



DENALI COMMISSION

**Alaska House Resources Committee
Climate Change / Disaster Programming
March 28, 2018**



Denali Commission – Our Mission

Created in 1998

Denali Commission Act:
serving rural Alaska

- **Identify gaps** where other agencies are not operating
- **Complement**, but not duplicate the work of other agencies



Sen. Ted Stevens,
photo from Ted Stevens Foundation



2015 Presidential Assignment

Village Relocations & Protect in place Solutions



- Short-term & long-term solutions
- Coastal erosion, flooding & permafrost degradation
- Adaptation strategies – village relocation and/or protect in place (note – this is about infrastructure)
- Denali Commission will be lead coordinating Federal agency (9/2/2015)
- Arctic Executive Steering Committee will provide guidance for a “whole of Government approach”.



Summary of Environmental Threats

Coastal Flooding & Wave Run-up – lack of winter sea ice during extreme winter storms (Shaktoolik, Kivalina, Shishmaref & other communities on barrier islands)

River Flooding – during ice break-up and damming the river

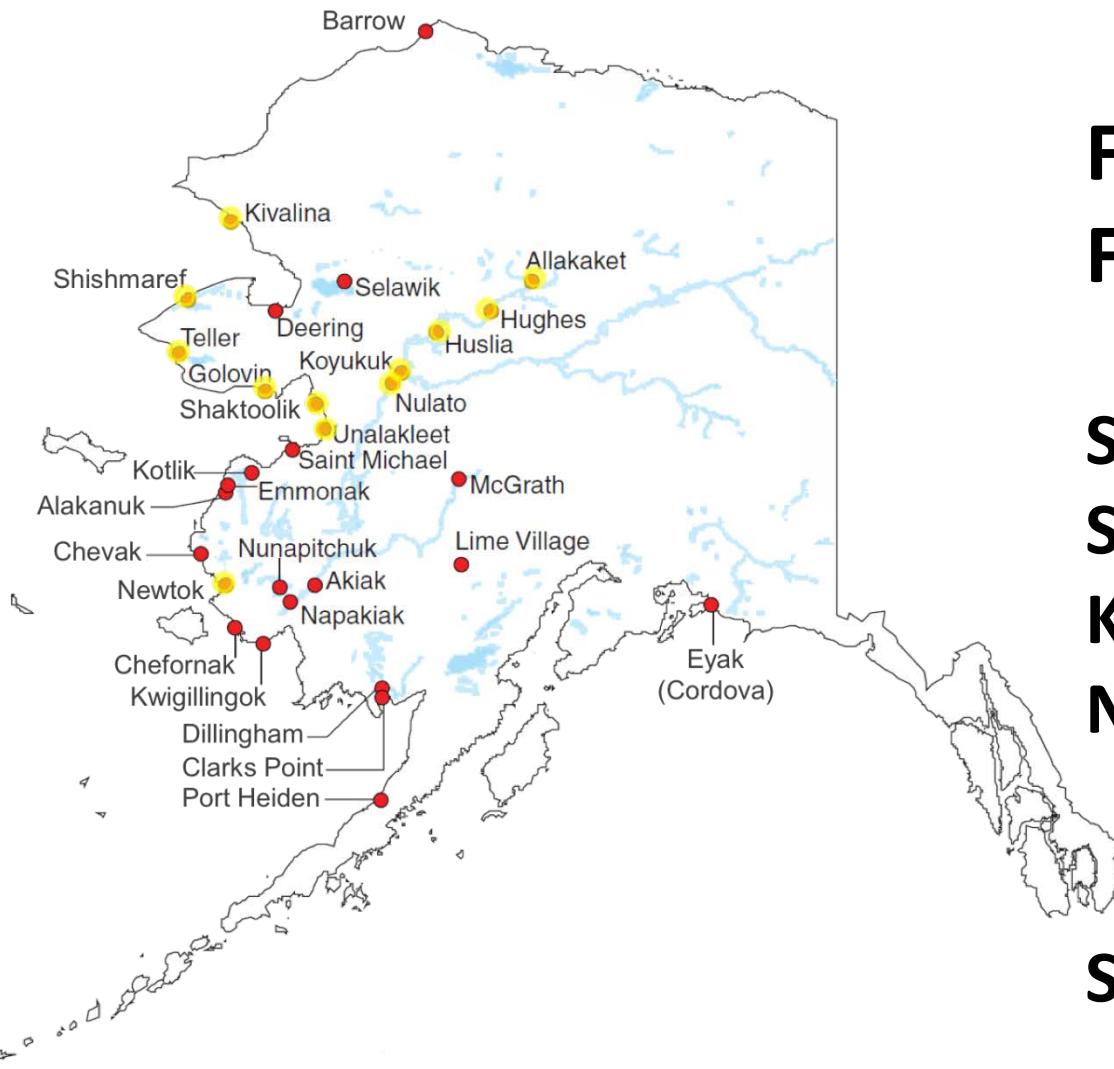
Permafrost melting – ground subsiding and infrastructure is damaged

Erosion driven by permafrost melting – coastal and river shorelines melting and washing away (Newtok).



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31 Environmentally Threatened Communities



**Four Communities
Facing Relocation:**

**Shishmaref
Shaktoolik
Kivalina
Newtok (Mertarvik)**

See GAO Report 09-551



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Winter Storms with no shoreline ice

Kivalina



Shishmaref





Coastal Flooding and Wave Run-up



Alaska District
Corps of Engineers
Civil Works Branch

Predicted and Historical Shorelines

Legend
1980
2004
1994
2017
2037
2057



Shaktoolik
1 inch equals 300 feet
Image dated June 2004

Alaska Baseline Erosion
Shaktoolik, Alaska

Photo 1: Shaktoolik tank farm threatened by wave-driven driftwood and erosion

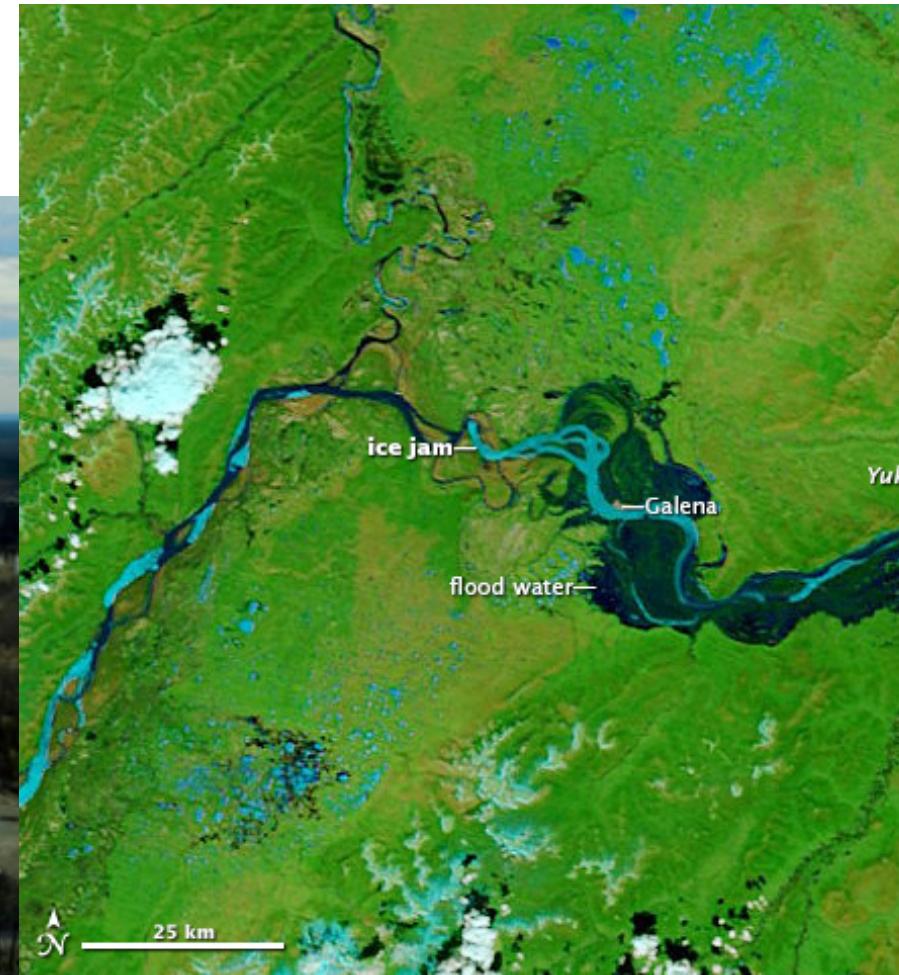


Shaktoolik in a 100-Year storm would be inundated by 6 feet of water.



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River Flooding/Ice Jam





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Permafrost Degradation





Village Infrastructure Protection - Program Funding

On March 22, 2018 Congress instructs the Commission to start **implementing** solutions. (*2 Years, 6 months, 20 days*)

Investment	2016	2017	2018
Newtok/Mertarvik	\$3.37M	\$1.5M	\$18.84M
Shaktoolik	\$1.02M	\$0.5M	\$0.25M
Shishmaref	\$0.52M	\$0.5M	\$1.5M
Kivalina	\$0.52M	\$0.5M	\$0.25M
VIP Program Development	\$1.57M	\$2.0M	\$0.5M
Total	\$7M	\$5M	\$21.34M



HB 173 Comments

Climate Change Science (Erosion/Flooding/Permafrost Degradation)



Applied Science (at the local level – Hazard Mitigation Plans,
Vulnerability Assessments, etc.)



Engineered Solutions & Prioritized Projects (Need)



Funding & Implementation



HB 173 Comments (Statewide Strategy)

- Enhance the Federal (DC) to State (Juneau) relationship
- Articulate a Village Relocation Policy
- Puzzling – why aren't FEMA & A-DHSEM engaged?
- Focus on **responding to climate change** – not stopping climate change
- Denali Commission stands ready to collaborate on complementary work w/ ACCR Commission
- Composition (see AS 42.45.375 (f)(4) Emerging Energy Technology Fund – naming the Denali Commission)