

Toolik Field Station 2023-2028 Strategic Plan

September 29, 2023

Our Mission

Our mission is to promote a greater understanding of the Arctic by safely, sustainably, and equitably fostering research and education in response to the needs of science and society.

Our Core Values

- **Collaboration:** We are part of a community of those who inhabit and study the Arctic. Our relationships with staff, researchers, students, rural and Indigenous communities, artists, other research stations, the public, and our partnering agencies and institutions are critical to our success as a station.
- **Open communication:** We value open and transparent communication that facilitates collaboration across disciplines and across scales, from staff and researchers to government agencies to Alaska Native nations and international institutes.
- **Dynamic support:** We embrace a dynamic approach to provide high quality and dependable support to ensure year-round access and opportunities for research and education. We adapt our operations and services as both science and the Arctic changes.
- **Safety & Inclusion:** Safety is essential in all aspects of our operations. We value diverse backgrounds and perspectives of community members, and strive to create an environment where everyone feels respected and supported. We aim to provide a harassment-free environment and commit to responding rapidly and appropriately when incidents occur.
- **Supporting science for a better, more sustainable future:** We support research and foster education of Arctic science for all. We steward the lands around Toolik by supporting ethical research that addresses important scientific and societal challenges. Research at the station benefits society. We work to minimize our negative effects on the environment, including by supporting sustainable operations that reduce our carbon footprint.

Vision for 2028

Toolik Field Station is a leading, year-round Arctic research, observation, and education facility, providing insight to address local and global challenges of the rapidly changing Arctic.

Strategic Priorities

1. Our station's research capabilities & facilities are bolstered.

- A. Current infrastructure and services are improved to fill gaps in research support needs.
 - Comprehensive evaluation of Toolik infrastructure to identify deficiencies is completed.
 - Research facilities, internet access, transportation, and overwinter storage are updated to sufficiently meet the needs identified in Objective 1.
 - Common use science equipment that supports current and unmet research needs is procured.
 - Professional development opportunities for research support staff are enhanced.
- B. New infrastructure and services are built to strengthen our research community.
 - State of the art laboratory facilities, including one winter-capable laboratory, that meet current and anticipated research priorities and emerging technologies are built.
 - Our support for under-represented research fields at the station is expanded.
 - Barriers to station use during the shoulder and winter seasons are explored, and reduced.
 - Onboarding for international and national researchers is improved.
- C. In alignment with national and international Arctic research priorities, support is developed in areas where Arctic science is advancing.
 - Broader Arctic research objectives, ICARP, USARC, and others, are supported.
 - Remote access is expanded to support pan-Arctic collaboration and sustainable field campaigns.
 - Synergistic SEDC open data products that integrate multiple spatial and environmental datasets for use by a broad range of user groups are created. Repositories for previously dark datasets are created.
 - Collaboration with international researchers is expanded.

2. Educational support is formalized. New outreach initiatives are launched.

- A. Educational support at the station is expanded.
 - In-person educational experiences for non-scientists and students at Toolik, including artist residences, undergraduate, and grades 9-12 student experiences are enhanced, especially for historically marginalized groups.
 - A wider variety of short-term educational experiences, especially led by schools in Alaska, are recruited and supported. Guidelines for educational courses at the station are created.
 - State-of-the art education center to support field courses and other educational activities is built via an NSF R1 mid-scale infrastructure grant.
 - A community mentorship program for early career researchers at the station is facilitated.

B. Outreach to external communities is expanded.

- Outreach and research collaboration with Alaska Native communities is started. Connections with researchers to coproduce knowledge on Arctic ecosystems and change are facilitated. Relationships with Anaktuvuk Pass are built.
- Public awareness of the importance of the Arctic and research conducted at Toolik is increased via strategic social media, mass media, & interpretative communications
- Outreach to K-12 teachers and students both within and outside of Alaska is increased to generate new interest in Arctic research with the missing millions
- Virtual educational experiences to expand the range of audiences Toolik reaches ([The Virtual Field](#)) are created.

3. A safe, diverse, equitable & inclusive community is actively fostered.

A. Efforts to increase belonging, equity, diversity, inclusion, & accessibility are implemented.

- Toolik community meetings are held at least quarterly to develop new initiatives to improving DEI.
- Gaps in the ways we engage and support the diverse identities of our current and potential community are addressed. This includes support for nearby Alaska Native communities, parents, international collaborators, and residents with disabilities.
- Entryways to the station are increased and publicized for researchers and staff across all career stages, especially to demographic groups that are currently under-represented at Toolik. Resources are created to enhance onboarding of new researchers and staff.
- Inclusive infrastructure, such as locks on dorm doors, a community gear closet, and a private space for prayer and other religious & spiritual practices, is built.
- Community-wide training opportunities related to DEI issues are held at least once per year.

B. Safety initiatives are expanded.

- Barriers to accessing mental health resources while at the station are reduced for both researchers and staff.
- Awareness of all aspects of fieldwork safety is promoted and mechanisms for reporting unsafe conditions are highlighted. Written guides for field safety planning and responding to common safety incidents (e.g., guides for tire changing or basic first aid guides in trucks) are distributed.
- Field and lab safety training is enhanced. Gaps in field safety training are identified and reduced.
- Provisioning and maintenance of communal safety gear is increased.

C. Tools of accountability are built.

- Shifts in station demographics are recorded and tracked.
- An annual station climate survey is created, distributed, and analyzed.
- Station policies, activities, and hiring practices are audited to ensure they support DEI.

4. Our financial stability & diversity are strengthened.

- A. Current fundraising efforts are expanded.
 - Fundraising for TUNDRA award, artist-in-residence, and general station support is increased and the award is expanded to better meet needs of early career scientists.
 - Station fees are adjusted, including adding maintenance fees for autonomous instrument use.
 - B. New fundraising efforts are established.
 - Private fundraising and friend-raising opportunities that align with our vision and mission of addressing Arctic climate change are seized.
 - Alternative grants are obtained to support initiatives not funded by the cooperative agreement, including new educational facilities and renewable energy.
 - A celebration is held in honor of our 50th year.
 - Toolik-branded merchandise is created and sold to raise general support funds.
 - A Friend of Toolik Field Station fundraising program is created, and a friend-raising event is hosted.
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Year 1 Project Descriptions

Strategic Initiative 1: New Directions Towards Education & a Green Energy Transition

Description: New, alternative grants are obtained to support initiatives not funded by the cooperative agreement, including midscale infrastructure grant to NSF for education center, DoE prospectus for energy transition, and additional grant applications to EU.

What will Toolik Field Station have after completing this initiative? (multiyear goal)

Toolik will be an example of a large, remote field station that has achieved energy transformation to functionally independent of fossil fuels. Toolik will have a state-of-the-art research and education facility.

What will Toolik Field Station have after completing the first year of work? (Year 1 target)

By September 2024, we will have 1) confirmed whether the DoE will fund a decarbonization pilot project and 2) will have identified an engineering partner and produced the white paper for the midscale research infrastructure application.

Strategic Initiative 2: Outreach and Collaboration with Indigenous Peoples

Description: Increase outreach and research collaboration with Alaska Native communities. Build relationships with Anaktuvuk Pass to enhance Toolik community's connection with Alaska Native and rural communities. Facilitate connections with researchers to coproduce knowledge on Arctic ecosystems and change.

What will Toolik Field Station have after completing this initiative? (multiyear goal)

Toolik and Anaktuvuk Pass will have a working relationship that serves as a bridge through which researchers can responsibly engage with the Anaktuvuk Pass community. This engagement may include but is not limited to knowledge co-production, educational resources for K-12 students, and career opportunities.

What will Toolik Field Station have after completing the first year of work? (Year 1 target)

By September 2024, Toolik Field Station will have developed relationships with the Anaktuvuk Pass K-12 school and pursue funding to support deeper collaboration.

Strategic Initiative 3: Alignment with Arctic Research Priorities

Description: Participate deeply in the ICARP IV planning process and ensure services are aligned with ICARP priorities, including Topics 2, 4, 5, 6 and 7. Nominate representatives to relevant [ICARP research priority working groups](#).

What will Toolik Field Station have after completing this initiative? (multiyear goal)

By 2025, TFS will be better prepared to support research initiatives that emerge from the ICARP IV process. TFS will have formed relationships with other international organizations and partners.

What will Toolik Field Station have after completing the first year of work? (Year 1 target)

By September 2024, TFS will have nominated representatives to relevant working groups, participated in the ICARP IV process, and will have influence into the priorities that will emerge from this process.

Strategic Initiative 4: Private Fundraising in our 50th Year

Description: Host a 50th anniversary celebration and fundraiser. Determine how to strategically seize the fundraising and friend-raising opportunities that align with our mission of addressing climate change safely, sustainably, and equitably.

What will Toolik Field Station have after completing this initiative? (multiyear goal)

By 2028, we will have fundraised at least \$500,000 for both ongoing and new donation-based efforts via an extensive network of Toolik alumni, staff, visiting artists, a Toolik friends group, and private individuals/charitable organizations.

What will Toolik Field Station have after completing the first year of work? (Year 1 target)

By September 2024, TFS will have a venue, date, and draft agenda and promotional content for a 50th anniversary celebration. Draft fundraising targets will have been identified and invitations will be issued to an extensive list of Toolik alumni over the past 50 years and potential donors.