Animal Use Protocol Form

Project Info.

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Project Title: Building the Capacity of Northern Inshore Collaborative Research
Principal Investigator: Dr. Scott Grant (School of Fisheries\Centre for Sustainable Aquatic Resources)
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Project Team Info.

Principal Investigator

Prefix: Dr.
Last Name: Grant
First Name: Scott
Affiliation: School of Fisheries\Centre for Sustainable Aquatic Resources
Position: Instructor
Email: Scott.Grant@mi.mun.ca
Phone1: (709) 778-0598
Phone2: 709 687-2995
Fax: 709-778-0661
Primary Address: 144 Ridge Road, P.O. Box 4920, St. John's, NL A1C 5R3
Institution: MUN (MI)
Country: Canada
Comments:

Other Project Team Members

Prefix	Last Name	First Name	Affiliation	Role In Project	Email
Ms.	Folkins	Margaret		Co-Investigator	maggie.folkins@mi.mun.ca
Mr.	Walsh	Philip	School of Fisheries\Centre for Sustainable Aquatic Resources	Co-Investigator	Philip.Walsh@mi.mun.ca
Mr.	Santos	Mark	School of Fisheries\Centre for Sustainable Aquatic Resources	Co-Investigator	mark.santos@mi.mun.ca
	Donovan	Meghan	School of Fisheries\Centre for Sustainable Aquatic Resources	Co-Investigator	meghan.donovan@mi.mun.ca

Common Questions

1. Project Description

#	Question	Answer
1.1	Is this a new protocol?	Application for a New Protocol
1.2	If a renewal, please provide the previous protocol number.	

1.3	If renewing or resubmitting, provide a summary of changes made to the application.	
1.4	The purpose of this animal protocol is to conduct:	Research
1.5	Lay Summary: Describe the objectives and rationale of your study in terms the general public would understand.	There is increasing pressure to utilize Arctic marine resources to minimize food insecurity through increased recreational/ subsistence harvesting and where suitable numbers of harvestable species occur there is interest in commercial development. To contribute to sustainable Arctic marine ecosystems, exploratory fisheries need to consider a comprehensive research strategy that includes indigenous tradition ecological knowledge (TEK) and building capacity to participate in research activities that foster community based management of renewable resources. Lack of community capacity to participate in research activities limits community partnerships in new emerging fishery initiatives and reduces the ability to extend scientific research. During this study, a newly constructed purpose built fisheries research vessel owned by the Qikiqtaaluk Corporation and indigenous supplied support vessels from four communities (i.e., Cape Dorset/ Kinngait, Sanikiluaq, Hall Beach, and Igloolik) will work in concert in waters adjacent to each community to determine the recreational/ subsistence and commercial fishery potential of benthic marine resources, specifically invertebrates (e.g., various species of shrimp, sea cucumbers, sea urchins, scallops, clams, and whelk). Sharing of knowledge, training, and capacity building among indigenous community members and researchers from the Marine Institute of Memorial University will occur during data collection associated with ecosystem based resource assessments with a variety of fishing gears, underwater video equipment, and seabed and mid-water sampling equipment. The primary objectives of the science-indigenous partnerships developed during this project are to carry-out collaborative ecosystem based fisheries resource assessments while promoting information

		exchange and supporting the development of indigenous skills required to not only participate in but also lead future programs to assess the status of marine resources and contribute science based information directly related to resource management. In addition to multibeam echosounder (MBES) surveys and physical sampling this project introduces a geo-referenced depth stratified underwater video survey providing high-resolution images of animals living on or near the seabed and their preferred bio-physical habitats. This innovative approach allows us to directly observe these hidden communities and how species distribution, abundance, and biodiversity differ over large spatial scales (i.e., Sanikiluaq to Igloolik represents 13° of latitude) as well as predict the effects of climate change on Arctic ecosystems. Local TEK will help to establish survey sites in waters adjacent to each community. Following MBES surveys, 30-minute depth stratified tows will be conducted with a video sled equipped with a georeferenced ultra-short baseline positioning system. Georeferenced drop camera surveys or small observation-class ROVs will be deployed where bottom conditions are unsuitable for towing. Video cameras will possess lasers for scaling and record at 4K resolution. In video surveys, all organisms larger than 2 cm will be identified to the lowest taxonomic level possible and counted while sediment type will be visually assessed to ground-truth the acquired MBES backscatter. Physical sampling of the seabed (Ponar grabs) will also be used to ground-truth seabed sediment classes. Observations of the number of individuals counted and computer software programs will be used to estimate density (number/m2) of potential commercial and ecologically important species from the video data. Once the site is surveyed, strings of baited pots will be deployed to provide a comparison of fishery-dependent capture rates (pots) to fishery independent density and biomass estimates (underwater video) of harvestable

		species. In addition to bottom grabs, an epibenthic sled and species specific dredges will be developed and tested to collect samples of organisms and provide supplementary biomass indices of species encountered. Multi-parameter sonde and CTD surveys will also be used to explain and compare species distribution, abundance, and diversity within and among communities. During the 2020 field season, a reduction in the duration of the field season is expected to restrict research to be carried out in one community, Cape Dorset (a.k.a., Kinngait). If time permits, the study will extend to Sanikiluaq. In 2020, the research vessel is expected to depart from Holyrood, NL on or about August 16, arrive in Cape Dorset on August 25, work in the Cape Dorset Region until September 21, and arrive back in Holyrood by October 5. To reduce the risk of contracting and spreading covid-19 during the 2020 field season, the research vessel will be crewed from insular Newfoundland and crew members will not get off the vessel until it returns to Newfoundland. During the 2020 field season, members of the crew will not have direct contact with community members. The crew will use personal protective equipment (face masks and gloves) and disinfecting solutions (hand sanitizer and sanitizing spray solutions for hard surfaces). A no-contact drop off of supplies will be arranged with community members to ensure necessary restocking and refueling of the vessel can occur. The Nunavut Chief Medical Officer has indicated that as long as the crew members can remain on the vessel, no additional quarantine is necessary. A letter of support for the research has been provided by the Kinngait (a.k.a, Cape Dorset) Hunters and Trappers Association and is attached to this application. During the 2021 and 2022 field season, the plan is to return to the above outlined collaborative research strategy involving working directly with community members supplying support vessels.

1.6	If it would be helpful to reviewers, copy and paste the one page grant application summary from your research protocol.	

2. Scientific and Pedagogical Merit

#	Question	Answer
2.1	Has this work undergone peer review for scientific or pedagogical merit?	Research - Peer Reviewed
2.2	Was the funding source competitive?	No
2.3	What is the origin of funds for this project?	External - Contracted or Privately Funded
2.4	Indicate the specific granting agency and describe the peer review process.	The Qikiqtaaluk Corporation (QC), a wholly owned subsidiary of the Qikiqtani Inuit Association and charged with the responsibility of development and wealth generation for the region's beneficiaries is the industry partner on this project. The research proposal has been vetted through and approved by the Centre for Sustainable Aquatic Resources internal peer review process which includes approval by the PhD accredited director of the centre. The research proposal has also been vetted through the QC and approved.
2.5	What grant numbers are associated with this protocol? In addition, if animal husbandry or animal order costs will be charged by Animal Care Services, please indicate how you would like costs distributed amongst accounts.	A foapal will be applied to this project and number provided when received.
2.6	What is the status of funds/grant?	Pending

3. The Three R's

#	Question	Answer
3.1	Replacement:	Given the nature of this study, targeted benthic invertebrates of recreational/subsistence harvesting potential or commercial potential will need to be collected to establish size selectivity of experimental fishing gear (conservation harvesting=avoid juveniles) and life-history characteristics (e.g., size at sexual maturity). To make sure an excessive number of

		individuals are not collected a maximum number will be collected for each length-class (e.g., 50 individuals per 10 mm shell-length class). Numbers collected will meet the needs of establishing relevant parameters for both sexes.
3.2	Reduction:	This study will utilize remote sensing in the form of multibeam echosounder surveys of seabed substrate and related features combined with towed video sled and drop-camera surveys to identify habitats that support the greatest number of individuals (density estimates are derived from video and drop-camera surveys). This information will then guide physical sampling locations and methods (pots and dredges). This strategy will limit the impact on the seabed, benthic communities, and non-targeted species by focusing efforts where remote sensing surveys and underwater video observations indicate species of interest are known to exist. As is outlined above in Replacement, this study will also set collection limits of individuals of each species based on size-class.
3.3	Refinement:	This study targets benthic marine invertebrate species that can provide a natural source of protein (food security) for Nunavut communities and where numbers merit commercial potential. There is the possibility of inadvertently capturing finfish (vertebrates) in the fishing gears. All finfish species captured will be prioritized with regard to recording species and size and returned to the site of capture as soon as practicable. Holding pans (crab pans) filled with fresh seawater will also be used to transfer fish until they can be measured. Further, all invertebrates captured will be recorded and those not required for laboratory analysis will be returned to the ocean as soon as practicable (generally within 1-5 minutes of capture) at the capture site.

4. Genetically Modified Animals

#	Question	Answer

4.1	Are any genetically modified animals generated or used as part of this protocol?	No
4.2	If using GMAs, please upload a completed GMA form per modified strain.	

5. Vivarium Housing

#	Question	Answer
5.1	Are animals to be housed in a facility or laboratory?	No
5.2	Where will the animals be kept?	
5.3	Will animals be kept outside of their primary housing room for greater than 24 hours? Please ensure all temporary locations are included into the checklist above.	No
5.4	If 'Yes', please describe where (room number or location) and how long animals are to be housed in the alternate location.	
5.5	Please list any special housing requirements.	Not applicable
5.6	Please list and describe any special environmental conditions required.	Not applicable
5.7	Please list and describe any special diets you are providing during the study.	Not applicable
5.8	It is standard practice that all animals in vivaria be given access to species-appropriate environmental enrichment. If requesting modification to standard enrichment strategies, please describe and justify.	Not applicable
5.9	In the event of an unexpected animal death discovered by facility staff, are there any special instructions?	Not applicable

6. Terrestrial and Marine Field Studies

#	Question	Answer
6.1	Does your study involve field work?	Yes
6.2	Does your study involve live capture?	Yes - Baited or Lured with direct contact
6.3	Describe the methods of capture. If a trap is to be used, indicate the type, the monitoring frequency, bait methods, means to address hydration, and any bedding options provided.	Experimental pots (e.g., varying shape, number of entrances, mesh size) will be baited with frozen squid placed in bait protection devices within a pot. Pots will be

		small enough to be fished from community vessels ranging in length from 20-28 feet. Pots will be deployed on the seabed and left overnight (not to exceed 24 hours except in the event of inclement weather) before hauling. Pots will be set in strings of 10-12 pots. The catch from individual pots will be dumped onto a sorting table or into a shallow sorting pan filled with fresh seawater and no more than 2-3 pots will not be hauled out of the water at one time until the catch in the proceeding pots is processed. Finfish will be immediately removed and measured. SARA species (i.e., spotted or northern wolffish) will be prioritized by immediately removing from the sorting table/pan, measured for length and weight, and returned to the ocean. Invertebrates will be identified to species, enumerated/ weighed, and where samples are required to be retained for future analysis, individuals will be placed in plastic bags and immediately frozen at -20C. Individuals not retained will be returned to the ocean at the capture site as soon as practicable (given the size of the pots, we do not expect catch rates to be high and our experience has shown that the entire catch in a pot can be processed within 1-5 minutes of capture). Experimental dredges developed for targeting various benthic marine species will be developed and tested. The experimental dredges will be small in size (1.5-2 feet wide; small foot print) and suitable for towing behind community vessels that range in length from 20-28 feet. Testing sites will be restricted to locations where suitable numbers of species of interest are found to be present from towed video sled and drop-camera surveys. This will avoid excessive disruption to seabed communities, bio-physical habitat, and non-targeted species. Tows will be short in duration (5-15 minutes) and at speeds that avoid excessive damaging the fishing gear (e.g., 0.5-0.7 knots), excessive damage to bio-physical habitats, and limit causing harm to entrained species. The catch

		will be treated in a manner similar to that outline above for baited pots.
6.4	Describe potential risks for injury or mortality that are associated with the capture method.	Pots present little risk of injury or mortality to invertebrates and finfish captured inadvertently because these animals are free to move about within the pot until the pot is retrieved. Towed fishing gears such as dredges can cause injury and mortality to captured animals when cobble or rocks are entrained in the net bag with the catch. Limiting the tow duration to 5-15 minutes will limit the injury to captured species.
6.5	Is there potential to capture or interact with any non-target species?	Yes
6.6	Please describe potential non-target interactions and outcomes.	Non-targeted species are commonly captured in the fishing gears that will be used during this study. We are taking steps to limit the catch of non-targeted species such as limiting tow duration of experimental dredges using small pots and dredges and only using fishing gear at sites that are shown to have substantial numbers of targeted species as evidenced from towed video and drop camera surveys. SARA listed species (i.e., spotted wolffish and northern wolffish) are unlikely to be captured within the depths surveyed during this study (<350 m). it is noteworthy, that this study is limited to Nunavut territorial waters (12 miles of coast) where depths do not exceed 350 m at the study communities and the SARA listed species mentioned here occur primarily at greater depths. Any SARA listed species captured will be prioritized during post-capture sampling and immediately returned to the ocean at the capture site.
6.7	Provide details on any markings, tags or collars and describe potential long term effects on the bearer. Include the established weight limit to animals of a given size.	No tagging, markings, or collars will be used during this study.
6.8	Following the study, what is the immediate outcome for any captured animals?	This study deals with benthic invertebrates. Benthic invertebrates will either be released at the capture location as soon as practicable or placed in plastic bags and frozen at -20C. Any non-targeted species captured will be

		release at the capture location as soon as practicable. the catch will be held in fresh seawater to maximize survival and minimize stress. Again, emphasis will be given to releasing finfish first. This will be followed by crustaceans, echinoderms, and molluscs, generally in that order.
6.9	Describe and justify any potential for ecological disruption.	Experimental dredges developed and tested during this study will be small in size (1.5-2 feet wide) and suitable for towing behind community vessels that range in length from 20-28 feet. Testing sites will be restricted to locations where suitable numbers of species of interest are found to be present from towed video sled and drop-camera surveys. The small footprint of the experimental gear and verification underwater video sampling that targeted species are present will avoid excessive damage to seabed communities and non-targeted species. Tows will be short in duration (5-15 minutes) to limit impacts to seabed communities. It is difficult to determine the extent of potential impact of the dredges on seabed communities. One of the aspects of this study that will be addressed by a graduate student in year 2-3 and/or following years is to to determine the impacts of dredges on the seabed bio-physical habitats by using the towed video sled and drop-camera to assess potential impacts along the tow paths.

7. Procedural Details

#	Question	Answer
7.1	Please justify species and number of animals requested in the Animal Use tab.	This study will focus on the assessment of benthic species that can provide a natural source of protein to Inuit communities and thereby help to lessen food insecurity. This will include various species of shrimp, scallops, whelk, sea cucumbers, sea urchins, and clams. It has been our experience that point in time sampling of up to 50 individuals from each 10 mm length class generally provides a suitable number of individuals to accurately estimate sex ratios throughout the life-cycle, establish size/ age at first, 50%, and

		100% attainment of sexual maturity, growth, biological condition (condition indices), and information on reproductive cycle (e.g., gonadosomatic indices), and fecundity. Where we will be trying to discern the reproductive season we will attempt to sample 30-40 individuals at biweekly to monthly intervals.
7.2	Where will procedures be performed on live animals?	No live animals will be used.
7.3	Will your study have the potential to cause pain and/or distress?	No
7.4	If pain and/or distress could be expected, please briefly summarize the circumstances. Further details will be included and described in the full procedure description (Question 7.22).	Finfish captured incidentally in fishing gears may be stressed. To reduce stress captured finfish and invertebrates will be held in fresh seawater during post-capture processing. Further, processing of finfish will be prioritized and they will be quickly returned to the ocean at the capture site..
7.5	Will pre-procedural analgesia be provided?	Not Applicable
7.6	If not using pre-procedural analgesia for invasive procedures, please justify.	Not applicable
7.7	If analgesia is to be used please download and include on the Agents Used on Live Animals attachment form.	
7.8	Does an animal need to remain conscious during an invasive procedure that may cause pain and/or distress?	Not Applicable
7.9	If not using anesthesia during invasive procedures, please justify.	Not applicable
7.10	If anesthesia is to be used please download and include on the Agents Used on Live Animals attachment form.	
7.11	Describe the monitoring and supportive care provided during surgery or invasive procedures.	Not applicable
7.12	Indicate methods employed to prevent hypothermia.	Not applicable
7.13	Indicate methods employed to prevent dehydration.	Captured animals will be held in fresh seawater during processing and quickly returned to the ocean at the capture site.

7.14	The intended outcome of surgeries or invasive procedures will be:	Not Applicable
7.15	Will any animal be involved in more than one major procedure?	
7.16	Provide justification for any use of multiple procedures per animal and specify the recovery time allowed in between.	Not applicable
7.17	Is post-procedural analgesia provided?	Not Applicable
7.18	If not using post-procedural analgesia for invasive procedures, please justify.	Not applicable
7.19	If analgesia is used please download and include on the Agents Used on Live Animals attachment form.	
7.20	Describe the monitoring and supportive care provided post-procedure.	Not applicable
7.21	Who will maintain post-procedural records and where will they be located?	Not applicable
7.22	With the previous questions in mind, describe in detail all procedures and techniques using live animals. Attaching flowcharts is highly recommended to assist reviewers in understanding how, when, where and what you are proposing to do with the animals.	Animals landed onboard vessel will be placed in pans with fresh seawater. Finfish will be removed first, measured for length, weighed, and quickly returned to ocean at capture location. Non-targeted invertebrates will be identified, grouped, weighed, and returned to the ocean at the capture location. Targeted invertebrate species will be removed and weighed. Lengths will be obtained for a representative sample of up to 250 individuals of targeted species. Representative samples of targeted species (up to 50 individuals from each 10 mm length-class) will be placed in plastic bags and frozen at -20C. Field data sheets will provide a list of the number of individuals of each species that are retained (frozen) for additional analysis. There will be a sufficient number of crew members to allow a division of labour so as to expedite the post-capture processing of animals.
7.23	Are flowcharts or supplementary information sheets attached?	

8. Endpoints and Euthanasia

#	Question	Answer

8.1	Summarize the intended experimental endpoints.	This study targets benthic invertebrates. Finfish captured incidentally during this study will be prioritized when processing the catch and quickly returned to the ocean. Finfish that exhibit signs of distress (e.g., barotrauma, cannot maintain upright orientation) will be killed by a blow to the head.
8.2	If the intended experimental endpoint is not euthanasia, please specify and describe what will happen to the animals.	Not applicable
8.3	Please describe adverse events that you may expect during the study that should not constitute a need to intervene or prematurely euthanize the animal.	Not applicable
8.4	Please describe adverse events that you may expect during the study that would constitute a need to intervene or prematurely euthanize the animal. These are defined as the humane endpoints.	A finfish exhibiting signs of distress (e.g., barotrauma, cannot maintain upright orientation).
8.5	What will happen to the animal upon reaching a humane endpoint?	Euthanasia
8.6	Do you wish to be contacted should an animal be found at one of the previously established humane endpoints?	Not Applicable - Field work location precludes veterinary intervention
8.7	Are there any limitations or requests regarding veterinary intervention or treatment? Please describe.	Not applicable
8.8	Indicate the method of euthanasia.	Blow to the head
8.9	If you responded 'Other', please specify.	
8.10	If physical means of euthanasia are to be used without prior anesthetic, please justify.	Time constraints and space limitations would limit use of an anesthetic prior to euthanasia.
8.11	Indicate methods of disposal for all animal tissues and carcasses.	Returned to the ocean at the capture location.

9. Hazardous Agents

#	Question	Answer
9.1	Will you, the animals, or anyone working in the vicinity potentially come into contact with hazardous agents? Does the protocol involve	No

	working with chemicals, biohazards or sources of radiation?	
9.2	Are chemicals, biohazards, or radiation administered to animals or used in animal rooms?	No
9.3	If administered, please clarify dose, route, and other parameters by filling out the Agents Used on Live Animals attachment form.	
9.4	Have imported cell lines or biological samples been tested for pathogens?	Not Applicable
9.5	If chemicals are used, please attach Material Safety Data Sheets (MSDS) for all chemicals associated with this protocol.	
9.6	If biohazards are used, identify the Risk Group of the biohazard.	
9.7	If biohazards are used, please attach the Biosafety Committee approved matrix for the assessment of risk group, or Biological MSDS.	
9.8	If biohazards are used, provide the Biosafety Application Number.	
9.9	What is the current status of the Biosafety Application?	Not Applicable
9.10	If sources of radiation are used, provide the Radiation Use Permit Number.	
9.11	Are special precautions or husbandry procedures required for housing or handling animals, or during disposal of the bedding and wastes? If so, please describe the requirements.	Not applicable
9.12	Please confirm that all cage cards will be clearly marked with the date and name of agent administered.	Not Applicable

10. Personnel Training

#	Question	Answer
10.1	Personnel #1: Surname, Given Name, Student/Employee ID #, Email Address.	Grant, Scott, 009281585, scott.grant@mi.mun.ca
10.2	Personnel #1: List all procedures, surgeries, handling and testing to be completed by this person. Please also describe their experience	Conduct length and weight measurements of captured animals (invertebrates and finfish). Extensive experience-over 28 years.

	working with the animals and procedures listed.	
10.3	Personnel #1: Completed Training:	CCAC Core Modules (D2L/DELTS)
10.4	Personnel #2: Surname, Given Name, Student/Employee ID #, Email Address.	Folkins, Maggie, 201599330, maggie.folkins@mi.mun.ca
10.5	Personnel #2: List all procedures, surgeries, handling and testing to be completed by this person. Please also describe their experience working with the animals and procedures listed.	Conduct length and weight measurements of captured animals (invertebrates and finfish). Over 6 years experience.
10.6	Personnel #2: Completed Training:	CCAC Core Modules (D2L/DELTS)
10.7	Personnel #3: Surname, Given Name, Student/Employee ID #, Email Address.	Donovan, Meghan, 200917003, Meghan.donovan@mi.mun.ca
10.8	Personnel #3: List all procedures, surgeries, handling and testing to be completed by this person. Please also describe their experience working with the animals and procedures listed.	Conduct length and weight measurements of captured animals (invertebrates and finfish). Over 6 years experience.
10.9	Personnel #3: Completed Training:	CCAC Core Modules (D2L/DELTS)
10.10	Personnel #4: Surname, Given Name, Student/Employee ID #, Email Address.	Santos, Mark, 080010634, mark.santos@mi.mun.ca
10.11	Personnel #4: List all procedures, surgeries, handling and testing to be completed by this person. Please also describe their experience working with the animals and procedures listed.	Conduct length and weight measurements of captured animals (invertebrates and finfish). Over 10 years experience.
10.12	Personnel #4: Completed Training:	CCAC Core Modules (D2L/DELTS)
10.13	Personnel #5: Surname, Given Name, Student/Employee ID #, Email Address.	
10.14	Personnel #5: List all procedures, surgeries, handling and testing to be completed by this person. Please also describe their experience working with the animals and procedures listed.	
10.15	Personnel #5: Completed Training:	
10.16	Personnel #6: Surname, Given Name, Student/Employee ID #, Email Address.	
10.17	Personnel #6: List all procedures, surgeries, handling and testing to be completed by this person. Please also describe their experience	

	working with the animals and procedures listed.	
10.18	Personnel #6: Completed Training:	

11. Emergency Contact Information

#	Question	Answer
11.1	Provide an after-hours emergency telephone number.	709 687 2995
11.2	Indicate the after-hours emergency contact designate.	Scott Grant

12. Permits and Licenses

#	Question	Answer
12.1	Does the described work require other permits or licenses for animal use or importation?	No
12.2	Controlled substance permit #:	Not applicable
12.3	Indicate the building and room number where agents are stored and describe what security measures will be taken.	Not applicable
12.4	Permits or licences from the Canadian Food Inspection Agency:	Not applicable
12.5	DFO license #:	to be assigned
12.6	Parks Canada or Wildlife permit/license #:	Not applicable
12.7	Other:	

13. Declaration

#	Question	Answer
13.1	I will ensure that all procedures performed under the protocol will be conducted in accordance with the policies of the Canadian Council for Animal Care and the Institutional Animal Care Committee of Memorial University and all relevant university, provincial, national, and international policies and regulations that govern the use of animal in research and teaching.	Agree

13.2	I understand that if I misrepresent and/or fail to accurately and fully disclose any aspects of the research, my Animal Care Committee Protocol approval clearance may be suspended.	Agree
13.3	I understand that I am required to submit an amendment request to the IACC before enacting any changes to my approved protocol. I understand that changes implemented without approval constitute a violation of policy.	Agree
13.4	I understand that I am required to keep record of all animals used and that I am required to submit an annual report for each year my protocol is active.	Agree
13.5	I understand that as the primary applicant, I am responsible to ensure personnel listed on the protocol have completed all required training prior to interacting with live animals. Failure to complete training could result in removal of personnel from a protocol or suspension of that protocol.	Agree
13.6	I understand that personnel added to the Project Team Info tab are granted full editing rights to my Animal Use Protocol and the ability to submit Events relating to Amendments, Reports, and Animal Orders for this protocol. I understand that as the primary applicant I retain full responsibility and accountability for all Amendments, Reports, or Orders submitted by authorized team members.	Agree
13.7	Annual site visits by the IACC, or designates, are required for all locations where animals are housed or used for testing and/or procedures. I understand that a site visit is required as part of the annual report if live animal work is taking place in my laboratory.	Agree
13.8	If there is any occurrence of an adverse event(s), I will notify the applicable facility manager and will report the incident through the Researcher Portal Event: Incident Report.	Agree

Animal Care Info

Purpose of Animal Use(PAU): **1. Studies of a fundamental nature in sciences rel ...**
Category of Invasiveness(CI): **C. Experiments which cause minor stress or pain of ...**
Classification:
Protocol Description:

Attachments

Doc / Agreement	Version Date	File Name	Description
Letter (Approval)	2020/06/02	QC Approval email from CMOH.pdf	Approval email from Nunavut Chief Medical Officer to conduct research in Nunavut coastal waters during August-September 2020.
Letter (Approval)	2020/06/01	QC Request Letter of Support from CMOH.pdf	Industry partner request for support from Nunavut Chief Medical Officer to use research vessel in Nunavut coastal waters August-September 2020.
Letter (Approval)	2020/06/09	Cape Dorset letter of support.pdf	Formal letter of consent from community of Cape Dorset (Kinngait) Hunters and Trapper Association to industry partner (Qikiqtaaluk Corporation) indicating acceptance of the research vessel (crewed by Marine Institute research team) to work in waters adjacent to community in August-September 2020.