PROJECT PURPOSE

- To **identify** important components of Kotlik and determine the risk of harm
- **Compile** *(collect, put together)* a list of vulnerable things that are affected by climate change (flooding, storm surges, erosion, thawing land, and changing temperatures)
- **Assess** *(measure, evaluate)* the vulnerability *(weakness)* of each identified item in the risk list and determine if each asset is susceptible *(weak)* or resistant *(tough)* to impacts from weather or climate events
- To **increase knowledge** *(both traditionally and scientifically)* and raise awareness of our rapidly changing climate
- To Plan for responding to change
Formed in 2019 after The Kotlik Tribal Council was granted funding from the BIA Tribal Resilience Program

Consisted of representatives from:
- Village of Kotlik Tribe
- Native Village of Bill Moore’s Slough Tribe
- Native Village of Hamilton Tribe
- Elders
- Youth

The goal was to provide a plan for mitigating damage caused by erosion, floods, storms and warming temperatures.
Threats and Vulnerabilities

- Erosion
- Flooding
- Thawing permafrost
- Decreasing sea ice
- Increasing Storm Surges
- Increasing Temperatures
BANK EROSION

Erosion is caused by the soil thawing and continuous wave action during the summer.
Between 1951 and 2015, the river banks have eroded as much as:

- Dump: 128 feet
- South side of river bank in town: 141 feet
- North side across river from main: 128 feet
- West side across river from main: 108 feet
Fall Flood, 2013

Caused severe damage to:
- Homes
- Buildings
- Water & sewer lines
- Boardwalk
- Personal property
Permafrost is thawing very rapidly, causing the crosses at the cemetery to slant and even slip out of the ground and fall over.
Sea ice has been reduced to almost nothing due to the latest series of storms that hit several communities in the Bering Strait Region. Open water can now be seen from the shores of Unalakleet, Shishmaref, Stebbins, St. Michael and other villages along the west coast of Alaska, a sight that is historically abnormal for this time of year.
Between Stebbins and Kotlik has little to no sea ice during the winter of 2019. South winds blow out the ice or they detach and drift far out into the Bering Sea.
• Ringed seals give birth in snow caves on the sea ice, which protect their pups from extreme cold and predators.
• Warming leads to earlier snow melt, which causes the snow caves to collapse before the pups are weaned.
• The small exposed pups may die from hypothermia or be vulnerable to predation by arctic foxes, polar bears, gulls, and ravens.
• Gulls and ravens are also arriving earlier in the Arctic as springs become warmer, which increases the birds’ opportunity to prey on the seal pups.
Berries are an important subsistence food that we gather in our region.

Warmer weather causes salmon berries to ripen earlier than they did 10 years ago.

The floods that we’ve been experiencing can impact the traditional harvesting locations.
FISH

- Temperature rise during summer months
- More flies getting into salmon filets and strips
- Cold underground storages are beginning to melt and become warmer
- Warmer water results in lower sockeye run
- Herring fish and herring eggs on kelp seem to be decreasing
CLIMATE CHANGE AFFECTS THE HEALTH AND WELL-BEING OF PEOPLE AND WILDLIFE

High temperatures cause stress in wildlife, making the animals, and the people that use them for food, more vulnerable to infectious diseases.

• Changing ice conditions can make travel more dangerous, increasing risk of injury.

• Rising temperatures can increase the risk of food poisoning from salmonella or botulism in stored traditional foods.

• Thawing permafrost can cause river banks to erode, reducing water quality, and increasing challenges in treating drinking water.

• Violent storms, flooding, and the erosion of the land threaten safety in some communities and can cause stress, anxiety, and fear.

• The changes affect the traditional knowledge systems, the environment, land, and livelihood.
SHORT-TERM GOALS

The Kotlik Tribe proposed a plan to migrate 21 high risk homes are threatened by erosion and floods to a new subdivision within the village.

LONG-TERM GOALS

Community Relocation to higher ground was taken into consideration and the Village of Kotlik is coordinating with other agencies.
SUBMITTED PROPOSALS FOR HOME RELOCATION

• Funded:
  • Kotlik Subdivision Design Services Design for Boardroad to Old Airport Site
  • Design and Construct Power Distribution and Build 1,200 Feet of Boardwalk to the New Site
  • PASS installation for 21 homes

• In Progress:
  • Home Buyout and Relocation Project Subapplication Development
  • Civil Site Construction
  • Construction and mobilization of skid for moving homes
  • Home Relocation Project (21 homes)
THANK YOU