

**Arctic Waterways Safety Committee
Standards of Care (SOC) Research Survey Operations
DRAFT Version 4 September 25, 2016**

Dear Users of the Arctic Waterways,

Commercial, industrial, and research interests in the Arctic are expanding rapidly, including in the waters of the U.S. Exclusive Economic Zone. The potentials are numerous and exciting and give rise to the need for guidelines to ensure that all waterway users remain safe throughout their voyages. Of particular concern is the potential for adverse impacts to the U.S. Arctic coastal communities that rely on sea life for their nutritional and cultural health, through subsistence hunting from small craft.

The guidelines set forth in this document have been developed, through a consensus of current waterways users,¹ for the purpose of providing operating and communications guidelines to ensure that potential conflicts between the scientific research community and subsistence hunters are avoided. Referred to as a “Standard of Care,” in keeping with accepted maritime terminology, the guidelines provided here are based on an acknowledgement that local conflicts could possibly occur when research surveys are underway. The intent of the Standard of Care is through consensus to establish the communication protocols needed to prevent surprises (on all sides) and to provide a framework for mitigating identified conflicts, while also setting forth means of avoiding impasses or wastage of time during a survey due to unanticipated conflict.

Language used here is intentionally direct for clarity. While all research proposals will not need to access the full process described in this Standard of Care, the guidance provides researchers a source of valuable information for survey planning and for issues that could arise during operation, as well as opportunities for debriefing after a research season. The process outlined can be thought of as a set of filters that inform users where conflicts are likely to occur and consensus by which conflicts can be addressed if they do arise.

The Arctic Waterways Safety Committee (AWSC) is not a new authority; rather it is a venue for deliberation toward consensus. While the Standard of Care is not a statutory or regulatory document, it may support the intent of several laws and guidelines, including: (1) the Marine Mammal Protection Act, (2) the Endangered Species Act, (3) Executive Order 13175 (Tribal Consultation), (4) the United Nations Convention on the Law of the Sea (UNCLOS), and (5) the International Maritime Organization (IMO) Polar Code. Furthermore, Standards of Care are published within the Arctic Waterways Safety Plan, a U.S. Coast Guard endorsed approach for minimizing conflict in the Arctic waterways. This Standard of Care will be appended to the Arctic Waterways Safety Plan upon completion of both documents.

¹ This specific document, related to the activities of research vessels, reflects the input of numerous Federal agencies that conduct and/or fund scientific research, researchers, vessel operators, and the wider suite of Arctic waterways users, including the Alaska Native communities that use the Arctic Waterways to accomplish their food and cultural security needs. Importantly, the document reflects existing expertise and consensus and builds on numerous examples of successful conflict mitigation.

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Finally, the Standard of Care is a living document. It is based on the consensus from discussions at the AWSC and other co-management meetings but is expected to be refined with experience, including with improved networks of communication per Table 1.

What are Standards of Care?

- Standards of Care are the procedures and practices, beyond regulatory requirements, that experienced and prudent maritime professionals follow to ensure safe, secure, efficient, and environmentally and culturally responsible maritime operations.
- Formalized Standards of Care are “good marine practices” that are developed and published to provide a guide for maritime professionals to consider and incorporate into their decision making process.
- Standards of Care are not regulations and thus not enforceable. In some special circumstances, they may not be the best course of action to take. Alternative procedures may be more appropriate.
- Mariners should be mindful that if they are involved in a maritime incident (such as a grounding or spill) when not following relevant “Standards of Care” they could be subject to legal action based on a rebuttable presumption of negligence.
- These Standards of Care are not all inclusive. They complement the laws and regulations, and should they seem to conflict with law or regulation, the law or regulation is always superior.

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**STANDARD OF CARE (SOC)
RESEARCH VESSEL OPERATIONS**

SOC Quick Reference

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PREAMBLE

Vessel activities associated with scientific research² should be planned and carried out so as to minimize any potential conflict with Alaska Native marine mammal subsistence hunting activities that are protected by the U.S. Marine Mammal Protection Act. This Standard of Care, a component of the Arctic Waterways Safety Plan, outlines the thresholds at which research participants should communicate with local communities, tribes, and their representatives prior to initiating activities in areas of active or anticipated marine mammal subsistence hunting for the purpose of identifying protocols and measures to mitigate potential conflicts.

A. PURPOSE

The purpose of this Standard of Care is to provide best management practices for research vessel operators, researchers, and agency funders operating in the Arctic Waterways (Figure 1) to minimize potential conflicts (Appendix 1) between research vessel operations and Alaska Native subsistence users. This document includes:

- A pre-season process to communicate upcoming research surveys with subsistence user groups early in the planning process;
- A pre-season process to help identify areas where there is a high likelihood for potential conflicts;
- In-season protocols for real-time communications during the field season should there be a potential for conflicts; and
- Post-season mechanisms for researchers to review any conflicts and share findings with the communities.

This Standard of Care does not replace existing mitigation measures or agreements³. The protocols outlined here are meant to promote dialogue between vessel operators, researchers, and agency funders and coastal communities, and through doing so, to minimize both conflict and potential negative environmental and safety impacts for all users of the Arctic waterways.

² We define scientific research as a gathering of data, information, and facts for the advancement of knowledge through a methodical study in order to prove a hypothesis or answer a specific question. Scientific research is systematic and follows a series of steps and a rigid standard protocol. This document does not apply to research conducted in conjunction with spill response and damage assessment. Spill response research would be coordinated with the Trustees and communities. However, research conducted under the Natural Resource Damage Assessment would be unable to adhere to the timelines outlined in this document. If a scientific research survey has the potential to “take” marine mammals, as defined by the Marine Mammal Protection Act, a Marine Mammal Protection Act Incidental Take Authorization may be issued, which would include an additional set of mitigation and monitoring measures. The National Marine Fisheries Service or U.S. Fish and Wildlife Service (as appropriate) can provide guidance as necessary.

³ Examples of existing agreements or measures include an Alaska Eskimo Whaling Commission Open Water Season Conflict Avoidance Agreement or any specific agency or vessel procedures in place to protect specific hunting areas and activities.

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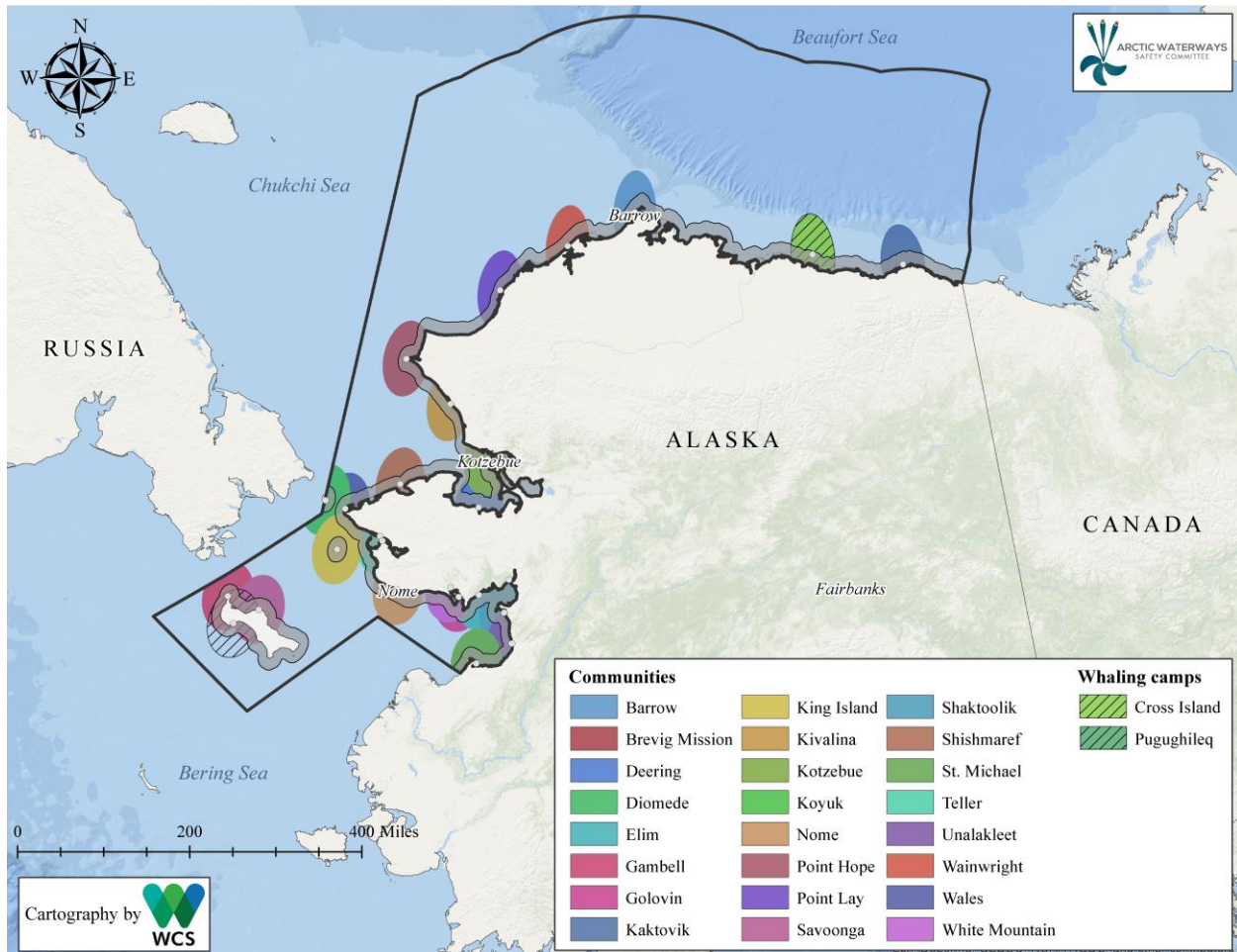


Figure 1. Arctic Waterways Safety Committee region, with communities shown with 30 nm buffers and a 12 nm buffer along the coast (where numerous summer subsistence camps are located). The Southern border is an Alaska Native Claims Settlement Act boundary, and the western and northern boundaries are defined by the United States Exclusive Economic Zone. Pugughileq is the local name for Savoonga’s spring whaling camp.

B. APPLICABLE RESEARCH FUNDERS, AUTHORIZERS AND PARTICIPANTS

1. Academic, State, and Federal Research Institutions
2. Foreign-Flagged Research Vessels and Department of State Authorizers
3. Federal Funding Agencies: e.g., *National Science Foundation, Department of the Navy, Bureau of Ocean Energy Management, National Oceanic and Atmospheric Administration, Fish and Wildlife Service, United States Geological Survey, National Park Service*
4. Non-Federal Funding Institutions: e.g., *North Pacific Research Board*
5. Volunteer Coordination Committees: e.g., *Arctic Icebreaker Coordinating Committee*
6. Research Vessel Operators
7. Principal Investigators

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C. APPLICABLE ALASKA MARINE MAMMAL CO-MANAGEMENT PARTICIPANTS

1. Alaska Beluga Whale Committee
2. Alaska Eskimo Whaling Commission
3. Alaska Nanuuq Commission
4. Eskimo Walrus Commission
5. Ice Seal Committee

D. APPLICABLE REGIONAL AND LOCAL GOVERNMENT AND TRIBAL PARTICIPANTS

1. Regional and Local Government: North Slope Borough, Northwest Arctic Borough, Kawerak Inc., City of Nome⁴
2. Tribal Entities: Inupiat Community of the Arctic Slope, Bering Strait Native Association, Manillaq

SECTION II: COMMUNICATION AND CONFLICT RESOLUTION PROCEDURES⁵

E. RESEARCH COMMUNITY AWARENESS AND NOTIFICATION

1. Academic, State, and Federal Research Institutions: Provide summary of pending activities in areas of concern to the AWSC, including dates, locations, and source(s) of anthropogenic sound or other potential disturbances (e.g., transects) associated with the research program.⁶
2. Federal-funding Agencies: Provide Principal Investigators and Vessel Operators a copy of the Standard of Care and guidance as to its implementation.
3. Principal Investigators: Assign a point of contact with responsibility for engagement with the AWSC. This in most cases would be the Principal Investigators in the pre- and post-season. However, during a survey, the Field Party Leader or Chief Scientist would be the point of contact if the Principal Investigator is not aboard the vessel⁷. In some instances this could also be the research vessel operator. The onboard contact during the field season should be identified prior to departure from the initial

⁴ The North Slope Borough, Northwest Arctic Borough, and City of Nome entered an agreement supporting the formation and work of the AWSC. The North Slope Borough created a Port Authority to facilitate infrastructure development in support of future maritime activities, including marine research.

⁵ See Appendix 3 for simplified flow chart of the procedures.

⁶ Examples and templates of how to provide this information will be provided upon request.

⁷ Field Party Leader = Head of the scientific crew. Oversees the overall science operation and plans the operation in consultation with the Master of the Ship. As the Principal Investigator's representative aboard the vessel, the Field Party Leader submits reports on a prescribed basis regarding the survey or any other matter concerning operation. Chief Scientist = The person who provides a clean line of communication between the operating crew and the scientific party. This individual is responsible for not only his or her own program but also for the projects of all scientists embarked. In addition, the personal conduct of the scientific party is under the purview of the Chief Scientist who is under the overall supervision of the Master of the Ship.

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embarkation point for the survey. This individual will communicate and coordinate with the AWSC, co-management organizations, regional entities, and affected villages, as set forth in this Standard of Care.

F. COMMUNICATION TRIGGERS AND PROCESSES

1. Communication Triggers: Scientific research project contacts should initially communicate with the AWSC for research-related activities (in either the open-water or ice-covered season) planned to occur within the Arctic Waterways (Figure 1), particularly where:
 - a. Activities are expected to cause conflict;
 - b. Activities occur within 50 nautical miles of Barrow or within 30 nautical miles from all other coastal villages; or
 - c. Activities occur within a distance of 12 nautical miles from the rest of the Arctic coastline.

2. Pre-Season Communication Process:
 - a) Late Fall Prior to Research Season
 - (i) *Research Participants*: Research participants (prospectively the Principal Investigator or his/her designee) who plan to conduct vessel-based scientific research within the areas identified in Section F.1(a)-(c) of this document, may report on research proposals, draft research survey plans, and any other research-related activities at the annual fall (expected to be November or December) meeting of the AWSC to seek guidance on the need for further consultation and to identify Alaska Native Organizations and other regional or local entities with whom to consult⁸. Notification should be given to the AWSC Chair and Secretariat at least three weeks prior to the annual fall meeting to ensure time is allotted on the meeting agenda.
 - (ii) Research participants planning projects in the Arctic Waterways beyond the distances set forth in Section F.1(a)-(c) of this document should send a notification to the AWSC at least three weeks prior to the annual fall meeting. The AWSC will advise, via email, on the existence of any potential conflicts with subsistence activities or marine mammal aggregations and, where applicable, additional communication may be necessary to mitigate those conflicts. In most cases, no further notification or communication will be necessary for these projects. However, in some instances, the AWSC may ask for additional details during the annual fall meeting.

⁸ Key research principal investigators may be invited to present at these meetings. Consistent attendance by vessel operators or their representatives will help build the necessary relationships to support effective research partnerships moving forward. The AWSC will provide an opportunity to discuss each research vessel survey, identify specific conflicts, and provide guidance by consensus on the next steps for informing hunter groups and villages that may be impacted. A standard notification form for regional and village contacts is provided by the Arctic Waterways Safety Plan based on existing protocols and forms being used by the Alaska Ocean Observing System (AOOS) Arctic Asset Registration (<http://www.aos.org/arctic-assets-registration/>).

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(iii) AWSC meeting organizers will prepare an agenda that would provide time to discuss research plans in the Arctic Waterways region.

b) Initiate Mitigation Meetings: As requested by the AWSC, for cases where potential conflicts have been identified (after presentation of the research survey plans at the fall AWSC meeting), research participants meet with potentially affected Alaska Native Organizations regarding the purpose and objectives of the research; proposed vessel routing; development of mitigation measures, where needed; and instruction regarding the need for village-specific meetings⁹.

c) Research in the Vicinity of Subsistence Communities:

(i) Any research activity planned to occur within the areas identified below constitutes a trigger for further communications (as described in this Standard of Care):

- Within 50 nautical miles of Barrow;
- Within 30 nautical miles of the villages of Kaktovik, Nuiqsut, Wainwright, Pt. Lay, Pt. Hope, Kivalina, Wales, Gambell, Savoonga, or Diomede or the whaling camps at Cross Island (Beaufort Sea) or Pugughileq (Southwest cape of St. Lawrence Island); or
- Within 12 nautical miles from the rest of the Arctic coastline.

(ii) The Principal Investigator or his/her designee of any research activity that triggers the thresholds established by this Standard of Care should contact (via phone and email) the Alaska Eskimo Whaling Commission Office in Barrow (Appendix 2) no later than the fall (November/December) AWSC meeting of the year prior to the proposed research survey. In addition, the Principal Investigator or designee should present (or have presented) their plans for review and discussion at the meeting of the winter Alaska Eskimo Whaling Commission Board of Commissioners (in the year prior to the planned research operations), and at the February Annual Meeting of the AEWK (in the year of the planned research operations). Such researchers or designees should in some cases be prepared to meet directly with the Whaling Captains' Associations of any potentially affected villages to finalize mitigation measures necessary to protect subsistence whale hunting activities by that village¹⁰.

d) Village and Regional Meetings: After notification at the winter AWSC meeting, and as requested by the Alaska Native Organizations, Principal Investigators or their designees should meet with regional or village representatives before,

⁹ These meetings could occur in-person or via remote methods with the guidance being to use the medium that promotes resolution of potential conflict.

¹⁰ The distances set forth in this section are subject to revision based on future direct consultation with the listed communities.

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during, and post research through multi-media avenues and written reports (*see Appendix 2 for list of contacts*).

- e) Following Development of Agreed Mitigation Measures with Potentially Affected Alaska Native Organizations, Communities, and Regional Entities:
Principal Investigators or their designees should provide final survey plans at either the annual spring (expected to be February) meeting of the AWSC or July meeting of the Alaska Eskimo Whaling Commission, including incorporation of all mitigation measures developed through the Mitigation Process as set forth above. The plans will be in a format (**Appendix x**) that can be forwarded to hunter groups and regional or village representatives.
3. In-Season Subsistence Communication and Mitigation Process
- a) Communications During Season: Protocols for communicating during the field season will be enacted using established communication infrastructure and networks (**Appendix x**).
 - b) Communications Protocols: Communications should occur using previously agreed to protocols that may vary by location (e.g., phone, text, email, or other means specified in the communications plan). A communication schedule should be agreed among interested parties and the Principal Investigator or designee. Each communiqué should report the following information:
 - (i) Vessel name, operator of vessel, charterer or owner of vessel, and purpose of transit;
 - (ii) Vessel location, speed, and direction;
 - (iii) Planned vessel movement between the time of the communiqué and the time of the next scheduled communiqué. The final communiqué of the day should include a statement of the vessel's general area of expected operations for the following day, if known at that time.
EXAMPLE: This is the R.V. *Sikuliaq*, operated by UAF, in the northern Bering Sea. We are currently at xxx xxx North xxx xxx West, proceeding SE at xx knots. We will proceed on this course for x hours and will report location and direction again at x time.
4. Post-Season Review of Research and any Conflicts
- a) Principal Investigators or their designee should provide an initial written summary of completed field work to the AWSC by November 1 regarding their activities in areas of concern, conflict, and compliance issues. Conflicts in a season between research vessels and indigenous subsistence hunters will be discussed and reviewed by both the Science and Subsistence sub-committees at the fall AWSC meeting and passed on to the full AWSC.
 - b) Principal Investigators or their designee will report on the preliminary results and findings of the project at the spring AWSC meeting the season following the

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research operations. Upon request by local communities, researchers or their designees should also be prepared to report research results to hunter groups or local communities with whom they have consulted regarding mitigation through multi-media avenues and written reports.

G. MARINE MAMMAL/PROTECTED SPECIES OBSERVERS

1. If agreed mitigation measures call for the use of a Marine Mammal/Protected Species Observer (MM/PSO) onboard the vessel, residents of subsistence hunting villages should be given preference in selection of the MM/PSO positions¹¹.
2. As a member of the crew, the MM/PSO will be subject to the regular code of employee conduct on board the vessel and will be subject to discipline, termination, suspension, layoff, or firing under the same conditions as employees of the vessel operator or appropriate contractor.
3. The MM/PSO's duties are to:
 - a) Keep a lookout for marine mammals in the vicinity of the vessel in order to assist the vessel captain in avoiding harm to marine mammals.
 - b) Carry out the communication responsibilities set out in this document, including communication with marine mammal subsistence hunters and interpretation of communications as needed to allow the vessel operator to take such action as may be necessary to avoid conflicts.
 - c) The MM/PSO will maintain a record of all communications made or received by the MM/PSO, including ship-to-shore and communications with subsistence hunting boats, as well as any marine mammal sightings by the MM/PSO (See Appendix x for Sample Data Sheet).

H. OPERATING IN PROXIMITY TO MARINE MAMMALS

While the focus of this Standard of Care is on minimizing conflict between Alaska Native subsistence hunters and research vessels, indirect impacts on hunters can occur when marine mammals are disturbed. For example, whales can become more skittish and harder to hunt as a result of disturbance. Consequently, outside of some permitted research directed at specific marine mammals (e.g., tagging), adhering to the following guidelines will reduce indirect impacts to hunters.

1. Vessels should be operated at speeds necessary to ensure no physical contact occurs with marine mammals, particularly whales. Furthermore, vessels should be operated in a manner that minimizes potential conflicts with marine mammals or subsistence hunters (e.g., vessel speeds should be less than 10 knots in the proximity of feeding whales or whale aggregations).

¹¹ The logistics and arrangements for MM/PSO, where agreed, will follow the general agreement in Appendix x.

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2. If any vessel inadvertently approaches within 0.8 kilometers (0.5 mile) of observed bowhead whales, except when providing emergency assistance to whalers or in other emergency situations, the vessel operator will take reasonable precautions to avoid potential interaction with the bowhead whales, which may include:
 - a) Reducing vessel speed to less than 5 knots within 900 feet of the whale(s);
 - b) Steering around the whale(s) if possible;
 - c) Operating the vessel(s) in such a way as to avoid separating members of the group;
 - d) Operating the vessel(s) to avoid causing a whale to make multiple changes in direction;
and
 - e) Checking the waters immediately adjacent to the vessel(s) to ensure that no whales will be injured when the propellers are engaged.
3. If any vessel inadvertently approaches large aggregations of walrus...*[to be added]*.
4. If any vessel inadvertently approaches large aggregations of beluga...*[to be added]*.

I. MARINE MAMMAL SIGHTING DATA

1. As is current practice, vessel operators shall voluntarily submit all sightings of injured or dead marine mammals to NOAA. NOAA will make this information available to the AWSC.
2. Marine mammal sighting information from research vessels will not be made available to the AWSC or hunter associations in real time.

J. SHARING RESEARCH FINDINGS AND CONFLICT ISSUES WITH VILLAGES AND CO-MANAGEMENT ORGANIZATIONS

1. Funders of maritime research activities are encouraged to share results of the research project with local communities in proximity to the marine activities. Examples of venues include:
 - a) Arctic Waterways Safety Committee Meetings
 - b) Alaska Eskimo Whaling Commission Meetings
 - c) Eskimo Walrus Commission – Hunter Meetings on St. Lawrence Island
 - d) Alaska Beluga Whale Committee Meetings

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- e) UAF Northwest Campus and Alaska Sea Grant (Nome)

- 2. Previous year's data should be made available upon request by subsistence user groups. In addition, data collected by Federal agencies or research funded by Federal agencies will be made available to the public following established policies (e.g., Public Access to Research Results). Typically, these policies require all digital information to be made available through a public data portal within 12 months of collection.

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APPENDIX 1

TYPES OF CONFLICT CONCERNS

Researchers, agency staff, and funders can inform themselves about many of the potential conflicts through summary documents [such as the Alaska Eskimo Whaling Commission Open Water Season Conflict Avoidance Agreement, Arctic Marine Shipping Assessment] and Alaska Native Organization websites. Conflicts may include, but are not limited to:

1. Endangerment of marine mammal subsistence hunters due to vessel transit and wakes or other movements in open water, broken ice, or while ice breaking;
2. Disturbance of marine mammal subsistence hunting activities, including deflecting animals away from hunting areas or causing animals to become skittish so that hunting is more difficult or dangerous;
3. Ship strikes to marine mammals in migration corridors, particularly for large cetaceans;
4. Disturbance or strikes to marine mammals in feeding aggregations;
5. Disturbance or strikes to marine mammals in resting aggregations (e.g., disturbance of walrus at coastal haulouts with vessels close to shore).

The Standard of Care acknowledges the two critical components required to successfully implement the operating and communication guidelines codified in this document. They are: 1) adequate communication between subsistence hunters and researchers and 2) adequate logistic capacity to support productive communications. This protocol provides clarity as to what constitutes effective communication and acknowledges limited logistic capacity in many regions.

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APPENDIX 2

Coastal Village and Regional Contacts within the Arctic Waterways Safety Committee’s Area of Interest
~~To be Updated Annually~~

Regional Administration and Alaska Native Marine Mammal Co-Management	Village • <i>Subsistence Camp</i>	Regional Contacts	Village Contacts	Whaling Captains Association Contacts
Kawerak Inc.	Gambell 63.77877N, -171.74390W	Austin Ahmasuk marine.advocate@kawerak.org (907) 443-4368		Rodney Unwiluk, Jr. (907) 985-5060
	Savoonga 63.69326N, -170.48161W			George Noongwook (907) 984-6008 (907) 891-2942 Thomas Akeya (907) 984-6825
	• <i>Pugughileq</i> 63.3581N, -171.2837W			
	St. Michael			
	Unalakleet			
	Shaktoolik			

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	Koyuk				
	Elim				
	Golovin				
	White Mountain				
	Nome				
	<ul style="list-style-type: none"> • <i>King Island</i> 64.9694N, 168.0649W 				
	Teller				
	Brevig Mission				
	Wales 65.66865N, -168.09129W				Raymond Seetok (907) 664-2356 (907) 634-0320 Winton Weyapuk (907) 664-8139
	Diomede				Ronald Ozenna, Jr. (907) 686-2175 Henry Soolook (907) 684-1024
Shishmaref					
Northwest Arctic Borough		Deering			

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	Kotzebue 66.89765N, -162.59936W			
	Kivalina 67.72624N, -164.53624W			Enoch Adams, Jr. (907) 645-2138 Lowell Sage (907) 545-5045
North Slope Borough	Point Hope 68.34699N, -166.81099W	North Slope Borough		Herbert Kinneveauk (907) 368-2236 (907) 350-7835 Clark Lane (907) 36802453 (907) 947-5190
	Point Lay 69.75684N, -163.05425W	North Slope Borough Department of Wildlife Management		Julius Rexford (907) 833-2214 (907) 833-0045 Thomas Nukapigak (907) 833-0191
	Wainwright 70.63639N, -160.04174W	AIC Science		John Hopson, Jr. (907) 231-9178 Oliver Peetok (907) 763-0220
	Barrow 71.29011N, -156.79205W			Harry Brower, Jr. (907) 852-0350 (907) 878-2237 Eugene Brower (907) 852--3601

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	<ul style="list-style-type: none"> • <i>Cross Island</i> 70.4908N, -147.9458W 			
	Nuiqsut 70.21510N, -151.00552W			Isaac Nukapigak (907) 231-0855 Carl Brower (907) 242-1013
	Kaktovik 70.13173N, -143.62656W			Joseph Kaleak (907) 640-0018 Christopher Gordon (907) 640-0022
Alaska Beluga Whale Committee				
Alaska Eskimo Whaling Commission				
Alaska Nanuuq Commission				
Eskimo Walrus Commission		(907) 443-4380 1-877-277-4392		
Ice Seal Committee				

Other key communication contacts		
NOAA Marine Advisory Program	Gay Sheffield	

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APPENDIX 3

