



# Newtok, Alaska

Near Bering Sea

Within:

✚ Yukon-  
Kuskokwim  
Delta

✚ Yukon Delta  
National  
Wildlife  
Refuge



# 1983 Legislative Grant for Erosion Assessment

## NINGLICK RIVER EROSION ASSESSMENT

**FINAL REPORT**

**February 24, 1984**

**Prepared for  
The City of Newtok  
Newtok, Alaska 99559**

**by  
Woodward-Clyde Consultants  
Anchorage, Alaska 99503**

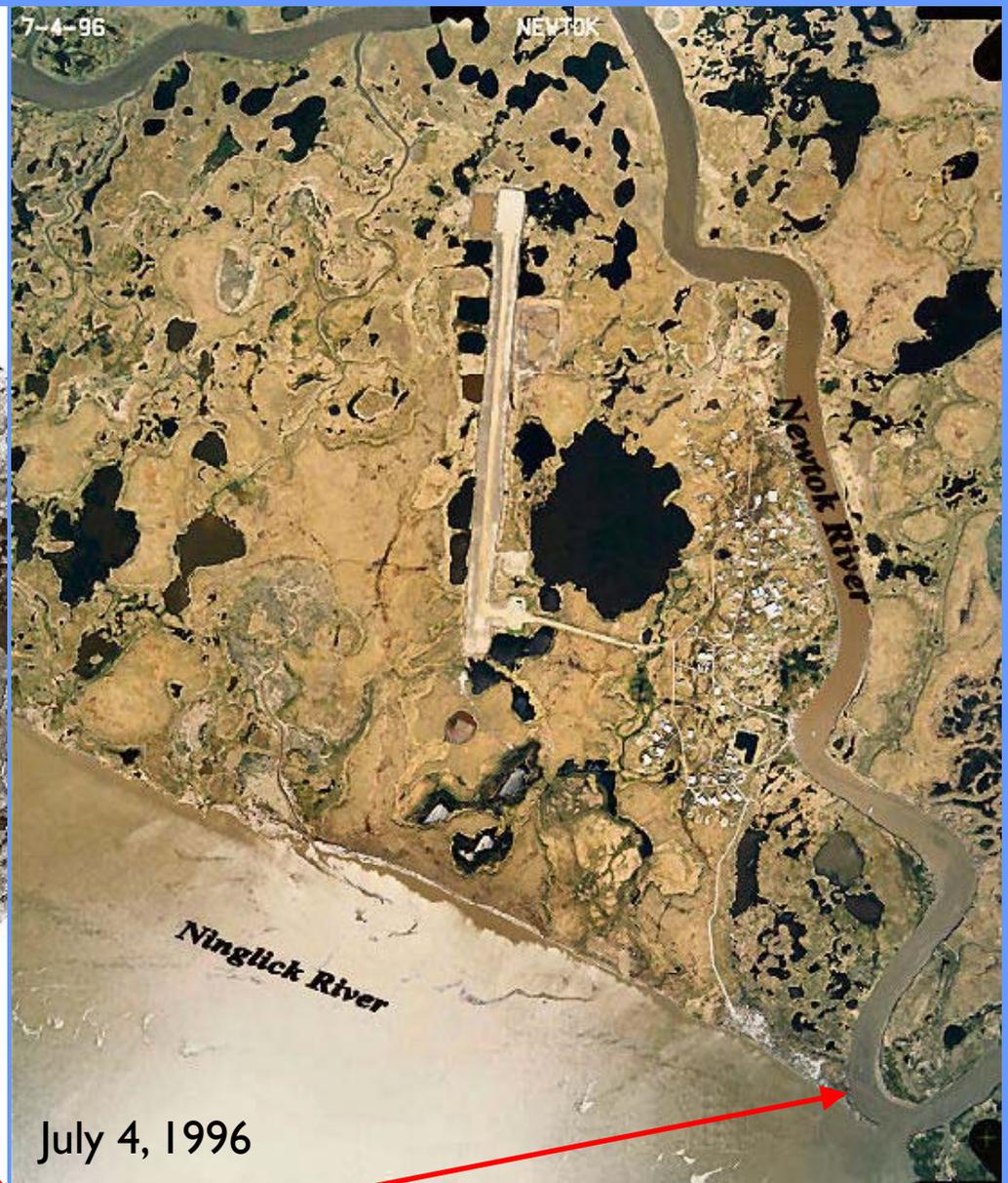
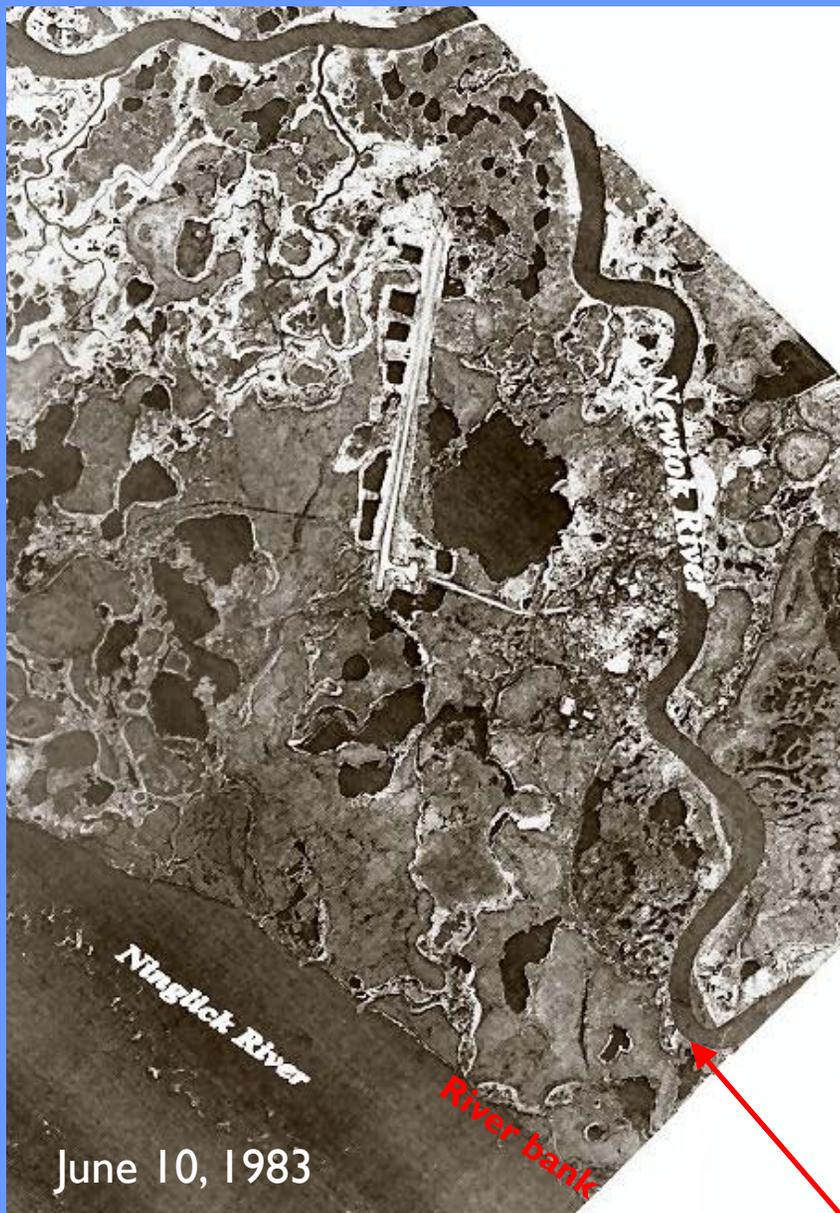


# Ninglick River Erosion Assessment

## Findings:

- ❖ If process could not be slowed, community structures would be impacted within 25 - 30 years (2008-2013).
- ❖ Providing full erosion protection would be prohibitively expensive.
- ❖ *“Relocating Newtok would likely be less expensive than trying to hold back the Ninglick River.”*





Loss of land to erosion 1983-1996  
River bank has eroded up to bend in river in 1996 photo

# Erosion of Ninglick River Bank



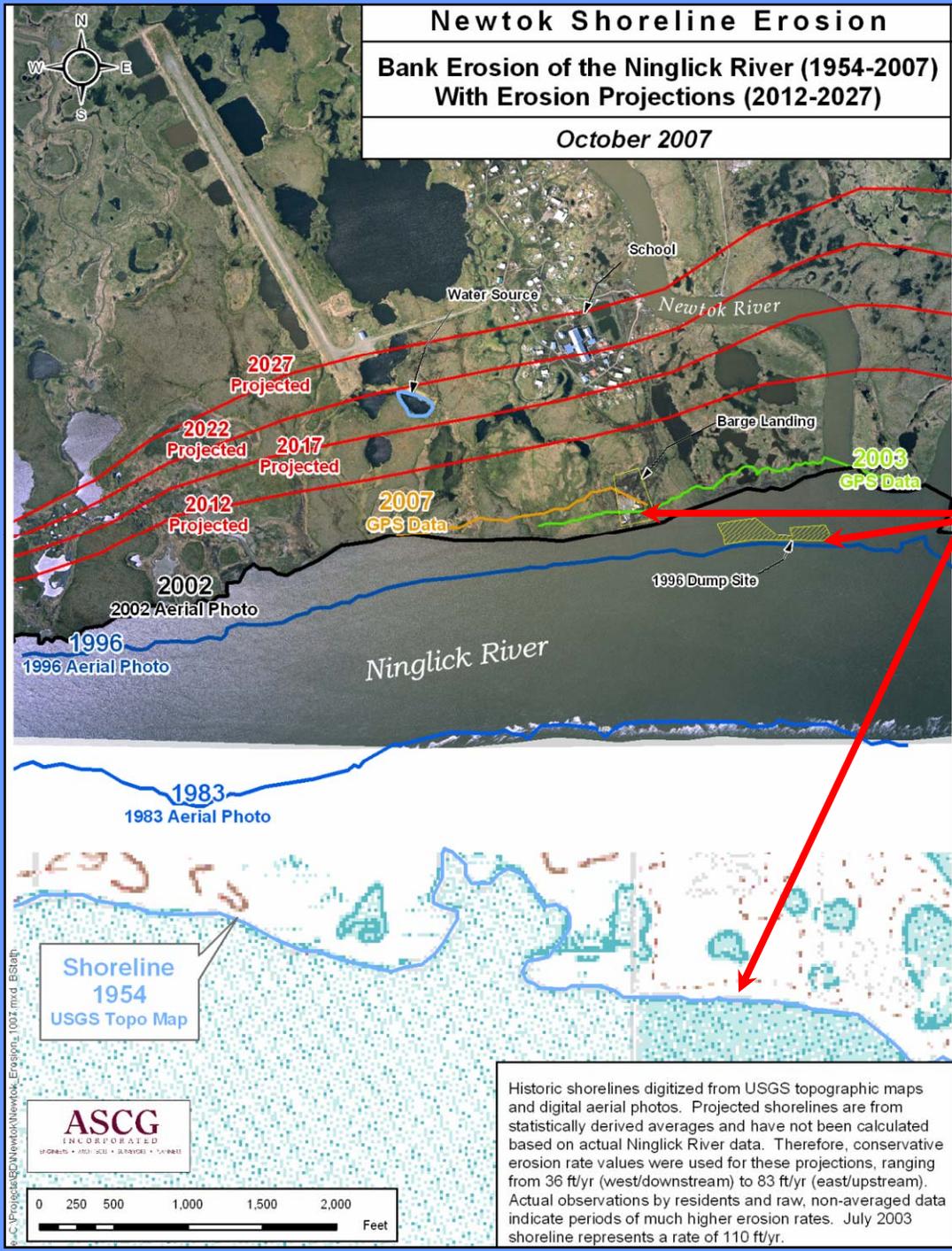
# Erosion of Ninglick River Bank

*Undercutting of Ninglick River bank results in deep thermo-erosional niches*



# Collapse of bluff due to undercutting





## Historical and Projected Erosion in Newtok:

The shoreline in 1954

The dump site and the barge landing have already eroded away.

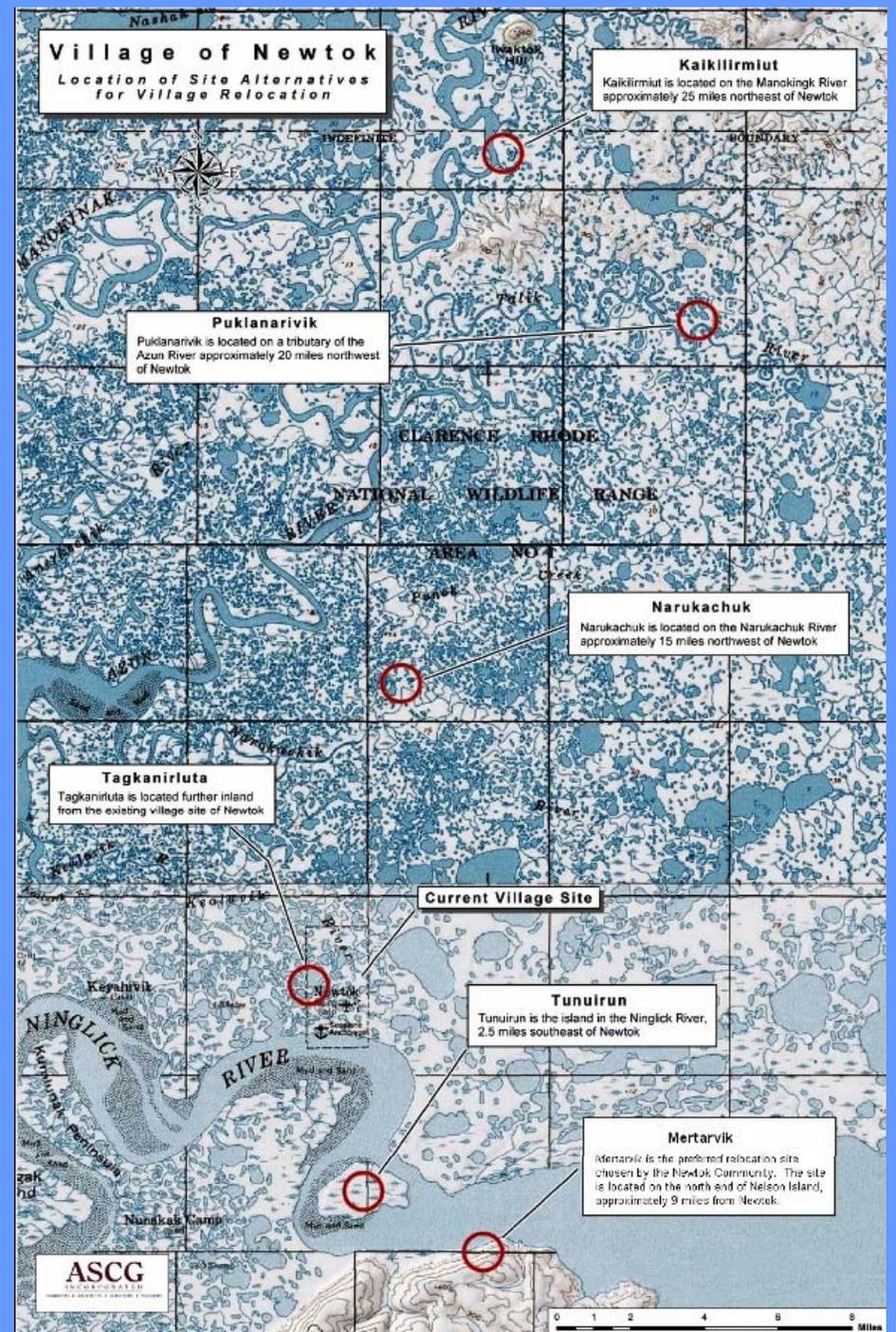
First houses impacted by erosion between 2012 and 2017 (village believes it will be sooner).

# Selecting a village relocation site:

1994: Newtok Traditional Council makes decision to move and begins relocation planning process.

- + Analyzed six potential village relocation sites.
- + Selected Mertarvik, site located on north end of Nelson Island (~ 9 miles southeast of Newtok).

1996: Newtok Native Corporation passes 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).



# The 2003 Land Exchange: An Act of Congress



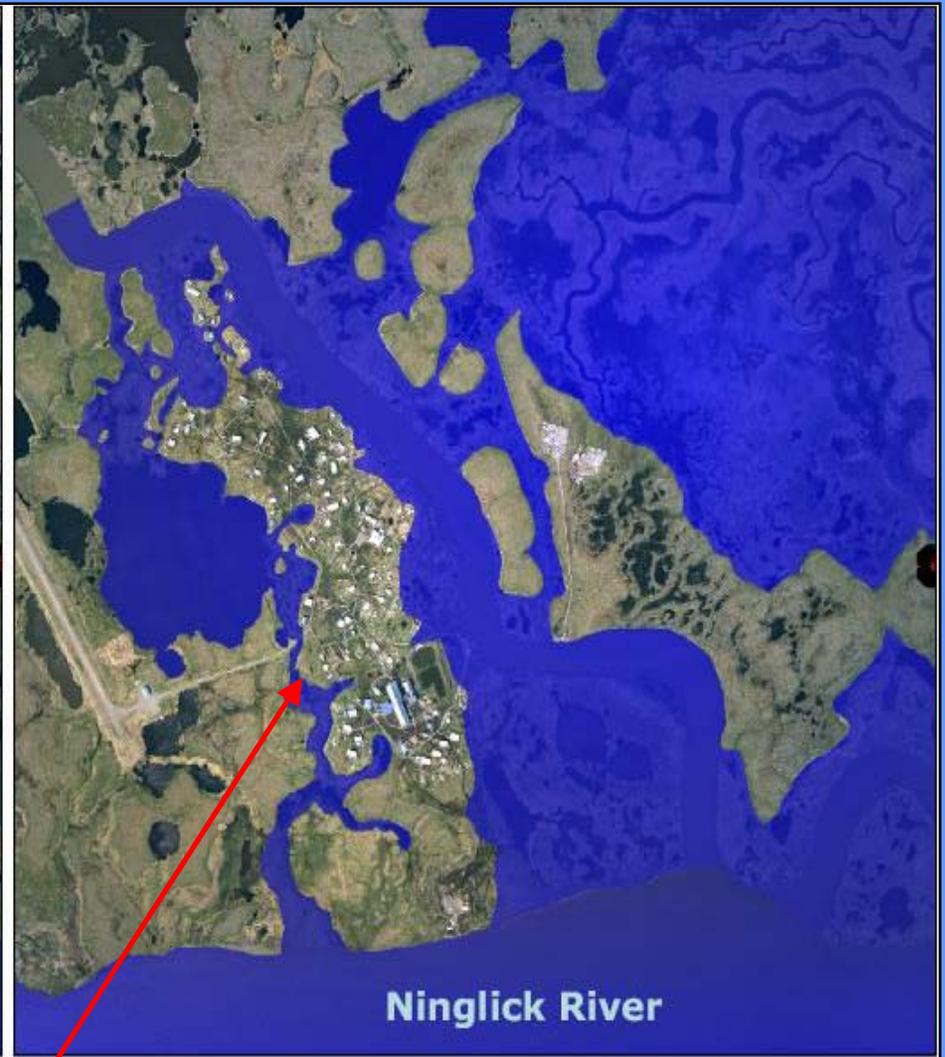
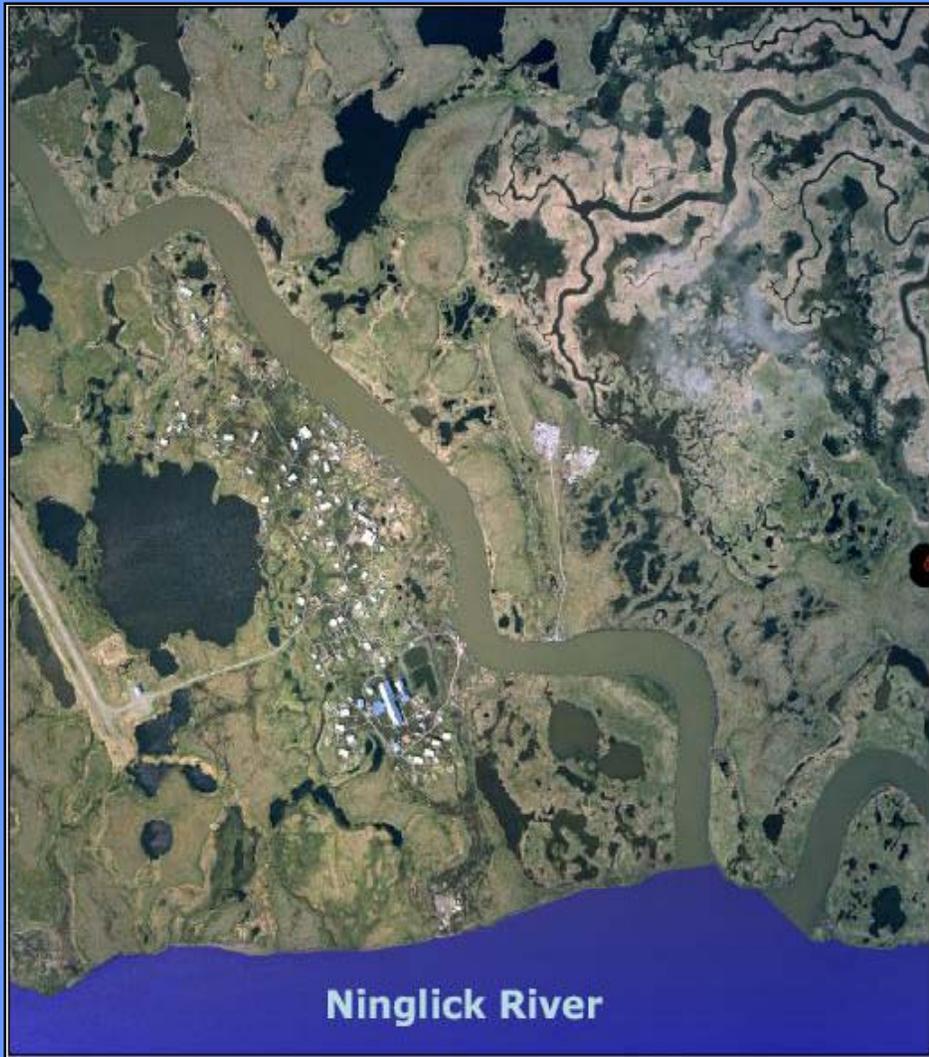
Secretary of the Interior Gale A. Norton signs the land exchange legislation as members of Newtok Native Corporation look on. (Source: Landye Bennett Blumstein LLP)



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



Enactment of U. S. Public Law 108-129, November 17, 2003.



Depiction of the September 22, 2005 fall storm



Some houses were only connected to the village by boardwalks floating in the water.







The remains of the barge landing on the Ninglick River



Barge ramp on Ninglick River lost to erosion in 2005

## Challenges to the Delivery of Fuel and Other Critical Supplies

Fuel and supplies must be delivered on Newtok River (but siltation from erosion has turned river into slough)

Last year, fuel barge was grounded for 3 days



Grounded Barge



Because of erosion and flooding, funding agencies are reluctant to invest in new infrastructure



Aging and deteriorating fuel tanks



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



Leakage from school sewage lagoon

# Public Health Issues attributed to Deteriorating Infrastructure:

## ***Environmental Public Health Assessment: Newtok, Alaska***

- ✦ Sanitation conditions in Newtok “*grossly inadequate for public health protection.*”
- ✦ Conditions appear to result from *lack of infrastructure development and failure to properly maintain existing infrastructure.*

Newtok, Alaska

Newtok

Mertarvik

Image © 2007 TerraMetrics

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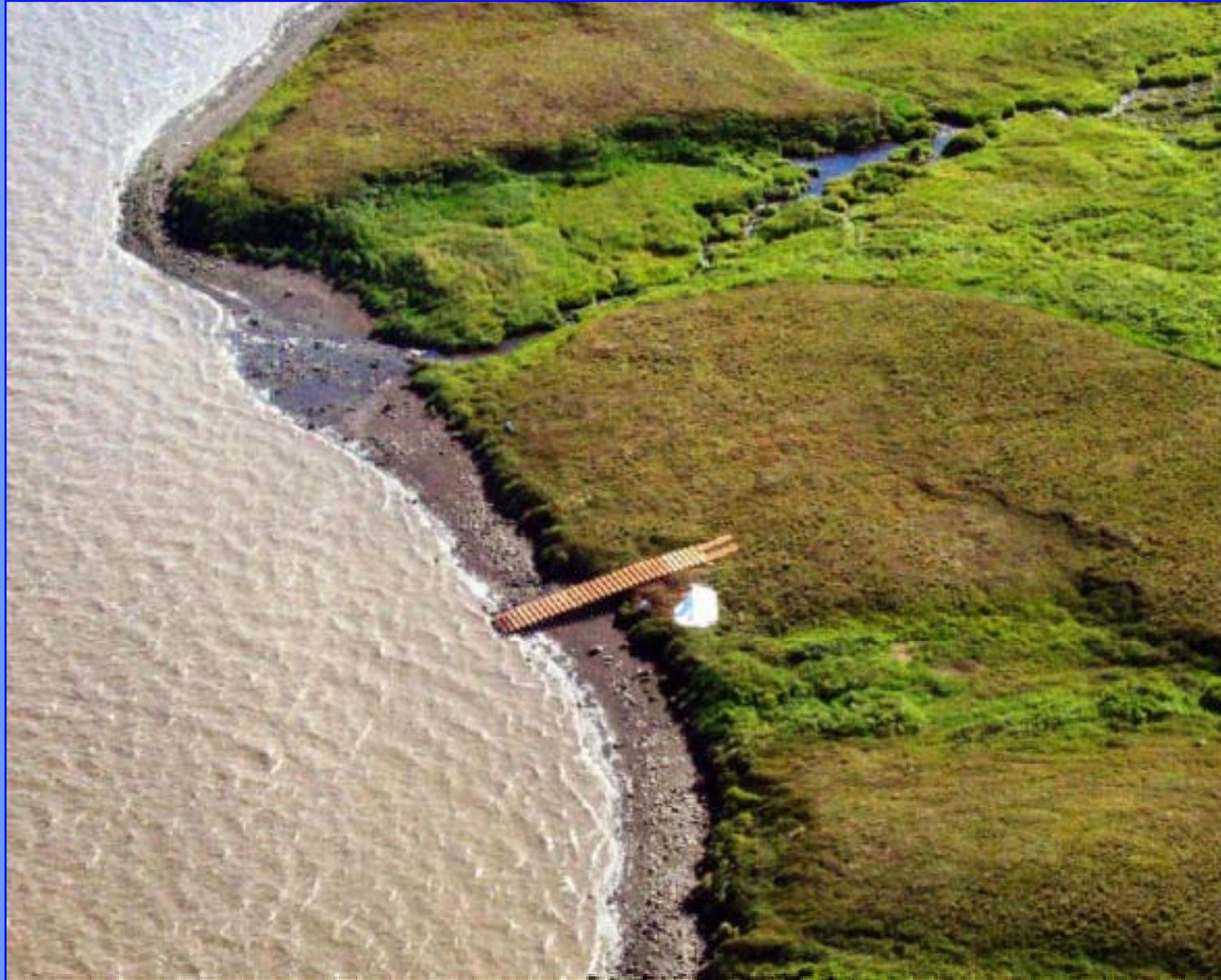
Pointer 60°54'42.21" N 164°33'48.20" W elev 19 ft

Streaming ||||| 100%

Eye alt 15.93 mi



Mertarvik:  
“getting water from the spring”



The barge ramp the village built to deliver housing packages to Mertarvik



**The barge delivering 3 BIA HIP Homes**



Taking the housing packages off the barge



Building 3 homes on Mertarvik







# The Newtok Planning Group

Assisting Newtok with relocation efforts  
since 2006

# Newtok Planning Group

State of Alaska > Commerce > DCRA Home > Newtok Planning Group

The Newtok Planning Group was formed in May 2006 when representatives from state and federal agencies and non-governmental organizations began meeting to coordinate assistance to the village of Newtok in its relocation to the new village site, Mertarvik, on Nelson Island. The Division of Community & Regional Affairs coordinates the Newtok Planning Group (NPG). [Download a list of the participants of the NPG.](#)

Through this effort, the agencies and organizations working with Newtok are finding new ways to collaborate and leverage resources to assist the Newtok community in its relocation efforts. Over the past two years, a community layout for the future village has been completed and funding has been acquired for a barge landing and staging area, an access road, and an evacuation center. A suite of emergency response plans is being developed for the community, and studies are underway for water/sewer and alternative energy infrastructure, housing, quarry development and a future airport.

To learn more about the emergency response and relocation work currently underway for Newtok and the new village site, Mertarvik, please see the drop-down menu titled "Emergency Response/Relocation Work", below.

The community layout plan for Mertarvik, Newtok's selected relocation site on Nelson Island, was completed in June 2008. The community layout provides the "blueprint" for future development at the new village site.



[Download a PDF file of this document](#)

To learn more about erosion, flooding and village relocation efforts at Newtok, go to:

[A Brief History of the Settlement of Newtok and Village Relocation Efforts](#)

## Resources

[Newtok Community Information Summary \(community profile\)](#)

### Meeting Minutes/Agendas

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*Mertarvik Spring at the new village site. In the Yup'ik language, Mertarvik means "getting water from the spring"*



*Barge delivery of BIA Housing Improvement Program packages to Mertarvik*



*Flying over Mertarvik near the spring and the temporary barge ramp*

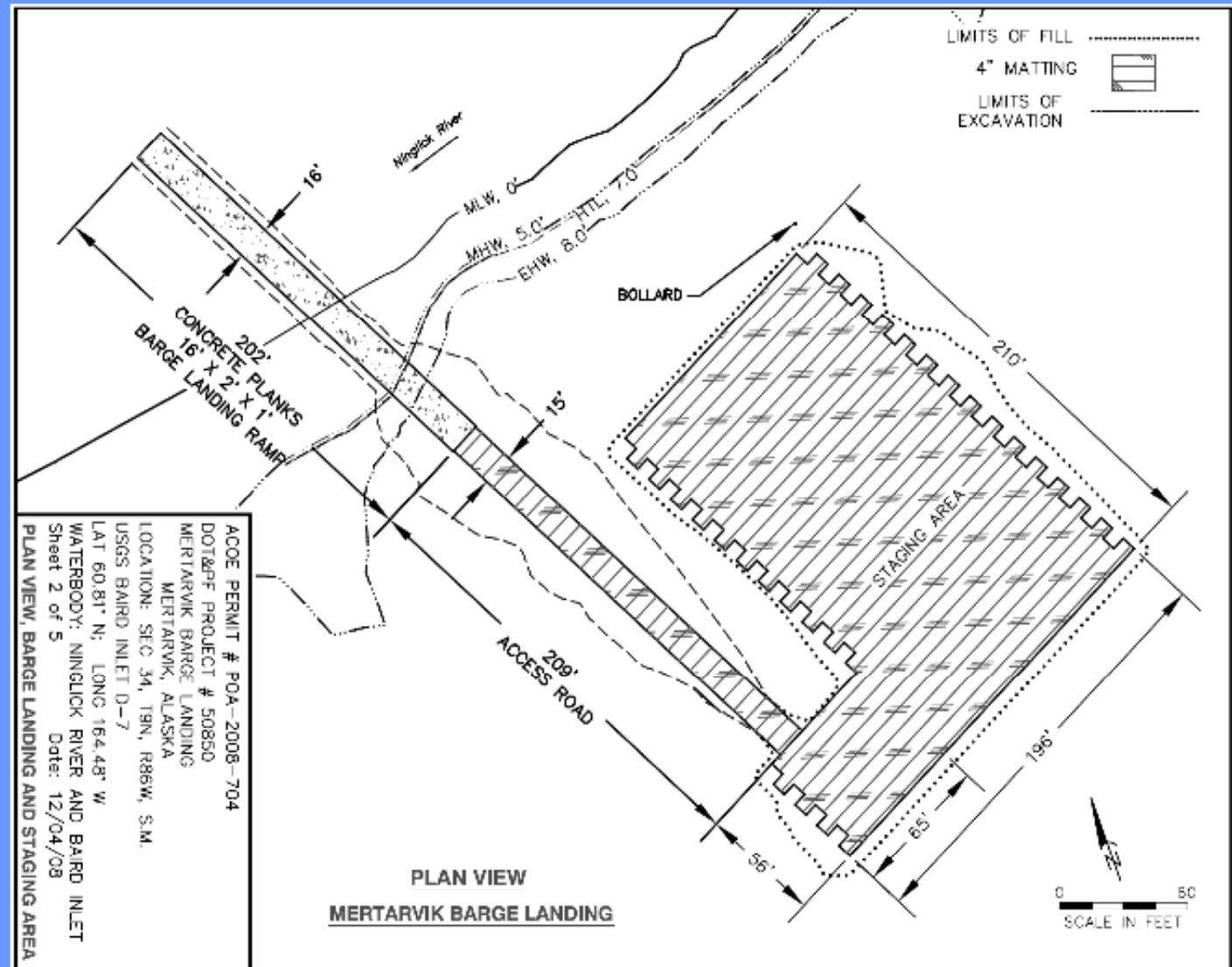
For more information, please contact:  
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907 289-4588  
[sally.cox@alaska.gov](mailto:sally.cox@alaska.gov)

# Mertarvik Barge Landing & Staging Area

**DCCED:**  
Grantee and project co-manager

**EDA:** Grantor \$800,000

**DOT/PF:**  
Project manager and providing match for grant





POINT

1000' 500' 0' 1000' 2000'

PROPOSED BARGE FACILITY LOCATION

SPRING

Barge landing site



# Mertarvik Community Layout Plan

- Division of Community & Regional Affairs (DCRA) Mini-Grant Program (Denali Commission Funding)
- DCRA assisted Newtok Traditional Council with grant application
- Newtok Traditional Council hired HDR Alaska to develop community layout

# Final layout funded through DCRA Mini-Grant Program



# Test Well by Village Safe Water Program



# Mertarvik Evacuation Shelter

Community Planning Grant to Newtok  
Traditional Council

Alaska Climate Change Impact Mitigation  
Program (Division of Community & Regional  
Affairs)

Newtok Traditional Council hired Cold  
Climate Housing Research Center to design  
the evacuation shelter

# Mertarvik Evacuation Shelter

