1.1 Study Identification

*All questions marked by a red asterisk * are required fields. However, because the mandatory fields have been kept to a minimum, answering only the required fields may not be sufficient for the REB to review your application.*

Please answer all relevant questions that will reasonably help to describe your study or proposed research.

1.0 * **Short Study Title** *(restricted to 250 characters)*:
Tracking Change in the Mackenzie River Basin

2.0 * **Complete Study Title** *(can be exactly the same as short title)*:

Tracking Change in the Mackenzie River Basin

3.0 * **Select the appropriate Research Ethics Board (***Detailed descriptions are available at http://www.reo.ualberta.ca/Human-Research-Ethics/Research-Ethics-Boards.aspx***):**
Research Ethics Board 1

4.0 * **Is the proposed research:**
Funded (Grant, subgrant, contract, internal funds, donation or some other source of funding)

5.01 * **Name of local Principal Investigator:**
Brenda Parlee

6.0 * **Type of research/study:**
Faculty/Academic Staff

7.0 **Investigator's Supervisor (required for applications from undergraduate students, graduate students, post-doctoral fellows and medical residents to REBs 1 & 2. HREB does not accept applications from student PIs):**

8.01 **Study Coordinators or Research Assistants:** People listed here can edit this application and will receive all email notifications for the study:

Name	Employer

There are no items to display

9.01 **Co-Investigators:** People listed here can edit this application and will receive email notifications *(Co-investigators who do not wish to receive email, should be added to the study email list team below instead of here).*
If your searched name does not come up when you type it in the box, the user does not have the Principal Investigator role in REMO. Click the following link for instructions on how to Request an Additional Role.

Name	Employer

There are no items to display

10.01 **Study Team:** *(co-investigators, supervising team, and other study team members) -*

People listed here cannot view or edit this application and do not receive email notifications.

Last Name	First Name	Organization	Role/Area of Responsibility	Phone	Email
Natcher	David	University of Saskatchewan	Co-Investigator		david.natcher@ualberta.ca
Lantz	Trevor	University of Victoria	Co-Investigator		tlantz@uvic.ca
Jobin	Shalene	University of Alberta	Co-Investigator		sjobin@ualberta.ca
Wesche	Sonia	University of Ottawa	Co-Investigator		swesche@uottawa.ca
Napoleon	Val	University of Victoria	Co-Investigator		napoleon@uvic.ca
Wray	Kristine	University of Alberta	Graduate Student		kewray@ualberta.ca
Delafield	David	University of Alberta	Graduat Student		delafiel@ualberta.ca
D'Souza	Amabel	University of Alberta	Graduate Student		dsouza@ualberta.ca
Martin	Chelsea	University of Alberta	Graduate Student		clmartin@ualberta.ca
Heredia Vasquez	Iria	University of Ottawa	Graduate Student		ihere013@uottawa.ca
Brietzke	Chanda	University of Victora	Graduate Student		
Proverb	Tracey	University of Victoraa	Graduate Student		
Bielawski	Ellen	University of Alberta	Co-Investigator		ellenb@ualberta.ca
Seixas	Cristiana	Campinas University, Brazil	Researcher		cristiana.seixas@gmail.com

1.3 Study Funding Information

1.0 * **Type of Funding:**
Grant (external)

2.0 * **Indicate which office administers your award.** *(It is the PI's responsibility to provide ethics approval notification to any office other than the ones listed below)*
University of Alberta - Research Services Office (RSO)

3.0 * **Funding Source**

3.1 Select all sources of funding from the list below:

Government of Alberta	1008
SSHRC - Social Sciences and Humanities Research Council	SSHRC

3.2 If your source of funding is not available in the list above, click "Add" below and write the Sponsor/Agency name(s) in the free text box that pops up. *(Nore: You may reflect multiple sources of funding by continuing to click "Add" to add each additional source of funding).*
There are no items to display

4.0 * **Indicate if this research sponsored or monitored by any of the following:**
Not applicable

The researcher is responsible for ensuring that the study complies with the applicable US regulations. The REB must also comply with US Regulations.

1.4 RSO Managed Funding

1.0 * **To connect your ethics application with your funding: provide all identifying information about the study funding – multiple rows allowed. For Project ID, enter a Funding ID provided by RSO/PeopleSoft Project ID** *(for example, RES0005638, G018903401, C19900137, etc).* **Enter the corresponding title for each Project ID.**

	Project ID	Project Title	Speed Code	Other Information
View	RES0037656	Waterloo Terre Net		
View	RES0044121	Unknown		
View	RES0037077	UofA VPR PG Parlee	ZE236	
View	RES0027949	SSHRC PG Parlee	ZE420	
View	RES0028089	UofA Faculty SSHRC Support	ZE235	
View	RES0041233	AE 19 GRAEMO4 Parlee	ZAAKW	

1.5 Conflict of Interest

1.0 * **Are any of the investigators or their immediate family receiving any personal remuneration (including investigator payments and recruitment incentives but excluding trainee remuneration or graduate student stipends) from the funding of this study that is not accounted for in the study budget?**

○ Yes ● **No**

2.0 * **Do any of investigators or their immediate family have any proprietary interests in the product under study or the outcome of the research including patents, trademarks, copyrights, and licensing agreements?**

○ Yes ● **No**

3.0 * **Is there any compensation for this study that is affected by the study outcome?**

○ Yes ● **No**

4.0 * **Do any of the investigators or their immediate family have equity interest in the sponsoring company? (This does not include Mutual Funds)**

○ Yes ● **No**

5.0 * **Do any of the investigators or their immediate family receive payments of other sorts, from this sponsor (i.e. grants, compensation in the form of equipment or supplies, retainers for ongoing consultation and honoraria)?**

○ Yes ● **No**

6.0 * **Are any of the investigators or their immediate family, members of the sponsor's Board of Directors, Scientific Advisory Panel or comparable body?**

○ Yes ● **No**

7.0 * **Do you have any other relationship, financial or non-financial, that, if not disclosed, could be construed as a conflict of interest?**

○ Yes ● **No**

Please explain if the answer to any of the above questions is Yes:

Important

If you answered YES to any of the questions above, you may be asked for more information.

1.6 Research Locations and Other Approvals

1.0 * **List the locations of the proposed research, including recruitment activities. Provide name of institution, facility or organization, town, or province as applicable**
Nacho Nayak Dun First Nation (Mayo) Yukon
Inuvik, NWT
Aklavik NWT
Fort McPherson NWT
Deline NWT
Fort Simpson NWT
Gameti NWT
Chetah Alberta
Fort Chipewyan
Fort McMurray First Nation
Lutsel K'e Dene First Nation NWT
Black Lake Saskatchewan
Fort Nelson, British Columbia

2.0 * **Indicate if the study will use or access facilities, programmes, resources, staff, students, specimens, patients or their records, at any of the sites affiliated with the following** *(select all that apply):*
Not applicable

List all health care research sites/locations:

3.0 **Multi-Institution Review**

* **3.1 Has this study already received approval from another REB?**
○ **Yes** ● **No**

4.0 **If this application is closely linked to research previously approved by one of the University of Alberta REBs or has already received ethics approval from an external ethics review board***(s)*, **provide the study number, REB name or other identifying information. Attach any external REB application and approval letter in the Documentation Section – Other Documents.**
The project will also include a multi-community license from the Aurora Research Institute.

2.1 Study Objectives and Design

1.0 **Provide planned start and end date of human participant research.**

Start Date:
2016-07-01

End Date:
2021-06-30

2.0 * **Provide a lay summary of your proposed research which would be**

understandable to general public

Tracking Change: Local and Traditional Knowledge in Watershed Governance is a six-year research program funded by the Social Sciences and Humanities Research Council and led by the University of Alberta, Mackenzie River Basin Board, and the Government of the Northwest Territories in collaboration with many other valued Aboriginal organization partners and universities. The broad goal of the project is to create opportunities to collaboratively document and share local and traditional knowledge (LTK) about social-ecological change in the Mackenzie River Basin, Lower Mekong, and Lower Amazon Basins and determine its' role in watershed governance. In 2016-17, the project will fund 8-10 community-based and collaborative research activities in the Mackenzie River Basin that deal with all or some of following themes and priorities:

- historical and contemporary observations and perceptions of conditions and change in the health of the **aquatic environment** (e.g., water quality, quantity, flow, groundwater, permafrost conditions);
- historical and contemporary observations and perceptions of conditions and change in **fish species** (population, movements, diversity, invasive species) and other **aquatic species** (e.g., geese, beaver);
- sustainability of **fishing livelihoods** (e.g., harvesting levels and practices, diet, health, access issues, perceptions of change in the health of valued fish species);
- implications of change for **governance** (e.g., how to maintain healthy relationships to the aquatic ecosystem, maintaining respectful and spiritual relationships, respecting treaty rights);

These priorities were recommended in a workshop with the NWT Water Stewardship Strategy Aboriginal Steering Committee and the Mackenzie River Basin Board (MRRB) Traditional Knowledge and Strengthening Partnerships Committee (TKSPC), Feb. 10, 2016. Additional input was asked of the partners and other members of the Project Team by email in October 2015.

3.0 * **Provide a full description of your research proposal outlining the following:**

- **Purpose**
- **Hypothesis**
- **Justification**
- **Objectives**
- **Research Method/Procedures**
- **Plan for Data Analysis**

The ***Tracking Change…*** is a 6 year project funded by SSHRC; It was developed in collaboration with the Traditional Knowledge Committee of the Mackenzie River Basin Board project developed in recognition that river systems are important social, economic, cultural and ecological places that contribute significantly to the well-being of many communities. Many river users have been observing and experiencing what is going on in the same places, in the same way, using the same signs/signals for many generations. Such tracking of change, has been more than a technical process; people watch, listen, learn and communicate about change

because they care about the health of the land and the health of their communities. Many residents are increasingly concerned about the stresses being created by petroleum resource development, mining, hydro-electric development as well as climate change. How can local and traditional knowledge generated over many generations help ensure the continued health and sustainability of the Mackenzie River Basin? During 2017-18, the project will fund 10 community-based research projects in the Mackenzie River Basin led by collaborating Aboriginal organizations and governments including the following:

- Inuvialuit Fisheries Joint Management Committee;
- Gwich'in Renewable Resources Board and Gwich'in Tribal Council;
- Sahtu Renewable Resources Board, Hamlet of Deline;
- Deh Cho First Nations; Weekeshii Renewable Resources Board and Tli Cho Government;
- Lutsel K'e Dene First Nation;
- Akaitcho Government;
- Mikisew Cree First Nation;
- Fort McMurray First Nation;
- Treaty 8 First Nations of Alberta;
- Fort Nelson First Nation;
- Prince Albert Grand Council.

Representatives of these organizations and other potential partnering organization met on Feb. 10 and developed a set of research priorities for 2016-2018. Specifically, the decision was to focus on the documentation of Traditional Knowledge of fishers and communities across the Mackenzie River Basin related to the following themes:

- historical and contemporary observations and perceptions of conditions and change in the health of the **aquatic environment** (e.g., water quality, quantity, flow, groundwater, permafrost conditions);
- historical and contemporary observations and perceptions of conditions and change in **fish species** (population, movements, diversity, invasive species) and other **aquatic species** (e.g., geese, beaver);
- sustainability of **fishing livelihoods** (e.g., harvesting levels and practices, diet, health, access issues, perceptions of change in the health of valued fish species);
- implications of change for **governance** (e.g., how to maintain healthy relationships to the aquatic ecosystem, maintaining respectful and spiritual relationships, respecting treaty rights);

These themes were prioritized in recognition that fresh water fisheries are changing at an alarming rate due to many kinds of stresses. These ecological changes are having an echoing effect on subsistence fisheries in regions where communities have limited access to other livelihood options. Local fishers and other community members represented by the Aboriginal organizations and governments (lived above) hold significant insights about many aspects of fish ecology (fish migration patterns, population dynamics and habitat use) as well as associated changes in river system dynamics and the echoing effects of livelihood and well-being. More specifically we are interested in addressing the following:

- What are the patterns of variability and change in fishing livelihoods being documented and experienced in the Mackenzie-Mekong-Amazon? What kinds of variability and change are being observed in the health, location, diversity, distribution of fish species valued for subsistence in each? What kind of social networks exist for sharing knowledge related to the condition of the fisheries? How have/are

fishing practices and outcomes changing in response to these ecological shifts (e.g., changes in practices, harvest, food sharing patterns, food security)?
- How are/can communities work together (upstream/downstream) to deal with these social- ecological changes in ways that ensure the continued sustainability fishing livelihoods?
- How are fishing livelihoods interconnected at different scales (local, regional, global)?
- How are fishing livelihoods sustainable in the face of emergent stresses of resource development and climate change?
-

The organizations (above) are collectively learning research activities in their own communities and regions. They will use a combination of semi-structured interviews and participatory mapping to answer these broad thematic questions on change in water quality, water levels, flow, fish population dynamics, diversity and condition as well as implication of such ecological change on the livelihood of communities. The outcomes of the research activities will be shared and synthesized at the end of the study respecting decisions on individual consent. Community and regional government consent is assumed to be given by virtue of their submission of their individual proposals.

4.0 **Describe procedures, treatment, or activities that are above or in addition to standard practices in this study area** *(eg. extra medical or health-related procedures, curriculum enhancements, extra follow-up, etc)***:**
The research objectives and methods activities have been defined by the Aboriginal organizations who are partners to our research project through submission of a research proposal. There are eleven Aboriginal organizations / governments who have submitted proposals (each for $25000). The research activities and methods are broadly similar across all eleven therefore this ethics application is intended to achieve a single approval for all.

5.0 **If the proposed research is above minimal risk and is not funded via a competitive peer review grant or industry-sponsored clinical trial, the REB will require evidence of scientific review. Provide information about the review process and its results if appropriate.**
NA

6.0 **For clinical trials, describe any sub-studies associated with this Protocol.**
NA

2.2 Research Methods and Procedures

Some research methods prompt specific ethical issues. The methods listed below have additional questions associated with them in this application. If your research does not involve any of the methods listed below, ensure that your proposed research is adequately described in Section 2.1: Study Objectives and Design or attach documents in the Documentation Section if necessary.

1.0 * **This study will involve the following***(select all that apply)*
Interviews and/or Focus Groups
Research focusing on First Nations, Inuit and Metis Peoples

NOTE 1: Select this ONLY if your application SOLELY involves a review of paper charts/electronic health records/administrative health data to answer the research question. If you are enrolling people into a study and need to collect data from their health records in addition to other interventions, then you SHOULD NOT select this box.

NOTE 2: Select this option if this research ONLY involves analysis of blood/tissue/specimens originally collected for another purpose but now being used to answer your research question. If you are enrolling people into the study to prospectively collect specimens to analyze you SHOULD NOT select this box.

2.5 Interview and/or Focus Groups

1.0 **Will you conduct interviews, focus groups, or both? Provide detail.**
There will be interviews and workshops aimed at document new knowledge as well as data synthesis and knowledge mobilization.

2.0 **How will participation take place (e.g. in-person, via phone, email, Skype)?**
120

3.0 **How will the data be collected (e.g. audio recording, video recording, field notes)?**
field notes, audio and video recording

2.8 First Nations, Inuit and Metis People

1.0 * **If you will be obtaining consent from Elders, leaders, or other community representatives, provide details:**
Aboriginal organizations and governments / communities have the opportunity to provide consent by virtue of their submission of a research proposal for work in their own commutes. Communiteis who have not submitted proposals will not be involved in research.

The Aurora Research Institute also provides the opportunity for community leaders (or elected representative) from communities in the NWT to approve the research project (i.e., proved community consent).

Individual consent will be obtained using a written consent form.

2.0 **If leaders of the group will be involved in the identification of potential participants, provide details:**
Each of the Aboriginal governments and organizations who are leading projects in their own communities will select the participants. The leaders and staff are in the best position to identify who are the most active and knowledgeable fishers and elders in the community who can contribute to the study.

3.0 **Provide details if:**
• property or private information belonging to the group as a whole is studied or used;
• the research is designed to analyze or describe characteristics of the group, or
• individuals are selected to speak on behalf of, or otherwise represent the group

N/A

4.0 * **Provide information regarding consent, agreements regarding access, ownership and sharing of research data with communities:**
Participants will be asked to sign a consent form to confirm their willingness to participate in the interview, and consent to the storage and ownership of their transcript by the University of Alberta. The participants' identities will be shared unless written consent for withholding of personal names and professional position is granted (see attached consent form). Some excerpts from the transcript will become public information according to terms and conditions set out in the consent form (i.e., the participant will indicate if he/she would like his/her name identified in those public documents). The complete transcripts from the project will be stored in a locked filing cabinet in the Department of Resource Economics and Environmental Sociology (Dr. Brenda Parlee's office) during and after the project for a minimum of five years. Any future use of the data beyond that defined in the project summary will be mediated by further consultation and consent of the participants.

Communities hold all their own data from research activities as per our research design (i.e., consistent with the principles of OCAP and regional policies of intellectual property rights (e.g., the Gwich'in Traditional Knowledge Policy); the above speaks only to data they are willing to share with the University of Alberta.

5.0 **Provide information about how final results of the study will be shared with the participating community** *(eg. via band office, special presentation, deposit in community school, etc)***?**
The results of the community-based research projects will be written up as plain language summaries by the lead applicant of the Aboriginal organization submitting a research proposal. This summary will be provided to the communities in their own region as well as to other participating communiteis in the Basin (e.g., the report by Mikisew Cree First Nation will be shared with the other 10 organization who in turn will share their reports with MCFN). A synthesis report will also be developed based on all eleven studies.

6.0 **Is there a research agreement with the community?**
● **Yes** ○ No

Provide details about the agreement or why an agreement is not in place, not required, etc.
The agreement in place is comprised of "Principles for Working Together" (see attached).

3.1 Risk Assessment

1.0 * **Provide your assessment of the risks that may be associated with this research:**

Minimal Risk - research in which the probability and magnitude of possible harms implied by participation is no greater than those encountered by participants in those aspects of their everyday life that relate to the research (TCPS2)

2.0 * **Select all that might apply:**

Description of Possible Physical Risks and Discomforts

No	Participants might feel physical fatigue, e.g. sleep deprivation
No	Participants might feel physical stress, e.g. cardiovascular stress tests
No	Participants might sustain injury, infection, and intervention side-effects or complications
No	The physical risks will be greater than those encountered by the participants in everyday life

Possible Psychological, Emotional, Social and Other Risks and Discomforts

Possibly	Participants might feel psychologically or emotionally stressed, demeaned, embarrassed, worried, anxious, scared or distressed, e.g. description of painful or traumatic events
No	Participants might feel psychological or mental fatigue, e.g intense concentration required
No	Participants might experience cultural or social risk, e.g. loss of privacy or status or damage to reputation
No	Participants might be exposed to economic or legal risk, for instance non-anonymized workplace surveys
No	The risks will be greater than those encountered by the participants in everyday life

3.0 * **Provide details of all the risks and discomforts associated with the research for which you indicated YES or POSSIBLY above.**

There is be no discomforts, however, there may be the perception on the part of local communities and interviewees that traditional knowledge is being appropriated through the research process and/or an increased perception of the environmental and socio-economic harms of changes in the Mackenzie River.

Some participants who are asked to talk about changes in the Mackenzie River system and the implications for their livelihood and well-being may become anxious if they share experiences of loss (e.g., thinning ice has led to some deaths in some communities). To minimize this stress, we will not engage community members who have been directly involved in some incidences and ensure that participants who become visibly anxious are aware of support services in the community to address their anxieties. Furthermore, the aim of the Tracking Change project is to try and address these risks and anxieties directly by creating/document and sharing research outcomes with communities (e.g., so there is a greater understanding of the dangers of thinning ice). For example, data on thinning ice is being shared in several communities through workshops, newsletters and reports. A low water level "navigation app" has also been created for use by Mikisew Cree First Nation land users (e.g., fishers) for community members traveling on the Athabasca River.

4.0 * **Describe how you will manage and minimize risks and discomforts, as well as mitigate harm:**

1. Minimizing Appropriation (and/or perception of appropriation) of Traditional Knowledge:

The participants will be involved in interviews or participatory mapping about changes in the Mackenzie River (fish) and implications for fishing livelihoods. Given the support of the Aboriginal organizations for the broader SSHRC project and the submission of their community-based proposals, the research is anticipated to be of benefit. To ensure there is consent among individual participants, standard consent forms will be administered. Those contacted for an interview are not required to participate and may withdraw from the interview at any time. The student will also require consent of individual interviewees through the standardized consent form (attached). The interviewees will also have the opportunity to review their transcript prior to any use by the Aboriginal organization / government or further use. Where consent is given and relevant the participant will also be acknowledged by name and include as a co-author of publications.

2. Minimizing the Perceptions of the Environmental and Socio-Economic Risks

Research focused on changes in the Mackenzie River Basin may increase perceptions of the risks of environmental and socio-economic harms. Interviewers will minimize the potential amplification of risk by asking questions both about the adverse impacts as well as benefits of changes taking place. Those contacted are not required to participate in the interviews; they can choose not to participate and can withdraw (quit) from the research at any time without prejudice or consequence. The participant will be asked to give verbal consent or sign a consent form to confirm their willingness to participate in the interview, consent to use the information data in public documents and consent to storage and ownership of the transcript by the University of Alberta. To ensure that risk perceptions are not heightened as a result of the project, particular consideration will be given to how research outcomes are communicated and understood by participants.

5.0 **Is there a possibility that your research procedures will lead to unexpected findings, adverse reactions, or similar results that may require follow-up** *(i.e. individuals disclose that they are upset or distressed during an interview/questionnaire, unanticipated findings on MRI, etc.)***?**

○ Yes ○ No

6.0 **If you are using any tests in this study diagnostically, indicate the member(s) of the study team who will administer the measures/instruments:**

Test Name	Test Administrator	Organization	Administrator's Qualification

There are no items to display

7.0 **If any research related procedures/tests could be interpreted diagnostically, will these be reported back to the participants and if so, how and by whom?**

NA

3.2 Benefits Analysis

1.0 * **Describe any potential benefits of the proposed research to the participants. If there are no benefits, state this explicitly:**
Potential benefits of the proposed research to participants include the opportunity for participants to voice their observations and experiences of change in their area of the Mackenzie River Basin and ultimately understand how these are synergistic with those of other individuals and communities up/downstream. Individual participants will also have the opportunity to:
- participate in on the land research activities (e.g., fish camps with elders)

There may also be no benefits to the participants.

2.0 * **Describe the scientific and/or scholarly benefits of the proposed research:**
The Mackenzie River Basin is one of the most understudied river systems in the world. Those who hold the most knowledge are the fisher and other Indigenous peoples who are involved in our study. Collaborative approaches to the documentation of traditional knowledge will create opportunities for scientific and scholarly writing on methodological questions (how-to) as well as a broad set set of contributions on themes social and ecological change. We anticipate 1-2 scholarly publications from each of the community-based research projects as well as 2-3 synthetic research summary publications. There are also five graduate students (3 MSc and 2 PhD students) involved in the research project; each will also proceed a thesis from their research.

3.0 **If this research involves risk to participants explain how the benefits outweigh the risks.**
There are few risks or harms from the project and many benefits anticipated.

4.1 Participant Information

1.0 * **Will you be recruiting human participants** *(i.e. enrolling people into the study, sending people online surveys to complete)***?**

● **Yes** ○ No

1.1 Will participants be recruited or their data be collected from Alberta Health Services or Covenant Health or data custodian as defined in the Alberta Health Information Act?

○ Yes ● **No**

4.2 Additional Participant Information

1.0 **Describe the participants that will be included in this study. Outline ALL participants** *(i.e. if you are enrolling healthy controls as well):*

The study is a collaboration with Aboriginal governments / organizations who seek to work with fishers in their communities of: Nacho Nayak Dun First Nation (Mayo) Yukon Inuvik, NWT Aklavik NWT Fort McPherson NWT Deline NWT Fort Simpson NWT Gameti NWT Chetah Alberta Fort Chipewyan Fort McMurray First Nation Lutsel K'e Dene First Nation NWT Black Lake Saskatchewan Fort Nelson, British Columbia.

2.0 * **Describe and justify the inclusion criteria for participants** *(e.g. age range, health status, gender, etc.):*

Participants who are members or residents of the participating communities, are older than 18 years old, of any health status, any gender and with knowledge related to change in the Mackenzie River Basin will be included. There is no statistical requirement for a particular sample size, however, we anticipate there will be 10-15 individuals involved from each of the eleven communities (above).

3.0 **Describe and justify the exclusion criteria for participants:**

There is no exclusion criteria.

4.0 **Participants**

4.1 How many participants do you hope to recruit *(including controls, if applicable?)*
165
4.2 Of these, how many are controls, if applicable?
0
4.3 If this is a multi-site study, how many participants do you anticipate will be enrolled in the entire study?
0

5.0 **Justification for sample size:**
Between 10-15 people will be interviewed from each of the participating communities. This sample reflects the anticipated number of active fishers or elders with detailed fishing knowledge.

4.4 Recruitment of Participants (non-Health)

1.0 **Recruitment**

1.1 How will you identify potential participants? Outline all of the means you will use to identify who may be eligible to be in the study *(i.e. response to advertising such as flyers, posters, ads in newspapers, websites, email, list serves, community organization referrals, etc.)*
Participants will be recruited through the partner organizations listed in the previous section and by snowball sampling. Once contacted by phone and/or in person individuals will be informed about the research project (with the attached Information Sheet) and a confirmation of their willingness to be interviewed and a time/location for the interview will be identified. Consent to be interviewed will however, only be garnered during the face to face interviews.

1.2 Once you have identified a list of potentially eligible participants,

indicate how the potential participants' names will be passed on to the researchers AND how will the potential participants be approached about the research.
See above 4.3 - 1.1.

2.0 Pre-Existing Relationships

2.1 Will potential participants be recruited through pre-existing relationships with researchers *(e.g. Will an instructor recruit students from his classes, or a physician recruit patients from her practice? Other examples may be employees, acquaintances, own children or family members, etc.)*?

○ Yes ● **No**

3.0 Will your study involve any of the following? *(select all that apply)*
Payment or incentives, e.g. honorarium or gifts for participating in this study

4.5 Informed Consent Determination

1.0 Describe who will provide informed consent for this study*(i.e. the participant, parent of child participant, substitute decision maker, no one will give consent – requesting a waiver)*
Interviewees and workshop participants will provide consent for their own participation.

1.1 Waiver of Consent Requested
If you are asking for a waiver of participant consent, please justify the waiver or alteration and explain how the study meets all of the criteria for the waiver. Refer to Article 3.7 of TCPS2 **and provide justification for requesting a Waiver of Consent for ALL criteria (a-e)**
NA

1.2 Waiver of Consent in Individual Medical Emergency
If you are asking for a waiver or alteration of participant consent in individual medical emergencies, please justify the waiver or alteration and explain how the study meets ALL of the criteria outlined in Article 3.8 of TCPS2 (a-f)**.**
NA

2.0 How will consent be obtained/documented? Select all that apply
Signed consent form
Verbal consent

If you are not using a signed consent form, explain how the study information will be provided to the participant and how consent will be obtained/documented. Provide details for EACH of the options selected above:
NA

3.0 Will every participant have the capacity to give fully informed consent on his/her own behalf?

○ Yes ○ No

3.1 Explain why participants lack capacity to give informed consent *(e.g. age, mental or physical condition, etc.).*
N/A

3.2 Will participants who lack capacity to give full informed consent be asked to give assent?

○ Yes ○ No

3.3 In cases where participants (re)gain capacity to give informed consent during the study, how will they be asked to provide consent on their own behalf?
N/A

4.0 What assistance will be provided to participants or those consenting on their behalf, who may require additional assistance? *(e.g. non-English speakers, visually impaired, etc.)*
An interpreter will be provided if there are participants who do not speak English. The interpreter
will be required to sign an agreement of confidentiality to ensure the intellectual property rights of
the interviewee are protected.

5.0 * If at any time a PARTICIPANT wishes to withdraw from the study or from certain parts of the study, describe when and how this can be done.
Potential participants will be made aware that they can withdraw their participation during any point before and during the research process. Also, prior to the interview, the researcher will inform the presenter that they will receive a written transcript of the interview for review and may withdraw any part or the entirety of the transcript data from the project within 30 days of receipt of the transcript. Follow-up verification emails will be arranged to confirm transcripts have been received, to clarify any unclear statements, correct any errors or misquotations, and confirm there is no problem with the data being published. The follow-up stage provides a last opportunity to withdraw from the study.

6.0 Describe the circumstances and limitations of DATA withdrawal from the study, including the last point at which participant DATA can be withdrawn *(i.e. 2 weeks after transcription of interview notes)*
If the participant wishes, their transcript will be destroyed and will no longer inform the data set. Participants may communicate this wish during or after the interview up to 30 days after the receipt of the transcript.

7.0 Will this study involve any group(s) where non-participants are present? For example, classroom research might involve groups which include participants and non-participants.

○ Yes ● **No**

4.6 Expense Reimbursements and Incentives

1.0 Expense Reimbursements:

1.1 Describe in detail the expenses for which participants will be reimbursed, the value of the reimbursements per item as well as the total maximum reimbursement and the reimbursement process *(e.g. participants will receive a cash reimbursement for parking at the rate of $12.00 per visit for up to three visits for a total value of $36.00)*
NA

1.2 IF you will be collecting personal information to reimburse or pay participants, describe the information to be collected and how privacy will be maintained.
NA

2.0 Incentives:

2.1 Will participants receive any incentives for participating in this research *(i.e. gift card, cash payment, prize draw)***? If yes, provide details of the value, including the likelihood (odds) of winning for prize draws and lotteries.**
https://www.ualberta.ca/research/support/ethics-office/human-research-ethics/use-of-incentives-in-research

Gift Card
NA - no lottery or prize draws

2.2 What is the maximum value of the incentives offered to an individual throughout the research?
A $50 honoraria (e.g., per hour) will be provided to individuals for participation in interviews and workshops. The amounts for these honoraria are set by communities (e.g., Band Councils) are are standardized. If a workshop is 5 hours long an honoraria might be as high as $250.00.

2.3 IF incentives are offered to participants, they should not be so large or attractive as to constitute coercion. Justify the value of the incentives you are offering relative to your study population.
A $50 honoraria (e.g., per hour) will be provided to individuals for participation in interviews and workshops. The amounts for these honoraria are set by communities (e.g., Band Councils) are are standardized. If a workshop is 5 hours long an honoraria might be as high as $250.00.

These amounts are not so large as to constitute a coercion but are considered fair compensation for the time that individuals spend participating in the research (e.g., forgoing time with families, harvesting food and/or away from wage employment). The costs of living in northern communities are high (e.g., milk is $20- 4 litres) in some communities so these dollar amounts offered for honoraria are reasonable given these costs.

5.1 Data Collection

1.0 * **Will the researcher or study team be able to identify any of the participants at <u>any stage</u> of the study?**

● **Yes** ○ No

2.0 **Primary/raw data collected will be** *(check all that apply)***:**

Directly identifying information - the information identifies a specific individual through direct identifiers (e.g. name, social insurance number, personal health number, etc.)

Indirectly identifying information - the information can reasonably be expected to identify an individual through a combination of indirect identifers (eg date of birth, place of residence, photo or unique personal characteristics, etc)

All personal identifying information removed (anonymized)

Made Public and cited (including cases where participants have elected to be identified and/or allowed use of images, photos, etc.)

3.0 **If this study involves secondary use of data, list all original sources:**

NA

4.0 **In research where total anonymity and confidentiality is sought but cannot be guaranteed** *(eg. where participants talk in a group)* **how will confidentiality be achieved?**

Potential research participants will be given the opportunity to have all personal identifying information (e.g., name) removed (anonymized) prior to transcription of audio-video recording as indicated on the consent form (see attached).

5.2 Data Identifiers

1.0 * **Personal Identifiers:** will you be collecting - at any time during the study, including recruitment - any of the following *(check all that apply)***:**

Surname and First Name
Address
Telephone Number
Email Address
Year of Birth
Age at time of data collection

2.0 **Will you be collecting - at any time of the study, including recruitment of participants - any of the following** *(check all that apply)***:**

There are no items to display

3.0 * **If you are collecting any of the above, provide a comprehensive rationale to explain why it is necessary to collect this information:**

Surname and first name of potential participants will be collected to create a list of participants who have been interviewed so that the research outcomes (e.g., publications) attribute the knowledge shared to the knowledge holder (i.e., quotes will be cited). As well, should participants choose to be identified, having a correct spelling of the individual's surname and first name will expedite the process of data transcription. Email addresses and telephone will be collected only for the purpose of initial contact with potential participants and intermediaries, after this point, email

addresses will be required for the purposes of communication regarding informed consent, data transcription errors and clarification, continued and ongoing consent to use of data up until the point of data analysis.

4.0 **If identifying information will be removed at some point, when and how will this be done?**
Identifying information will not be removed unless the participant has indicated confidentiality is to be maintained. Their name, telephone number and email address will be removed immediately after verification. Other identifying information will be removed from transcripts through deletion of their names at the time of transcription.

5.0 * **Specify what identifiable information will be RETAINED once data collection is complete, and explain why retention is necessary. Include the retention of master lists that link participant identifiers with de-identified data:**
All of the above identifiers will be retained unless consent is not provided.

6.0 **If applicable, describe your plans to link the data in this study with data associated with other studies (e.g within a data repository) or with data belonging to another organization:**

5.3 Data Confidentiality and Privacy

1.0 * **How will confidentiality of the data be maintained? Describe how the identity of participants will be protected both during and after research.**
Participants will be asked to sign a consent form to confirm their willingness to participate in the interview and be audio/video recorded. They will be informed that the audio file and text transcript will be stored for at least five years at the University of Alberta. If the interviewee chooses to participate but does not want to be identified publicly by name (e.g., in study reports), an alias identifier will be used (e.g., A001). The complete transcripts from the project will be stored in a locked filing cabinet in the Department of Resource Economics and Environmental Sociology (Dr. Brenda Parlee's office) during and after the project. Any future use of the data beyond that defined in the project summary will be mediated by further consultation and consent of the participants.

2.0 **How will the principal investigator ensure that all study personnel are aware of their responsibilities concerning participants' privacy and the confidentiality of their information?**
A training workshop will be held with interviewers from all eleven communities to ensure they are aware of their responsibilities pertaining to the confidentially of information.

3.0

External Data Access

* **3.1 Will identifiable data be transferred or made available to persons or agencies outside the research team?**

● **Yes** ○ No

3.2 If YES, describe in detail what identifiable information will be released, to whom, why they need access, and under what conditions? What safeguards will be used to protect the identity of subjects and

the privacy of their data.
According to consent forms, individuals can choose to have their names associated with the data from their interviews. This affirmation of the knowledge holder's expertise is a sign of respect - consistent with the policies of many First Nations communities in the study region. (i.e., it is disrespectful of the knowledge holder to present narrative as anonymously shared). If however, individual interviewees do not wish to be known/identified, these privacy concerns will be respected. See consent form.

Data that includes identifiers may be included in plain language summary reports to communities, on the tracking change website, as well as in academic publications.

Communities own their own data from projects in which they are the lead organization or participating organization. The original data is held by individual community collaborators
(e.g.,Environment Committees, Renewable Resource Councils). Individuals or organizations not directly engaged with local projects (eg., other communities, consultants, governments, other academics) seeking access to local data must contact the local organizations directly to gain access to the data from local projects. It is up to the community to determine appropriate use of their own data. (e.g., Mikisew Cree First Nation must contact the Akaitcho Territory Government directly to access raw data from projects in this neighbouring region. A consultant working for Environment and Climate Change Canada must contact each community organization to access raw data from each of the communities participating in the Tracking Change if they wish to use it for a State of the Aquatic Ecosystem Report for the Mackenzie River Basin).

3.3 Provide details if identifiable data will be leaving the institution, province, or country *(eg. member of research team is located in another institution or country, etc.)*
Given the project is international in scope, we may from time to time engage in knowledge sharing outside Canada.

Project outcomes including quotes from research participants may also be posted on our website and may be shared at workshops and other related meetings (e.g., United Nations Permanent Forum on Indigenous Issues, Mackenzie River Basin Board meetings).

Outcomes will also be shared in academic forums will also leave the institution. (e.g., posters shared at individual conferences and internationally peer reviewed journal publications may contain quotes that have names and community affiliations).

5.4 Data Storage, Retention, and Disposal

1.0 * **Describe how research data will be stored, e.g. digital files, hard copies, audio recordings, other. Specify the physical location and how it will be secured to protect confidentiality and privacy.** *(For example, study documents must be kept in a locked filing cabinet and computer files are encrypted, etc. Write N/A if not applicable to your research)*
All transcripts will be stored in a locked filing cabinet in the Department of Resource Economics and Environmental Sociology (Dr. Brenda Parlee's office) during and after the project or in a locked filing cabinet of the

Aboriginal partner. A second digital copy of the audio recordings will be stored on the portable laptop computer of the interviewer which is to be stored in a locked case in his/her possession. Data sets emerging from the transcripts will be stored on secure computers of the Aboriginal partners or within the Department of Resource Economics and Environmental Sociology, with access restricted to members of the research team.

2.0 * **University policy requires that you keep your data for a minimum of 5 years following completion of the study but there is no limit on data retention. Specify any plans for future use of the data. If the data will become part of a data repository or if this study involves the creation of a research database or registry for future research use, please provide details.** *(Write N/A if not applicable to your research)*
The data will be kept for a minimum 10 years. There are no plans to destroy the data.

3.0

If you plan to destroy your data, describe when and how this will be done? Indicate your plans for the destruction of the identifiers at the earliest opportunity consistent with the conduct of the research and/or clinical needs:
The data will be destroyed through shredding of any materials emerging from the project and deletion of any audio/video recordings.

Documentation

Add documents in this section according to the headers. Use Item 11.0 "Other Documents" for any material not specifically mentioned below.

Sample templates are available in the REMO Home Page in the **Forms and Templates**, or by clicking HERE.

1.0 **Recruitment Materials:**

Document Name	Version	Date	Description

There are no items to display

2.0 **Letter of Initial Contact:**

	Document Name	Version	Date	Description
	Letter of Introduction	0.04	2019-10-24 10:04 AM	

3.0

Informed Consent / Information Document(s):

3.1 What is the reading level of the Informed Consent Form(s):
GR. 4

3.2 Informed Consent Form(s)/Information Document(s):

	Document Name	Version	Date	Description
	Information Sheet	0.05	2019-10-24 10:03 AM	

Interview Consent Form	0.05	2019-10-24 9:53 AM	
Workshop Consent Form	0.01	2019-10-24 9:55 AM	

4.0 Assent Forms:

Document Name	Version	Date	Description

There are no items to display

5.0 Questionnaires, Cover Letters, Surveys, Tests, Interview Scripts, etc.:

Document Name	Version	Date	Description
Guiding Interview Questions	0.01	2016-06-09 2:57 PM	

6.0 Protocol/Research Proposal:

Document Name	Version	Date	Description

There are no items to display

7.0 Investigator Brochures/Product Monographs:

Document Name	Version	Date	Description

There are no items to display

8.0 Health Canada No Objection Letter *(NOL)*:

Document Name	Version	Date	Description

There are no items to display

9.0 Confidentiality Agreement:

Document Name	Version	Date	Description
Confidentiality Agreement	0.01	2019-10-24 9:23 AM	

10.0 Conflict of Interest:

Document Name	Version	Date	Description

There are no items to display

11.0 Other Documents:

For example, Study Budget, Course Outline, or other documents not mentioned above

Document Name	Version	Date	Description
TEMPLATE Research Agreement	0.01	2019-10-24 9:34 AM	

You have completed your ethics application! Click "Continue" to go to your study workspace.

This action will NOT SUBMIT the application for review.

Only the Study Investigator can submit an application to the REB by selecting the "SUBMIT STUDY" button in My Activities for this Study ID:Pro00094722.