bering Strait region

The regional population is projected to grow to 11,462 by 2045.

Workforce: 50% government, 20% education and health services, 10% trade, transportation, and utilities, and 5% manufacturing

Groceries are 131% higher in Nome compared to Anchorage. Costs even higher in communities.

30% of children live below the federal poverty line in the region. The communities in the region range from 54% to 67% below the federal poverty line.

31% of families in region rely on SNAP benefits for food assistance. Communities in the region range from 50-69% that rely on SNAP.

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Tribal Service Providers

Headquartered in Nome, Alaska, Norton Sound Health Corporation is owned and managed by the 20 federally recognized tribes of the Bering Strait region. The tribal system includes a regional hospital and 15 village-based clinics, which operate under an Indian Self-Determination and Education Assistance Act (IS-DEAA) agreement under Indian Health Services.

Kawerak, Inc. is the regional tribal nonprofit consortium to deliver Bureau of Indian Affairs (BIA) services for 19 of the 20 federally recognized tribes of the Bering Strait region. Kawerak employs over 250 people in the region, with 55% located in Nome. In Bering Strait region communities, Kawerak employs Tribal Coordinators, who help manage tribal governments, Village Public Safety Offices, and Head Start programs.

Norton Sound Economic Development Corporation (NSEDC) is a private 501(c)(4) non-profit corporation representing 15 member communities and more than 8,700 people in the Bering Strait region of Northwestern Alaska. NSEDC is one of six Community Development Quota (CDQ) organizations in Alaska.

Bering Strait Regional Housing Authority (BSRHA) is a primary source provider of affordable housing projects including new construction, modernization, rehabilitation of current homes, and the acquisition of homes throughout the Bering Strait region.

Philosophy of Service & Partnership

The philosophy of service in the Bering Strait region is grounded in the principle of Native self-determination. Our way of life defines where we live, as we hunt and gather with each season. A family of governments operate in the Bering Strait in support of one another to address sanitation deficiencies and advance public infrastructure development. While city governments operate within State of Alaska jurisdiction, residents execute leadership as defined by Native values in cooperations and partnership with tribal governments. Tribal governments manage the delivery of services provided by regional tribal organizations including technical utility support and administrative support for elected leadership. Tribes manage the technical services of Norton Sound Health Corporation and Kawerak, Inc.



Water and Sewer Deficiencies

In the Bering Strait region, we face a \$261 million sanitation need. Five communities in the region - Diomedes, Wales, Shishmaref, Stebbins, and Teller - remain completely unconnected to running water and sewer. Gambell is 70% served, with 43 homes still unconnected to water and sewer. Ongoing sewer and water upgrades and maintenance backlogs remain concerns in seven communities. An estimated 520 homes in the Bering Strait region have no running water, nor flush toilets.

The Indian Health Service reports a total need for unserved homes across the Lower 48 at \$137 million. The total need representing unserved communities in Alaska totals \$1.5 billion. The total sanitation need in Alaska is \$2.2 billion.

According to the 2019 Statewide Threat Assessment published by the Denali Commission, the U.S. Army Corps of Engineers and the University of Alaska Fairbanks, the communities of Shishmaref, Golovin, Shaktoolik, Unalakleet, and St. Michael were identified as communities facing "erosion, flooding, permafrost degradation and combined threats" to critical public infrastructure. In Shaktoolik, storm surges from the Bering Sea are eroding away the shore and getting dangerously close to public infrastructure. The school, clinic, fuel tank farm, and other critical infrastructure are subject to flooding during fall and winter storms.

In all the region's communities, heavy equipment, such as rubber-tired backhoes, large excavators, loaders, dozers, vacuum trucks and vacuum trailers are needed for year-round maintenance of and access to water, sewer, and honey bucket services and snow removal during the winter months. In addition, adequate arctic storage facilities are needed for this equipment. [1.this equip](#)

Development of the CUAP

The Community Utility Assistance Program (CUAP) was created to help each city government in the Bering Strait region provide access to clean water and waste management for residents by empowering elected leadership to carry out a high-quality, DEC-compliant water and sewer program with improved sanitation reporting, engineering, and governance services, and improving operations by ensuring water plant operators are certified by creating in-region, and in-community training opportunities.

The concept of establishing a utility collaborative has been under consideration since 2017. Tribal leaders expanded engineering and environmental services at Norton Sound Health Corporation and governance and training services at Kawerak to improve sanitation in the region's communities.

In June 2021, the Helmsley Charitable Trust awarded the region a grant of \$20 million, which will be managed through Engineering Ministries International (EMI). This generous gift was the catalyst for the business formation of the CUAP through a pre-development grant.

City	Tribe	Corporation
<ul style="list-style-type: none"> Utility owners and operator employers Best Practice Score funding requirements Federal and State of Alaska funding and grants (PILT, Fish tax) Sales tax, gaming revenue NSEDC infrastructure funds/grants State of Alaska Village Safe Water 	<ul style="list-style-type: none"> Government-to-government relationship with the United States Project Scope Oversight - IHS Sanitation Deficiency System Self-governance NSHC Kawerak, Inc. 	<ul style="list-style-type: none"> Landowners May grant rights-of-way or easements Economic development Advocating for shareholders

In addition to this grant, the NSHC Board of Directors and the NSEDC Board of Directors both pledged \$500,000 on an annual basis to support the ongoing efforts of the CUAP, with the goal of directly supporting each village in the CUAP.

Community Involvement & Partnership Governance

In the spring of 2021, Kawerak and NSHC met with each of the communities' tri-organizations by teleconference or in person to brief them on the preliminary details of the CUAP and the benefits, but most importantly, to gauge feedback about how the program should be designed. The CUAP is a technical assistance and support model, which has been created to address administrative challenges of city governments and attract sanitation investments. Recognizing the multi-jurisdictional nature of community governance, the CUAP will promote partnerships with cities, tribes, and village corporations.

CUAP Business Plan

The Community Utility Assistance Program (CUAP) Business Plan serves as a guide to facilitate the development of the CUAP with communities and regional partners. The Bering Strait CUAP is a technical assistance model to improve engineering and governance services with regional communities.



Our Mission

To empower elected leaders and community staff in the management and development of community utility systems for improving affordability and sanitation services with communities.

Our Vision

By 2030, all residents in the Bering Strait region will have access to safe and affordable water and wastewater disposal systems, in order to ensure healthy communities, live our way of life on our lands, and create economic opportunities for residents.

Our Values

COOPERATION AND TEAMWORK

Anticipate how to assist and serve one another in achieving results; serve one another selflessly

KNOWLEDGE OF LOCATION-BASED LANGUAGES AND CULTURES IN OUR REGION

St. Lawrence Island Yupik, Iñupiaq and C(at of lif)9gg (der tlcMm(. L)-2 222ik 2 1 Tf0 -1.65 Td(KNO)22 (SHA/tp)re2hm(r

CUAP Goals

Infrastructure Goals

Human Capital Goals

GOAL 1: IMPROVE WORKFORCE RETENTION, DEVELOPMENT, AND SAFETY

Objective 1: Cross-train other individuals in each community with transferable "skill sets" to expand the level of certified water plant operators available to assist in each community

Objective 2: Identify opportunities for city governments to partner with each other to contract services for highly certified water plant operators to prevent burnout and maximize best practice scores

Objective 3: Encourage city governments to pay water plant operators a living wage and provide benefits such as insurance and retirement to help with retention

Objective 4: A sample policy and procedure book will be developed and presented to each city council as a template to use for its water and sewer utility system

Objective 5: Safety manuals will be developed for the water plant

Objective 6: NSHC sanitation response, lines of notification, responsibilities and management

GOAL 2: IMPROVE CITY GOVERNMENT FINANCIAL PERFORMANCE AND OVERSIGHT/COMPLIANCE

Objective 1: Financial training needs of each water and sewer business utility office will be assessed and a training plan will be developed for the region. Kawerak and NSHC plan, schedule, fund, provide culturally relevant trainers

Objective 2: Each city government will develop an annual operating budget for the water and sewer utility system which will ensure revenues collected for water and sewer support operating expenses

Objective 3: Each city government will pay taxes accordingly on an annual basis

GLIAN6aPObjective 1: Financial tr

tification exams. Provide test prep days to share successful ways to study, learn the subjects, and learn with friends, support study groups for water test operator exams

Objective 5: Explore pathways to employment: apprenticeships and student internship opportunities with high school students; adult basic education & 477 opportunities (NACTEC)

Objective 6: Utilize existing Hazardous Mitigation Plans to establish emergency response teams for utility disasters, including the coordination of community-based emergency response volunteers. Involve youth (Kawerak's emergency response department and BSSD)

Regional CUAP Development Goals

GOAL 1: DEVELOP AND SUSTAIN CUAP

Objective 1: Establish governing policies of CUAP

Objective 2: Develop tier criteria options for membership, including process for withdrawal from CUAP

Objective 3: Conduct a water and sewer rate assessment and analysis for each community to break-even.

Objective 4: Strengthen billing practices

Objective 5: Improve homeowner collection compliance

Objective 6: Grow reserve accounts

GOAL 2: ENSURE PARTNERING AGENCIES CARRY OUT IDENTIFIED ROLES AND RESPONSIBILITIES THROUGH COLLABORATION

Objective 1: A memorandum of agreement (MOA) will be developed and signed by each participating member

Facilitate communication between the city, tribe and village corp (tri-organizations)

Tribal Coordinators assist as utility clerks/administrators

Facilitate communication at the regional level

Establish ARUC in MOA for seamless service

MOA with NSEDC to support:

1. Reserve account and any banking fees
2. Fixed annual subsidy to support any relevant water and sewer expenses
3. Contract plumber and electrician costs

Objective 2: A charter will be developed which will outline how frequently the CUAP collaborative will meet, what the standing agenda will be, and how decisions are made

Objective 3: Each city government will identify a representative who will participate in the collaborative to bring back information to his/her city council and to make decisions to guide the CUAP

Objective 4: A newsletter will be published quarterly to keep the communities and partnering agencies informed about the CUAP

Oversight of the CUAP

NSHC is owned and managed by the 20 federally recognized tribes of the Bering Strait region. The NSHC governing board is comprised of 22 board members; one representative is appointed to serve on behalf of every tribe, one seat is held by a Kawerak, Inc. representative, and another seat is held by a community of Nome representative.

Although NSHC does not receive earmarked funds to operate water and sewer utility programs in the Bering Strait region, the NSHC Board of Directors has made water and sewer a priority. In 2018, the NSHC bylaws were amended to include a Water and Sewer Committee, which would include, but not be limited to, representation from all unserved communities. NSHC is the first tribal health organization to hire its own sanitation engineer. Due to limited state funding, NSHC also self-funds a portion of the remote maintenance worker budget on an annual basis. The Water and Sewer Committee will continue tribal oversight of the operations of the CUAP. The CUAP will comply with existing NSHC Board policies and procedures.

In 2021 the NSHC Board of Directors pledged \$500,000 on an annual basis to support the CUAP. Since NSHC operates a health clinic in every community and is one of just a few institutional users of water and sewer in each community it serves, NSHC is committed to financially supporting each city government in its quest to provide the highest quality water delivery and waste management services. First, NSHC will ensure it is paying an adequate water and sewer rate for the service it receives. Once new rates have been negotiated, NSHC will utilize any remaining funds to support additional activities of the CUAP.

The CUAP Administration will comply with existing personnel and accounting policies and procedures. The CUAP project manager is hired through NSHC and provides regular reporting to the Water and Sewer Committee of the Board. -

Community
Partners

Norton
Sound Health
Corporation

Regional CUAP
Partners

Services of the CUAP

New Staff Hired by NSHC to Bring CUAP Implementation

Norton Sound Health Corporation will fund a new position, CUAP Project Manager, to lead the day-to-day activities of the collaborative. During the pre-development phase of the business planning efforts, there was a need identified to expand the Remote Maintenance Worker program. The State of Alaska currently funds 1.5 FTE Remote Maintenance Worker (RMW) positions, and the NSHC Board self-funds 1.5 FTE RMW/Operations and Maintenance Manager. Currently, the RMW program is in a state of being reactive when it comes to most utility operations. The staffing levels are not adequate to fulfill basic or advanced requests to stay proactive. One additional Sanitation Maintenance Worker will be added in FY23.

NSHC will continue to employ the staff to oversee the CUAP. Existing staff continues to support and work on the CUAP project. Over the past three years, the NSHC Board of Directors has self-funded (this means Indian Health Services does not provide money in the compact to directly fund a program) a sanitation program which consists of:

1. 1 FTE Sanitation Engineer
2. 1 FTE Operation and Maintenance Manager
3. 1 FTE Administrative Assistant
4. .5 FTE Remote Maintenance Worker (RMW) *Note: the State of Alaska pays for the other 1.5 FTE, for a total of 2 FTE RMWs: RMW Manager, RMW and RMW

Additional NSHC infrastructure support has been added to implement an operational water testing lab for the region:

1. 1 FTE Office of Environmental Health Director
2. 1 FTE Environmental Planner
3. 1 FTE Environmental Specialist

*All three staff members above are certified to conduct water sample testing

Water Plant Operator Training

NSHC partners with ANTHC Tribal Utility Support to provide technical assistance to operators as well as provide onsite training for operators and backup operators. Further training and support will be provided as needed during the project's one-year warranty period.

The CUAP will provide a robust, culturally relevant training program that will focus on water, sewer, and sanitation certifications. Classes operators have participated in will be tracked, so future trainings can be curtailed to the actual need of the region's operators. The "RMW Report" from the State of Alaska will also be used to assist operators in staying current with their Continuing Education Credits (CEUs). CEU requirements vary by certificate type and level.

The RMWs too will be receiving hours for certification and are too required to be certified at the level of their highest system, which is level 2. After an RMW gains sufficient experience and certification, they will have an opportunity to teach the class. New training opportunities will always be looked at. Cross training of NSHC village maintenance workers to be certified will also help boost operational responses in each community.

The eventual goal for the CUAP program is to have in-region locally trained trainers for all levels of existing

Solid Waste Services

City Governance Training

The city management personnel will receive utility management training through the Dept. of Commerce, Community, and Economic Development, Rural Utility Business Advisor (RUBA) Program. Training is available both on-site and at regional hubs during 32-hour courses. The certification program is available online with training materials to practice before staff takes the test.

Financial Assessments

Kawerak's Tribal Affairs Program took the lead with JW Industries (JWI) to conduct the financial assessments. Tribal Affairs scheduled all the travel and appointments, met with the City Council or City Manager and accounting staff.

Tribal Affairs received a USDA grant for technical assistance and training grant for \$129,249 provided financial training to the city council. The Tribal Affairs created a list of documents required from the city for the assessments a head of time so once on the ground they would work together to finalize the financial data needed.

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The major deliverables from the effort will be:

1.

Infrastructure Reports for Elected Leadership

To empower elected tribal and city leadership over sanitation infrastructure, and the federal/state investment in sanitation, the CUAP will communicate the Qawiaraq Sanitation Indicators, which provide public infrastructure updates for water, wastewater and solid waste facilities in Bering Strait region communities.

The indicators will:

- Identify utility systems under threat of failure
- Identify active sanitation projects each construction season
- Facilitate the update of utility projects for the Indian Health Service Sanitation Deficiency System, which both state and federal allocation systems utilize in funding processes
- Facilitate the identification of funding strategies for public utility projects
- Identify the status of sanitation funding eligibility requirements
- Identify training requirements for public utility owners and operators
- Identify the status of Safe Drinking Water Act compliance measures for public utility systems

In summary, the indicators include:

- Sanitation Project Updates
- Status of Federal/State Funding Requirements
- Status of utility compliance with the Safe Drinking Water Act
- Certifications and Training Requirements

Project updates are provided by project managers (VSW, ANTHC engineers) for Bering Strait region; cross-referenced with the Indian Health Service Sanitation Deficiency System; State of Alaska's Dept. of Commerce, Community and Economic Development Division of Community and Regional Affairs; and the State of Alaska's Dept. of Environmental Conservation.

NSHC's Self-Governance Liaison manages updates to the Sanitation Indicators and distributes to cities and tribes. The Self-Governance Liaison also helps facilitate the annual interagency coordination meeting with State regulators and engineers.



SWOTT: A Strategic Analysis

Performing an analysis of strengths, weaknesses, opportunities, threats and trends (SWOTT) is a strategic way the CUAP can break down and identify its strengths and weaknesses and look closely at opportunities, threats and trends to provide a blueprint for the CUAP to work from.

A SWOTT analysis isolates specific items that can be continued with, improved upon, discarded of, or implemented. Identifying these items aids in the growth of the water operations and allows us to look at all available options for systems improvements. This information reflects information gathered through listening sessions with the local leaders in areas where water and operational opportunities should be prioritized going forward.

Strengths

WATER MONITORING SYSTEM

The Office of Environmental Health opened a state-certified drinking water lab for the region. The lab is able to analyze drinking water samples that public water systems are required to take each month. This analysis detects the presence or absence of total coliform bacteria and E. Coli in drinking water. These monthly samples are one of the most important ways to know water is safe to drink.

Providing this service in region is expected to help reduce the number of drinking water violations that communities get when their samples can't make it to Anchorage or Fairbanks labs in time for labs to analyze the samples.

REGIONAL UTILITY OPERATOR & MANAGEMENT TRAINING

The region has experienced and dedicated staff focused on the support and training of water/wastewater operators and managers.

STRATEGIC ENGINEERING AND COORDINATION

ANTHC and VSW reduce cost of construction and coordination with KTP and BSRHA as the infrastructure plan will identify projects where economies of scale can be utilized by coordinating construction logistics (barging, heavy equipment, etc.)

EDUCATION & TRAINING

NSHC and Kawerak have training programs through various departments and partners with UAF Northwest Campus and State of Alaska online and real-time on-the-ground training.

REGIONAL COORDINATION & COLLABORATION

Governing boards cooperate across the region with diplomacy, tact, and respect. The cooperation is culturally relevant.

SELF-GOVERNANCE

The principle of self-determination has demonstrated success in well managed tribal governments as well as achieved economies of scale in the delivery of financial, managerial, and technical services to communities. Our tribes, tribal organizations, and Native corporations remain poised to advance self-determination in the areas of infrastructure investment and the coordination of housing, sanitation, surface and marine transportation facilities.

DEDICATION & COMMITMENTS TO THIS PROJECT

This project has support from the region's tribal leaders. The city government, tribe, and Native corporation in each community participating in the CUAP have not only verbalized their commitment to this project, but have agreed to formalize this commitment through a signed memorandum of agreement outlining the roles and responsibilities of each entity. Both NSHC and Kawerak have made water and sewer a priority for the past decade. Several initiatives were already underway to empower our communities to improve best practice scores. Both organizations will continue to contribute staff, in-kind, to the project. Both organizations continue to support training opportunities and provide advocacy at the state and federal level. The NSHC Board of Directors has agreed to provide governance oversight for the CUAP and has pledged \$500,000 on an annual basis for a period of five years, with an option to renew based on program outcomes. NSEDC has been supporting our communities for years by investing in water and sewer capital projects and by funding training needs in the region. The NSEDC Board has matched the NSHC contribution in the amount of \$500,000 per year for a period of five years.

INFRASTRUCTURE AND ASSET MANAGEMENT

This project will create a cloud-based PS&E database with pre-planning of construction projects, including environmental and geotechnical reports stored so that we can share our resources by lowering pre-engineering work on projects.

TRADITIONAL AND LOCAL KNOWLEDGE ACKNOWLEDGMENT

NSHC's capacity to engage in communities through traditional and local knowledge to take positions on many projects to promote traditional and local knowledge to voice concerns over self-government, climate change.

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Remove Indian Health Service Sanitation Deficiency System "Cost Caps".

Remove Indian Health Service Sanitation Deficiency System ineligible cost match requirements for Alaska Native villages.

Remove EPA certified operator requirements for unserved communities

Eliminate Best Practice Score Requirements

While city governments operate utilities within State jurisdiction and the State only awards State/Federal sanitation funding to cities, our tribal governments manage the delivery of technical services provided by regional tribal organizations including engineering and administrative utility support. With the purpose of empowering community leaders and operators in the management of infrastructure assets, our regional tribal organizations are poised to improve the delivery of financial, managerial, and technical capacity building services.

Native corporations are the landowners in local communities, and often must make land available for public utility development and provide rights of way. The development and management of community infrastructure projects are often planned independently of each other. Housing investment is managed

Threats

Threats to our water operations on a safety, administrative, and systemic scale are always present, and identifying these threats and knowing how to react to them is a priority. Having a grasp on how our water operations could be threatened or compromised can better prepare the CUAP to become more resilient.

ENVIRONMENTAL CLIMATE CHANGE

Active landfill sites and closed out dump sites in multiple communities are threatened by eroding coastlines. Water and wastewater lines are threatened by storms and eroding coastlines.

ECONOMY POST-COVID-19

The global economy has not yet fully recovered from COVID-19 and its variants. Projects are costing more due to long-term lead time for materials, causing project delays.

WATER CONTAMINATION

Contamination of drinking water can take multiple forms and come from a variety of sources. Anthropogenic sources of contamination can often come in the form of spilled petroleum products, untreated sewage, leachate runoff from landfills/dumps, lead & copper from household plumbing, and mining operations. Non-anthropogenic contamination sources are often from natural rock formations; as water flows through the rock contaminants like arsenic or uranium can be dissolved into the water. Other known contamination threats to water systems in the region include bird droppings contributing to high levels of nitrate in source waters, increased algal blooms (including documented Harmful Algal Blooms in marine waters) that can quickly clog water treatment systems, salt-water intrusion, and high levels of turbidity (dirt).

Fortunately, most regional communities have pristine quality drinking water sources or have treatment systems and trained operators sufficient to remove contaminants. Exceptions to this include the communities of Diomedes and Wales. Both communities are on the US Environmental Protection Agency (EPA) Enforcement Targeting Tool (ETT) list due to their violations related to high levels of contaminants making it through their treatment systems and into their drinking water supply. Diomedes has high levels of both nitrate and arsenic, while Wales has high levels of uranium. Both communities are in the process of getting upgraded water treatment systems that should address the contaminant exceedances. Meanwhile people living in both communities are forced to continue drinking the water.

OCEAN CONTAMINATION

With the increase in Arctic shipping through the Bering Strait from the Northern Sea Route and the Northwest Passage due to climate change opening the Arctic up to natural resource

Trends

Reviewing what trends are occurring with other municipal water utilities and in the utility industry helps provide ideas to consider updating our water system and processes.

HIGHER REGULATION STANDARDS

More water regulation means that management of water utilities could change. This may result in the need for more investment in water infrastructure, which could also impact capacity and staffing levels of the water utility. Having a good sense for the direction of the state and federal regulations regarding water is critical in planning for the future of the water utility.

Upcoming regulatory changes anticipated include:

EPA is making final determinations to regulate PFOS/PFOA in drinking water. Further regulatory changes are expected for wastewater as well. Lead and Copper Rule Revisions effective date was extended to December 16, 2021. Summary of relevant changes:

- Establishing a trigger level to jumpstart mitigation earlier.

- Driving more and complete lead service line replacements.

- Requiring testing in schools and childcare facilities.

- Requiring water systems to identify and make public the locations of lead service lines



CUAP Operating Budget

The operating budget for the CUAP will be developed by the CUAP Advisory Council and approved by the NSHC Board of Directors in preparation for the beginning of the fiscal year: October 1- September 30th. The budget below does not include any in-kind staffing resources provided by Kawerak or NSHC and only outlines how the new revenue authorized by both governing boards of NSHC and NSEDC will be utilized over the next five years to implement the goals and objectives of the CUAP.

NSEDC will award NSHC the grant funds in the amount of \$500,000/year, which will be spent on the expenses outlined in the budget, which includes paying subsidies to the communities to support either the start of a reserve account or funds to grow the existing reserve account. Another payment will be made to the City Governments by NSHC as a pass-through from the grant funds awarded. This payment will be an annual subsidy to be used to off-set homeowner bills. NSEDC will also contribute to contractor plumbing and electrician services. NSHC would identify qualified contractors and these individuals would be dispatched to communities as needed.

NSHC's funds will be used to pay a premium, fixed water and sewer rate that is in excess of what the Indian Health Services will agree to reimburse for water and sewer services for the village clinic. As one of only a few institutional users of water and sewer in each community, the rate charged of NSHC has been nominal or non-existent and there is an opportunity for City Governments to capture more revenue by focusing on negotiated rates with NSHC alone.

Starting October 1, 2022, NSHC plans to hire a full-time Project Director and an additional Sanitation Maintenance Worker.

During the timeframe of 2022-2027, the CUAP will be in the implementation phase. During the implementation phase, the CUAP will focus on community specific rate collections to identify the opportunity available to increase revenue from institutional or other large commercial payors and to improve compliance of homeowner collection rates. Billing services will be offered through NSHC starting after January 2024 for any city governments that require assistance with this effort.

Sustainability of CUAP Beyond 5 Years

January 2027 will mark five years of program implementation for the CUAP. During the first five years, communities will benefit from the generous contributions from NSEDC to help each balance water and sewer operating budget. Important services, such as billing and contracted plumbing and electrician labor will be provided to participating communities through other funded resources during the first five years. However, by January 2027, the CUAP will begin a new phase in which each community must be prepared with a water and sewer operating budget that balances without the reliance of large financial subsidies from NSEDC or other financial contributions from NSHC as observed during the implementation phase. To facilitate this, there are two sustainability objectives that must be met: 1. NSHC agrees to continue to fund staffing levels of CUAP and Sanitation staff, and 2. communities agree to develop and implement business plans to maximize revenue opportunities.

OBJECTIVE #1: NSHC AGREES TO CONTINUE TO FUND STAFFING LEVELS OF CUAP AND SANITATION STAFF

By 2027, NSHC will provide the following in-kind staffing contributions:

1. 1 FTE CUAP Project Director
2. 1 FTE Sanitation Engineer
3. 1 FTE Operations and Maintenance Manager
4. 1.5 FTE Remote Maintenance Worker Staff
5. 1.5 FTE Remote Maintenance Worker Staff (through State of Alaska program funding)
 - . 1 FTE Office of Environmental Health Director
 - . 1 FTE Environmental Planner
 - . 1 FTE Environmental Specialist
 - . 1 FTE Administrative Assistant
10. Any new staff identified during the evaluation and implementation phase of the CUAP*

*On page 12, NSHC's financial commitment by 2027 is estimated to be \$1,422,588 on an annual basis. This contribution could change if more staffing needs are identified during the implementation phase.

OBJECTIVE #2: COMMUNITIES AGREE TO DEVELOP AND IMPLEMENT BUSINESS PLANS TO MAXIMIZE REVENUE OPPORTUNITIES

During the pre-development phase, the financial data collected from JW Industries identified there is great potential to maximize revenue and strengthen other financial practices to facilitate a break-even water and sewer operating budget for each community. The opportunities include:

1. Development of a separate water and sewer budget

During the course of financial review, it was identified that some city governments blend revenues from other business conducted on behalf of the city into the operating budget. The goal is for all city governments to develop a separate water and sewer operating budget to better track water and sewer utility revenue and expenses.

2. Revise collection rates

Each community collects from three different users: homeowners, commercial users, and institutional users. An overall goal for the CUAP is to develop a reasonable homeowner water and sewer rate for each community.

HOMEOWNER RATES: CURRENT

Homeowner rates are different for each community. The highest rate was identified in the community of St. Michael, where homeowners are being charged in excess of \$200 if they are delinquent on past bills. The lowest rate was found in Unalakleet, which is most likely a result of other revenue collected by the city that is offsetting the rate. During the financial review, the only unserved community that stated it was charging homeowners for honeybucket or trash pick-up services was Teller. The homeowner rate is unknown at this time (all unserved communities are reported as \$0).

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revenue by 2027.

The following initiatives will be utilized to help improve homeowner collections: 1. develop policies to be approved by the city government, 2. educate homeowners and city governments about state or government

EXPENSES

The expenses included in the sustainability budget were estimated using an average of actual expenses identified. However, some water and sewer operating budgets are combined with other city business, including the revenue and expenses for those other services.

PERSONNEL EXPENSES

One of the biggest projected expenses includes the water plant operator salaries. The financial review identified that not all communities are able to pay a competitive wage for water plant operators and it is unclear if all communities are paying for dedicated utility clerk for the water and sewer business. A goal in 2027 is for the city governments to employ an average of 2 FTE water plant operators and .5FTE dedicated utility clerks.

RESERVE ACCOUNTS

During the financial review, it was identified that not all communities have funds earmarked for maintenance and repair. This is a best practice score criteria and will be a focus during the implementation phase. By 2027, city governments will be expected to budget for these funds, with the assumption that NSEDC subsidies may not be made available. The implementation phase includes the set-up of reserve accounts in a separate bank account. The goal is for these funds to grow and carry-over if not utilized.

WATER TESTING EXPENSE

Many of the water and sewer budgets included a water testing expense. This expense will be eliminated as NSHC began water testing lab services in 2021, free of charge to the communities. This is one example of a CUAP initiative that is already creating efficiencies for the communities and reducing costs.

PURCHASED SERVICES

By 2027, participating communities will be asked to contribute to billing services and contracted plumbing/electrician services. A figure used in the sustainability budget is \$10,000/billing and \$10,000/contracted services. This is an average, but the figure will vary for each community based on the number of accounts being billed and the level of contractor services required per year. The payment for these services could be referred to as an annual "membership fee". It is too premature to detail out what this looks like, but the concept is being considered and will be further discussed with the CUAP Advisory Council moving forward.

UTILITY ENERGY CONNECTION

The sustainability of utilities in Bering Strait region communities is closely tied to energy costs. Energy in each community is provided by diesel fuel powering electricity to village microgrids. The communities of Diomede, White Mountain, Golovin, and Unalakleet manage their own energy utility, while the remaining communities are managed by the Alaska Village Electric Cooperative. NSEDC executes a bulk fuel buying program to improve purchasing power of the region's 15 communities. However, periods of high global energy prices impact Alaska Native communities quite severely on the affordability of electricity and home heating fuel. As Bering Strait region leaders and technical experts continue analysis to maximize revenue opportunities for water and sewer utilities, improving energy efficiency will be a critical element.

CONCLUSION

The pre-development phase provided a snapshot of what the financial data looks like for each community and what the opportunities for improvement are. During the next five years, the CUAP will focus on the development and approval of separate water and sewer operating budgets for each community so accurate revenue and expenses can be tracked. However, it is evident that there are revenue opportunities to be maximized. More analysis and studies will be conducted over the next few years to better understand what affordable homeowner rates are and what the true uncollectible rate is. By 2027, city governments should be prepared to stand-alone, which includes contributing financially to any contracted service needs for billing, plumbing, or electrician needs.

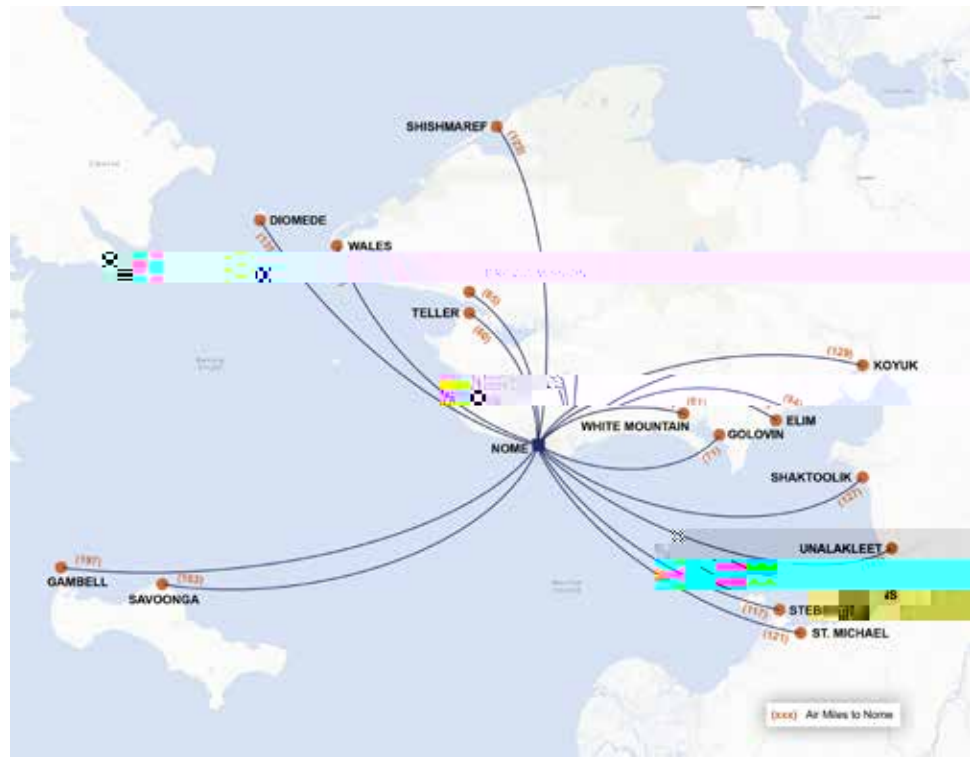
Appendix I

Geography

The region has 16 communities in total, ranging in population from 100 to 3866. The region extends north from Shishmaref, east to Koyuk, south to St. Michael, and west to Gambell. The City of Nome serves as the hub community.

The Bering Strait Region is found in northwestern Alaska, between the latitudes of 63.5 degrees and 66.5 degrees north. The region encompasses an area of 23,000 square miles and is made up of the Seward Peninsula, St. Lawrence Island, King Island, Little Diomedede 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 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 surpassing 4,000 feet in elevation. The region has no glaciers and becomes ice-free for a short period each year in late summer yet is underlain with permafrost. The region is drained by several rivers and myriad smaller creeks and streams.



Logistics

The Bering Strait region relies heavily on air transportation for passenger mail and cargo service. A state-owned airstrip is available in 15 communities, while Little Diomedede has a heliport. Boats, both personal and commercial, are used for river and ocean travel in summertime. Barges deliver heavy cargo at least five times a year to Nome and twice for the outlying communities. ATVs, snow machines, and some vehicles are used for local transportation. There are dirt and gravel and paved roads.

Population and Housing Characteristics

The region is made up of a primarily Native population who fish commercially and are active in subsistence

Appendix II

Results of Water & Waste Service Overview

The CUAP will continue to work with the community's city or utility to capture data needed to calculate the water rates.

BREVIK MISSION: SMALL TREATED -- PIPED GRAVITY SYSTEM

Customer Type	Rate	Number of Customers	Collection Rate	Annual Income
Residential User Fees	\$60.00/month	93		
Small Commercial Users	\$180.00/month	5		
Large Commercial Users	\$180.00/month			
School User Fees	\$180.00/month	1		\$207,528.32
User Fees from Washeteria	\$5.00/load			
User Fees from NSHC Clinic	\$0			
Water Sales (per gallon)				
Total Revenue				\$207,528.32

DIOMEDE: SMALL TREATED -- COULD MOVE UP TO A LEVEL 2 SYSTEM. UNSERVED COMMUNITY. WASHETERIA AND HONEY BUCKETS.

Customer Type	Rate	Number of Customers	Collection Rate	Annual Income
Residential User Fees	\$0	35	0	0
Small Commercial Users	\$0.25 per gallon			
Large Commercial Users	\$0.25 per gallon			
School User Fees	\$25,362.00	1		\$25,362.00
User Fees from Washeteria	\$4.00 per token			
User Fees from NSHC Clinic	0			
Water Sales (per gallon)	\$25,362.00			
Total Revenue	60,330.75			\$25,362.00

SAVOONGA: LEVEL 1 -- PIPED SYSTEM WITH VACUUM. ARUC COMMUNITY.

Customer Type	Rate	Number of Customers	Collection Rate	Annual Income
Residential User Fees	\$80.00/month	160		
Small Commercial Users	\$150.00/month	7		
Large Commercial Users	\$150.00/month	1		
School User Fees	\$6,100.00/month	1		\$67,100.00
User Fees from Washeteria				
User Fees from NSHC Clinic	\$300/month	1		
Water Sales (per gallon)				
Total Revenue				\$67,100.00

Customer Type	Rate	Number of Customers	Collection Rate	Annual Income
Residential User Fees	\$30.00/month	59		
Small Commercial Users	\$35.00/month	1		
Large Commercial Users	\$35.00/month	1		
School User Fees	\$0.25 per gallon	1		\$171,296.72

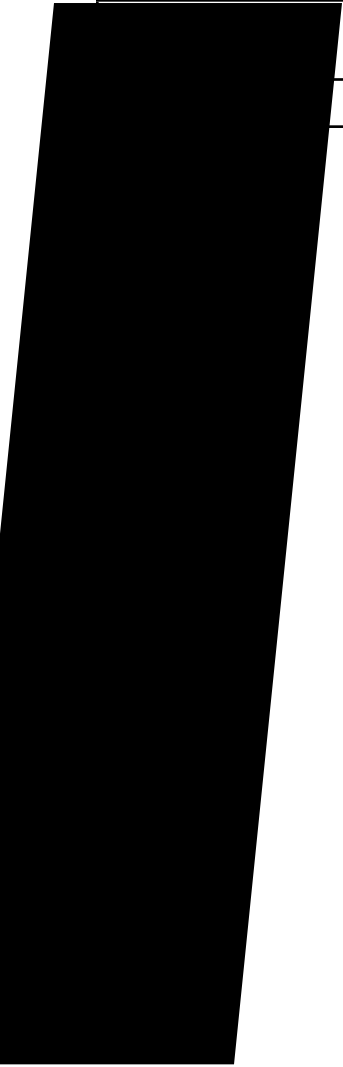
SHISHMAREF: LEVEL 2 -- NON-PIPED COMMUNITY. HONEY BUCKET FLUSH AND HAUL OR HONEY BUCKET HAUL.

Customer Type	Rate	Number of Customers	Collection Rate	Annual Income
Residential User Fees	\$			\$600.00
Small Commercial Users	250-gallon tank/\$7.00 per tank			
Large Commercial Users	250-gallon tank/\$7.00 per tank			
School User Fees	\$0.25 per gallon	1		\$280,871.91
User Fees from Washeteria				
User Fees from NSHC Clinic				
Water Sales (per gallon)				
Total Revenue				\$281,471.91

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Customer Type	Rate	Number of Customers	Collection Rate	Annual Income
Residential User Fees	\$0.25 per gallon			\$4,781.61
Small Commercial Users	Unknown			
Large Commercial Users	Unknown			
School User FTw 10.81	Unknown			

Customer Type	Rate	Number of Customers	Collection Rate	Annual Income
Residential User Fees	\$			\$50,703.39
Small Commercial Users	\$90.00/month			



Appendix III