

# Climate Change in Alaska

“Building Resiliency into our Future”



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Statewide Maintenance and Operations Chief

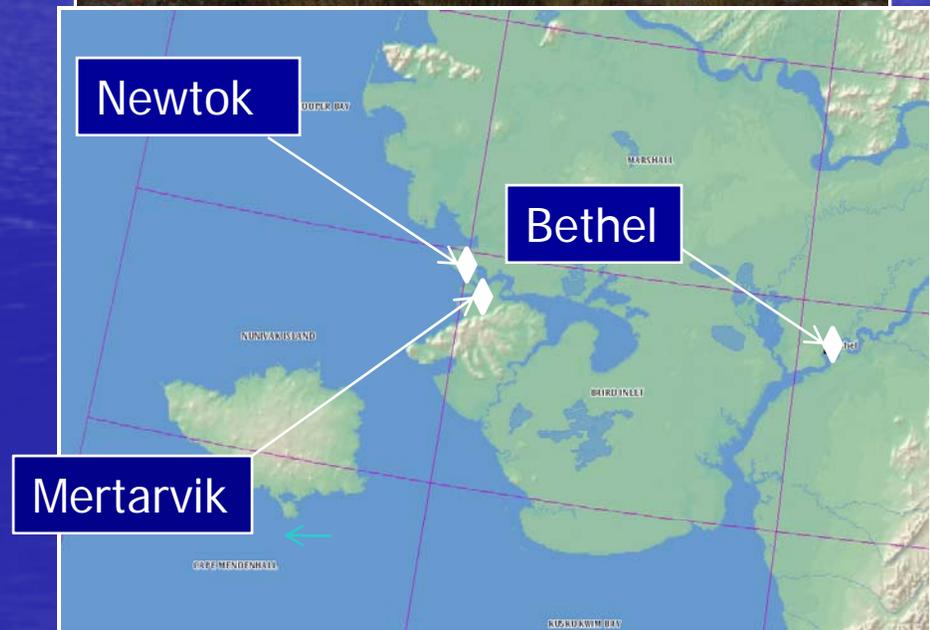
Alaska Department of Transportation and Public Facilities

# Infrastructure and Erosion Control Project

- 600K Funding Authorized FY09 – Direct recommendation from the IAW
- Funding allows DOT&PF to begin early coordination with the effected communities, as well as State and Federal Agencies.
- Allows DOT&PF to collect available engineering data that may be useful for future investigations.
- Also allows for preliminary engineering investigations to help accelerate project development
- 500K requested in FY10 to continue phased approach and project coordination (IAW)

# Mertarvik Barge Facility

- Scope of Project: Construct 30,000 foot staging area with 16 foot wide boat ramp at Mertarvik
- Design: Nearing completion
- Construction: estimated \$1.8M
- Total Project Cost: \$2.8 million (includes \$800K from Economic Development Administration - remainder General Funds)
- Schedule
  - Advertise February 25, 2009
  - Bid Opening March 27, 2009
  - Completion: July 15, 2009
- \$2M requested in FY10 (IAW) for materials and materials site development





# Kivalina



# Kivalina Airport Shoreline Protection (FEMA)

- Placed supersacks on the coastal side of airport property to protect the taxiway after sea storm
- Used local labor and materials
- Developing a more permanent



# Kivalina Airport - Permanent Repairs

- Currently in Design
- FEMA funded
- Scope: Repair 725 Lineal feet of Taxiway Safety Area, Construct Rip Rap Revetment for future protection. (9,000 CY of Rip Rap to be barged in)
- Status: Requires additional funding – original estimate in 2005 was \$1.2M
- Current Estimate is \$5.3M for Construction
- Scheduled to Construct in 2009 if FEMA approves

# Koyukuk Airport Improvements

- Airport project completed in 2006
- Lengthened and widened runway.
- Raised grade above the 100 year flood levels
- Total Cost: \$9.2 M



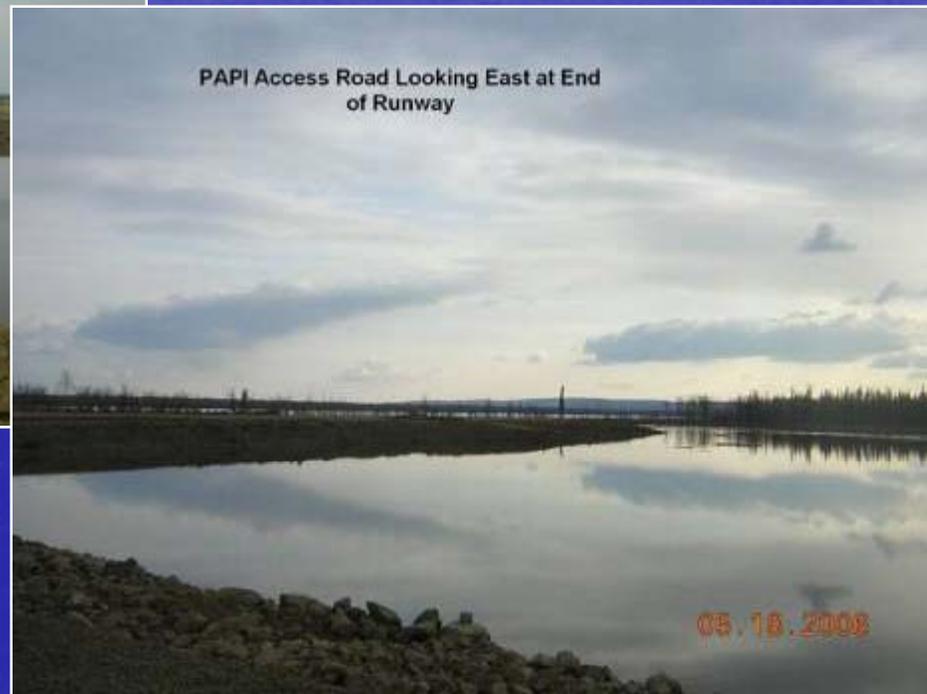
# Koyukuk Airport

PAPI Access Road Looking West at Runway



Completed runway  
above flood levels in  
2006

PAPI Access Road Looking East at End  
of Runway



# Koyukuk Evacuation Road

- 800K requested in FY10 Budget
- Project Scope:
  - Reconnaissance Study
  - Preliminary Engineering
  - Environmental Studies
  - Final Design of evacuation road



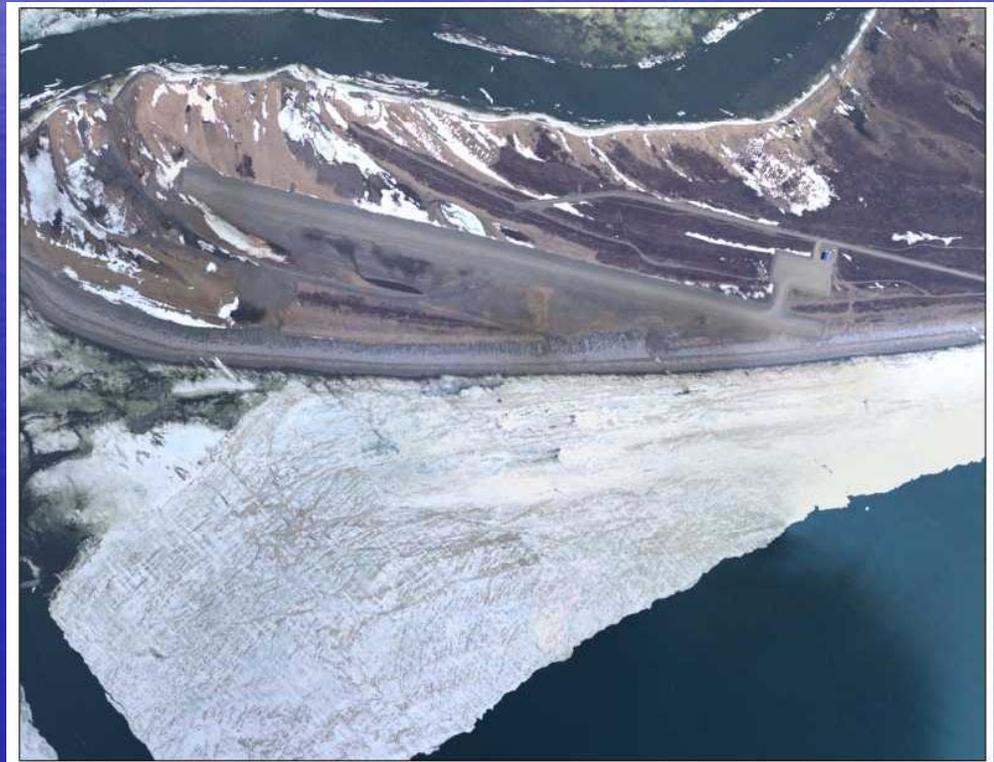
# Shaktoolik Airport Emergency Repairs

- Debris removal after the 2005 Fall Storm
- Completed shortly after the storm by Local M&O forces



# Shaktoolik Airport Permanent Repairs

- FEMA funded project
- Completed in 2008
- Repaired damage to the Runway Safety Area and Nav-Aids.



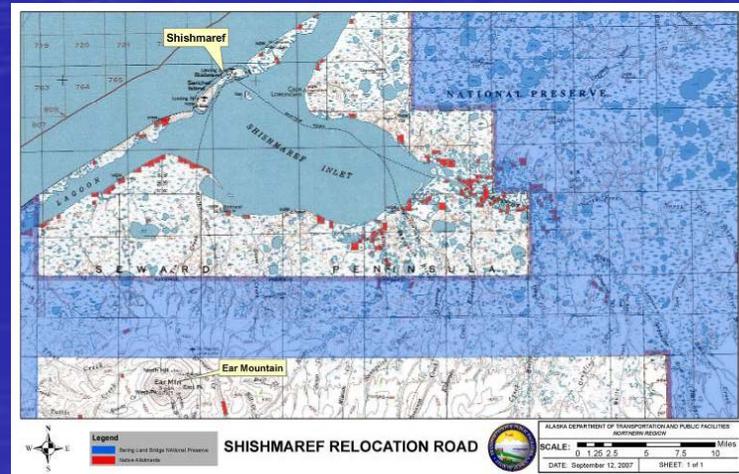
# Shaktoolik Landfill Road

- FHWA Funded project
- Completed in 2008
- Constructed drainage improvements to existing road through town, and a new section of road to a future landfill site.



# Shishmaref Projects

- Several projects in planning/design
- 1 FAA funded Master Plan Project
- 1 FHWA funded Reconnaissance Study
  - Scope: Evaluate the possibilities of a road from Ear Mountain to a barge site on the coast.



# Shishmaref Relocation Road

## *Reconnaissance Study*

- Field work started in 2007
- Reconnaissance studies are broad in scope – provide overview of challenges and issues
- Major issue at Shishmaref is materials costs
- Scope: Evaluate the possibilities of a road from Ear Mountain to a barge site on the coast.
- Working in cooperation with the National Park Service
- Potential road alignments currently being evaluated

# Unalakleet Beach Road Permanent Repairs

- FHWA funded (Emergency Repairs)
- Repaired the embankment and constructed a seawall using local materials
- 1073 lineal feet of shore protection along Beach Road
- Project Cost: \$2.2 Million



# Kotzebue Shore Avenue (FHWA)

- FHWA funded project to construct approximately 4400 lineal feet of sheet pile erosion protection
- Design complete



# Hopper Bay Airport Relocation

- Coastal erosion has plagued the airport in recent years, likely exacerbated by climate change and marginal sea ice conditions
- Various erosion protection measures have been attempted
- Currently an airport **relocation** project is scheduled for FFY11 or FFY12 (under design)



# Additional Community Projects

- Chignak Lagoon – Airport Relocation
- Emmonak - Clinic Rd Reconstruction (2009)
- Little Diomedede – Helipad Improvements (FAA)
- Gambell – Evacuation Rd (FHWA)
- Hughes – Studying Flooding (FAA)
- Nome - FHWA funded project to repair Nome Council Road – Mostly Complete
- Point Hope - Evacuation Road Rehab/Extension
- Nunam Iqua – Replace Boardwalks w/road

# Thank You



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