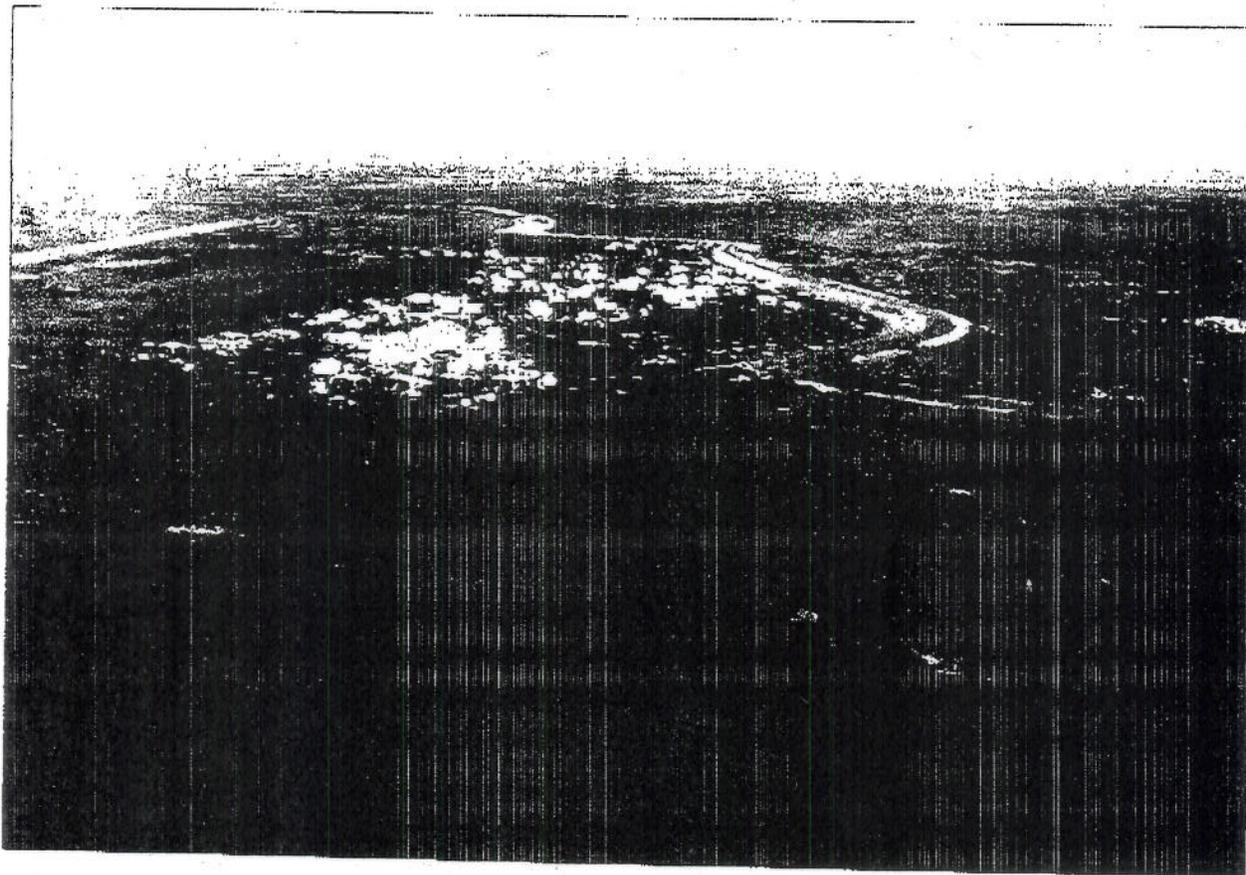


**Stanley Tom's Testimony**  
**Subcommittee on Disaster Recovery**  
**October 11, 2007**



## An Overview of Erosion, Flooding, and Relocation Efforts in The Native Village of Newtok

Good morning. I am Stanley Tom of the Native Village of Newtok, in Western Alaska. I am the Tribal Administrator of the Newtok Traditional Council.

My village is one of four Alaskan villages identified as being in imminent danger from flooding and erosion and making plans to relocate. Advancing erosion of the Ninglick River near my village has been so severe that critical infrastructure has been lost. My community has become increasingly vulnerable to severe flooding, public health issues, and problems with the delivery of fuel and other critical supplies.

Shoreline protection measures are not an option for my village. Studies conducted since 1983 have concluded that we must relocate because there is no permanent, cost-effective way for my community to remain at the current village site.

My village is working very hard to relocate. We have selected a place to move to and have gained ownership of the land. We have even started to build houses at our new village site. The agencies in the Newtok Planning Group are helping us, but this is very hard to do without a designated lead agency and funding for relocation. We cannot work fast enough to keep up with the erosion. We are very concerned that the next major storm will leave our village uninhabitable before we can move to our new village site.

### **Early Erosion Assessment of Newtok**

We have been dealing with our erosion problem for a long time. In 1983, we received a grant from the Alaska Legislature to assess the erosion problem and evaluate alternatives for erosion control to protect several miles of the Ninglick River bank.

As part of the ***Ninglick River Erosion Assessment***, historical bank erosion rates were evaluated from historical and current aerial photographs. The evaluation determined that between June 1957 and May 1983, the north bank of the Ninglick River had eroded at an average annual rate of 19 to 88 feet. It was determined that if the erosion could not be slowed, community structures would be endangered within 25 to 30 years (2008-2013).

The conclusion of the erosion assessment was that providing full protection to stop the erosion process over the entire length of the Ninglick River bank would be prohibitively expensive. Woodward Clyde concluded that ***"Relocating Newtok would likely be less expensive than trying to hold back the Ninglick River."***

The photos on the next page show the extent of erosion over a thirteen year period after the ***Ninglick River Erosion Assessment***. In the July 4, 1996 photo, the Ninglick River Bank has eroded up to the bend in the Newtok River.



June 10, 1983



July 4, 1996

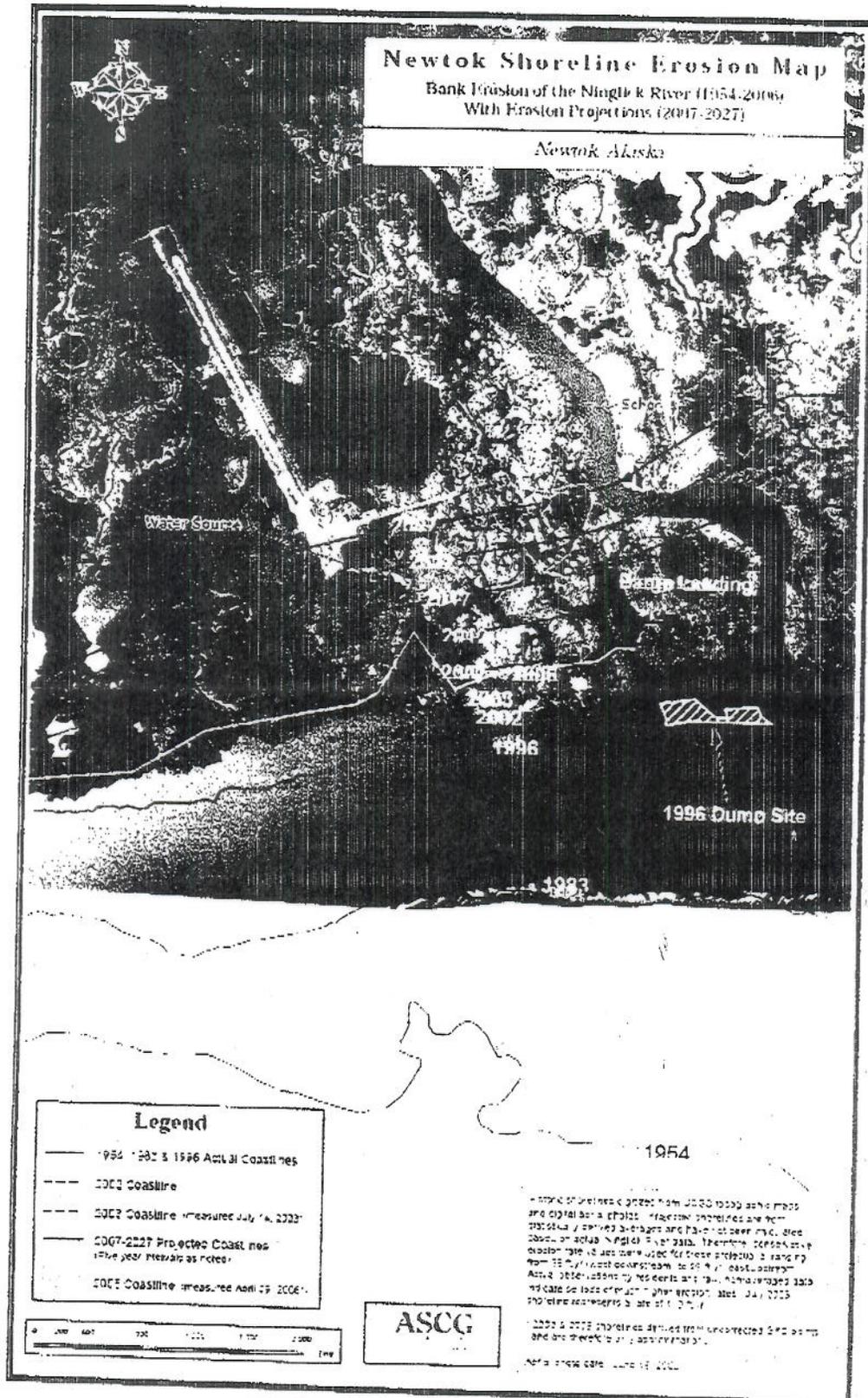
Source: Newtok Background for Relocation Report

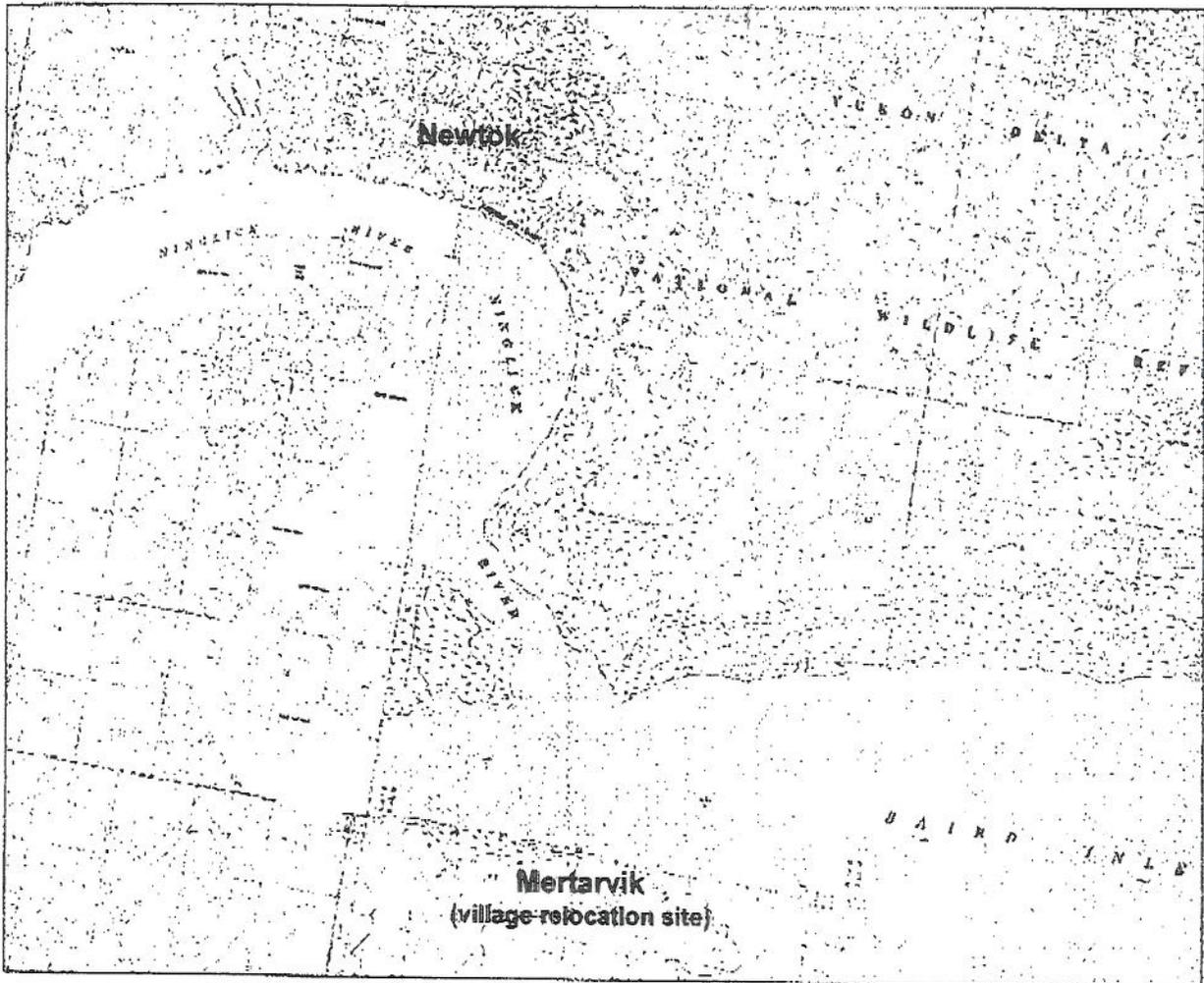
### Our Work to Relocate

In 1994, the Newtok Traditional Council began to make plans to relocate. The Traditional Council analyzed six potential village relocation sites. The selected relocation site, located on the north end of Nelson Island, was within the Yukon Delta National Wildlife Refuge and under the management of the U.S. Fish and Wildlife Service (USFWS). The site, approximately nine miles southeast of Newtok, is called **Mertarvik**, which in Yup'ik means "getting water from the spring". The map on the next page shows the locations of Newtok and Mertarvik.

## The Erosion Worsens

For the relocation planning study, the contractor prepared a Shoreline Erosion Map based on historic shorelines digitized from USGS topographic maps and digital aerial photos. It was found that average rates of erosion along the Ninglick River varied from 36 feet to over 83 feet per year upstream. The average rate of erosion occurring directly in front of the village between 1954 and 2003 was measured to be 68 feet per year. The loss to erosion has been continuous from the base year of 1954 (see map, below).



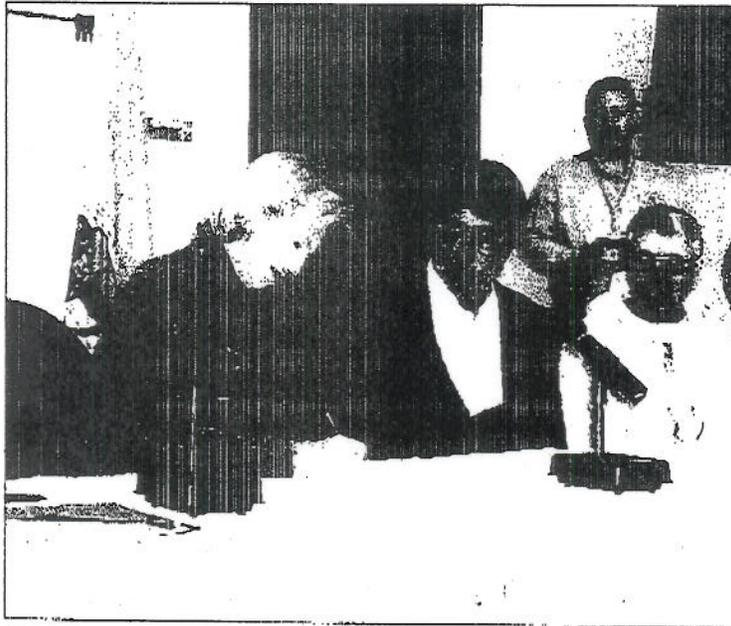


In 2000, the Newtok Traditional Council hired a contractor to plan for the village relocation. Three reports were prepared as a result of these early planning efforts:

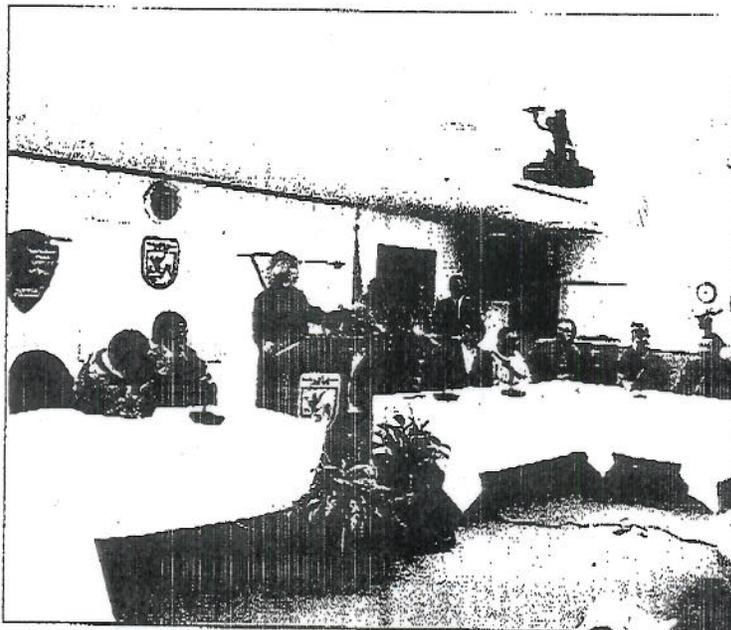
- **Newtok Background for Relocation Report:** This report provided background documentation to government agencies in order to justify the efforts of the village's relocation to Nelson Island and to support requests for government assistance in this process.
- **Preliminary Geotechnical Overview:** The Corps of Engineers performed a site reconnaissance to visually evaluate the surface and subsurface conditions at Mertarvik. The study concluded that based on visual evaluation; there were no geotechnical site conditions that would preclude Mertarvik from use as the area for relocation of the village of Newtok.
- **Newtok Transportation Plan:** This includes a land use map and transportation plan for the proposed relocation site with prioritized roads, justifications, and estimated costs as a guide for future community development studies.

### **The Land Exchange to Acquire the Village Relocation Site, Mertarvik**

In November, 1996, the Newtok Native Corporation passed a resolution authorizing the negotiation of a land exchange within the Yukon Delta National Wildlife Refuge with the U.S. Fish and Wildlife Service (USFWS). With the assistance of legal council, Newtok Native Corporation negotiated the terms of the land transfer and drafted federal legislation. On November 17, 2003, United States Public Law 108-129 was signed into law allowing for the Newtok Native Corporation to trade land for the village relocation site on Nelson Island (Mertarvik).



Secretary of the Interior Gale A. Norton signs the land exchange legislation as members of Newtok Native Corporation look on. (Source: Landye Bennett Blumstein LLP)

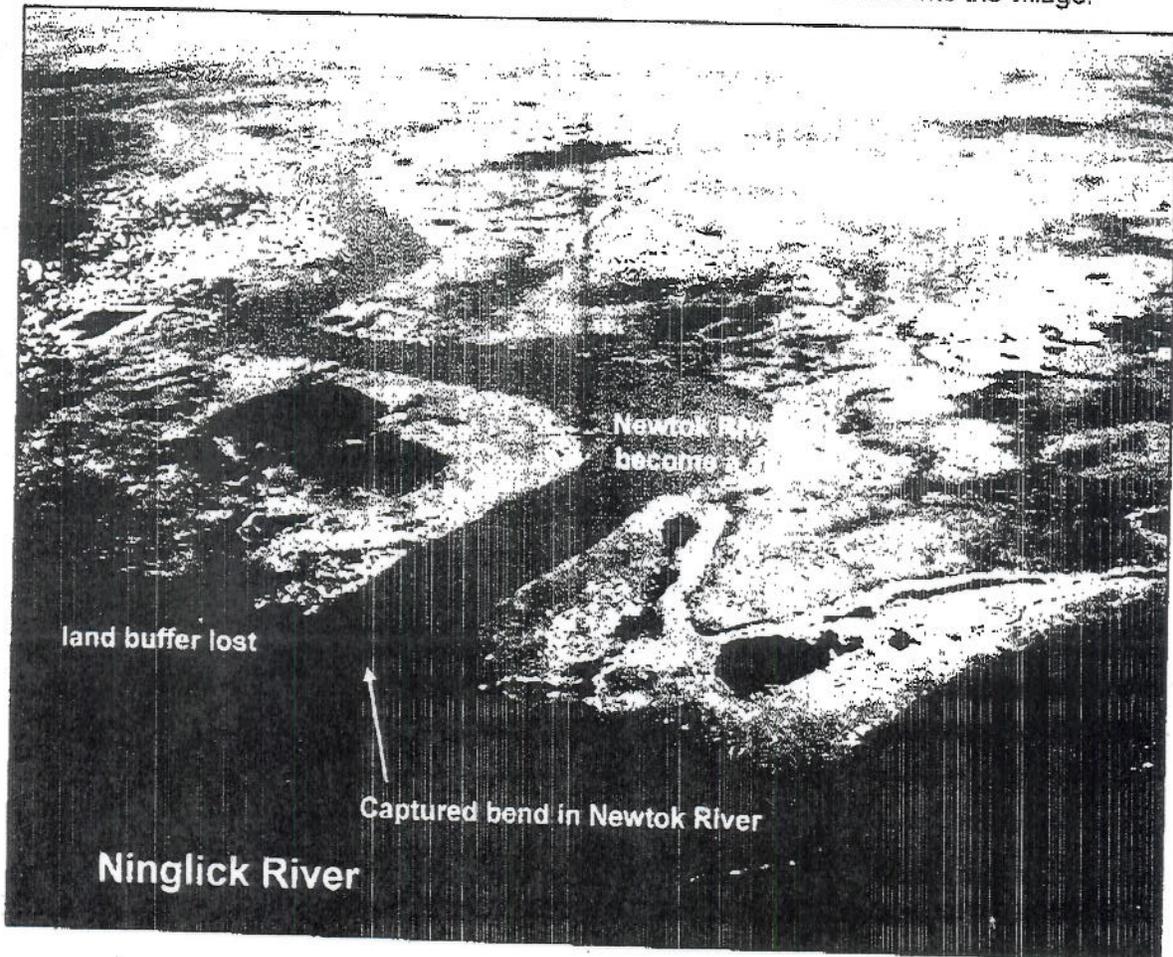


Secretary Norton speaks to the Newtok Native Corporation. (Source: Landye Bennett Blumstein LLP)

**Progressive Erosion Brings New Problems:  
Increased Flooding, Public Health Issues and Difficulties Delivering Fuel**

Although my village has worked very hard to relocate, we have not been able to work fast enough to keep up with the erosion of the Ninglick River.

Erosion has removed the land buffer between the Ninglick and the Newtok Rivers. Now, there is a direct connection between the Ninglick River and the village. In the fall storm season, flood water can now surge through the Ninglick River, up the Newtok River and into the village.



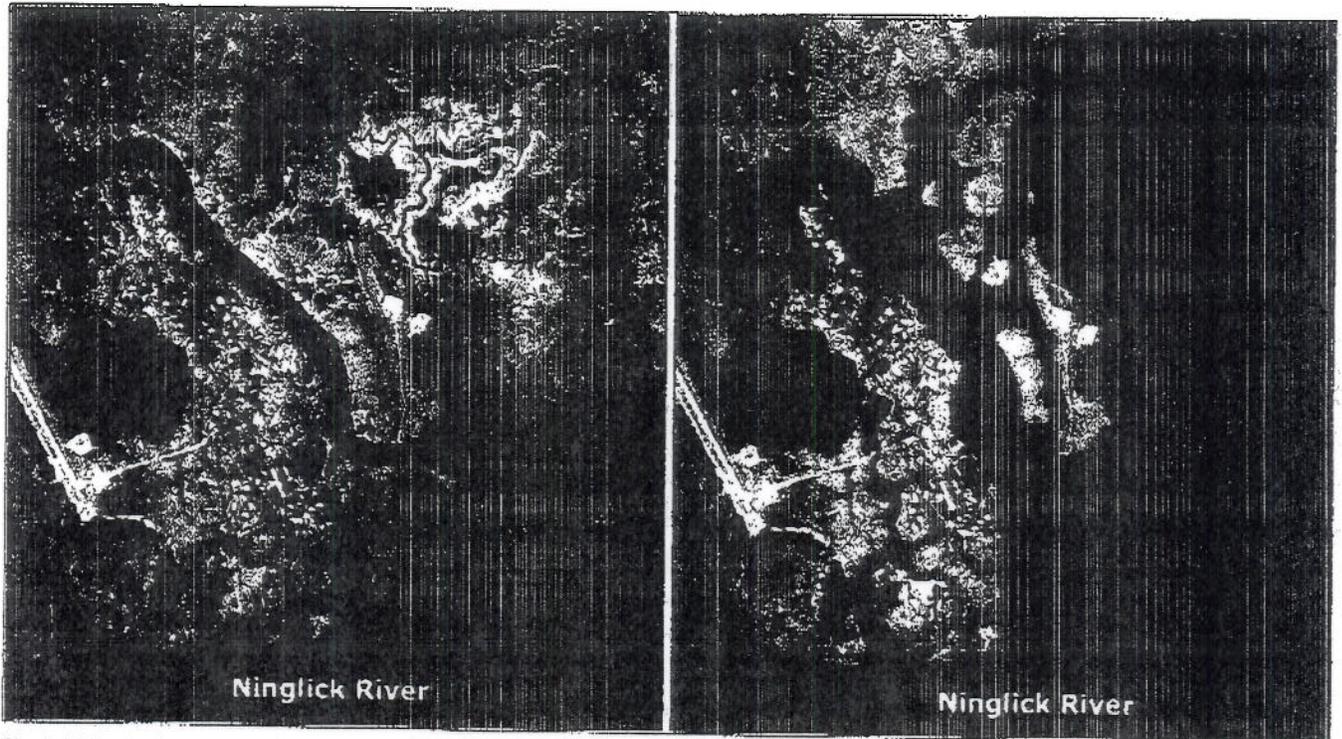
The land lost by erosion of the Ninglick River has caused siltation of the Newtok River, turning the river into a slough. The Newtok River used to be a busy traffic route to my village, providing easy access to residences and barge off-loading facilities. The encroachment of the Ninglick River has caused the Newtok River to become progressively shallower with built up silt, stopping the flow of the Newtok River. At low tide, the Newtok River is similar to a mud flat, making boat and barge navigation extremely difficult and limited.

### Public Health Concerns

A team of public health professionals representing Alaska's State and Tribal organizations conducted a comprehensive assessment of environmental public health conditions in Newtok during the months of August and September 2006. The team found sanitation conditions in Newtok to be grossly inadequate for public health protection. The situation has been attributed to many problems, including high levels of community contamination, little potable water for drinking and hygiene/sanitation practices, and household crowding. The **Environmental Public Health Assessment: Newtok, Alaska** found that between 1994 and 2004, 29 percent of Newtok infants were hospitalized with Lower Respiratory Tract Infections (LRTI), including 20 percent for pneumonia, 18 percent for respiratory syncytial virus (RSV), and 11 percent for pneumonia RSV. These numbers are considered to be very high and could indicate the occurrence of water-washed disease (disease caused by lack of water, poor personal hygiene and lack of proper human waste disposal).

The erosion and flooding situation in our village has increased this problem. The Newtok River has long been used as the village's honey bucket disposal site. With the increased siltation of the river, disposed waste has no place to go. During storms, flood water now rushes up the Ninglick River unobstructed into the Newtok River, forcing the stagnant water of the Newtok River into the village. This has increased the public health threat to my community.

The map below shows the extent of flooding that occurred in Newtok as a result of a fall storm that occurred on September 22, 2005. Residents indicated on aerial photos the extent of flooding around and within the village. The floodwaters completely surrounded the village, turning it into an island for several days.



*Newtok Flood – September 22, 2005. Source: Newtok Traditional Council and USACE*

Several houses were only connected to the village by boardwalks that were floating in the floodwater.

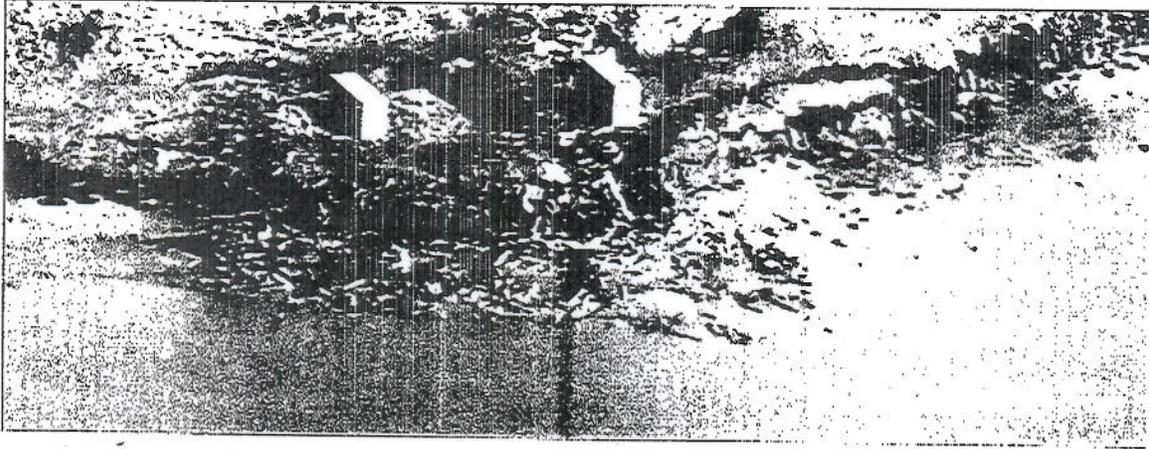


*Source: Stanley Tom*

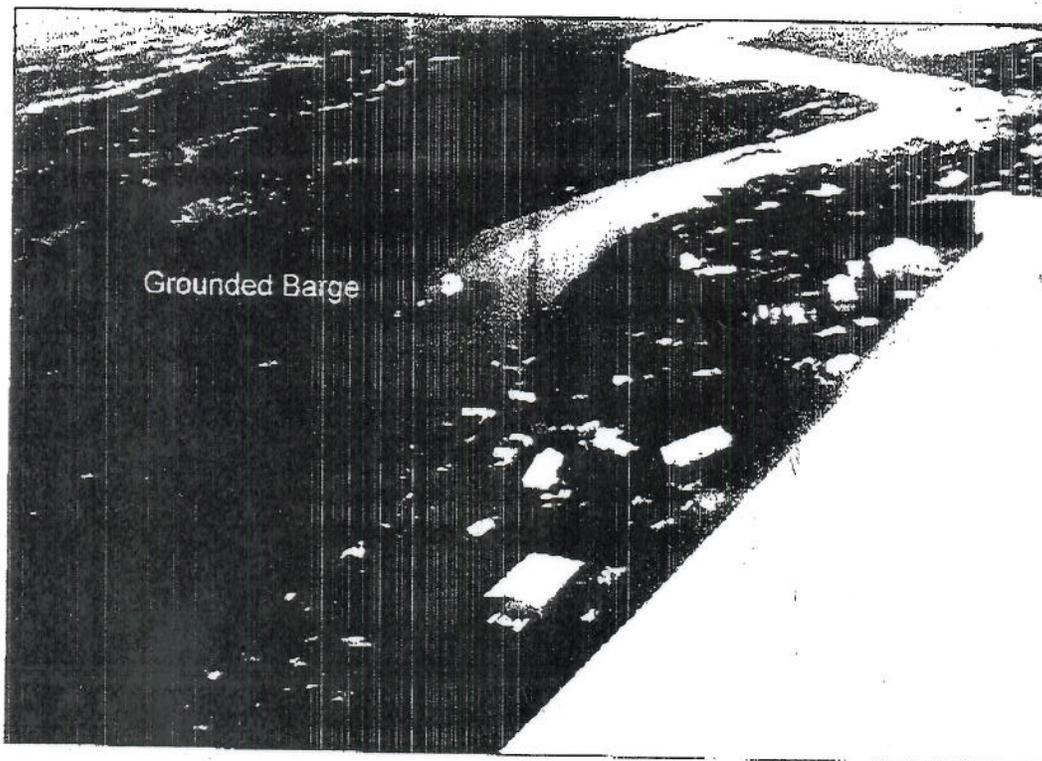
As a result of the September 2005 flood and another event that occurred in 2004, Newtok was included in two federal disaster declarations, **DR-1571-AK (2004 Bering Sea Storm)** and **DR-1618-AK (2005 Fall Sea Storm)**.

### Difficulties Delivering Fuel

The village barge landing was lost to erosion of the Ninglick River in 2005 leaving the community with no cost-effective way to receive the delivery of construction materials or other large items.



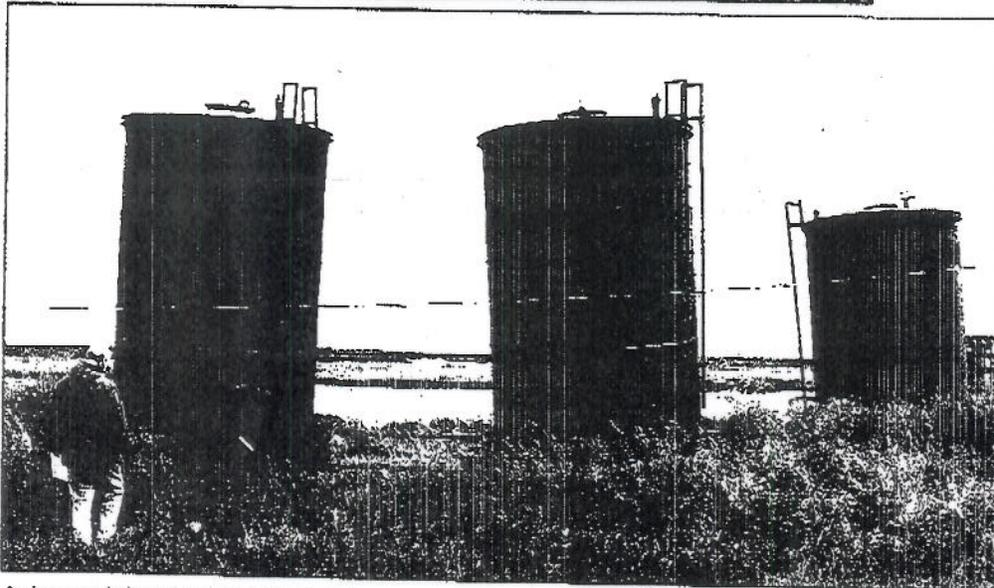
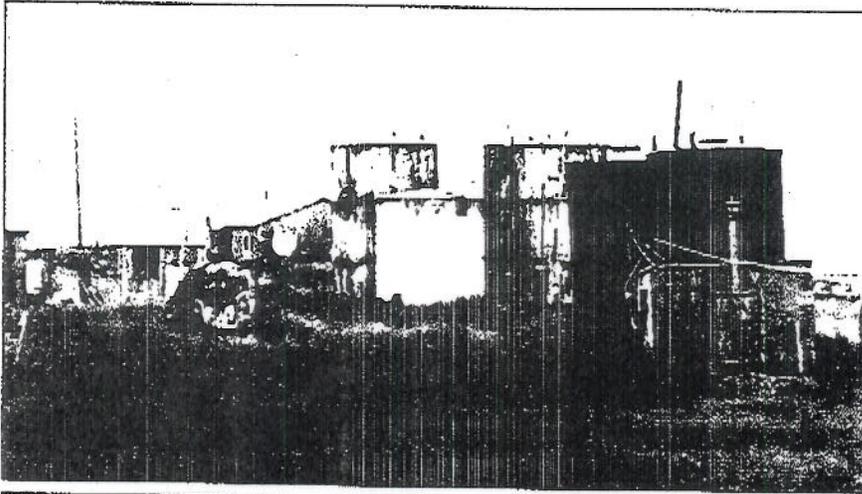
Barge deliveries to the village are now restricted to the Newtok River, however the altered hydrology of the Newtok River has severely limited when barge deliveries can be made. In August 2006, a fuel barge was grounded in the Newtok River for three days (below). Recently, fuel had to be flown into the village when delivery could not be made by barge.



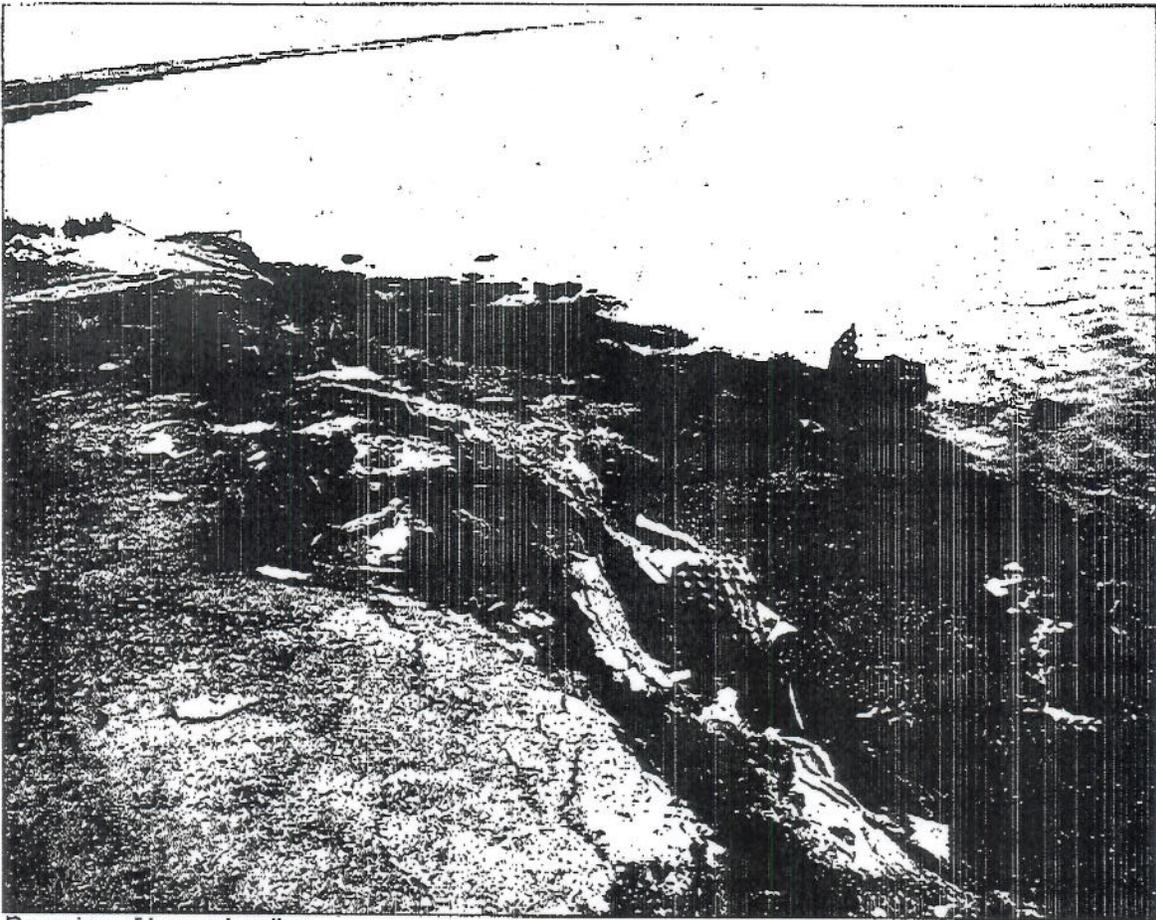
**Additional Challenges: Deferred Community Maintenance and Investment**

As a result of the conditions in my village, government funding entities have become reluctant to invest in critical infrastructure in Newtok. The concern is that new capital facilities might be lost to the Ninglick River advancing upon the village.

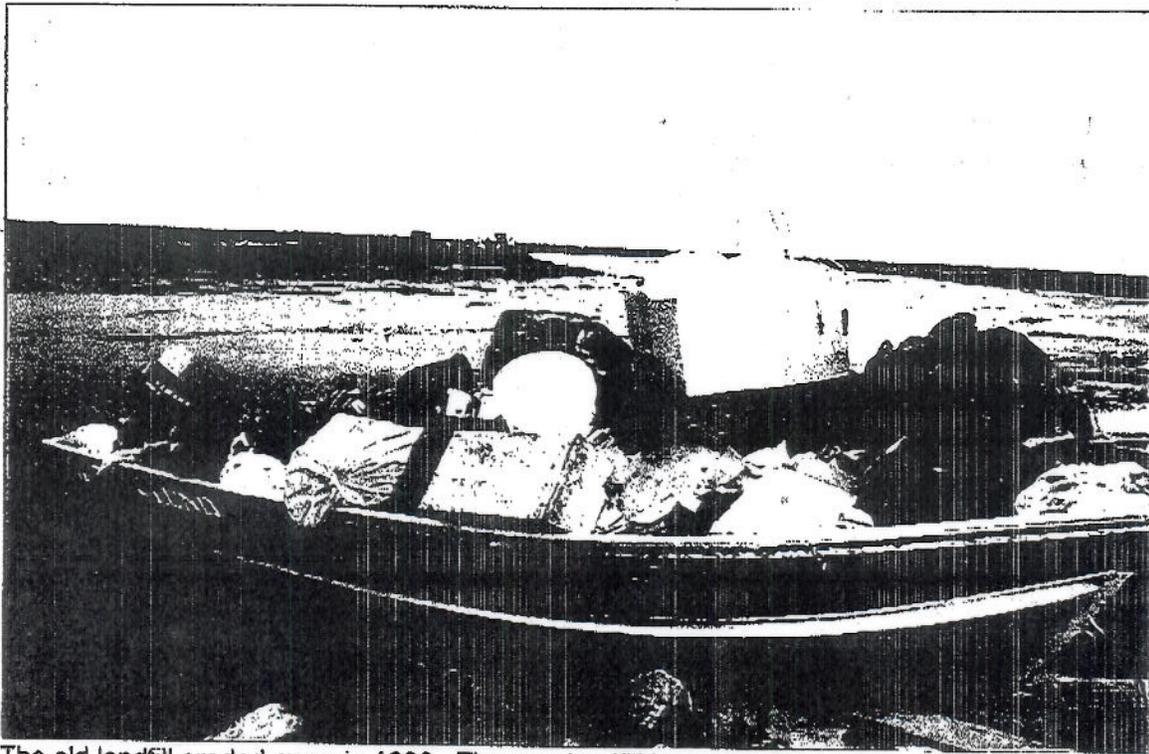
The deferment of new construction to replace old facilities creates hardships on the village.



Aging and deteriorating fuel tanks



Remains of barge landing



The old landfill eroded away in 1996. The new landfill is accessible by boat at high tide only

### What We are Now Doing: the Newtok Planning Group

In late spring 2006, representatives from State and Federal agencies and regional organizations began meeting to identify agency resources and to establish an overall strategy to assist with Newtok's relocation. The Newtok Traditional Council and Newtok Native Corporation are active members of the Newtok Planning Group. The Division of Community & Regional Affairs (DCRA) within the Department of Commerce, Community and Economic Development (DCCED) is facilitating this group.

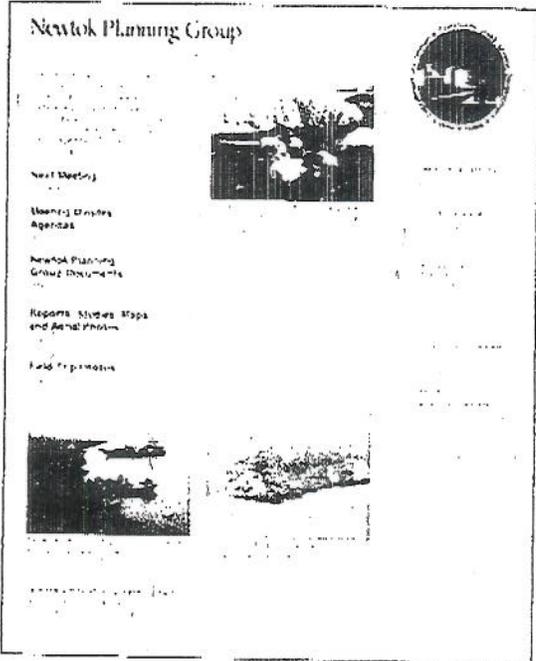
This effort has been dependant voluntary cooperation of participating agencies. No state or federal agency has the authority to serve as the lead coordinating agency for village relocation. The Newtok Planning Group has been making slow but steady progress, however the "patchwork" approach to funding may not address all our relocation needs.

The Newtok Planning Group is focusing on two primary efforts to assist us:

- Addressing the community's *short-term needs* at the existing village and critical infrastructure needs at the new village site.
- Addressing the community's *long-term relocation planning needs* through the development of a comprehensive relocation planning strategy, including overall project management.

Some of the ways in which the Newtok Planning Group has collaborated to date include:

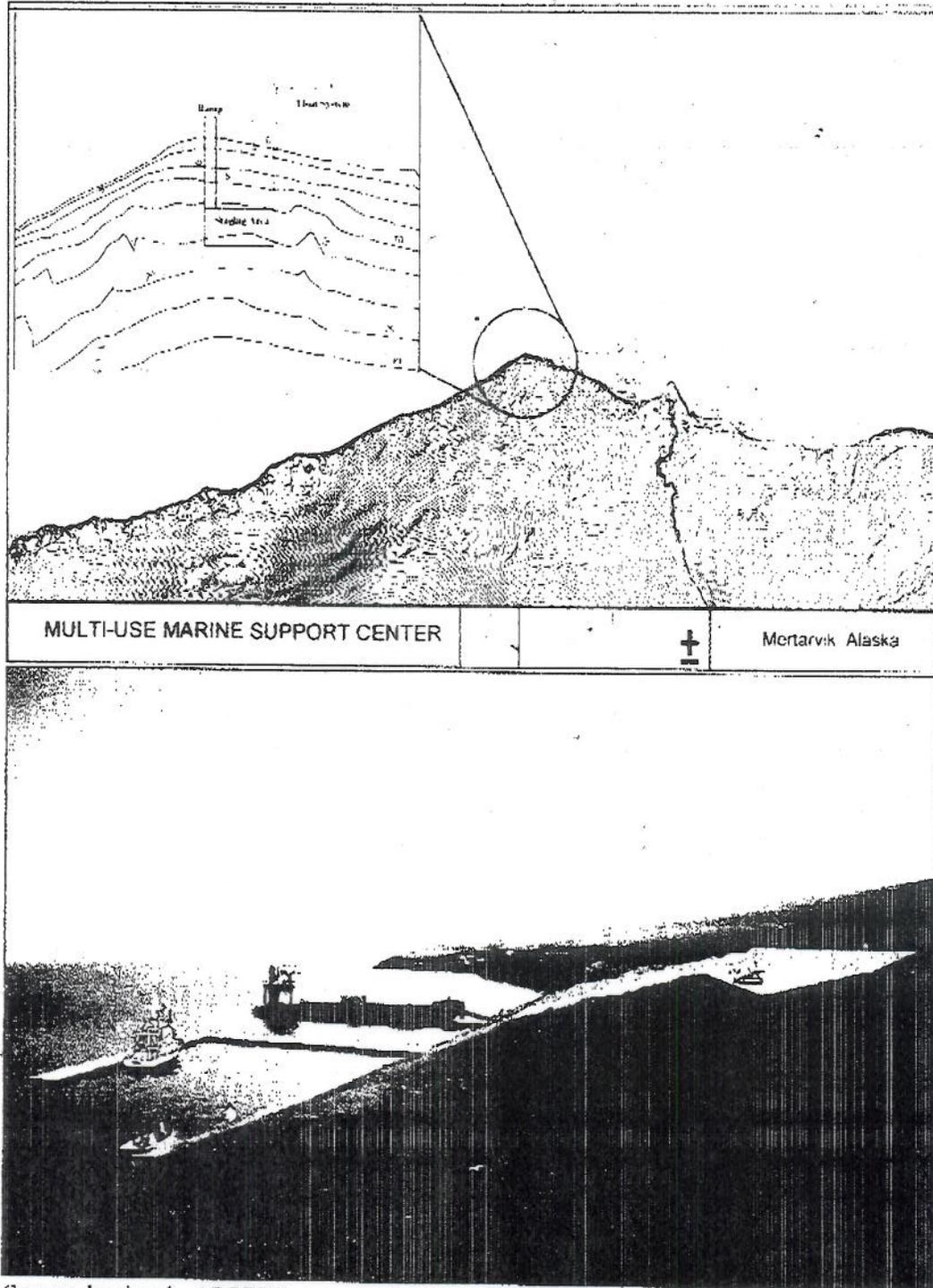
- Identification and assessment of the resources each agency can provide to Newtok in an effort to find areas of collaboration, potential cost sharing, gaps in funding, and to avoid potential conflicts in relocation activities.
- Development of a relocation planning schedule to provide a framework for relocation efforts and to keep agencies informed of relocation activities
- Development of an RFP for a Strategic Management Plan for the comprehensive relocation effort.
- Creation of a website that serves as a clearinghouse for reports, studies and Newtok Planning Group (NPG) updates:  
[http://www.commerce.state.ak.us/dca/planning/Newtok\\_Planning\\_Group\\_Webpage.htm](http://www.commerce.state.ak.us/dca/planning/Newtok_Planning_Group_Webpage.htm)



Recent products of the Newtok Planning Group's efforts include the following:

**Funding for Barge Facility at New Village Site:** The Department of Commerce, Community and Economic Development helped us with a grant application for Investment Assistance to the U.S. Department of Commerce, Economic Development Administration (EDA). This resulted in the \$800,000 award for design and construction of a Multi-Use Marine Support Facility (barge

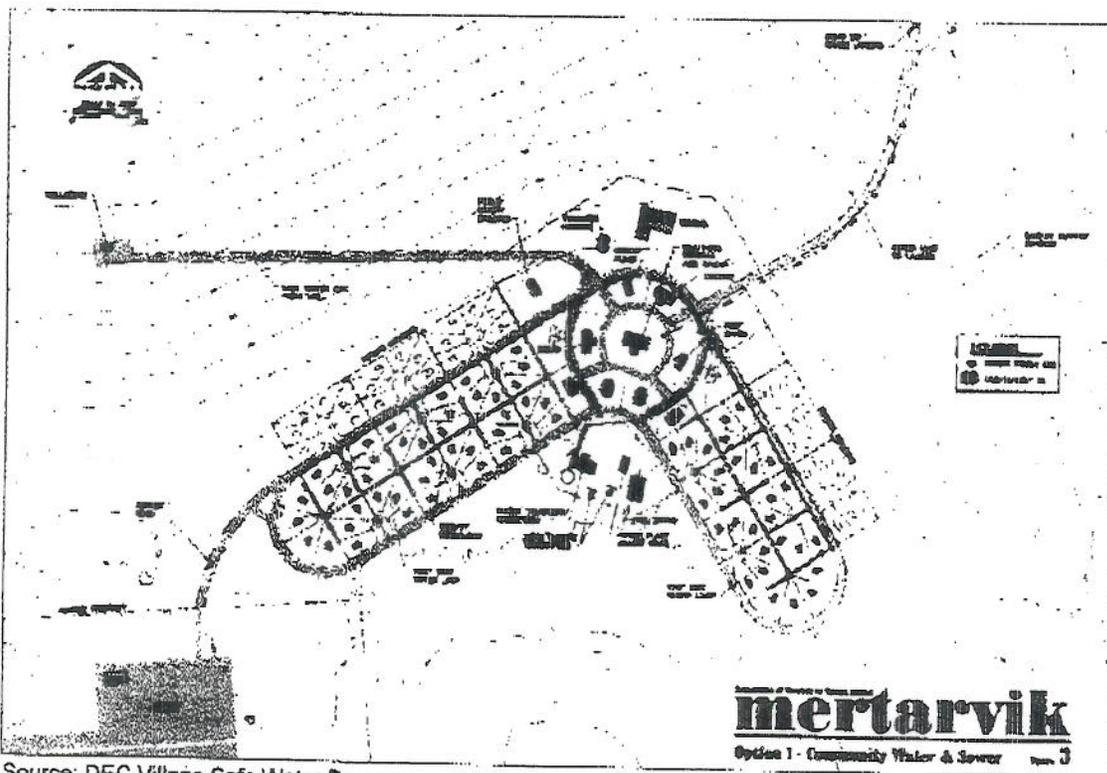
ramp, dock and staging area). The Alaska District Corps of Engineers and the Department of Transportation and Public Facilities (DOT/PF) provided assistance on the application. The DOT/PF is providing the \$200,000 local match for the \$1 million project. The barge landing is a critical first step in developing the new village site as the facility will provide for the delivery of equipment and construction materials to Mertarvik. Construction of the facility is expected to be completed during the summer of 2008.



Concept drawings by ADOT/PF

**Funding for Community Planning at the New Village Site:** the Department of Commerce, Community and Economic Development Division of Community & Regional Affairs (DCRA) provided technical assistance to the Newtok Traditional Council in its application for a Mini-Grant for the development of a community layout plan for the new village site. The Traditional Council was awarded a Mini-Grant (funded by Denali Commission and administered by DCRA) of \$30,000 for development of a community layout plan for new village site. The community layout plan will guide the efficient and orderly development of Mertarvik.

**Preliminary Layout of Water/Sewer Infrastructure:** the Department of Environmental Conservation's Village Safe Water Program has developed preliminary community layouts identifying water/sewer infrastructure at the new village site. The alternative selected by the community is based on sustainable water and sewer systems. The piped sewer system would be operated by gravity flow and would not require lift stations to pipe sewage to the lagoon. The community planning effort funded by the Mini-Grant will be based on these water/sewer layouts.



Source: DEC Village Safe Water Program

**Water Source Investigations:** This spring, the Village Safe Water Program just completed investigations at Mertarvik to locate a source for the new village water supply.

**Geotechnical Studies:** This summer, the Corps of Engineers completed geotechnical drilling at the new village site. The DOT/PF recently received approval for a grant for geotechnical investigations for an airport at the new village site.

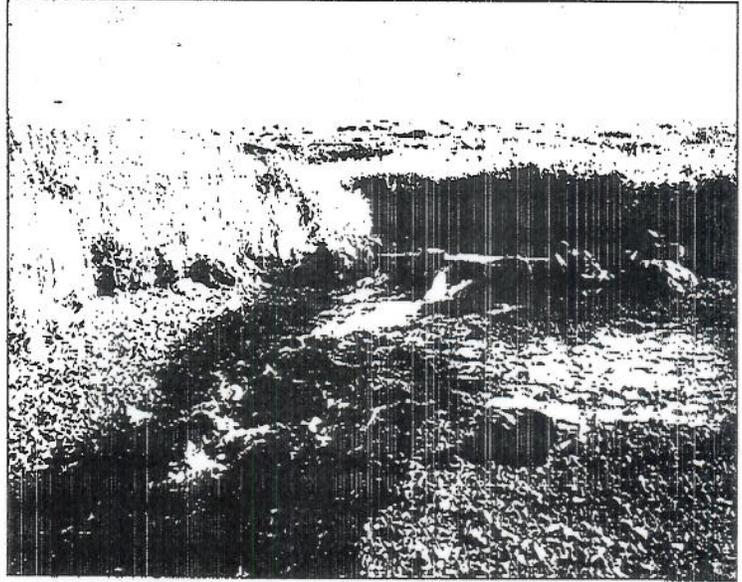
**Fisheries Support Center:** The Coastal Villages Region Fund plans to build a fisheries support center at Mertarvik in the future. The fishery support center will consist of an area for boat and net repair, office space, bunk space, and storage space for fishery operations in the community.

### **Mertarvik: Getting Water from the Spring**

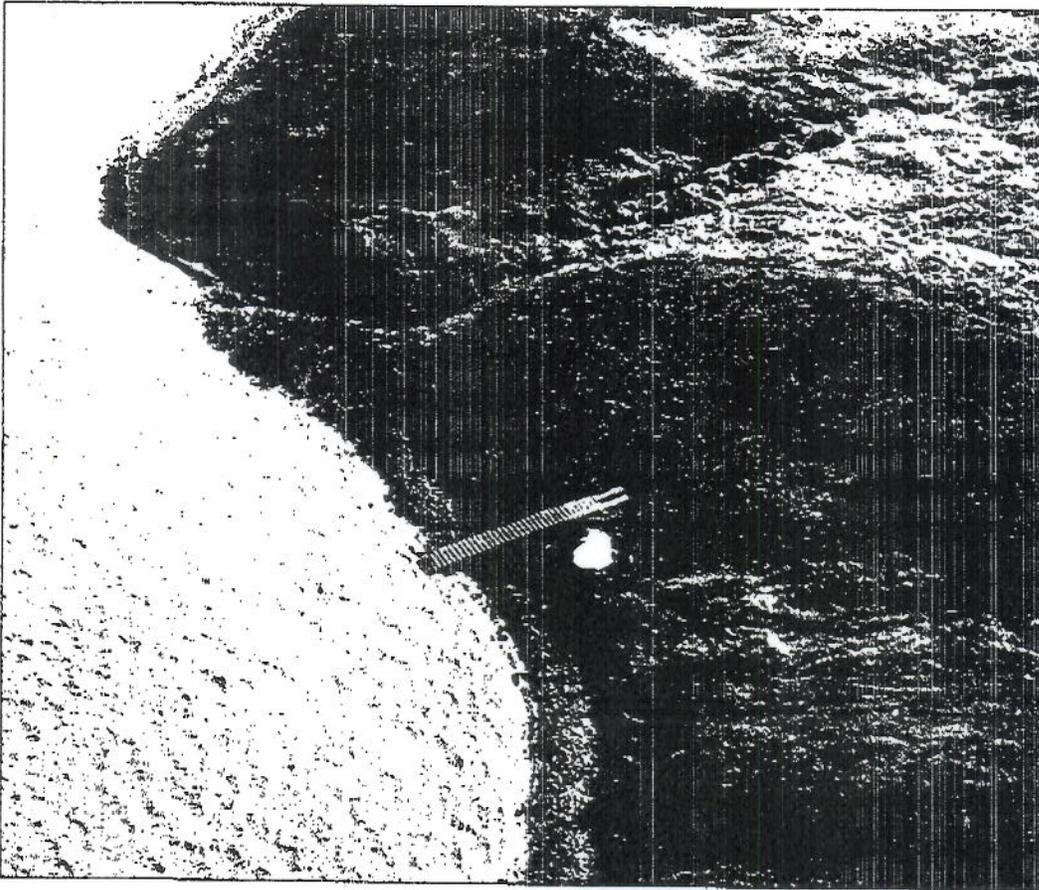
In 2006, Newtok residents were awarded three Bureau of Indian Affairs (BIA) Housing Improvement Program (HIP) homes to build at Mertarvik.

In preparation for the barge delivery, village residents built a temporary barge ramp for the delivery of the housing packages to Mertarvik.

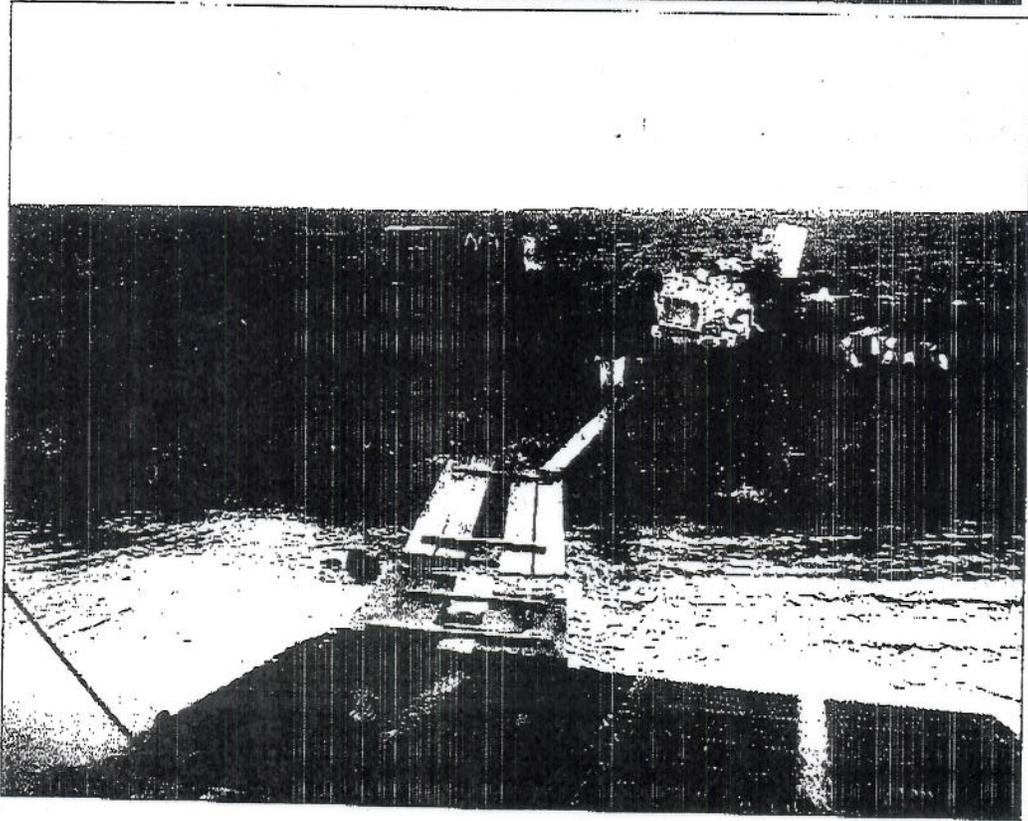
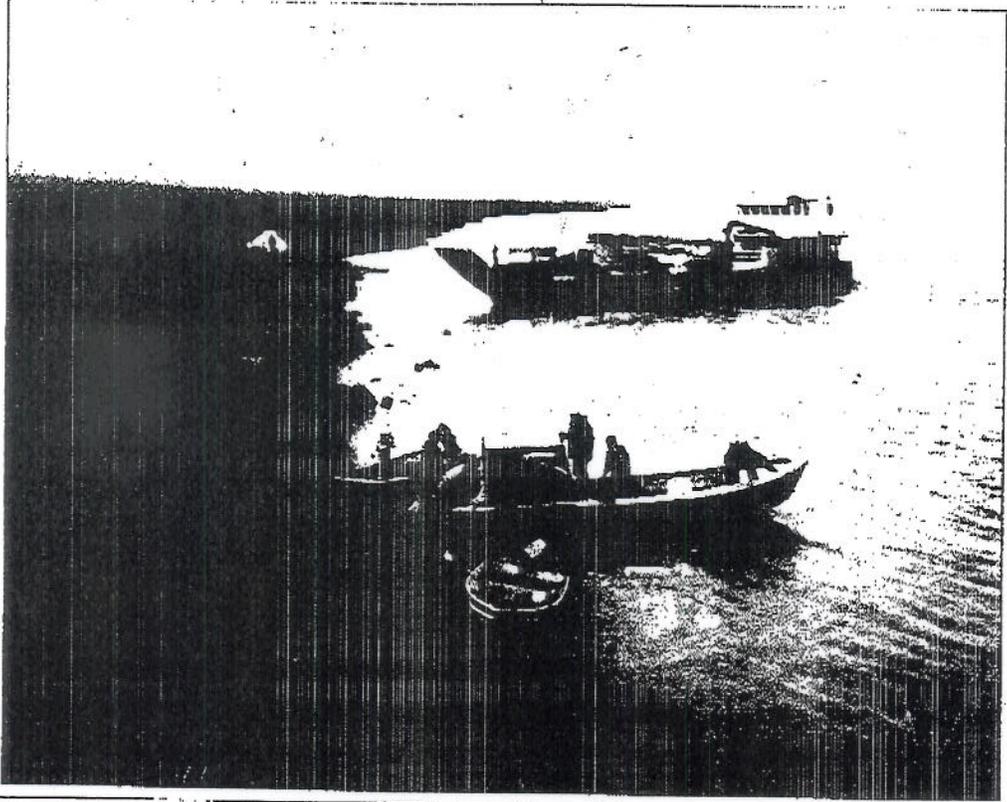
In September 2006, a barge company was able to deliver the homes to the new site with the help of village residents. A work party of Newtok residents met the landing craft at Mertarvik, disassembled the housing packages on the landing craft and carried the housing materials to shore. Construction of the three homes is nearly complete. The homes will be moved to the location of the new village once community planning and basic infrastructure is complete.

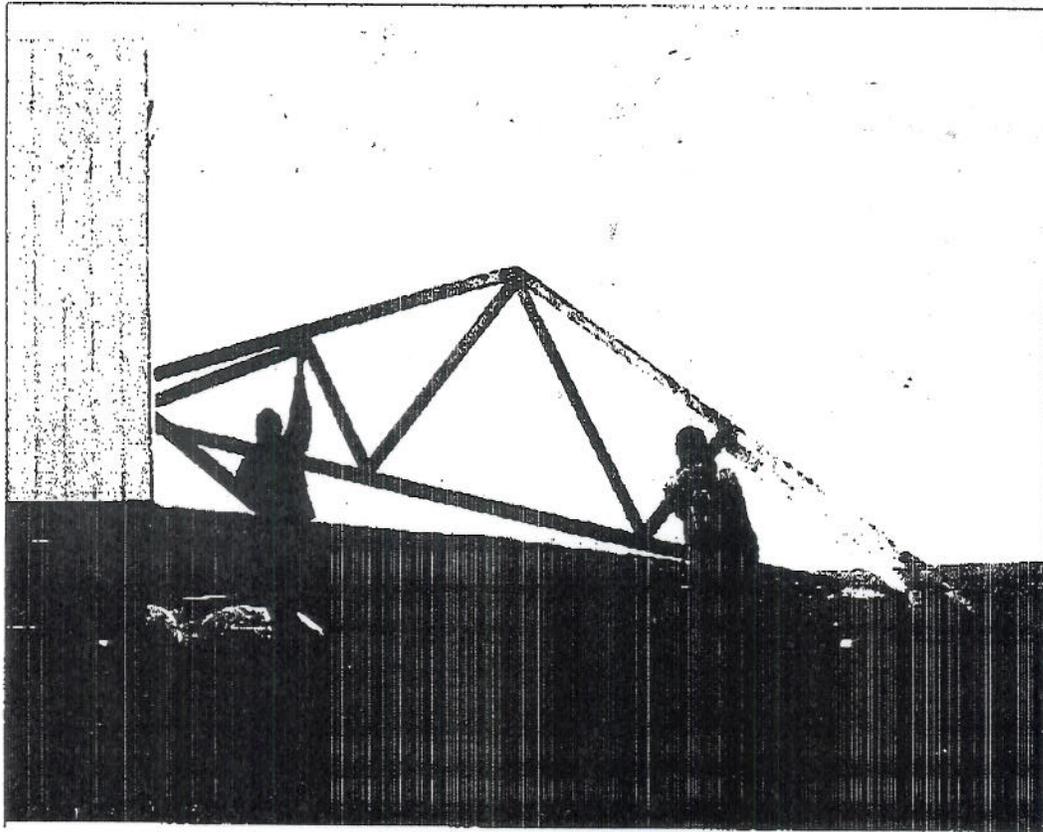


Mertarvik Spring



The barge ramp built by Newtok residents. Mertarvik spring flows near the top of the photo.





Constructing the new homes at Mertarvik

