OFFICE OF POLAR PROGRAMS

USA Update to FARO 2023

Dr. Jennifer Mercer, Section Head Arctic Sciences



National Science Foundatio WHERE DISCOVERIES BEGI U.S. National Science Foundation Geosciences Directorate (GEO) Office of Polar Programs (OPP)

Notable Arctic Updates



- National Strategy for the Arctic Region (NSAR)
- Bering Task Force on the Northern Bering Sea Climate Resilience Area
- Recapitalization of Summit Station, Greenland
- Joint NASA/NSF workshop: Future of Greenland Ice Sheet Science (FOGSS) meeting March 22-23
- IARPC/United States Arctic Observing Network (U.S. AON) Board released report "On the Need to Establish and Maintain a Sustained Arctic Observing Network"
- International Cooperative Engagement Program for Polar Research (ICE-PPR) MOU
- The U.S. Army Engineer Research and Development Center's Cold Regions Research and Engineering Laboratory: creation of 3 new facilities (Treat Island, ME; Fairbanks, AK; Hanover, NH) for the testing of coatings to withstand/mitigate ice adhesion/corrosion.

Summit Recapitalization



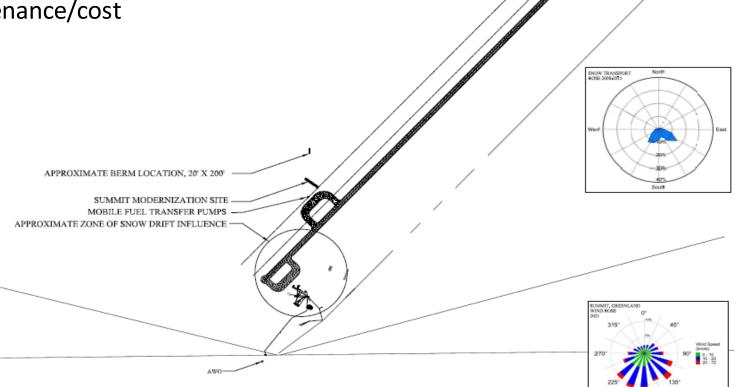
New Station

 Efficient, flexible observing platform to enable year-round research with minimal human presence
 Elevated station minimizes drift
 Reduced operational maintenance/cost

Multi-year construction

environment

- Increased flights for several years for cargo / fuel
- Extended summer seasons and larger winter crews for construction
- Anticipating a 5-to-7-year
 construction duration



Reducing Environmental Impact



- New Summit Station aims to reduce human presence
- R/V Sikuliaq is designed to have the lowest possible environmental impact, including a low underwater radiated noise signature for marine mammal and fisheries work
- Examples of environmental sustainability NSF-funded research
 - "Electric Vehicles in the Arctic (EVITA) -Interactions with Cold Weather, Microgrids, People, and Policy"
 - "Displacing Wood Use with Electric Thermal Storage Heating to Improve Ambient Air Quality"



International infrastructure access

- International collaborators are welcome at Summit Station and Toolik Field Station, both with reasonable day rates. Please contact <u>rcrain@nsf.gov</u> for more information
- Long-lead time coordination of planning and proposal preparation will assist with international vessel access options
- Thule Partnership
- ARMAP: Arctic Research Mapping Application https://armap.org/



