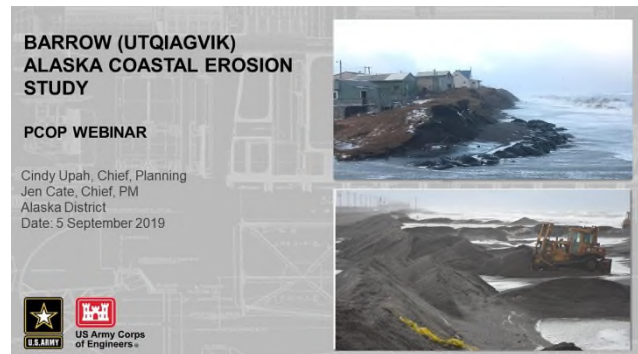


# Barrow Alaska Coastal Erosion Feasibility Study – Challenges and Lessons Learned

September 5, 2019

Q&A Session

*This webinar provided an overview of challenges and lessons learned from the Barrow Alaska Coastal Erosion Feasibility Study. This unique study, which is on track to be completed in 27 months, has successfully utilized risk informed decision making to accelerate project delivery, while also recommending a non-National Economic Development (NED) project based on “Other Social Effects.” The webinar was presented by Cindy Upah (Alaska District Chief of Planning) and Jen Cate (Alaska District Chief of Project Management) and included discussions on the roles of vertical alignment, communication, and public involvement in executing this study.*



*This summary of the Question / Answer session of the webinar is not a transcription; questions and responses have been edited and reordered for clarity.*

## **Level of Detail**

**What process did the team go through to assess and communicate the risk related to pushing H&H and Geotech updates to the Preconstruction Engineering and Design (PED) phase, and how was this decision incorporated into the cost estimate contingency?**

The team conducted a cost risk analysis very early on in the study as we approached the Alternatives Milestone meeting. The study team sat down with the chiefs of each of the engineering sections and went line by line through formulated measures and the projected technical analyses / data needed to discuss the how various decisions could impact the study and project cost (e.g., if the size of the structure were to be over or underestimated) and determine which updates could be pushed to PED. These recommendations were presented to the vertical team. Some elements were brought back in to the feasibility phase (e.g., some of the wave modeling), but the vertical team agreed that it made sense to move the rest of them to PED. The study team did have a lot of data to build on, which facilitated the decision about whether that data was sufficient for the feasibility phase level of analysis and decision-making.

## **Planning Models**

**Were other certified models used (e.g., BeachFX or IWR Planning Suite), other than the models that were mentioned as approved for single use?**

IWR Planning Suite was used during the NED analysis; the team did not use BeachFX.

### **Study Cost**

**What parameters were included in the emergency response cost model? Did the team have to distinguish between Regional Economic Development (RED) and National Economic Development (NED) emergency response costs, or were they all considered to be under NED?**

The costs were all regional costs allocated to Barrow. The emergency response cost model that was used was developed by the community, who determined the levels of oil, gas, and other resources needed during specific weather events (including event duration, wave height, wind speed, etc.). The community developed the model using reimbursement funding from FEMA, and the study team helped to refine the model so it could be used as the foundation of the community's costs.

**How did the team justify selecting the plan with highest incremental cost?**

The team justified the decision based on the level of risk reduced by implementing the project. The study considered six reaches and determined that the most effective flood control project would need to cover all of them and not just reaches 2 and 3, the base reaches. Each reach contains a specific erosion or risk element the project aims to reduce.

**How much funding was allocated to public involvement and communication over the life of the study?**

The cost of the 22 team visits to Barrow over the course of the study cost between \$20k and \$40k. In addition, a public relations firm assisting with the public involvement meetings was provided under a \$200k contract funded by the community.

### **Community Engagement**

**Was a third-party neutral facilitator used for the charette and public meetings?**

The charette in Barrow was led by an Alaska District project manager trained in facilitation. The public meetings were facilitated by professionals from a public relations firm hired by the community made up of local community members who were able to help the study team develop a presentation that resonated with the public. The firm also helped the team determine who in the community they should talk to first (i.e., the community's elders) before discussing the study with the rest of the public.

**Was there any consideration of the feasibility of relocating any residences or critical infrastructure?**

The team did look at relocation of structures, particularly during the initial study. In fact, some of the properties along the coast that have already been impacted by flooding and erosion are actively being moved inland, and two of the doors to the utilidor are being raised. However, while the community is supportive of these ongoing relocation efforts for individual properties, relocation wasn't a feasible nonstructural alternative for the current study due to the significant costs of moving critical infrastructure such as the coastal road, utilidor, and airport facilities.

In addition, the gravel (silt and sand mixture) in the area is the only suitable material available for building new roads and padding down structures, but it is already being used for the sacrificial berm.

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Therefore, it was quickly screened early on since it wouldn't meet the objectives of the study as an effective long-term solution for the community.

**Unanswered Questions:**

**Did you have to prepare and submit a NED exception package to ASA(CW) for their approval?**

**Apart from CE/ICA did you use any criteria to screen initial/final arrays of alternatives?**

**What kind of plan formulation strategy did you use?**