NOTE: The updated version of this document as of January 25, 2017 can be found at the following link:
https://www.unols.org/sites/default/files/Sikuliaq_CECSOP_Mar%2022%202017_0.pdf

Community and Environmental Compliance Standard Operating Procedures (CECSOP) for R/V *Sikuliaq* Research Operations

The R/V *Sikuliaq,* is owned by the National Science Foundation and operated through a Cooperative Agreement by the College of Fisheries and Ocean Sciences at the University of Alaska Fairbanks. The vessel is designed to support a wide variety of research activities and operate in arctic and sub-arctic regions where subsistence activities may occur. In light of potential subsistence activities in these regions, this document is intended to provide guidance and explain standard operating procedures (SOPs) to Principal Investigators (PIs) that intend to use the R/V *Sikuliaq* to conduct research activities.

Specifically, this document provides the Community and Environmental Compliance Standard Operating Procedures (CECSOP) for operating practices aboard the *Sikuliaq*; provides guidance to identify/communicate/mitigate potential impacts on or time/area conflicts with subsistence hunting areas, activities, and resources; explains environmental compliance procedures; and describes the various roles and responsibilities involved in these processes. These SOPs are intended to facilitate the best practices and use of this unique vessel, enhance cruise success, encourage appropriate and necessary outreach to potentially affected subsistence communities (e.g., subsistence hunters, Alaskan Native Organizations, communities and regional entities), and ensure compliance with applicable federal environmental regulations (e.g., National Environmental Policy Act, Marine Mammal Protection Act, and Endangered Species Act). To the extent possible, the CECSOP was prepared to align with the version of the Arctic Waterways Safety Committee (AWSC) Standard of Care Research Cruise Operations (SOC)[1] available at the time of this document preparation. The AWSC is a group comprised of Arctic waterway users (e.g., subsistence hunters, industry, government, and others) with a goal to bring together local marine interests in the Alaskan Arctic in a single forum, and to act collectively on behalf of those interests to develop best practices to ensure a safe, efficient, and predictable operating environment for all current and future users of the waterways. The AWSC is currently preparing a final version of a SOC for research vessels working in Arctic Waterways. The CECSOP may be adjusted in the future based on new information, such as a final AWSC SOC or other best practices.

The R/V *Sikuliaq* general guidance for research activities is described in Section I, while the SOPs are described and organized in Section II of this document as pre-cruise, cruise, and post-cruise activities. Section III explains personnel roles and responsibilities. While the SOPs reflect current best practices, each research activity is unique and may require additional, or modified, procedures to successfully conduct research activities on the R/V *Sikuliaq* to achieve research goals. The University of Alaska Fairbanks (UAF) and the College of Fisheries and

[1] The Arctic Waterways Safety Committee (AWSC) Standard of Care (SOC) Research Cruise Operations Draft Version 4 (25 Sept 2016).

Ocean Sciences (CFOS) personnel that manage the R/V *Sikuliaq* are dedicated to assist and support PIs in complying with these SOPs as well as additional or different procedures necessary to achieve research goals.

I. General Guidance for Research Activities:

A. To the maximum extent possible, research activities should be planned to avoid impacts on or time/area conflicts with subsistence hunting areas, activities and resources (note Appendix A for information on general subsistence resources/migration periods/hunt activities).

B. To achieve research goals, discussions may be needed with potentially affected subsistence communities if:
   a. proposed research activities cannot avoid impacts on and time/area conflicts with subsistence hunting areas, activities, and resources;
   b. proposed research activities would occur during active subsistence hunt periods and:
      i. are to be conducted within 30 nautical miles (nm) of an Arctic coastal village;
      ii. are to be conducted at a distance of 10 nm from the rest of the Arctic coast;
      iii. involve sound sources with the potential to affect marine resources within the above noted distances (i and ii).

Per the Arctic Waterways Safety Committee (AWSC) Standard of Care (SOC) Research Cruise Operations Draft Version 4 (25 Sept 2016), Figure 1 illustrates Arctic villages and coastal areas of concern.

Commented [k1]: Tentative wording. May change to "activities within 50 nm of Barrow or within 30 nm of other coastal villages" depending on the December AWSC meeting

Commented [k2]: Tentative wording. May change to 12 nm depending on the December AWSC meeting

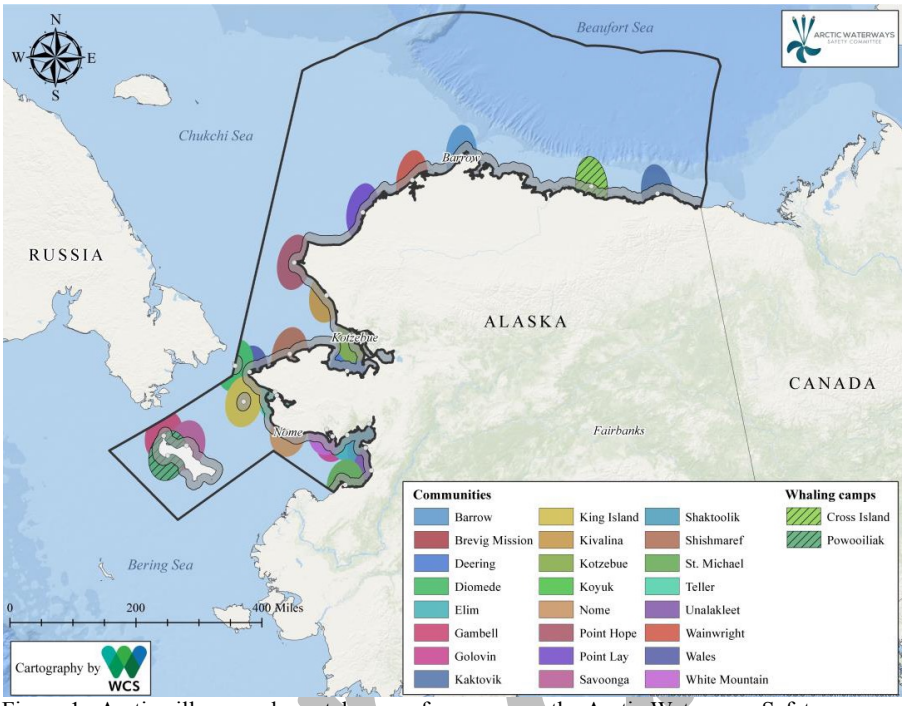


Figure 1. Arctic villages and coastal areas of concern per the Arctic Waterways Safety Committee (AWSC) Standard of Care (SOC) for Research Cruise Operations Draft Version 4 (25 Sept 2016).

II. Standard Operating Procedures (SOPs)

A. Pre-Cruise Actions:

1. PIs scheduled for, or potentially interested in, using the R/V *Sikuliaq*, should review these SOPs and material available on the UAF R/V *Sikuliaq* website prior to using the vessel. PIs are encouraged to contact the CFOS Associate Dean for Research (AD-RA) for any additional guidance on or clarification of conducting research in the Alaska region relative to subsistence issues and the Marine Superintendent regarding vessel capabilities/limitations.
2. Once a proposed research activity has been scheduled on the vessel, the NSF Division of Ocean Sciences Environmental Compliance Officer will send the NSF "Organization Environmental Impacts Checklist" (NSF EC Checklist) to the PI; the NSF EC Checklist can also be found on the UAF R/V *Sikuliaq* website (https://www.sikuliaq.alaska.edu/ops/?q=node/12) and the NSF website. Within three weeks of receiving the NSF EC Checklist, PIs should complete it for the proposed research activities, have it signed by their Institution's Authorized Organizational Representative, and return it to the NSF Environmental Compliance Officer for

review.

3. At the earliest possible time, but no later than the September prior to field work (e.g., Sept 2016 for any project proposed for January-December 2017), PIs should provide the CFOS AD-RA with information on their proposed research activity using the Pre-Cruise Plan template located on the UAF R/V *Sikuliaq* website.
4. PIs, or a qualified designee[2], will attend a fall meeting determined by the CFOS AD-RA (most likely the AWSC annual fall meeting in the November timeframe) to present an overview of their research plans, draft cruise plans, and any other relevant research-related activities. The PI will be accompanied by the CFOS AD-RA and/or other representatives of the vessel (e.g., Marine Superintendent; CFOS MAP agent; CFOS Communication Specialist, etc.). Input will be sought at the meeting as to whether the proposed research activity has the potential to impact subsistence activities or resources and if additional discussions with potentially affected parties is recommended, and if so, specifically which entities (e.g., Alaska Native Organizations). PIs, or a qualified designee, may need to attend additional meetings to discuss proposed research activities with potentially affected parties and develop monitoring and mitigation measures in order to avoid or minimize potential impacts to subsistence hunting areas, activities, and resources. The CFOS AD-RA will coordinate and assist PIs with this effort.
5. A modified research pre-cruise plan, incorporating any monitoring/mitigation measures will be presented by the CFOS AD-RA, PI, or qualified designee at a spring meeting to be determined by the CFOS AD-RA (likely the Spring AWSC meeting or February Alaska Eskimo Whaling Commission meeting). If not present at the meeting, the PI, or qualified designee, may need to be available remotely to provide assistance to the CFOS AD-RA during the meeting.
6. The NSF environmental compliance process, including compliance with federal environmental regulations and any necessary consultations, must be completed prior to cruise commencement. Compliance with various environmental regulations can be a lengthy process. For example, formal consultations associated with the MMPA and ESA take a minimum of 120 days and 135 days, respectively; informal consultations under the ESA can take a minimum of 30 days. The NSF OCE Environmental Compliance Officer will confirm with the CFOS AD-RA, Marine Superintendent, and PI when documentation is complete.

   NSF retains the discretion to deny research activities from going forward if environmental concerns are revealed during the environmental compliance process. PIs should not rely on the scheduling of the cruise as an indicator that NSF cannot or will not cancel the cruise for concerns revealed during the environmental compliance process.

B. Cruise Actions:

1. The Captain and crew of the R/V *Sikuliaq* will comply with all applicable regulations

[2] In this document, a "qualified designee" is intended to be someone capable of discussing and answering questions about the proposed research, techniques, methodologies, cruise routing and tracks.

(international, federal, state, and local) and UNOLS[3] Research Vessel Safety Standards, and will navigate the vessel responsibly if operating in the vicinity of marine mammals.

2. For research activities that will not involve impacts on or time/area conflicts with subsistence hunting areas, activities, and/or resources, no special monitoring or mitigation measures will be warranted unless required by other regulatory requirements, such as through consultation under the Endangered Species Act.
3. For research activities that may involve potential impacts on or time/area conflicts with subsistence hunting areas, activities, and/or resources:
    a. The Captain/Crew of the R/V *Sikuliaq* will report location, speed, direction, and purpose of transit to interested communities via the tribal office or designated local contact at least once every six hours or as requested by interested communities.
    b. If identified as a necessary mitigation measure, the ship may have a Protected Species Observer (PSO)[4] on-board who will record marine species observed during the cruise during daylight hours. Any notable observations will be communicated via the tribal office or designated local contact as noted in item II.B.3.a.
    c. Any additional monitoring/mitigation measures agreed upon during Pre-Cruise Actions (Section II.A.) will be implemented during cruise operations. This may include having a Community Observer onboard who may not be a qualified PSO but who will observe or participate in research activities, interact with the research team, and communicate about the research cruise with Alaskan communities.

C. Post Cruise Actions:

1. A Post-Cruise Summary for the cruise will be prepared by the PI using the template found on the UAF R/V *Sikuliaq* website. The Post-Cruise Summary will be submitted to the CFOS AD-RA within 90 days of cruise completion and will be posted on the UAF R/V *Sikuliaq* website.
2. If PSOs participated during the cruise, a final PSO report will be compiled within 90 days of cruise completion, submitted to the CFOS AD-RA, and will be posted on the UAF R/V *Sikuliaq* website. (This report may be incorporated into a Post-Cruise Summary for the research activity.)
3. A summary of past year research cruise activities, including research, monitoring, and mitigation highlights and any areas for improvements, will be presented by the CFOS AD-RA at a fall meeting to be determined by the CFOS AD-RA (likely the Fall AWSC Meeting).
4. The PI, or their designee, will report on any preliminary research results at a meeting identified by the CFOS AD-RA, likely the next Spring AWSC Meeting following the cruise. If agreed upon during Pre-Cruise Actions (see II.A.), PIs may need to report preliminary research results to affected subsistence communities.

[3] R/V *Sikuliaq* is part of the University-National Oceanographic Laboratory System (UNOLS).
[4] Qualifications necessary for the PSO will be determined during discussions with affected subsistence communities. PSOs will be subject to the regular code of conduct on board the vessel and UNOLS standards.

III. Roles and Responsibilities:

The following are general descriptions (not all-inclusive) of the roles and responsibilities associated with research cruises conducted on the R/V *Sikuliaq*.

CFOS Dean:
The Dean of CFOS has overall responsibility for CFOS personnel and facilities, including R/V *Sikuliaq* operations. As required, the Dean will work closely with the AD-RA, Marine Superintendent, Communication Specialist, Marine Advisory Program (MAP) agents, and the NSF in support of R/V *Sikuliaq* outreach activities and in accordance with these CECSOP procedures.

CFOS Associate Dean, Research Administration (AD-RA):
The R/V *Sikuliaq* has a single point of contact (POC) for issues related to subsistence hunting and environmental compliance: the CFOS Associate Dean, Research Administration (AD-RA). The AD-RA will maintain constant and close contact with the Marine Superintendent, and communicate and coordinate with the AWSC, NSF, and the PIs. The CFOS AD-RA will provide potential ship researchers working in the Arctic with the CECSOP for R/V *Sikuliaq* Research Operations, and will ensure that researchers are aware of the AWSC SOC Research Cruise Operations Draft Version 4 (25 Sept 2016), and the AWSC Safety Plan (April 2016; http://www.arcticwaterways.org/safety-plan.html). The CFOS AD-RA will review all pre-and post-cruise research operations cruise plans and distribute them to the NSF Environmental Compliance Officer, the Marine Superintendent, and the AWSC.

MAP Agent:
The AD-RA will work with appropriate MAP agents to connect the ship (through the Marine Superintendent) and potential PIs with the local communities in which they are working. The MAP agent duties may include organizing ship tours and PI outreach activities.

Marine Superintendent (MS):
The MS will work with the AD-RA with primary responsibilities to include acting as a liaison between the PIs and the MAP agents and reviewing all pre- and post-cruise reports. The MS will also work with the NSF Environmental Compliance Officer to ensure that NSF compliance process is complete and accurate. The MS participates in the UNOLS Arctic Icebreaker Coordinating Committee activities and will report ship activities to this group.

CFOS Public Information Officer and R/V Sikuliaq Science Liaison (SSL):
The SSL will assist the AD-RA in working with the communities, the MAP agents and the PIs. The SSL will also assist in general outreach activities for the ship.

NSF Environmental Compliance Officer:
The NSF Environmental Compliance Officer will send the NSF "Organization Environmental Impacts Checklist" (NSF EC Checklist) to the PI; the NSF EC Checklist can also be found on the UAF R/V *Sikuliaq* website and the NSF website. The NSF environmental compliance process, including compliance with federal environmental regulations and any necessary consultations, must be completed prior to cruise commencement. The NSF Environmental Compliance Officer will confirm with the CFOS AD-RA, Marine Superintendent, and PI

when documentation is complete. The NSF Environmental Compliance Officer is available to clarify any questions regarding compliance with federal environmental regulations and processes.

Principal Investigator (PI):
The PI(s) is responsible for completing the NSF Organization Environmental Impacts Checklist and the UAF Pre- and Post-Cruise Reports. They are responsible for ensuring that their research complies with NSF and R/V *Sikuliaq* policies and procedures, including the CECSOP. The PI is also still responsible for obtaining any permits[5] for the activities, such as a North Slope Borough Study Permit.

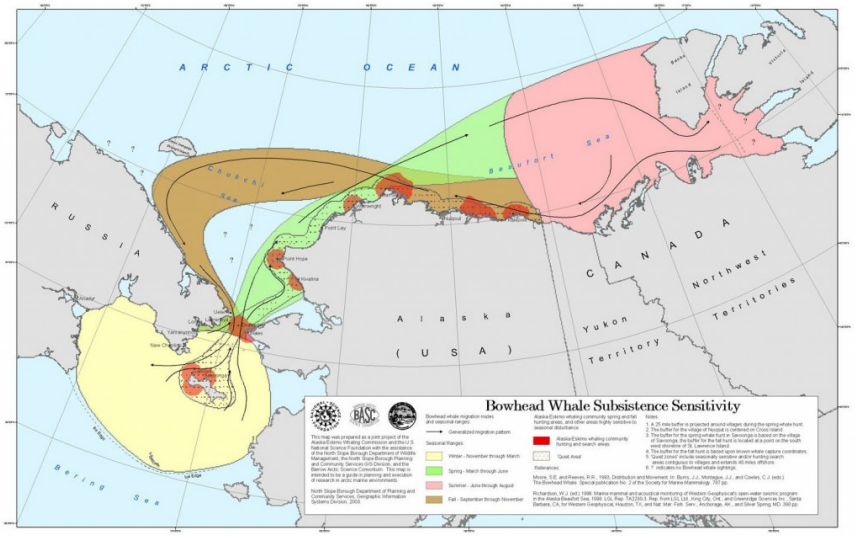
Protected Species Observer (PSO):
The PSO(s) participate during some cruises to assist with monitoring for marine species. PSOs[6] on-board will record any marine mammals observed during the cruise during daylight hours. Any observations will be communicated via the tribal office or designated local contact during the cruise and a final PSO report will be compiled within 90 days of cruise completion and will be posted on the UAF R/V *Sikuliaq* website. (This report may be incorporated into a final cruise report for the research activity.)

R/V *Sikuliaq* Captain and Crew:
The Captain of the R/V *Sikuliaq* has authority over the vessel and ensures compliance with all applicable regulations and UNOLS Research Vessel Safety Standards. The Captain and crew of R/V *Sikuliaq* ensure safe navigation of the vessel, including when in the vicinity of marine mammals. The Captain and/or crew of the R/V *Sikuliaq* will report location, speed, direction, and purpose of transit to interested communities via the tribal office or designated local contact at least once every six hours or as requested by interested communities.

[5] For clarification, the term "permit" is often colloquially used in reference to all environmental compliance activities, including federal authorization received under a federal regulation such as the MMPA or ESA. Obtaining a "permit", however, does not include NSF's federal environmental compliance responsibilities, such as compliance with NEPA, MMPA, and ESA, or the resulting associated decisions and authorizations. Permits are often necessary for activities (e.g., construction) proposed to be conducted on federal, state, and local government lands and permits are therefore needed from the appropriate governing agencies (e.g., Bureau of Land Management, National Park Service, North Slope Borough, etc.).

[6] Qualifications necessary for the PSO will be determined during negotiations. PSOs will be subject to the regular code of conduct on board the vessel and UNOLS standards.

Appendix A



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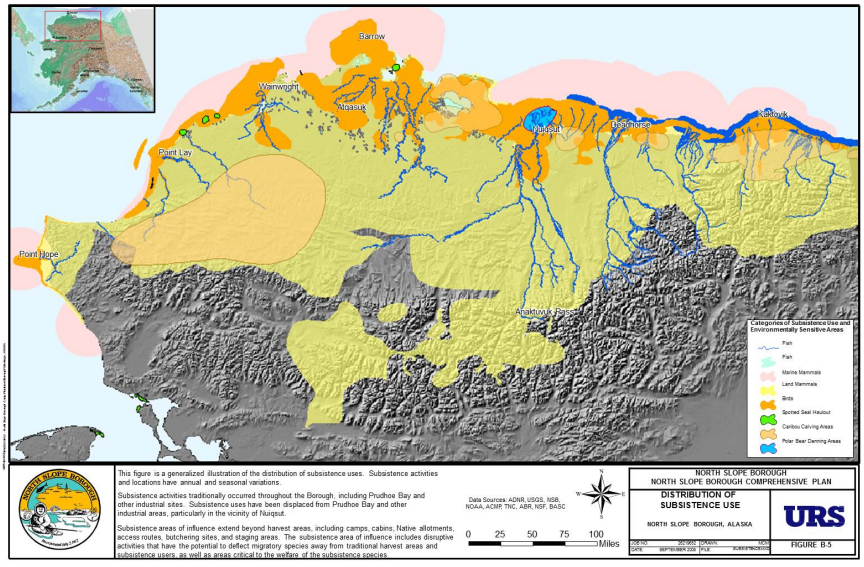
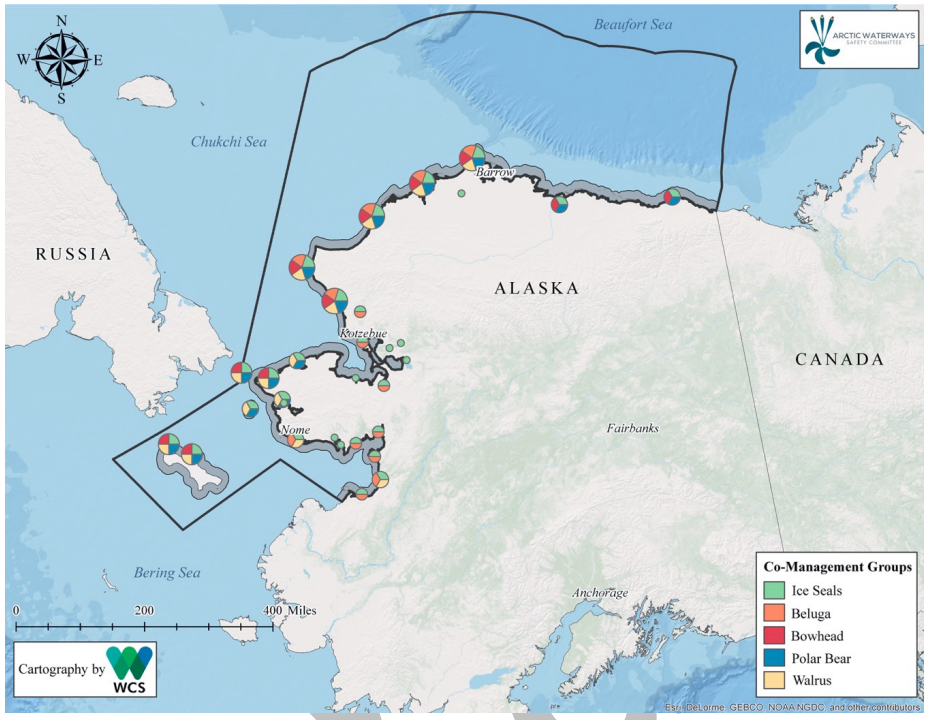


Source: http://www.north-slope.org/assets/images/uploads/b5.pdf



Co-management representation at the different coastal villages within the Arctic Waterways Safety Committee's area. A 12 nautical mile buffer is shown along the coast for scale. Source: Arctic Waterways Safety Plan, April 2016; http://www.arcticwaterways.org/safety-plan.html.