

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 (CFOS) at the University of Alaska Fairbanks (UAF). The vessel is designed to support a wide variety of research activities and operate in arctic and sub-arctic regions where Alaska Native marine mammal harvest activities for subsistence use may simultaneously occur. In light of the importance of maritime subsistence activities to coastal communities in these regions (Figure 1), 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, the Community and Environmental Compliance Standard Operating Procedures (CECSOP), states the standard operating practices aboard the *Sikuliaq*; provides guidance to identify/communicate/mitigate potential impacts on, or time/area conflicts with, maritime subsistence harvest areas, activities, and resources; explains environmental compliance procedures; and describes the various roles and responsibilities of individuals involved in these processes. These SOPs are intended to support best practices while facilitating use of this unique vessel, enhance cruise success, encourage appropriate and necessary outreach to potentially interested coastal communities (e.g., Tribal leadership, Alaskan Native organizations, co-management entities that participate in management of marine mammals, and other community and regional organizations), and ensure compliance with applicable federal environmental regulations (e.g., National Environmental Policy Act (NEPA), Marine Mammal Protection Act (MMPA), and Endangered Species Act (ESA)). To the extent possible, the CECSOP was prepared to take into consideration the Arctic Waterways Safety Committee (AWSC) Standard of Care for Research Cruise Operations (SOC)¹ document, which was also being developed at the time of this document preparation. The [AWSC](#) is a coordination group comprised of Arctic waterway stakeholders (e.g., individuals and representatives from Alaska Native Organizations, industry, local government, and others) that is meant to provide a unified forum for local marine interests in the Alaskan Arctic, and to act collectively on behalf of those interests to ensure a safe, efficient, and predictable operating environment for all current and future users of arctic waterways. The CECSOP provided here is a living document and may be adjusted in the future based on new guidance, such as a revised AWSC SOC or other best practices that are identified.

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. UAF and CFOS personnel that manage the R/V *Sikuliaq* are dedicated to assist and support PIs in complying with these or modified SOPs.

¹ The Arctic Waterways Safety Committee (AWSC) Standard of Care (SOC) for Research Cruise Operations Draft 22 Feb 2017 Version. A full list of acronyms is listed in Appendix A.

I. General Guidance for Research Activities:

- A. If possible, research activities should be planned to avoid impacts on, or time/area conflicts with, maritime subsistence harvest areas, activities and marine resources (see Appendix B for available information on general maritime subsistence resources/migration periods/harvest activities).
- B. To achieve research goals, while minimizing community impacts, discussions may be needed with potentially affected coastal communities if funded research activities cannot avoid impacts on and time/area conflicts with maritime harvest areas, activities, and resources; for example, when:
 - a. Activities are expected to cause conflict
 - b. Research is to be conducted within 50 nm of Barrow or within 30 nm of other coastal villages or established whaling camps (Figure 1)
 - c. Research is to be conducted within a distance of 12 nm (U.S. territorial limit) from the rest of the Arctic coastline

The distances listed here were recommended by the communities represented in the AWSC and are included in the AWSC SOC Draft 22 Feb 2017 Version. Transit in itself through the Bering Strait will be conveyed to interested parties by the MS. PIs will be notified if further action is necessary.

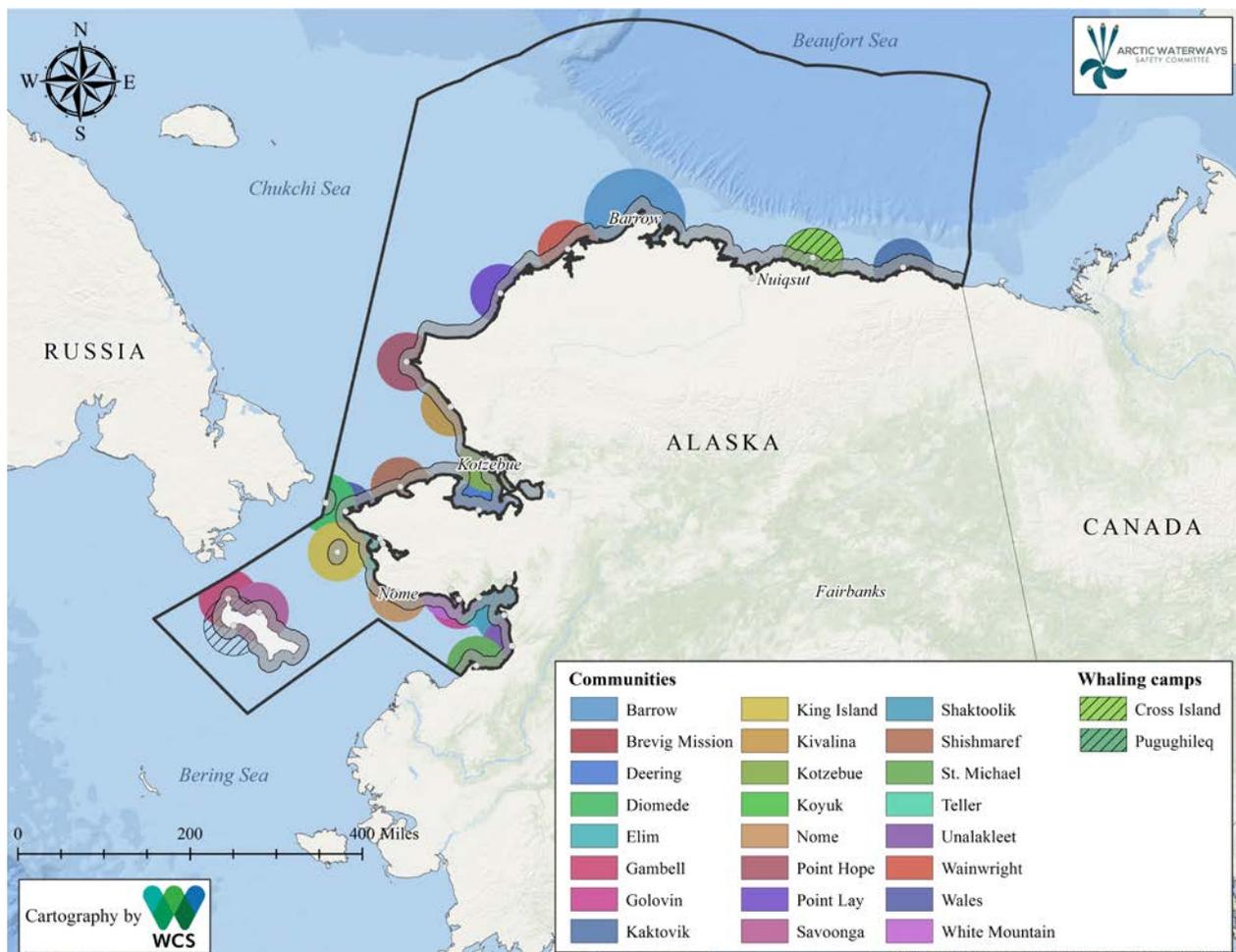


Figure 1. Arctic villages and coastal areas of concern per AWSC SOC for Research Cruise Operations Draft 22 Feb 2017 Version.

II. Standard Operating Procedures (CECSOPs)

A. Pre-Cruise Actions:

1. PIs scheduled for, or potentially interested in, using the R/V *Sikuliaq*, should review these CECSOPs 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 Administration (AD-RA) for additional guidance or clarification with respect to conducting research in the region relative to maritime subsistence issues and the Marine Superintendent regarding vessel capabilities/limitations.
2. Once a research activity has been scheduled on the vessel (regardless of the sponsoring agency/organization), the NSF Division of Ocean Sciences Environmental Compliance Officer (NSF OCE ECO) will send the NSF “Organization Environmental Compliance 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. Within three weeks of receiving the NSF EC Checklist, PIs should complete it for the research activities, have it signed by their Institution’s Authorized Organizational Representative, which indicates institutional concurrence, and return it to the NSF OCE ECO for review.
3. Project summaries and presentations:
 - a. Within two weeks of the PIs being informed of an award recommendation by a sponsoring agency/organization, the PIs should provide the CFOS AD-RA with a one-page project summary using the template found on the UAF R/V *Sikuliaq* website that presents the research questions, the location and timing of the research, and the general research activities to be conducted. This document will be used to communicate the planned scientific objectives to the AWSC one month prior (if possible) to their fall (Nov/Dec) meeting and to determine if the PIs should attend future AWSC meetings, meetings of co-management organizations such as the Alaska Eskimo Whaling Commission (AEWC), and/or meetings with potentially affected communities (see Section II.A.4). The PIs also need to complete the Pre-Cruise Plan template located on the UAF R/V *Sikuliaq* website.
 - b. If, after assessing the one-page summary, the CFOS AD-RA determines there are no time/area conflicts, then the PIs need only supply the CFOS AD-RA with a 3-5 slide presentation that can be used by the CFOS AD-RA at the fall AWSC meeting and/or an AEWC meeting to briefly introduce attendees to the research and cruise plans.
 - c. If the one-page summary, as assessed by the CFOS AD-RA, indicates that there may be a time/area conflict as described in Section I.B, then the PIs, or a qualified designee², may need to attend the fall AWSC meeting and/or the AEWC meeting to present an overview of the 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 Marine Advisory Program (MAP) agent; *Sikuliaq* Science Liaison, etc.). Input will be sought at the meeting as to whether the funded research activity has the potential to impact maritime subsistence activities and/or marine resources and if additional discussions with

² In this document, a “qualified designee” is defined as someone capable of discussing and answering questions about the proposed research, techniques, methodologies, cruise routing and tracks.

potentially affected parties is recommended, and if so, specifically which entities (e.g., co-management entities, whaling captains associations, tribal governments, etc.). PIs, or a qualified designee, may need to attend additional meetings to discuss funded research activities with potentially affected parties and develop monitoring and mitigation measures in order to avoid or minimize potential impacts to maritime subsistence harvest areas, activities, and resources. The CFOS AD-RA will coordinate and assist PIs with this effort. For NSF funded projects, NSF Program Managers are aware that additional travel funds may be needed for these purposes. For non-NSF projects, PIs should consult with their funding entities.

- d. If necessary, a modified research pre-cruise plan, incorporating any agreed upon monitoring/mitigation measures, will be presented by the CFOS AD-RA, PI, or qualified designee, at a meeting to be determined by the CFOS AD-RA (likely the Spring AWSC meeting or February AEWG 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.
4. The NSF environmental compliance process overseen by the NSF OCE ECO, including compliance with federal environmental regulations and any necessary consultations, must be completed prior to cruise commencement. Compliance with the required environmental regulations can be a lengthy process. For example, formal authorizations associated with the MMPA take a minimum of 120 days and formal consultations associated with the ESA take a minimum of 135 days. Informal consultations under the ESA can take a minimum of 30 days. The NSF OCE ECO will confirm with the CFOS AD-RA, Marine Superintendent, and PI when documentation is complete.

NSF retains the discretion to deny any research activities from going forward if environmental or subsistence concerns are revealed and not resolved 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 (international, federal, state, and local) and UNOLS³ Research Vessel Safety Standards, and will navigate the vessel responsibly, particularly when operating in the vicinity of marine mammals.
2. For research activities that will not involve impacts on or time/area conflicts with maritime subsistence harvest areas, activities, and/or resources, no special monitoring or mitigation measures for marine mammals will be warranted unless required by authorizations issued by the National Marine Fisheries Service or U.S. Fish and Wildlife Service as mandated by the Marine Mammal Protection Act or Endangered Species Act.
3. For research activities that may involve potential impacts on or time/area conflicts with maritime subsistence harvest areas, activities, and/or resources:
 - a. The Captain/Crew of the R/V *Sikuliaq* will report location, speed, direction, and

³ R/V *Sikuliaq* is a vessel in the U.S. Academic Research Fleet and is scheduled through the University-National Oceanographic Laboratory System (UNOLS).

purpose of transit to interested communities via their Tribal office or designated local contact as requested.

- b. Any additional monitoring/mitigation measures agreed upon during Pre-Cruise Actions (Section II.A.) will be implemented during cruise operations, which may include having a Protected Species Observer (PSO) or Local Expert (LE) onboard. A PSO is a person who has been typically approved by the National Marine Fisheries Service (NMFS) and can identify, document, and report on marine mammal observations per MMPA authorization or ESA consultation requirements. A PSO(s) is typically responsible for enforcing monitoring and mitigation measures and any formal reporting requirements identified in permits or authorizations, such as per the MMPA and ESA. An LE may not be a qualified PSO but will observe or participate in research activities, interact with the research team, and communicate about the research cruise with Alaskan communities. Whether an LE will be needed will be determined during discussions with local communities. The researcher of the funding entity would need to pay for the PSO and LE (if required). Regardless, of whether a PSO or LE is required, researchers are encouraged to retain the services of an LE from subsistence hunting villages on arctic cruises whenever possible. All LE personnel will be asked to provide documentation of their communication efforts to local communities during and after the cruise (e.g. written reports, access to social media, etc.).

C. Post Cruise Actions:

1. A Post-Cruise Summary 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 a PSO and/or Local Expert participated during the cruise, a final report by each 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.) A PSO(s) will also be responsible for preparing and submitting any formal reports required by permits or authorizations, such as per the MMPA and ESA
3. A summary of past year research cruise activities involving R/V *Sikuliaq* may be presented by the CFOS AD-RA at the Fall and Spring AWSC Meetings, and possibly other meetings as appropriate.
4. If the project needed mitigation to avoid impacts to subsistence hunt activities or resources (as determined prior to the cruise), the PI, or their designee, may need to report on preliminary research results, mitigation highlights and any areas for improvements at the next scheduled AWSC Meeting. If agreed upon during Pre-Cruise Actions (see Section II.A.), PIs may need to report preliminary research results to affected coastal communities.

III. Roles and Responsibilities:

The following are general descriptions (not all-inclusive) of the roles and responsibilities of individuals 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, *Sikuliaq* Science Liaison, MAP agents, and 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 maritime subsistence harvests and environmental compliance: the CFOS Associate Dean, Research Administration (AD-RA). The AD-RA will maintain constant and close contact with the Marine Superintendent as well as communicate and coordinate with the CFOS Public Information Officer and R/V *Sikuliaq* Science Liaison (SSL), MAP agents, the AWSC, NSF, and the PIs. The CFOS AD-RA will review all pre- and post-cruise research operations cruise plans and distribute them to the NSF OCE ECO, the Marine Superintendent, the SSL, MAP agents, and the AWSC. The CFOS AD-RA will also coordinate with the SSL to review and distribute the one-page research summaries, and give any needed research presentations at appropriate meetings.

Marine Superintendent (MS):

The MS will work with the AD-RA with primary responsibilities to include reviewing all pre- and post-cruise reports. The MS will also work with the NSF OCE ECO to ensure the NSF compliance process is properly completed prior to cruise commencement. 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 CFOS Public Information Officer acts as the SSL. The SSL will assist the AD-RA in working with the communities, MAP agents, and the PIs. The SSL will provide potential ship researchers working in the Arctic and subarctic regions with the CECSOP for R/V *Sikuliaq* Research Operations, and will ensure that researchers are aware of the current AWSC SOC and the [AWSC Safety Plan](#). The SSL will be available to assist PIs with their one-page summaries and required compliance meeting presentations (such as for the AWSC meeting and/or the AEWSC meeting). The SSL will also assist in general outreach activities for the ship.

Marine Advisory Program (MAP) Agent:

If applicable, the AD-RA and SSL will work with appropriate MAP agents to connect the ship (through the Marine Superintendent) with the local communities in which they are working. The MAP agent duties may include assisting with R/V *Sikuliaq* logistic support and regional community communications. If requested, the MAP agent may also assist the PIs with local outreach activities.

NSF Ocean Sciences Division Environmental Compliance Officer (NSF OCE ECO):

The NSF OCE ECO will send the NSF “Organization Environmental Compliance 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 OCE ECO will confirm with the CFOS AD-RA, Marine Superintendent, and PI when documentation is complete. The NSF OCE ECO is available to clarify any questions regarding compliance with federal environmental regulations and processes.

Principal Investigator (PI):

The PI(s)/Institutions are responsible for completing and submitting the NSF Organization

Environmental Compliance Checklist. The PIs are also responsible for completing 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 those outlined in this CECSOP. They are also responsible for providing the one-page summary of their research, any requested presentations, and possibly attending meetings as outlined in Section II.A.3. Additionally, the PI(s) are responsible for obtaining any necessary permits⁴ for the proposed activities (e.g., North Slope Borough Study Permit).

Protected Species Observer (PSO):

The PSO(s) participate during some cruises to assist with monitoring for marine species. PSO(s)⁵ on-board will record any marine mammals observed during the cruise during daylight hours. A PSO(s) is typically responsible for enforcing monitoring and mitigation measures and any formal reporting requirements identified in permits or authorizations, such as per the MMPA and ESA. Although UAF will assist with arranging for PSOs, the funding for PSOs is borne by the ship user.

Local Expert (LE):

Qualifications for an LE will be determined during negotiations. LEs will be subject to the regular code of conduct on board the vessel and UNOLS standards. The LE will maintain a record of all communications made or received by the LE, including ship-to-shore and communications with subsistence hunting boats, as well as any marine mammal sightings made by the LE. Any observations will be communicated via the tribal office or designated local contact during the cruise and a final LE report will be compiled within 90 days of cruise completion and will be posted on the UAF R/V *Sikuliaq* website. Although UAF will assist with arranging for LEs, the funding for the Local Expert is borne by the ship user.

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 has the right to refuse to perform any activities that are not contained within the agreed upon cruise plan if deemed contrary to the processes laid out in this document. To the extent feasible, any decisions that are not directly related to the safety and integrity of persons, the vessel, or other properties and that impact research activities will be made in consultation with the Chief Scientist. The Captain and crew of R/V *Sikuliaq* ensure safe navigation of the vessel, including when in the vicinity of marine mammals and other marine resources. The Captain and/or crew of the R/V *Sikuliaq* will report location, speed, direction, local weather conditions, sea ice conditions, and purpose of transit to interested communities via the tribal office or designated local contact as requested by interested communities. The Captain and crew may

⁴ 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. Additionally, authorization is often necessary for proposed activities (e.g., construction) to be conducted on federal, state, and local government lands. If applicable, the PI(s) are responsible for obtaining needed permits from the appropriate governing agencies (e.g., Bureau of Land Management, National Park Service, North Slope Borough, etc.).

⁵ Qualifications necessary for the PSO will be determined during consultations/negotiations. PSOs will be subject to the regular code of conduct on board the vessel and UNOLS standards. PSO(s) are typically NMFS approved and can identify, document, and report on marine mammal observations per consultation requirements, such as per the MMPA.

work directly with MAP agents regarding communications, outreach, and/or logistical assistance when underway and/or during a port call.

Appendix A.

List of acronyms used in this document.

AD-RA: Associate Dean for Research Administration

AEWC: Alaska Eskimo Whaling Commission

AWSC: Arctic Waterways Safety Committee

CECSOP: Community and Environmental Compliance Standard Operating Procedures

CFOS: College of Fisheries and Ocean Sciences

ESA: Endangered Species Act

LE: Local Expert

MAP: Marine Advisory Program

MMPA: Marine Mammal Protection Act

MS: Marine Superintendent

NEPA: National Environmental Policy Act

NSF: National Science Foundation

NSF EC Checklist: Organization Environmental Compliance Checklist

NSF OCE ECO : NSF Division of Ocean Sciences Environmental Compliance Officer

PI: Principal Investigators

POC: point of contact

PSO: Protected Species Observer

SOC: Standard of Care for Research Cruise Operations

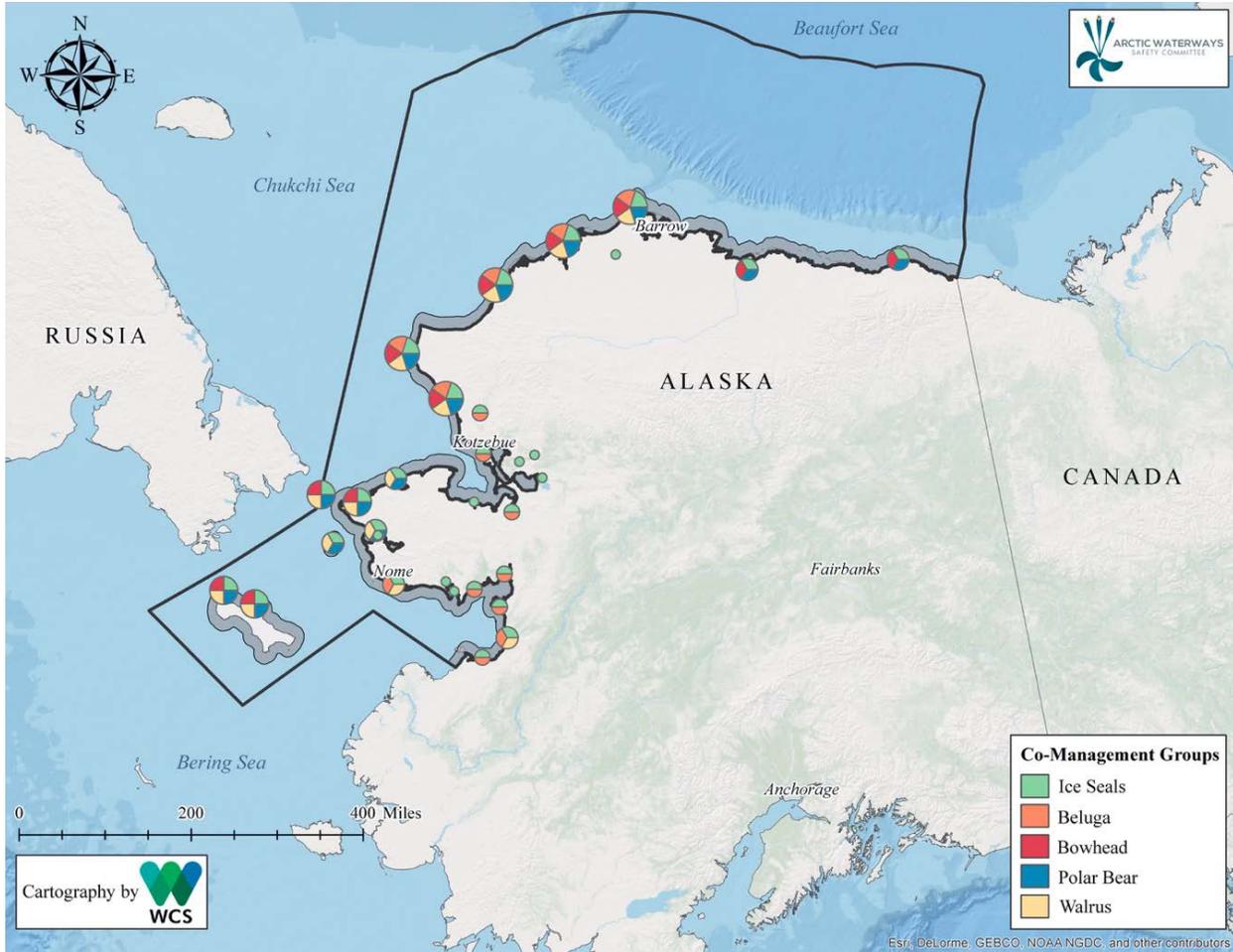
SOP: standard operating procedures

SSL: R/V *Sikuliaq* Science Liaison

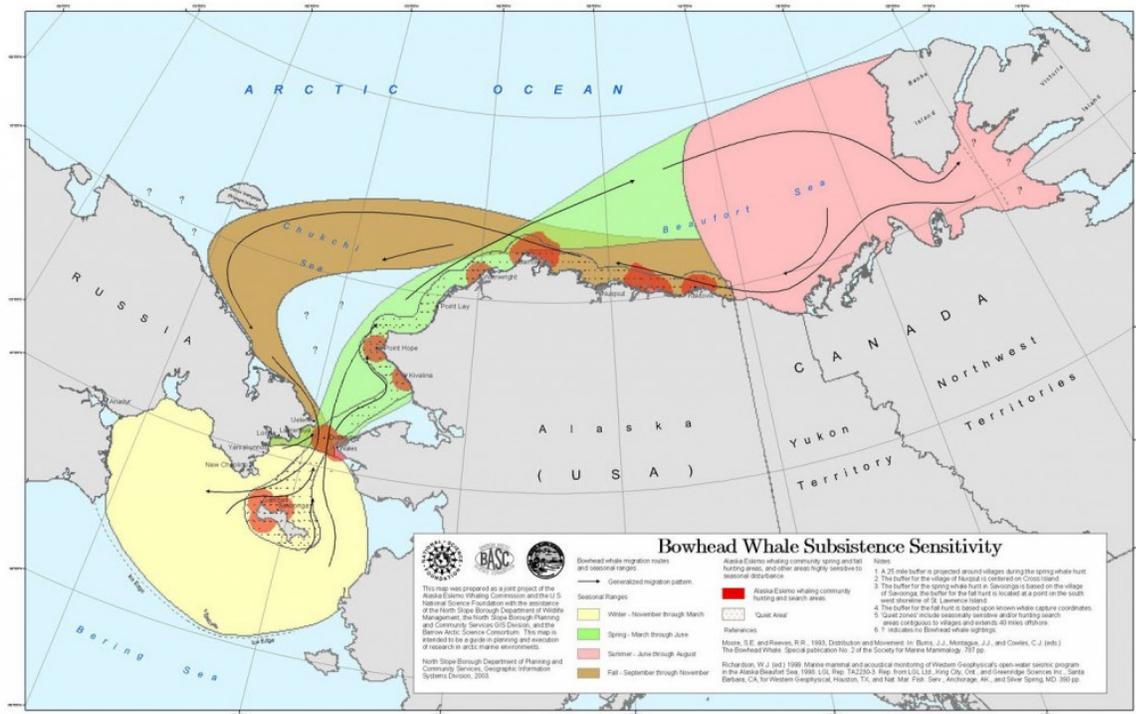
UAF: University of Alaska Fairbanks

Appendix B.

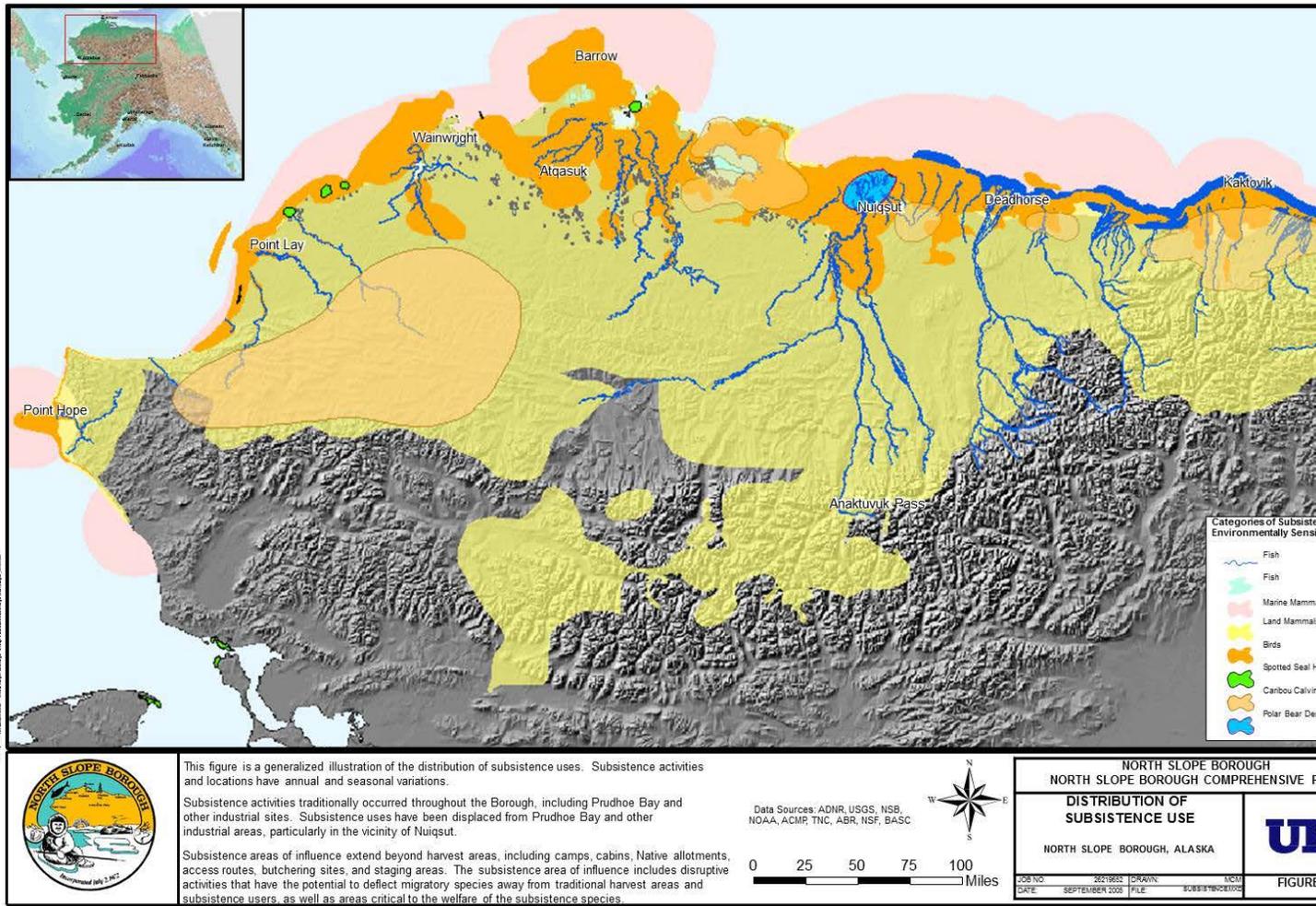
Maps showing some of the subsistence use areas and marine mammals of interest. This is not an exhaustive list but is what was available when this document was completed. For larger images, please go to the links provided.



Alaska Native Marine Mammal Co-management organizational representation for 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.



Bowhead whale subsistence sensitivity areas highlighting migration paths. Source: http://icefloe.net/files/Bowhead_Whale_Subistence_Sensitivity.jpg



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