

NNA Track [2] Planning Grant: Developing Arctic Village Resilience to Future Water Cycle, River Systems, and Coastal Change

Key Project Contact(s): Julie Brigham-Grette, Colin Gleason, James Temte University of Massachusetts-Amherst, and Alaska Native Tribal Health Consortium (ANTHC)/Alaska Pacific University (APU), Co-PIs. juliebg@geo.umass.edu; cjgleason@umass.edu; jtemte@alaskapacific.edu

Project Website Urls & Social Media Accounts: Facebook page and website planned.
https://www.nsf.gov/awardsearch/showAward?AWD_ID=1927644

Project Objectives: *Goal:* As arctic people navigate the new arctic, it is essential that communities chart a course that holistically considers both the physical world and human dimensions of these new realities. Accordingly, any rigorous study of the New Arctic must be grounded in the lived experience of its inhabitants and provide opportunity for tribes to take ownership over their own short- and long-term response to these grand challenges. *Aim:* This planning grant will set the foundation for a larger Phase 1 Navigating the New Arctic project to be proposed at the completion of this planning period *in collaboration with Native communities*. While the content of this future proposal is purposefully not set given the established need for planning and dialogue, we expect that our three focus areas will yield hypotheses and science goals that will answer important open science questions, while at the same time serving local communities as they look to the future. Specifically, we hope to gain a comprehensive view of community needs and prepare community members for responding to three areas of the New Arctic: (1) The impact of a changing climate on the municipal water cycle, (2) The impacts of coastal erosion, sea level rise, flooding, and river derived sediment delivery to harbor facilities, infrastructure, and health, and (3) The future of community water resources in an uncertain Arctic future. *Broader Impact:* This planning grant will identify new and exciting science questions as conceived by Arctic residents from their observations. In partnership, we will use the intersection of their knowledge and needs and our expertise to develop a integrated science plan that both addresses emerging issues but also serves to build capacity in the tribes and villages as the Arctic continues to change in the coming decades.

Keywords: NW Alaska, YK Delta, coastal erosion, river erosion, permafrost thaw, water supply, sanitation, managed retreat, education.

Progress to Date/Future Plans: Our planning process is now somewhat more challenging because of COVID-19. Given the planning that has already been done by villages and tribes and the current travel restrictions, we have worked by Zoom/email with community leaders already involved with planning and resilience issues. We are working through them to gather input on the greatest needs for research and observation that can be done as a future partnership and capacity building program.

Highlights or Expected Outcomes: Partnerships have been developed and zoom notes shared with all participants to maintain open dialog as we plan with communities using existing documentation.

NNA Community Collaboration and Research Coordination: We suggest starting with community needs and how an RFP might be focused on that. We are focused on the region of Kotzebue and the YK Delta. What protocols does NNA have for projects in the same regions?

Advice for Overcoming NNA Project Challenges: Our planning process is now somewhat more challenging because of COVID-19. We believe that the Kawerak et al. 2020 letter to NSF needs strong consideration for restructuring the proposal process.