Barrow Atqasuk Science Advisors

Minutes
13 June 2016
teleconference

Participants (BASA members in *italics)*

Karl Newyear, UIC Science (meeting leader)
Stephanie Gaff, UIC Science
Sean Gunnells, UIC Science
Nagruk Harcharek, UIC Science (ex-officio)
Anne Jensen, UIC Science (ex-officio)
Terri Mitchell, UIC Science (ex-officio)
Mike Abels, UAF IAB/Toolik Field Station
Carin Ashjian, Woods Hole Oceanographic Institution
Chris Baird, National Ecological Observatory Network (NEON)
Faustine Bernadac, National Ecological Observatory Network (NEON)
Hank Loescher, National Ecological Observatory Network (NEON)
Bob Rich, Arctic Research Consortium of the US (ARCUS)
Ignatius Rigor, University of Washington
Anna Schemper, CH2M Hill Polar Services (CPS)
Todd Sformo, North Slope Borough Department of Wildlife Management
Bill Simpson, UAF
Bryan Thomas, NOAA ESRL
Stan Wullschleger, Next Generation Ecosystem Experiment (NGEE)

Administration Items

- BASA information has been posted to the Barrow Bulletin web page (www.barrowbulletin.com) including the Terms of Reference and past meeting notes. Meeting presentations will be posted there soon.
- The process of electing a Social Sciences representative to BASA was discussed. The value of a Candidate Statement was debated but decided against, at least in this case since such a requirement is not specified in the Terms of Reference and no current BASA members needed to provide one. Voting via an anonymous Survey Monkey poll was agreed as the best method, with BASA members given 1 week to respond once the ballot is made available.
- Biographical information about the two candidates was distributed to all voting BASA members. Both represent a similar academic focus; a primary discriminator may be that one is a tenured professor and one is an early career scientist.

Recent Meetings

- NEON Site Host Workshop (28-30 March, Front Royal, VA)
  A workshop was convened in response to NSF's decision to change NEON management authority. After the workshop was scheduled but before it occurred NSF chose Battelle as the new management group and reorganized their oversight into a team approach. Key NEON personnel include:
  Hank Loescher, NEON Director of Strategic Projects
  Gene Kelly, Visiting NEON Head Scientist
  Mike Kuhlman, Battelle Chief Scientist
  Rich Leonard, Battelle Ecology Project Manager
  Richard Farnsworth, Battelle Ecology CEO
  NSF demonstrated continued and high-level commitment to the NEON program. The workshop accomplished several goals including: introducing various entities associated with NEON to each other, identifying common issues, and improving communications on various levels. A major theme was communication and coordination of NEON activities with those of other researchers at each site. Another workshop is planned for this fall. It's recognized that Site Hosts are often put in a position of front-line ambassadors for NEON to other users which requires more support and coordination.

- North Slope Science Initiative Science Technical Advisory Panel (9-10 May, Barrow)
  This consortium of federal and state-level agencies is charged with coordinating research activities throughout the North Slope. NSSI's 2015 report to Congress is available online which explains their organization, function, and activities. Karl presented information about UIC Science / CPS and their operations in Barrow, of which many NSSI participants were largely unaware. NSSI is reviewing and commenting on the Arctic Waterways Safety Committee's Standards of Care protocols.

- UNOLS Arctic Icebreaker Coordinating Committee (16 May, teleconference)
  This group is primarily concerned with scientific projects operated from the USCGC *HEALY* and R/V *SIKULIAQ*. No *HEALY* support will be required in Barrow this year. The Juranek/Sipler cruise aboard the *SIKULIAQ* will be re-presented to the AEWC during their next meeting in July with assistance from Murray Stein of UAF Marine Operations. AICC is also reviewing and commenting on the AWSC's Standards of Care as this has very direct impacts on research vessel operations. The federal government is moving forward with actions to procure new heavy icebreaker(s) including requirements gathering and proposed funding bills. However, there is little to no support for making science an essential function of the new vessel(s). The *HEALY* departed Seattle last week to begin Operation Arctic Shield 2016.

- Atqasuk Community Meeting (11 June, Atqasuk)
  UIC Science presented information on planned science activities to the public in Atqasuk for the third consecutive year. Content included general information about CPS and UIC Science along with specific presentations by the ITEX and Zona project researchers. A good Q&A session ensued and there were no negative comments made about current or planned science activities in the area.

Updates on Barrow and Atqasuk Operations

UIC Science presented numerous examples of operational updates in Barrow and Atqasuk including the following:

- UIC Science's position of North Slope Science Liaison is currently vacant, though outreach activities will continue to be supported. Instituting a new radio call-in show was suggested, in addition to the ongoing taped researcher interviews. UIC Science is investigating how to post podcasts of previous interviews on the Barrow Bulletin.
- The owner of the house in Atqasuk used for visiting researcher lodging over the past two years plans to live there herself and terminated the lease. Therefore UIC Science is leasing James Ivanoff's house this summer. Accommodations were sufficient for at least 14 people to stay there this past weekend. Alternate housing is being investigated for a few weeks during mid-summer when James' house is under previous commitment.
- The BARC Reverse Osmosis system suffered a freezing event this spring resulting in significant damage rendering it inoperable. UIC Science is looking into a complete replacement unit as this may be more cost-effective than purchasing individual components. In the meantime purified water of different grades is available for purchase through the UIC Water Plant at NARL ($20 per 5 gallon bottle; RO, UV, carbon filtration) or from the Millipore system at the BARC (18.2 MΩ, RO, UV, DI, carbon filtration, 60 liters/day). It is unlikely that the RO system will be relocated within the BARC due to existing plumbing, despite its susceptibility to freezing.
- Vendor technicians are currently on site in Barrow to repair/replace/reconfigure the BARC Card Key system and make it fully and consistently operational. In the future researchers will be issued individually coded card keys offering access only to authorized locations. Card keys can be remotely enabled or disabled as needed, much like hotel keys.

- This spring NEON completed construction of their 10-meter tall tower, instrument hut, boardwalk/trail mat, and power system in the BEO. Installation of scientific instrumentation is planned for fall/winter 2016-17. Faustine Bernadac and Chris Baird of NEON will visit Barrow in late June to personally visit the planned sampling plots to verify their condition and determine appropriate measures to minimize tundra damage during repeated sampling access. During the last meeting BASA expressed interest in adding internet and/or radio repeaters on the NEON tower to provide more reliable field communications. NEON reports that a process for accommodating such "assignable assets" will be rolled out at the Ecological Society of America meeting in August.

Research Interference Avoidance

- Earlier this year several projects were conducting incompatible activities in the BEO. Through much effort and communication all groups were ultimately accommodated and accomplished their goals but not without some disruption. This highlights the importance of researchers clearly identifying their needs, constraints, and expectations well in advance, and of UIC Science to communicate and coordinate with projects in the field.
- As a proactive approach to similar potential situations, last year UIC Science produced a "Field Guide to BARC Roof Instrumentation" which identifies all antennas, cameras, and other technical equipment installed on the BARC roof and established protocols for its management including the addition of new equipment. This document will be posted on the Barrow Bulletin. UIC Science plans to produce a similar document in 2016 covering the BEO Control Shed.
- UIC Science proposes a checklist for researchers to identify any components of their fieldwork which may be subject to interference from other groups, or potentially affect other groups' sites. Several improvements to the draft were suggested including adding a map to indicate location. Once requirements are known then they can be addressed appropriately and in advance, perhaps by an ad-hoc subcommittee of BASA. Tools such as BAID (www.barrowmapped.org) and Armap (www.armap.org) are publicly available, but are largely backward-looking and describe what has happened in the past. The checklist would be intended to gather forward-looking requirements and perhaps made more available to researchers when planning their field programs. Some system for documenting "disturbance" activities was suggested, but given the proximity of a residential community with private, commercial, and subsistence activities this may be difficult to effectively implement.

Long-Term Facilities Plan

- Based on discussions during the 17 March 2016 BASA meeting and insight from Mike Abels on the creation of the Toolik Field Station LRFP, UIC Science presented a strawman outline (i.e. Table of Contents) arranged as chapters and timeline for creating a similar document for Barrow. This information was distributed as an attachment to this meeting's invitation, with modifications included with these notes.
- The general consensus was that the Outline included all necessary topics but may be too prescriptive, and details of later chapters will likely flow from the content of earlier ones, especially Chapter I: Vision, Goals, and Guiding Principles. Therefore, the scope of the LRFP should be carefully defined and may take a disproportionate amount of time relative to the number of pages in the final document. A subsection of Chapter I should clearly identify the stakeholders in this plan.
- The proposed timeline seems conservative and the process might proceed faster than anticipated, depending on the overall management structure (e.g. will outside/professional assistance be recruited? How much time can UIC Science staff dedicate?) and motivation/availability of contributors. Much of the content of proposed Chapters II: Facility History and Current Status, and III: Recent, Current, and Anticipated Science Activity exists in other documents which can be reviewed and updated relatively quickly rather than creating from scratch.
- The short-term plan is for BASA members to consider the proposed Outline and Timeline for consensus approval and formation of a team to begin work on Chapter I at the next BASA meeting. Please consider volunteering! A 1-2 hour workshop sidebar meeting is suggested to be held during the AGU Fall Meeting for Chapter I contributors to collaborate in person.

Common-Use Equipment

- UIC Science posed the question of what additional equipment/instruments would help researchers be more effective during their time in Barrow. This question is also posed in end-of-season outbriefs to gather additional ideas.
- There are differing opinions on the usefulness of low-power (e.g. dissecting) microscopes; many researchers prefer their own equipment and would not trust a common-use scope to be sufficient or in good operational repair.
- Cryogens such as dry ice or liquid nitrogen may have a wider appeal because of their limited shelf life and difficulty in shipping. UIC Science currently has the capability to produce dry ice on demand. The ARM project or outside groups such as the hospital may use LN2.

- Freezers, purified water, and drying ovens would be generally useful. These capabilities already exist in Barrow but may need to be augmented.

Alumni Association

- UIC Science is interested in fostering an alumni mindset among Barrow and Atqasuk researchers. A formal organization is not necessarily required.
- Regular newsletters or columns in publications such as *Witness The Arctic* may help keep people up to date and tied in to the community even if they are not actively conducting research in the area. Social media presence may work, but requires consistent administration and there are a range of opinions in its appeal.
- Giveaway items (patches, pins, luggage tags) may work; specific items should have broad general appeal and be different from items currently available for purchase (hats, hoodies). Toolik field Station uses Café Press to offer souvenirs with the advantage of not requiring inventory on hand. A logo could be applied to any number of products on demand.

Upcoming Meetings of Interest

- International Conference on Permafrost, 20-24 June, Potsdam, Germany
- Alaska Eskimo Whaling Commission, 18-20 July, Anchorage, AK
- Ecological Society of America, 7-12 August, Ft. Lauderdale, FL
- AGU Fall Meeting, 12-16 December, San Francisco

IARPC

- The Interagency Arctic Research Policy Committee is preparing their next 5-year research plan covering 2017-2021. A draft will be available for public comment in July 2016. See the IARPC webpage (www.iarpccollaborations.org) or FedBizOpps for the announcement of availability. The goal is to publish the final document by December 2016 so please submit your comments as soon as possible.

Other

- UIC Science will be featured in the Member Highlight section of the next issue of *Witness The Arctic*.

Next Meeting

- The next ~quarterly BASA meeting is proposed to occur via teleconference in September. UIC Science will arrange for the teleconference. A major topic will be discussion and approval of a general contents and timeline for the Long Range Facilities Plan and solicitation of volunteers for Chapter I.

Old Action Items

1. UIC Science will coordinate with Ilisaġvik College and Tuzzy Library to properly catalogue materials from the Bill Brower Library.
2. UIC Science to document science projects in the Barrow area on an annual basis.

New Action Items

1. UIC Science to post BASA meeting presentations and “Field Guide to BARC Roof Instruments” on the Barrow Bulletin.
2. UIC Science to investigate posting podcasts of researcher interviews on the Barrow Bulletin.
3. BASA members to vote for Social Sciences representative using anonymous Survey Monkey ballot. Details sent separately with these notes.
4. UIC Science to refine and implement a pre-season checklist to identify potential conflicts among research activities.
5. UIC Science to produce “Field Guide to BEO Control Shed Antennas”.
6. BASA members to review proposed Elements and Timeline for Barrow Long Range Facilities Plan for approval during next meeting. Please consider volunteering as a contributing author for one or more chapters.