

“Unit 4” Disaster Resilience Program

National Association of Environmental Professionals

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Joel's Background

- Civil Engineer - with extensive experience in the Yukon-Kuskokwim Delta.
- Since 2019 has been a disaster resilience consultant to the Akiak Native Community (my Mom's village where she was born and raised)
- Since 2022 has been the Unit 4 Disaster Resilience Program Manager for the Bethel Community Services Foundation (BCSF).



Matt's Background

- Civil Engineer - with extensive experience in rural Alaska.
- Since 2021 has been the lead consulting engineer for the Akiak Managed Retreat Project
- Since 2024 CRW Engineering Group has been one of two Alaska based engineering consulting firms under contract for the BCSF Unit 4 Disaster Resilience Program.



Unit 4 Disaster Resilience - Presentation Outline

- **NEPA**: as it applies to tribes
- **Akiak Managed Retreat & NEPA**: An example of an ongoing disaster resilience project.
- **Unit 4 proposed disaster resilience model**: “3-legged stool” with the private sector, the community and the public sector (i.e., agencies, non-profits, and tribal organizations)
- **Unit 4 Theory of Change**: Regional approach to support small tribes develop disaster resilience projects, timely, to respond to increasing environmental threats

NEPA & Tribes

- Federal Government & Tribes have a 1 to 1 relationship.
- Council on Environmental Quality (CEQ) encourages agencies to engage with tribes, and allows tribes to serve as cooperating agencies for NEPA.
- 24 CFR **Part 58** for NEPA - allows states, units of general local government, and tribes to assume federal environmental responsibilities as “Responsible Entities”. US Department of Housing & Urban Development (HUD).
- HUD Office of Native American Programs - All a Responsible Entity need to do to start the **Part 58** NEPA process is to pass a motion to apply for a Community Development Block Grant (CDBG or ICDBG).

A New Threat: Spring Melt / High Water Riverine Erosion Event

Akiak Managed Retreat Project

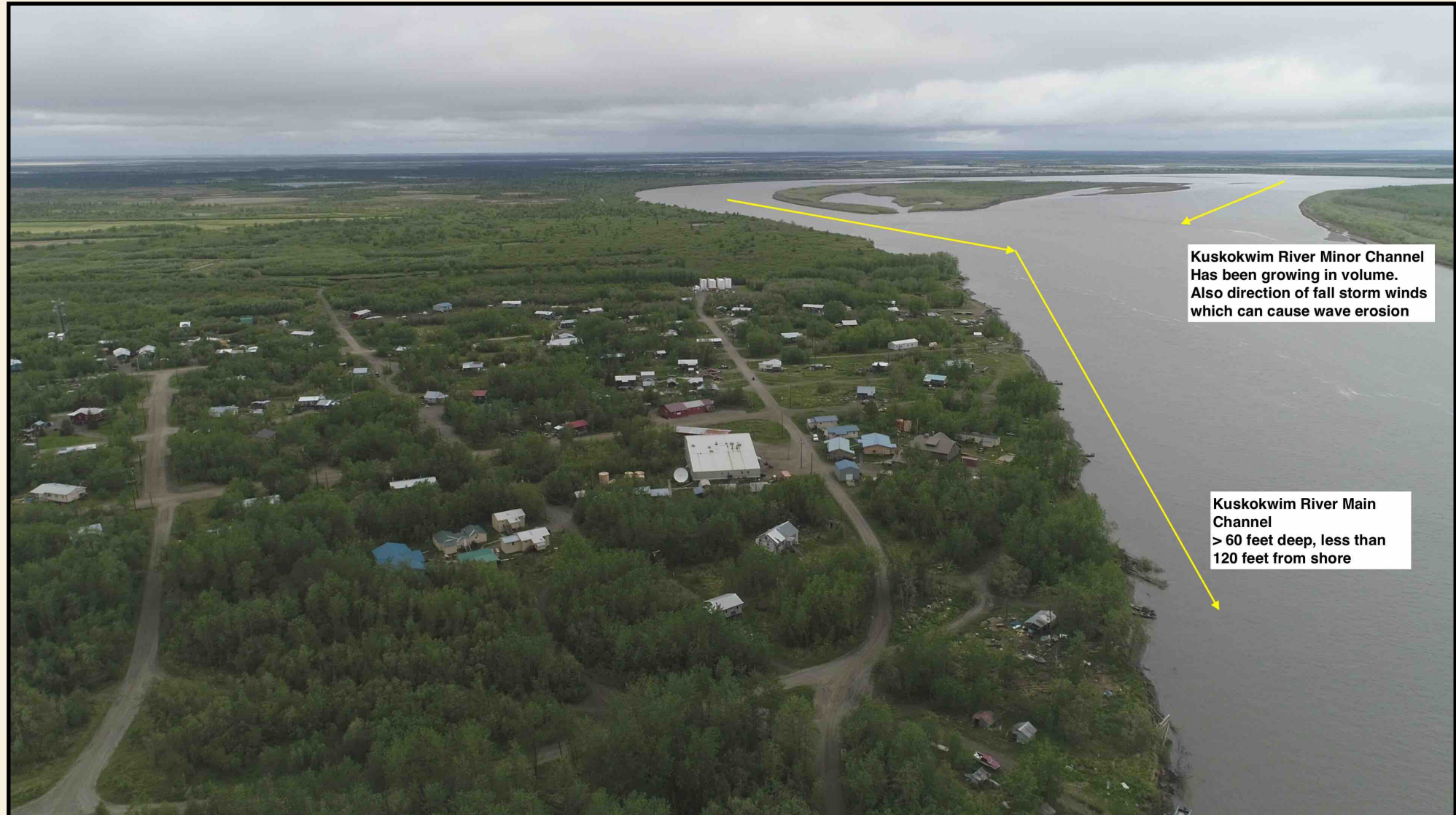


A New Threat: Spring Melt / High Water Riverine Erosion Event (May 18/19, 2019)



Likely Reason for Kuskokwim River Changes

60-foot deep river channel is in front of the village





Two forms of riverine erosion:

1. Fall time storms (historically)
2. Spring time erosion (recent)

Akiak

Imagery courtesy of Maxar from September 2024, data collected from imagery and GPS-ed in the field. Methods used for erosion forecasts are outlined in Buzard et al., 2021 (<https://doi.org/10.14509/30672>).
Erosion forecast and map by Jackie Dean, February 2025

Shoreline

Measured with Imagery	Measured with GPS
— 1952 — 1995	— Aug, 2024
— 1973 — 2023	

Erosion Forecast

 2024 - 2033
 2034 - 2043
 2044 - 2053
 2054 - 2063
 2064 - 2073

ALASKA
0 250 500 Feet

Akiak Managed Retreat

Relocate 8 Homes, Demolish 3 structures, build a 32-lot new housing subdivision on safe ground, and more tasks...



Akiak Managed Retreat

Structurally sound buildings can be relocated (8 total);
If not sound, then demolished (3 total).



NEPA: Akiak Managed Retreat Project & Part 58

- Tiered Environmental Assessment
- Broad Review - Environmental Assessment - Akiak Home Relocation and Managed Retreat Project. Published June 2020.
- Seven site specific EAs, Published from June 2020 to 2022.
- One pending site specific EA - Solid Waste Site, Honey-bucket Lagoon, and Sewage Lagoon Improvements. (Pending)
- Multiple Tribal FONSI's...

NEPA: Federal Agency Response to Akiak Part 58 Documentation

- HUD Part 58 NEPA “approval” is tied to the agency’s Request for Release of Funds (RROF) process.
- Denali Commission adopted and incorporated Part 58 NEPA.
- IHS/ANTHC ignored it and did their own NEPA.
- BIA incorporated, in part, the Tribe’s Part 58, but also did additional environmental review work.
- USDA is still working on environmental review, so we do not know how the agency will respond.

NEPA & Integrating with Other Planning Processes

- **The Hub:** Primary disaster resilience planning document is FEMA's Hazard Mitigation Plan (HMP).
- **The spokes:** NEPA, sanitation preliminary engineering reports, electrical and bulk fuel conceptual design reports, community wildfire protection plans, community and economic development strategy, BIA long range transportation plan, annual housing plans, etc.
- **Strategy:** Use Part 58 to start NEPA work early
- **Obstacle:** How to obtain funding for NEPA, let alone concurrent planning efforts, when many agencies may have a voice on environmental review and "siloed" infrastructure development

Unit 4 Disaster Resilience Regional Model

Goals

- Accelerate Project Development
- Regional Collaboration Among Tribes – Including Sharing Resources
- Economy of Scale Solutions with Private Sector
- Tribal Ecological Knowledge – Understanding River Dynamics (watershed from mouth of the river to Tuluksak – where tidal influence ends)

Unit 4 Approach

- The lower Kuskokwim River is one watershed with multiple tribes and municipalities
- The program will draft and seek FEMA approval for a regional hazard mitigation plan (HMP) for the lower Kuskokwim River watershed
- Capture as much environmental data during the HMP process to facilitate local NEPA development
- Consider a programmatic EA for the lower Kuskokwim communities for common disaster resilience activities such as house elevations, house demolishing, relocating houses, etc.
- Consultants work both on local infrastructure development and regional infrastructure (i.e., common geo-technical issues, etc.)

Unit 4 Structure - Community

Three-Legged Stool

- Leg 1 COMMUNITY: the community includes, typically, a tribe, sometimes a city, a village corporation, school and businesses, often with limited administrative and project management capacity, partnerships with regional health corporations, housing authorities and BIA providers (tribal organizations). Some communities are in boroughs and some are in unboroughed areas.
- Leg 1 UNIT 4: Organized Village of Kwethluk, City of Kwethluk, Akiachak Native Community, Akiak Native Community, City of Akiak, & Tuluksak Native Community. The Native Village of Nunapitchuk is joining Unit 4 to explore a new village site.

Unit 4 Structure - Public Sector

Three-Legged Stool

- Leg 2 PUBLIC SECTOR: Organizations that implement federal and state programming, and federal and state agencies that fund the work. This sector also includes “defined” tribal organizations (25 USC § 5304[l]) and “authorized tribal organizations” that are not “defined” (i.e. Stafford Act).
- Bethel Community Services Foundation (BCSF) is acting in a manner consistent with a tribal disaster resilience organization (if such an organization was defined).

Unit 4 Structure - Private Sector

Three-Legged Stool

- Leg 3 PRIVATE SECTOR: Includes planners, designers, engineering consultants, construction contractors, and facilities service providers.
- Leg 3 BCSF ENGINEERING CONSULTANTS: CRW Engineering Group and Kuna Engineering were selected by the Unit 4 Tribal Administrators through a competitive solicitation to provide engineering consulting services for any community that BCSF serves.

CRW & KUNA SITE VISIT



Unit 4 Theory of Change

- Engage private sector early to develop conceptual alternatives
- Integrate various related planning processes concurrently.
- Do not waste a good disaster while you have the community's attention.
- Do not waste a well functioning elected body. Regular communication is critical.
- No one is an expert on the entire river but many are experts on their sections of the river. Bring them together.
- Routine outreach to the public sector is useful to advance priority projects whether by the community or by regional partners.
- In summary, this is the community engaging outwardly to the private sector and public sector.

Typhoon Halong (October 12, 2025)

Devastated Kipnuk and Kwillingok.

Both communities want to relocate to safe ground.

Suggested NEPA legislation for relocation and interim villages:

- Congressional CATEX for all pre-construction tasks for all alternative sites (see CRS Report R48595).
- Tribes as Co-Lead Agencies for NEPA on relocation.



Typhoon Halong (October 12, 2025)

Akiak had modest damage in comparison



251012 AKI MR bank area lost to storm _103628