

ENHANCING COASTAL RESILIENCE

POINT HOPE, ALASKA

BACKGROUND

Point Hope lies on a gravel spit at the tip of the Lisburne Peninsula, at the northwesternmost point of Alaska. For the past 2,000 years, this location in the Arctic Circle, rich in natural resources from both the land and sea, has been an ideal location for the Iñupiat community to practice subsistence hunting of whales, seals, and walrus and inland caribou, muskoxen, fish, and birds. However, with an elevation of just 13 to 18 feet above mean sea level, Point Hope is highly vulnerable to the effects of climate change, especially sea level rise, loss of shore-fast sea ice and permafrost, and increases in the size of storm surges, which are all accelerating erosion. Today, Point Hope is looking to the future by planning nature-based projects that will help the community maintain its ancestral home, and become an example for similar communities across Alaska's North Slope.

CHALLENGES

- Temperatures in Point Hope are rising at more than twice the rate of the rest of the United States.
- Melting permafrost and slower formation of shore-fast ice are accelerating coastal erosion, thereby threatening infrastructure, public health, and food supplies.
- Rising sea levels are increasing flooding, which impacts infrastructure and drinking water safety.
- Wildlife migration patterns are changing, increasing the likelihood of food insecurity.



Sandbags placed along the northern shore of the peninsula in an attempt to slow erosion

PROJECT LEADS



AGVIO
AGVIO ENVIRONMENTAL SERVICES



PROJECT SUPPORT



Image: NOAA ShoreZone

COMMUNITY PRIORITIES

The City of Point Hope maintains an annually-updated improvement plan to track community priorities and progress. Six of those priorities relate to coastal and climate resiliency:

- Erosion along the northern shore of the City.
- Protection of ice cellars, a vital and culturally important form of in-ground refrigeration for annual whale catches.
- Construction of a boat ramp for easier and safer access to fishing waters as sea ice forms later and melts earlier each year.
- Extension of the Point Hope evacuation road, which at its lowest point is susceptible to flood damage.
- Development of a rock and gravel quarry to help support both extension of the Point Hope evacuation road and maintenance within the City.
- Re-location of the Point Hope landfill away from the existing runway and coastline.



Image: Tikigaq Corporation

NATURE-BASED SOLUTIONS

Point Hope, with its harsh winters and unique location, does not lend itself to the same nature-based resilience solutions used in much of the continental United States. Innovation will be required at all levels to ensure solutions both work with natural systems while also maintaining the Iñupiat ethos of living with nature. This means that some features that would not typically be considered “nature-based”, such as Point Hope’s ice cellars and boat ramps, are in fact integral to both the community and to the ecosystem, as any engineered features that help reduce food waste in turn protect wildlife populations from unnecessary harvesting to replace lost food stuffs. By focusing on these unconventional connections between community and nature, Point Hope can serve as a new place for innovation when engineering solutions in concert with nature.



Image: The Raven's Librarian

A CULTURAL FOCUS

Project activities will be rooted in broad stakeholder consultation and outreach using traditional knowledge, in tandem with western science. By leveraging the extensive knowledge of Point Hope’s Iñupiat elders, local business owners, and other community members, projects will improve resiliency to a changing climate and help preserve the values of Point Hope for generations to come.

