

## Work Plan Application

Project Information	
<b>Project Title:</b>	A Braided Approach to Evaluating Fish Health Through Metis Community Monitoring
<b>Lead Applicant, Organization, or Community:</b>	Métis Nation of Alberta
<b>Work Plan Identifier Number:</b> If this is an on-going project please fill the identifier number for 24/25 fiscal by adjusting the last four digits: <b>Example:</b> D-1-2425 would become D-1-2425	
<b>Project Region(s):</b>	Oil Sands Region
<b>Project Start Year:</b> First year funding under the OSM program was received for this project (if applicable)	2021
<b>Project End Year:</b> Last year funding under the OSM program is requested <b>Example: 2024</b>	2025
<b>Total 2024/25 Project Budget:</b> From all sources for the 2024/25 fiscal year	\$150,000.00
<b>Requested OSM Program Funding:</b> For the 2024/25 fiscal year	\$150,000.00
<b>Project Type:</b>	Community Based Monitoring
<b>Project Theme:</b>	Surface Water
<b>Anticipated Total Duration of Projects (Core and Focused Study (3 years))</b>	Year 3
<b>Current Year (choose one):</b>	Focused Study Year 2 of 3
	Core Monitoring -Select One-

## Contact Information

<b>Lead Applicant/ Principal Investigator:</b> Every work plan application requires one lead applicant. This lead is accountable for the entire work plan and all deliverables.	Christine Grams
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## Project Summary

In the space below, please provide a summary of the proposed project that includes a brief overview of the project drivers and objectives, the proposed approach/methodology, project deliverables, and how the project will deliver to the OSM Program objectives. The summary should be written in plain language and **should not exceed 300 words**.

The Métis Nation of Alberta (MNA) proposes to continue studying fish health in the oil sands regions (OSR) of Alberta by expanding and refining a program established in 2021. This project was initiated in 2018 in response to an MNA-led engagement campaign that asked Métis Citizens to share their concerns regarding climate change and the environment. Of 392 responses, 198 (51%) had to do with Alberta's aquatic ecosystems and could be classified into three categories: decline in water quality, decline in water level, and decline in fish populations. Resource depletion of this nature is especially harmful to Métis communities, since Métis culture is deeply connected to natural ecosystems, and many Métis Citizens continue to rely on healthy fish populations for subsistence.

Therefore, the objective of this program is to gather data on the extent of fish health decline in Alberta's OSR so the MNA can: (a) advocate for Métis cultural rights and practices, (b) inform government policy and industry practice in the OSR, and (c) encourage the inclusion of Indigenous communities and Traditional Knowledge in conservation efforts. To reach this objective, a combination of staff- and community-led monitoring will continue in waterbodies of concern within the OSR. To standardize methodology across this program, the MNA's completed Fish Health Index (FHI) tool will be introduced to Community Monitors at MNA community gatherings. The FHI tool integrates western scientific and Métis Traditional Knowledge indicators and prompts monitors to complete thorough fish health assessments by asking specific questions and providing examples of what constitutes a "healthy" or "unhealthy" fish.

Anticipated deliverables of this program include an expanded network of Métis Citizen monitors, a robust dataset to inform baseline fish health and relevant limits of change in the OSR, and instructional community monitoring documents to be shared with other OSM program members.

## 1.0 Merits of the Work Plan

All work plans under the OSM Program must serve the mandate of the program by determining (1) if changes in indicators are occurring in the oil sands region and (2) if the changes are caused by oil sands development activities and (3) the contribution in the context of cumulative effects. In the space below please provide information on the following:

- Describe the key drivers for the project identifying linkages to Adaptive Monitoring framework particularly as it relates to surveillance, confirmation and limits of change (as per OC approved Key Questions).
- Explain the knowledge gap as it relates to the Adaptive Monitoring that is being addressed along with the context and scope of the problem as well as the Source - Pathway - Receptor Conceptual Models .
- Describe how the project meets the mandate of the OSM Program or areas of limited knowledge is the work being designed to answer with consideration for the TAC specific Scope of Work Document (attached) and the Key Questions (attached)?
- Discuss results of previous monitoring/studies/development and what has been achieved to date. Please identify potential linkages to relevant sections of the State of Environment Report.

The original driver for this project was widespread Citizen concern over a decline in water level, water quality, and fish health in Alberta's waterbodies. Since Métis culture is deeply rooted in connection with natural systems, MNA Citizens who regularly practice harvesting serve as a knowledgeable and well-established surveillance system of the health of fish, wildlife, and the overall environment in the OSR. Thus, the job of the MNA's Environment and Climate Change department is to take formal measurements of western science and Traditional Knowledge indicators to confirm the decline in fish and fish habitat health observed by Métis Citizens.

An equally important driver of this project is the preservation and transfer of Métis Traditional Knowledge and culture among Citizens, especially youth. The natural environment and its resources play an integral role in many Métis customs and practices, such as fish harvesting for subsistence. If fish populations and water quality decline beyond culturally meaningful limits of change, this has critical consequences for Métis Citizens' ability to congregate, practice traditional harvesting methods, and feed their communities.

Until very recently, many have considered Indigenous Traditional Knowledge to be subordinate to western scientific methods due to its qualitative nature and oral method of transfer. However, perspectives have been shifting in recent years as the value of Traditional Knowledge continues to be explored and demonstrated by researchers, environment managers, and Indigenous communities. Several communities involved in the OSM program continue to challenge this assumption by advocating for inclusion and consideration of First Nations and Métis Traditional Knowledge in the broader scientific community. The MNA's proposed monitoring program will continue this initiative by documenting, practicing, and sharing Métis Traditional Knowledge and cultural indicators of fish health with a variety of audiences. This program will also work to establish pre- and post-development baseline estimations of fish health through a Métis lens, and compare how Traditional Knowledge and western science indicators reflect changes in fish health in response to oil sands development.

Specifically, the source-pathway-receptor models this project is most concerned with include:

1. Landscape disturbance -> Habitat loss & fragmentation -> Altered habitat -> Wildlife health and abundance
2. Industrial water use -> Contaminants -> Water transport -> Water quality and wildlife health
3. Seepage & spills -> Organic & inorganic substances -> Groundwater & overland water flow -> Fish and human health

Since the main priority of the MNA's environmental monitoring initiative is to address the concerns of Métis Citizens, the scope of the proposed program will be limited to waterbodies that are frequented by and culturally significant to Citizens, as well as fish species that are targeted by Citizens.

This program will directly support the OSM program's mandate to determine whether changes in indicators are occurring in the OSR by defining, sharing, and repeatedly measuring Métis and western science indicators of fish health in the OSR. Additionally, the proposed workplan expansion for the 2024-2025 fiscal year allocates resources towards compiling internally and externally derived data regarding fishing

activities, fish health, and the state of waterbodies within the OSR. These efforts are expected to contribute to the establishment of a pre-development baseline, while also addressing the role of cumulative effects on fish health in the OSR.

Since the MNA's proposed program focuses directly on fish health, it considers multiple TAC key questions including: Are the fish healthy? Are the resources fish rely on healthy? Are the fish safe for me and my family to eat? Are there enough fish to feed my family and community? Are culturally significant waterbodies healthy and accessible to my community? Are important fish species still available?

The proposed program was first launched as a pilot study in 2020, when a small number of MNA staff and Métis harvesters collaborated to catch and examine fish from a handful of lakes of concern across Alberta. A combination of traditional (gill nets) and modern (rod and reel) techniques were used to lethally harvest fish. Measurements taken onsite were primarily of a western scientific nature (fork length, weight, stomach contents, external abnormalities), while Métis Traditional Knowledge indicators (palatability, flesh colour and texture), were recorded by harvesters upon processing and consuming fish at a later date. The palatability forms submitted by harvesters in 2020 were subsequently expanded into three forms: fishing trip experience, fish size and health, and fish palatability. These forms were transferred online to a database management system and became available to all MNA Citizens in early 2021. Since its launch, the Fish Health Community Monitor program has grown steadily, with the number of forms submitted increasing annually. Analysis of these forms has already revealed interesting and informative trends, such as variance in the seasonal catch rates of different waterbodies, observations of an overall decrease in fish size, and nearly unanimous positive palatability reports.

Since the initial engagement events held in 2018, the MNA has gauged Citizen concern regarding fish health twice more; once via an online survey in 2020, and a second time through in-person re-engagement community events in 2023. An observed decline in water quality, fish health, and number of fish in culturally significant waterbodies remains an important concern of Métis Citizens (specific data from 2023). This persistent feedback from Citizens has guided the annual expansion of the MNA's fish health monitoring program, including the objectives outlined in this proposal.

As a result of engagement events, Community Monitor forms, and cultural gatherings, the MNA has fostered working relationships with a community of Métis harvesters and Knowledge Holders who assist the MNA with current and future projects. The most recent product of this collaboration is the Fish Health Index (FHI) tool, which takes the form of a rubric. The FHI tool guides Monitors through completion of a braided fish health evaluation that considers both Métis Traditional Knowledge and western science indicators. Having been designed, assembled, and reviewed during the 2023-2024 fiscal year, the FHI tool will now be ready for distribution and implementation into all areas of the MNA's fish monitoring program throughout 2024-2025.

The findings of the proposed project will be useful in informing the Surface Water portion of the upcoming State of Environment Report.

The FHI will help to standardize observations across the Fish Health Community Monitor program, as well as facilitate the transfer of Traditional Knowledge indicators between community members and to youth who may be new to harvesting.

## 2.0 Objectives of the Work Plan

List in point form the objectives of the 2024/25 work plan below

1. Integrate the Fish Health Index (FHI) tool into existing MNA fish health monitoring programs
  - Streamline and standardize the fish health evaluation process for Métis Community Monitors
  - Provide reference materials to aid new Community Monitors in participating in fish health evaluations
  - Share FHI tool with other OSM program partners and external organizations to encourage consideration of Métis Traditional Knowledge indicators in environmental monitoring initiatives

## 2. Expand Targeted Ice Fishing and Fish Health Community Monitor programs

- Understand the harvesting habits and concerns of Métis Citizens to advocate for protection of their Section 35 rights
- Recruit additional Métis Community Monitors to facilitate Traditional Knowledge Transfer, reconnection with the environment, and curation of a robust community-based monitoring dataset
- Celebrate and encourage Community Monitor work through MNA-hosted Askiy Guardians Gatherings and partnership with local organizations (such as watershed alliances)
- Allocate resources responsibly by using Community Monitor data to identify and target waterbodies of highest concern

## 3. Refine MNA's fish health community-based monitoring methods and develop as an SOP to share with other OSR communities

- Share findings and methodologies with other OSM program partners and external organizations to ensure monitoring efforts are efficient and effective
- Create best work practices documents (FHI tool, SOPs) that can be referenced to ensure consistent and standardized methodologies are being used
- Make the process of establishing community-based monitoring programs more accessible for external organizations by making best work practices documents publicly available

## 4. Increase MNA staff and community technical monitoring capacity

- Approach monitoring with a more holistic, multi-disciplinary point of view
- Increase the technical methodologies and analyses available for use in the MNA's monitoring programs
- Provide direct benefits to Métis communities by identifying and facilitating experiential and professional development opportunities for Citizens

## 5. Analyze fish health monitoring data, determine outcomes, and report results

- Maintain transparent communication with MNA Citizens and funding partners
- Provide informative and usable reporting materials for a variety of audiences including Métis Citizens, the general public, and technical organizations such as the OSM program
- Create resources that can be used to improve and sustain monitoring efforts in subsequent years

### 3.0 Scope

#### Evaluation of Scope Criteria (Information Box Only- No action required)

Your workplan will be evaluated against the criteria below. A successful workplan would:

- Be in scope of the OSM Program (e.g., regional boundaries, specific to oil sands development, within boundaries of the Oil Sands Environmental Monitoring Program Regulation)
- consider the TAC-specific Scope of Work document and the key questions
- integrate western science with Indigenous Community-Based Monitoring)
- address the Adaptive Monitoring particularly as it relates to surveillance, confirmation and limits of change as per approved Key Questions.
- have an experimental design that addresses the Pressure/Stressor, Pathway/Exposure, Response continuum
- produce data/knowledge aligned with OSM Program requirements and is working with Service Alberta
- uses Standard Operating Procedures/ Best Management Practices/ Standard Methods including for Indigenous Community-Based Monitoring

### 3.1 Theme

Please select the theme(s) your monitoring work plan relates to:

- |  |   |   |                                   |
|--|---|---|-----------------------------------|
| <input type="checkbox"/> Air                 | <input type="checkbox"/> Groundwater                            | <input checked="" type="checkbox"/> Surface Water | <input type="checkbox"/> Wetlands |
| <input type="checkbox"/> Terrestrial Biology | <input type="checkbox"/> Data Management Analytics & Prediction | <input type="checkbox"/> Cross Cutting            |                                   |

### 3.2 Core Monitoring, Focused Study or Community Based Monitoring

Please select from the dropdown menu below if the monitoring in the work plan is “core monitoring” and/or a “focused study”. Core monitoring are long term monitoring programs that have been in operation for at least 3 years, have been previously designated by the OSM program as core, and will continue to operate into the future. Focused studies are short term projects 1-2 years that address a specific emerging issue.

Community Based Monitoring

### Themes

Please select the theme from the options below. Select all that apply.

- |                                      |  |   |                                  |
|--------------------------------------|--|---|----------------------------------|
| <input type="checkbox"/> Air         | <input type="checkbox"/> Groundwater   | <input checked="" type="checkbox"/> Surface Water | <input type="checkbox"/> Wetland |
| <input type="checkbox"/> Terrestrial | <input type="checkbox"/> Cross-Cutting |   |                                  |

### 3.3.1 Surface Water Theme

Please select from the dropdown menus below the sub-theme(s) your monitoring work plan relates to and address the Key Questions:

#### 3.3.1 Surface Water Theme:

##### 3.3.1.1 Sub Themes

Biological

#### 3.3.1.2 Surface Water Key Questions:

Explain how your surface water monitoring program addresses the key questions below.

Has baseline been established? Have thresholds or limits of change been identified?

The MNA launched a fish health monitoring pilot study in 2020, examining fish sampled from lakes across Alberta using a combination of traditional means (gill nets) and modern harvesting techniques (rod and reel). Fish caught during the sampling events were measured for species, length, weight, stomach contents, and visually inspected for signs of poor health or abnormalities. The MNA's project continued in 2021-2022, re-sampling fish from most lakes previously visited and expanding the work to include fish toxicological testing. During 2022-2023, the MNA continued efforts to sample target lakes of concern within the OSR, expanding efforts to include Calling Lake.

This work is expected to continue for a fourth year during the upcoming winter months (January - March 2024). Generally, the MNA has aimed to sample two lakes each year located within the OSR within the winter months. Consecutive sampling of individual lakes is often considered to establish baseline data at a lake specific level, especially when catch rates are low or toxicological data collected warrants further investigation. Once MNA has collected sufficient baseline data for an individual lake (or considered available data provided by available external sources, like AEPA surveys, the MNA moves on to target other lakes of concern.

The MNA also launched its fish health community monitoring program in August 2021, through which MNA Citizens can report their fishing activities and observations on waterways and waterbodies in Alberta to the MNA. During the first year of this program, the MNA received over 300 reports from MNA Citizens and participation in the program is growing. To date, the MNA has received over 800 reports from Citizens, including over 160 reports from within the OSR. The long-term goal of this program is to have ongoing participation from MNA Citizens in the program to obtain multi-year baseline fish health and productivity data for waterways and waterbodies across Alberta, including those within the OSR. If declines in fish abundance or fish health are detected for specific waterways or waterbodies, the MNA can consider launching a focused study to investigate the declines. MNA community monitor data and ongoing engagement data are primary data the MNA considers for determining lakes of concern. It is also the hope of the MNA that other OSM participating communities will adopt similar community reporting methods so Indigenous harvester observations for lakes across the OSR can be pooled to provide a more robust dataset for examining the state of individual waterbodies. MNA intends to work on an ICBM SOP to share methods with other interested communities as part of this workplan.

Are changes occurring in water quality, biological health (e.g., benthos, fish) and/or water quantity/flows relative to baseline? If yes, is there evidence that the observed change is attributable to oil sands development? (Describe source-pathway-receptor and/or conceptual models and what is the contribution in the context of cumulative effects?)

Previous engagements with MNA Citizens within the OSR highlighted key environmental concerns, including declines in fish populations, fish health, and water quality. Investigating these community concerns through both Western science and Traditional Knowledge perspectives is the purpose of the MNA's fish monitoring activities within the OSR. Previous research on fish health within the OSR found that TK was often a more reliable indicator of ecosystem state than intermittent sampling using western science methods, whereby TK could fill in knowledge gaps not captured by ongoing scientific monitoring. Harvesters have been found to continuously observe changes in fish health, water quality, water quantity, and ice thickness throughout their lifetime. Their observations can be used as indicators for the health of aquatic ecosystems.



The MNA conducts annual sampling of waterbodies of concern, aided by a team of MNA harvesters, to collect primarily western science data. However, to explore TK perspectives, the MNA seeks to gather the observations of MNA harvesters through their fish health community monitoring program, through which online reports can be filled out by harvesters and shared with the MNA. To ensure the MNA understands TK indicators specific to MNA Citizens, they recently conducted work to interview Knowledge Holders and Elders to explore fish health indicators. These indicators have been recorded and will be shared with MNA Citizens through a Fish Health Index (FHI) tool the MNA is producing and aims to distribute broadly and incorporate into their community monitor program and promote and MNA community events.

The MNA's monitoring efforts could contribute useful data for the establishment of a baseline for fish populations within individual waterbodies and waterways (e.g., fish and fish habitat). For example, through MNA's community monitoring forms submission, the MNA is building baseline data to detect changes in fish populations, harvesting success, and the presence/absence of fish indicators as reported by MNA Citizens.

Are there unanticipated results in the data? If yes, is there need for investigation of cause studies?

Previous toxicological testing has revealed relatively high mercury levels in individual fish at some lakes of concern targeted by the MNA's sampling efforts (e.g., high levels in Moose Lake detected in winter 2021). Given the influence of net locations, weather, and other factors impacting fish activities and fishing success, these results may not be a cause for immediate concern, but often warrant the MNA revisiting the location in future years. Our community monitoring form submissions have also provided us with insight into fishing success, experiences, and concerns of Citizens across Alberta, including in the OSR. For example, Beaver Lake was noted to have low catch rates over the 8 trips reported, and Citizens noted poor fishing trip satisfaction due to crowding, few or small fish caught, and signs of poor fish health.

Are changes in water quality and/or water quantity and/or biological health informing Indigenous key questions and concerns?

The MNA regularly engages with its Citizens to gather and share information, obtain program feedback, and hear environmental concerns. Recent engagements have indicated the health of surface waters in the OSR and the fish within them are of concern to the MNA community, especially to those residing within MNA Regions which intersect with the OSR. Sixty-three percent of all environmental concerns shared by MNA Citizens within OSR-intersecting MNA Regions were related to water, fish health, and fish abundance. Declines in the availability and health of fish and degradation of their habitats can have a variety of negative impacts on MNA Citizens related to food security, connection to lands and waters, the transfer of Traditional Knowledge, and their ability to exercise their Section 35 rights. These are changes the MNA seeks to investigate through this project. Instances of poor or declining fish health detected from the MNA's community monitoring program and/or lake sampling efforts will be shared with MNA Citizens and flagged for potential future focused study to investigate causes.

Are data produced following OSM Program requirements and provided into the OSM Program data management system?

All scientific data collected through activities supported by the OSM Program are considered open by default to share with the OSM Program, as per its guidelines. Each year the MNA produces a final report which includes supplementary documents with data collected through fish sampling activities. Data summaries of Traditional Knowledge are provided in aggregate formats to the OSM program within the final report. However, sensitive information and Traditional Knowledge are not openly shared with the OSM Program.

Do methodologies use relevant Standard Operating Procedures/ Best Management Practices/ Standard Methods?

Western science methodologies utilized for community fishing events, fish sampling activities, and taught to MNA Citizens who participate in the MNA's fish health community monitor program are comparable to those conducted by other fish studies within the OSM program (McMaster et al. 2018; Brunet et al. 2020), which includes measuring fish weight, length, sex, and visual health. Sampling protocol materials developed by the MNA relied on the Manual of Instructions - Fall Walleye Index Netting (Morgan, 2002)

developed by the Percid Community Synthesis Diagnostics and Sampling Standards Working Group. Formal OSM Standard Operating Procedures (SOPs) have not been readily available in past years for the MNA to consider for the alignment of sampling methods. Likewise, engagement with the OSM Aquatics TAC has been limited, although feedback on MNA's monitoring activities have been positive. It's worth noting that OSM SOPs for aquatics projects have been made available to MNA staff this year, so moving forward the MNA can consider efforts to further align with methods as described in SOPs.

The MNA has also undertaken work that is not currently captured by existing SOPs under the OSM Program, such as the development of a Fish Health Index (FHI) tool and a fish health community monitor program. The MNA worked with Vanessa de Koninck, Ph.D., OSM Interdisciplinary Social Scientist, to review and refine materials used for these activities. The MNA has engaged with the Aquatics TAC regarding the intent to develop an OSP to share these methodologies with other OSM communities.

#### Literature Cited:

Brunet et al. 2020. Towards indigenous community-led monitoring of fish in the oil sands region of Canada: Lessons at the intersection of cultural consensus and fish science. *The Extractive Industries and Society* Volume 7, Issue 4, November 2020, 1319-1329.

Morgan, G.E. 2002. Manual of instructions – fall walleye index netting (FWIN). Percid community synthesis, diagnostics and sampling standards working group. Edited by Ontario Ministry of Natural Resources, Peterborough, pp. 20.

How does the monitoring identify integration amongst projects, themes or with communities?

Indigenous Knowledge, as defined by the Canadian Government's Tri-council Policy Statement for Ethical Research involving Humans (Chapter 9, pg. 113) (also cited in this document in section 13.0) is defined as being knowledge held by the Aboriginal peoples, specific to place, rooted in multi-generational experiences, and determined by the communities' land, environment, region, culture, and language. While there are ongoing fish health projects being conducted within the OSM program to investigate fish health, there are many Indigenous communities within the OSM areas; each with their own Traditional Knowledge.

The MNA's fish health community monitoring program allows MNA Citizens across the OSR to participate in environmental monitoring and assessing the state of the waterbodies and fish populations they rely on for subsistence, recreation, and the continuity of their culture. The MNA's work to develop a Fish Health Index (FHI) tool based on Traditional Knowledge shared by Métis harvesters regarding fish health is proposed to be integrated into the MNA's community monitoring program to share traditional knowledge within the community, while also aligning indicators considered and reported on by MNA Citizens participating as monitors. Lastly, target lake fish sampling activities can produce comparable data (see discussion of methods above) that has the potential to be combined with data obtained by other OSM communities to develop a broader and more robust dataset to examine fish and waterbody health within the OSR.

With consideration for adaptive monitoring, where does the proposed monitoring fit on the conceptual model for the theme area relative to the conceptual model for the OSM Program?

The monitoring intended to occur from the proposed project fits into the EEM framework by contributing to surveillance for the surface water category, focused on water and biological quality. The proposed monitoring work is intended to collect data to be used as baseline conditions and to detect changes in fish health in surface water sources throughout the OSR. This work will advance understanding transition towards the conceptual model of the EEM framework by providing further insight into Culturally Relevant Indicators for assessing fish health from Métis perspectives. As previously noted (See 4.), each Indigenous community has unique Traditional Knowledge. Culturally relevant indicators and receptors considered within the conceptual model should not be limited to communities who have previously engaged in work

related to fish health. Our data fits into the adaptive monitoring framework, in that the data collected is standardised through community monitoring (for example: measuring fish weight, length, sex, and visual health), the use of the previously developed Traditional Fish Health Assessment Tool, and it will continue to engage with Citizens on fish health concerns. Additionally, as community monitors are Métis harvesters, who often return to the same body of water multiple times a year, we are able to see how health changes over time and adapt our monitoring if fish health changes are identified.

How will this work advance understanding transition towards adaptive monitoring?

This monitoring project directly compliments a transition to adaptive monitoring in that it uses community monitoring to establish baseline data and detect changes for waterways and waterbodies across the OSR. Regularly reviewing the data submitted by community monitors will allow us to detect changes in fish health, fish abundance, fishing success, and new Citizen concerns. Being actively aware of these developments enables us to direct focused monitoring efforts to quickly investigate these issues. Moreover, detections of poor fish health throughout monitoring activities may be relevant to other OSM fish health and water quality related programs. Using resources and methodologies developed through this program, including the development of community monitoring SOP for OSM, will help guide future monitoring and contribute to the broader monitoring efforts of the OSM program.

Is the work plan contributing to Programmatic State of Environment Reporting? If yes, please identify potential linkages to relevant sections of the State of Environment Report.

This monitoring project will directly compliment other OSM fish monitoring projects (McMaster et al. 2018; Brunet et al. 2020) by investigating Traditional Knowledge perspectives on fish health, implementing the MNA's community monitoring program to obtain fish health and abundance data from across the OSR, and developing an ICBM SOP for community monitoring for the Aquatics TAC. Detections of poor fish health throughout monitoring activities may be relevant to other OSM fish health and water quality related programs. Using resources and methodologies developed through this program, the process for setting up other OSM Community Monitor programs would be expedited.

#### Literature Cited:

Brunet et al. 2020. Towards indigenous community-led monitoring of fish in the oil sands region of Canada: Lessons at the intersection of cultural consensus and fish science. *The Extractive Industries and Society* Volume 7, Issue 4, November 2020, 1319-1329.

McMaster et al. 2018. Aquatic ecosystem health assessment of the Athabasca River mainstem and tributaries using fish health and fish and invertebrate toxicological testing. *Oil Sands Monitoring Program Technical Report Series No. 1.8*, pp. 76.

## 4.0 Mitigation

### Evaluation of Mitigation Criteria (Information Box Only- No action required)

Your workplan will be evaluated against the criteria below. A successful workplan would potentially inform:

- efficacy of an existing regulation or policy
- an EPEA approval condition
- a regional framework (i.e., LARP)
- an emerging issue

Explain how your monitoring program informs management, policy and regulatory compliance. As relevant consider adaptive monitoring and the approved Key Questions in your response.

First and foremost, the proposed project will be useful in evaluating the efficacy of policies regulating Métis harvesting rights. Métis are recognized as an Aboriginal people of Canada in section 35 (2) of the Constitution Act, 1982. Hunting, fishing, and trapping have been important to Métis peoples' way of life throughout history and remains important to their culture today. The Government of Alberta supported the protection and sustainability of these harvesting rights through the enactment of a Métis Harvesting Policy in 2018. Under this policy, four Métis Harvesting Areas were established across northern and central Alberta. Currently, Métis Citizens are restricted to harvesting within Areas they can prove both ancestral and contemporary connections to. As the distribution, abundance, and availability of harvesting resources - including fish - fluctuates in response to climate change and oil sands development, so too should the policies that restrict Métis traditional harvesting rights. The proposed program will advocate for the rights of Métis harvesters by tracking changes to fish health and abundance within the OSR, and making this data publicly available so that legislative bodies can make informed adjustments to existing policies.

Declines in fish abundance and health within the OSR is a mounting issue for MNA Citizens. The proposed workplan, which adopts a Métis perspective and embodies the OSM program's adaptive monitoring framework, will inform fish-related management, policy, and regulatory compliance in a number of ways. The Fish Health Index (FHI) tool, combined with the MNA's ICBM Standard Operating Procedure (SOP), will be publicly available for use by individuals and organizations across Alberta. These two documents will serve as models that other Indigenous communities within the OSR can use for (a) examining fish health through a Traditional Knowledge lens and (b) utilizing community knowledge and experiences to monitor fish health in lakes across the OSR. Additionally, the expansion of the Targeted Ice Fishing and Community Monitor programs, as well as improvements to the MNA's technical capacity, will facilitate the ongoing curation of a robust, holistic fish health dataset. Once reviewed and publicly available, this information can be used alone or with complementary data to make informed management decisions by a variety of stakeholders. Finally, the release of clear and digestible online reports, including ArcGIS StoryMaps and infographics, will empower individual Métis Citizens to make informed harvesting and stewardship choices within the OSR.

## 5.0 Indigenous Issues

### Evaluation of Indigenous Issues Criteria (Information Box Only- No action required)

Your workplan will be evaluated against the criteria below. A successful workplan would potentially:

- Investigate Indigenous communities key questions and concerns
- Includes culturally relevant receptor(s) and indicator(s)
- Include or be driven by Indigenous communities (participatory or collaborative)
- Develop capacity in Indigenous communities
- Include a Council Resolution or Letter of Support from one or more Indigenous communities
- Describe how ethics protocols and best practices regarding involvement of Indigenous peoples will be adhered to
- Provide information on how Indigenous Knowledge will be collected, interpreted, validated, and used in a way that meets community Indigenous Knowledge protocols

Explain how your monitoring activities are inclusive and respond to Indigenous key questions and concerns and inform the ability to understand impacts on concerns and inform Section 35 Rights

The MNA actively works to ensure its Citizens are provided with opportunities to participate in monitoring events and to share their thoughts and concerns regarding these events with MNA ECC staff. Projects ideas and target areas for monitoring are always informed by knowledge and concerns expressed by MNA Citizens through ongoing engagements. Although there are challenges to gauging the thoughts of 60,000 MNA

Citizens across Alberta, efforts are made to include as many diverse viewpoints as possible. For example, during the 2023 Environment & Climate Change Re-engagement campaign, 12 in-person sessions were held throughout Alberta to reach as many local Métis communities as possible. Free childcare, a shared meal, and travel compensation were provided to reduce barriers to attendance. To accommodate those who couldn't attend an in-person engagement event, virtual information sessions and online feedback surveys were organized.

Reducing barriers to participation is also an important consideration of the Fish Health Community Monitor program. One of the main purposes of the proposed Askîy Guardians Gathering is to unite prospective Community Monitors with experienced Métis harvesters and Knowledge Holders, so that Monitors can learn how to conduct comprehensive fish health evaluations. The objective of this Traditional Knowledge transfer is to allow Citizens of all knowledge levels to become Community Monitors and advocate for the natural resources and environments that are integral to Métis culture. This initiative will be further supported by the distribution of the FHI tool, which will be available online, at MNA events, in local district offices, and in mailouts. Inclusivity and accessibility were also kept in mind during the design of the Fish Health Community Monitor forms themselves. Monitors will be guided through the submission process with clear questions, answer prompts, and the option to upload photos to more clearly convey their observations. The Community Monitor forms take only a few minutes to complete and are available to Citizens wherever there is internet connection. MNA staff are also available to formally submit data through Community Monitor forms if Citizens deliver fish health data through other formats such as mail or text.

The MNA's fish health monitoring programs were first established in response to a series of engagement sessions held in 2018. At that time, 41% of all environmental concerns expressed by the Métis Citizens of Alberta referred to water quality and fish health. In MNA regions where OSRs are located (Regions 1, 2, 5, and 6), water quality and fish health concerns made up 63% of environmental concerns. This indicates that Citizens in proximity to OSR have heightened concerns regarding fish and fish habitat health.

Since then, water quality and fish health have continued to be primary concerns of MNA Citizens. Most recently, concern for fish and fish habitat health was gauged through a combination of online and in-person surveys launched as part of a five-year re-engagement initiative. 53% of respondents from across Alberta expressed moderate to extreme levels of concern regarding fish and waterbody health. This proportion was even higher across Regions impacted by oil sands development (1, 2, 5, and 6), where 65% of respondents expressed moderate to extreme concern. In fact, a quarter of Alberta-wide respondents (and nearly half of OSR-based respondents) have already noticed changes to fish and fish habitat, including population declines, health declines, and decreased water quality. These changes fundamentally affect the ability of Métis harvesters to connect with the environment and meet their families' dietary needs using traditional fishing methods. Of the 67% of respondents who confirmed they spent time fishing in OSR-affected Regions, 24% reported they had reduced yield, and 13% attested they had reduced harvesting efforts due to concerns about consuming unhealthy fish. This is a significant number of Métis Citizens whose right to harvest fish for subsistence, which is protected under Section 35 of the Canadian Constitution, is being infringed upon. Thus, one of the main objectives of the proposed project is to gather relevant data on changes to fish health in the OSR. This data will be collected through both staff- and Citizen-led monitoring activities and will be made available to stakeholders and government bodies to advocate for the protection of Métis Citizens' Section 35 rights.

Métis cultural protocols will be followed during the work proposed under this program. All community events and meetings will be opened by a prayer led by an Elder, tobacco will be offered to harvesters and Knowledge Holders to request and thank them for sharing their knowledge, and when appropriate, gifts will be offered to thank participants for their time and support of the project. Harvesters are provided with tobacco and an opportunity to say a prayer when setting nets during monitoring and community events. Citizens will be awarded honorarium according to MNA's internal honorarium guidelines when requested to assist with project activities (e.g., opening/closing prayers, attending meetings, sharing

knowledge, etc.).

Does this project include an Integrated Community Based Monitoring Component?

Yes

If YES, please complete the [ICBM Abbreviated Work Plan Forms](#) and submit using the link below

[ICBM WORK PLAN SUBMISSION LINK](#)



## 5.1 Alignment with Interim Ethical Guidelines for ICBM in the OSM Program

Are there any community specific protocols that will be followed?

Métis cultural protocols will be followed during the work proposed under this program. All community events and meetings will be opened by a prayer led by an Elder, tobacco will be offered to harvesters and Knowledge Holders to request and thank them for sharing their knowledge, and when appropriate, gifts will be offered to thank participants for their time and support of the project. Harvesters are provided with tobacco and an opportunity to say a prayer when setting nets during monitoring and community events. Citizens will be awarded honorarium according to MNA's internal honorarium guidelines when requested to assist with project activities (e.g., opening/closing prayers, attending meetings, sharing knowledge, etc.).

Does the work plan involve methods for Indigenous participants to share information or knowledge (e.g. interview, focus group, survey/structured interview), or any other Indigenous participation? If yes, describe how risks and harms will be assessed, and the consent process that will be used.

Yes, the work plan includes two activities in which sharing of Citizens' knowledge and information is the primary objective. The risks and harms of each activity is primarily assessed by MNA Environment & Climate Change staff members. However, each aspect of the proposed workplan is a collaborative effort. The methods, benefits, and drawbacks of each activity may be reviewed by Métis harvesters, MNA Citizens serving on the Askîy Advisory Committee (AAC), MNA provincial leadership, or others, depending on the scope and objectives of the activity.

The first of the planned information-sharing activities is the Fish Health Community Monitor program, through which Citizens can become Community Monitors and share details of their fishing trips with the MNA through online report forms. At the beginning of each report form, a brief description of the program and a link to participation and consent details is available. MNA Citizens are made aware of the benefits and risks of participating in the program and how data collected through the program will be stored, used, and shared. If MNA Citizens choose to submit photos as part of their monitoring report, they are asked to complete a consent form and model release form to indicate how the MNA may or may not use their photos.

As with any online database in which personal information is stored, there is a small risk of loss of confidentiality. For this reason, and for participants' peace of mind, the only identifying information collected through the Fish Health Community Monitoring forms is the participant's name and email address.

The second of the planned information-sharing activities is an annual MNA-hosted Askîy Guardians Gathering, which takes the form of a community fishing events that celebrates Citizens' participation in the Fish Health Community Monitoring program. This event also encourages Citizens of all backgrounds and experience levels to participate in fishing activities and fish health assessments under the guidance of experienced Métis harvesters.

Risks that have been identified with outdoor Askîy Guardians Gatherings include exposure to adverse weather conditions, swift water, tripping hazards, exposure, and others. The MNA will mitigate these risks by:

- Encouraging MNA Citizens to come prepared with suitable clothing and equipment
- Selecting locations with ease of access
- Providing shelter and warming stations, and additional accommodations as needed

Askîy Guardians Gatherings pose no expected emotional or psychological risk to participants. Citizens will be invited to attend the scheduled events to learn from local harvesters and Knowledge Holders and participate in the transmission of cultural practices within the MNA Community. When photos are taken at these events, all participants will be notified and provided with consent forms. If individuals do not consent to having their photo taken and likeness shared, MNA staff avoid taking photos of the individual

(when able) and ensure any identifiable photos taken of the individual are not published or shared.

Do the activities include any other collecting/sharing, interpreting, or applying Indigenous knowledge? Please describe how these activities will be conducted in alignment with the Interim Ethical Guidelines, and any community-based protocols and/or guidelines that may also apply.

Yes, the proposed workplan includes the interpretation, application, and sharing of Indigenous knowledge. The Fish Health Community Monitor forms allow Citizens to share information in a variety of ways, including multiple choice questions, long answer questions, and photo submission. Thus, MNA Environment & Climate Change staff will potentially be required to interpret Traditional Knowledge in order to compare information, identify trends, and summarize findings for reporting. Additionally, the purpose of the Fish Health Index (FHI) tool, developed with OSM support during the 2023/24 fiscal year, is to support and streamline the application of Métis Traditional Knowledge during fish health assessments. The FHI tool was designed to synthesize Métis Traditional Knowledge regarding fish health into an accessible document to facilitate Knowledge transfer within the community, as well as with partner organizations. Externally, the FHI tool serves as an example of how Indigenous indicators can be integrated into monitoring initiatives. Finally, the Traditional Knowledge of Métis harvesters may be shared beyond MNA community events through digital publications of audio and video recordings. The recording and sharing of this type of information will only be conducted with the subjects' prior informed consent. All information collected, shared, interpreted, and applied will be completed by MNA staff, on behalf of the MNA Community.

A description of how these activities will be conducted in alignment with the Interim Ethical Guidelines is shared below.

#### 1. Integrate the Fish Health Index tool into existing MNA fish health monitoring programs

The principal driver behind the creation of the Fish Health Index (FHI) tool was to enable environmental monitoring programs (both internal and external to the MNA) to incorporate Métis Traditional Knowledge indicators into existing and future monitoring initiatives. By succinctly suggesting indicators and providing examples of indicator condition in both healthy and unhealthy fish, Indigenous Knowledge can more easily be recognized as valid, contemporary, and complementary to western scientific knowledge systems. As the FHI tool is the product of a collaborative effort between a diverse team of MNA Environment and Climate Change staff and Métis Knowledge Holders and harvesters, its creation is an example of how the proposed program intends to adopt an interdisciplinary approach to braiding multiple knowledge systems.

#### 2. Expand Targeted Ice Fishing and Fish Health Community Monitor programs

The primary objectives of the Fish Health Community Monitor program, the Askîy Guardians Gatherings, and their associated activities is to facilitate meaningful and equitable community participation in fish health monitoring, and to strengthen collaborative relationships through community-building events. Guardians Gatherings provide space for Citizens to express concerns and feedback to MNA Environment & Climate Change staff, which ensures program activities are informed by community needs and interests. Online Community Monitor report forms are an avenue for Citizens to submit evidence of and bring attention to waterbodies and fish species of concern, while Targeted Ice Fishing Surveys are an opportunity for the MNA to validate community concerns and build trust with Citizens through clear and timely reporting of results. Since MNA Citizens are a primary source of the information to be collected throughout the proposed program, the process of obtaining ongoing prior informed consent is front of mind and incorporated into all aspects of the proposed workplan.

#### 3. Revise and share the MNA's Indigenous Community-based Monitoring protocol

Similar to the development and distribution of the FHI tool, the proposed process of documenting the MNA's Indigenous Community-Based Monitoring protocol through a Standard Operation Procedure (SOP) will be an interdisciplinary activity. MNA Environment and Climate Change staff intend to engage Métis Knowledge Holders and harvesters, Citizen representatives, and OSM Technical Advisory Committee



members to draft an SOP that demonstrates the validity and practicality of Métis fish health indicators and outlines how other organizations can include Métis communities and indicators in their own programs.

#### 4. Increase MNA and Métis community technical monitoring capacity

An ongoing component of the MNA's environmental monitoring program is expanding the technical capacity of both staff and Community Monitors. Staff participation in workshops, conferences, and training programs increases the scope of knowledge and methods that can be applied to MNA monitoring programs and reports. Furthermore, networking and establishing partnerships at these events enables the MNA to provide a greater array of professional development opportunities to Métis Citizens. In alignment with the OSM program's Interim Ethical Guidelines, these pursuits are always guided by community-identified needs and interests.

#### 5. Assess fish health monitoring outcomes and report results

Recognizing that Indigenous communities are the owners and stewards of community-based monitoring data and information, the MNA acts to collect, store, analyze, and share data in an appropriate, accessible, and respectful manner on behalf of its Citizens. Summarizing the findings of the proposed monitoring activities will be done in a timely and thorough manner to ensure that Métis Citizens are able to make use of monitoring data and confirm that Traditional Knowledge is being shared and applied appropriately. Data that is deemed culturally sensitive or that is submitted in confidentiality will be kept private so as to avoid misrepresentation, misuse, and misappropriation.

Indicate how Indigenous communities / Indigenous knowledge holders will be involved to ensure appropriate analysis, interpretation and application of data and knowledge.

Following the conclusion of the proposed 2024/25 monitoring activities, the findings of this project will be shared through online and in-person platforms to keep MNA Citizens informed and provide them with opportunities to deliver program reviews and feedback.

The progress and findings of the proposed activities will also be reviewed by the MNA's Askîy Advisory Committee (AAC). The AAC, comprised of representatives from each of the six MNA Regions, plus one youth and one elder representative, was established in 2021 to provide guidance and feedback on the MNA's environmental monitoring projects and programming. Following the MNA's transition to the Otipemisiwak Métis Government, which is comprised of 22 districts, the AAC is being reorganized to provide more accurate provincial representation. The AAC will be reinstated during the 2024/25 fiscal year and will meet quarterly to discuss the progress of MNA monitoring initiatives, including that of the proposed program.

How are Indigenous communities involved in identifying or confirming the appropriateness of approach, methods, and/or indicators?

MNA Citizens and Knowledge Holders have been involved in directing the approach and methods of the proposed project since its inception and launch in 2018 and 2021, respectively. Project activities and objectives have been guided by Citizen concerns, observations, and feedback shared during both formal engagement sessions and informal community events. Citizens will continue to have the opportunity to comment on the appropriateness of project activities by filling out annual online feedback surveys, connecting with Environment & Climate Change staff at MNA-hosted events, and checking the regularly updated ECC StoryMaps posted to the MNA's website.

The MNA's Fish Health Index (FHI) tool was developed during 2022/23 and 2023/24 fiscal years using Traditional Knowledge and indicators shared by Métis harvesters during a series of semi-directed interviews. Métis harvesters who participated in the interviews were also given opportunities to review the FHI tool and provide feedback. Sharing the FHI tool and incorporating it into community monitoring activities and events will ensure that Métis-informed indicators of fish health will be used consistently and correctly during future MNA monitoring projects. The FHI tool will serve as a foundation for the eventual

re-assessment of indicator validity, as encouraged by the OSM program's adaptive monitoring framework.

MNA Citizens remain the primary source of the information to be collected, interpreted, and analyzed through the various activities included in this project. Therefore, the inclusion of Métis perspectives and values throughout the entirety of this program is unavoidable and of the utmost importance.

How does this work plan directly benefit Indigenous communities? How does it support building capacity in Indigenous communities?

This program will have many direct benefits to the MNA community. Collectively, the activities included in the proposed workplan will address Citizen concerns regarding declines in fish health and water quality. The MNA's Fish Health Community Monitor program empowers Citizens to actively monitor the fish species and waterbodies that are important to them, and to advocate for additional monitoring should concerning observations be made. Reconnection with the environment through repeated monitoring efforts is encouraged by offering small financial incentives and prizes for participating Citizens. The planned Askîy Guardians Gathering creates numerous opportunities for community building and Traditional Knowledge transfer, with harvesters and Knowledge Holders in attendance to guide fishing activities and share their experiences. The implementation and distribution of the FHI tool will be an educational asset during the 2024/25 Guardians Gathering and will serve as a physical guide that participants can reference during their personal fishing activities. Together, these activities will build community capacity by introducing MNA Citizens to both western-science and traditional methods of assessing fish health. Participation in organized fishing events will also provide MNA Citizens with the tools to harvest fish, learn and share Traditional Knowledge, maintain a cultural connection to the natural world, and maintain food sovereignty and security within their community.

How is the information from this work plan going to be reported back to Indigenous communities in a way that is accessible, transparent and easy to understand?

The data reported by Fish Health Community Monitors and gathered through other staff-led monitoring activities will be shared in multiple ways. Summaries of monitoring results are most accessible to MNA Citizens through ArcGIS StoryMaps, which are engaging, interactive, and easily accessed online through URL links on the MNA website and social media accounts. StoryMaps make use of customized maps, pictures, and text to summarize monitoring activities in an organized and digestible way. Additionally, MNA Environment & Climate Change staff are working with our database management system provider, Environmental Systems Solutions (ESS), to develop an online dashboard that would provide a more in-depth look at aggregate data submitted by MNA Community Monitors. The MNA regularly shares information with Citizens through an annual report prepared for the MNA Annual General Assembly and by hosting information booths in multiple tradeshow and community gatherings (e.g., Métis Fest, often held at Métis Crossing in June). The Fish Health Index (FHI) tool is also an example of a printed resource developed through work supported by the OSM program that will be distributed to MNA Citizens in an accessible format.

## 6.0 Measuring Change

### Evaluation of Measuring Change Criteria (Information Box Only- No action required)

Your workplan will be evaluated against the criteria below. A successful workplan would potentially:

- assess changes in environmental conditions compared to baseline (e.g., validation of EIA predictions)
- report uncertainty in estimates and monitoring is of sufficient power to detect change due to oil sands development on reasonable temporal or spatial scales
- include indicators along the spectrum of response (e.g., individual, population, community)
- focus on areas of highest risk (where change is detected, where change is greater than expected, where development is expected to expand collection of baseline).
- measure change along a stressor gradient or a stressor/reference comparison

Explain how your monitoring identifies environmental changes and how can be assessed against a baseline condition. As relevant, consider adaptive monitoring, the TAC specific Scope of Work document and the Key Questions in your response.

The process of identifying and measuring changes to fish health in OSR waterbodies will be executed in two main steps.

The first step will be the continued establishment of baseline fish health conditions. This will be achieved primarily through analysis of Citizen-submitted Fish Health Community Monitor reports. The second phase of the proposed workplan, “Expand Community & Fish Health Monitoring”, focuses on growing and refining this program to improve the quality and quantity of data to be used for baseline estimations. Some of the proposed improvements include introducing the Fish Health Index (FHI) tool to Community Monitors to help standardize the fish health evaluation process, as well as increasing the availability of small financial incentives and prizes to encourage Citizens to repeatedly submit fish health evaluations. Support will also be provided to Community Monitors at an MNA-hosted Askîy Guardians Gathering. During this gathering, experienced Métis harvesters and Knowledge Holders will be in attendance to teach Citizens fishing methods, encourage them to become Community Monitors, introduce them to the FHI tool, and to share Traditional Knowledge. The objective of the proposed program improvements is a continued increase in the number of Citizen participants, number of submitted fish health evaluations, and volume of data that can be used to estimate baseline fish health in the OSR. In addition to these efforts, MNA ECC staff will dedicate a portion of the requested funds to identifying and obtaining both internal and external complementary sources of historical data on fish health that might be helpful in estimating pre-development environmental baselines.

The second step towards identifying and quantifying environmental changes in the OSR will be focusing Targeted Ice Fishing efforts on waterbodies of highest risk. Following the creation of a reliable estimate of baseline fish health, select waterbodies of concern (locations where changes to fish health are unexpected or pronounced) will be identified as targets for annual staff-led surveying efforts. Targeted Ice Fishing will involve MNA ECC staff visiting at least one waterbody of concern within the OSR between January and March to closely inspect fish health and consult with local Métis knowledge keepers. The anticipated outcomes of Targeted Ice Fishing activities will be an increase in the resolution at which MNA ECC staff are able to detect changes in fish health, as well as increased sample size, which improves the efficacy of statistical analysis. Variables such as sample size, timing of fish health evaluations, and availability of complementary external data will be communicated in reporting materials so that the power and reliability of fish health data is clear.

## 7.0 Accounting for Scale

### Evaluation of Accounting for Scale Criteria (Information Box Only- No action required)

Your workplan will be evaluated against the criteria below. A successful workplan would potentially be:

- appropriate to the key question and indicator of interest
- relevant to sub-regional and regional questions
- relevant to organism, population and/or community levels of biological organization
- where modelled results are validated with monitored data
- where monitoring informs on environmental processes that occur at a regional scale. e.g. Characterizing individual sources to gain a regional estimate of acid deposition and understand signal from individual contributing sources.

Since the proposed Fish Health Community Monitor program is hosted through the MNA's ESS online database management system, the process of conducting and analyzing fish health evaluations is more or less free of the physical constraints that might limit the geographic scope of a single team of field biologists. Since 2021, over 800 Fish Health Community Monitor forms have been submitted by 282 Métis Community Monitors, providing observations on braided fish health indicators from 150 waterbodies across Alberta. As of August 2023, there were approximately 160 forms submitted related to water bodies within the OSR. The volume and geographic scope of this dataset is much greater than anything MNA ECC staff could hope to collect independently within the same period of time, which demonstrates the utility and importance of community-based monitoring methods. Equipped with such numerous observations on fish health collected from a wide variety of waterbodies across all three of Alberta's oil sands regions, MNA ECC staff can examine important key questions such as: Are there changes to fish health in waterbodies that MNA Citizens rely on for subsistence? Which changes warrant closer investigation? Are there regional and sub-regional patterns of fish health changes that might be indicative of cumulative effects? Since the answers to these questions, as well as the underlying data, may be of use to other communities and organizations participating in the OSM program, the results of this initiative and the associated methodologies will be made available through annual reports and SOPs included in the proposed workplan. Resources requested for the proposed workplan will also help to enlist and support additional Métis Community Monitors over the 2024/25 fiscal year, allowing for the continual growth and improvement of this dataset and the MNA's Community Monitoring network. If other SOM communities adopt similar methodologies for community monitoring within the OSR, combined datasets across communities may provide a stronger sample for drawing inferences regarding fish health, population changes, and the detection of negative fish health indicators.

A major advantage of the large scope of the Fish Health Community Monitor dataset is that fish health can be considered wholly or divided and compared by a diverse set of factors. These may include geographic location, proximity to urban centres, and degree of habitat disturbance, among others. By comparing and combining multiple factors, this dataset will help the MNA and other OSM program participants to identify potential cumulative effects, as well as to draw both large- and small-scale conclusions about changes to fish health in the OSR.

## 8.0 Transparency

### Evaluation of Transparency Criteria (Information Box Only- No action required)

Your workplan will be evaluated against the criteria below. A successful workplan would potentially include:

- a plan for dissemination of monitoring data, including appropriate timing, format, and aligns with OSM program data management plan
- demonstrated transparency in past performance
- identified an annual progress report as a deliverable
- reporting of monitoring results occurs at timing and format that is appropriate for recipient audience.

Explain how your monitoring generates data and reporting that is accessible, credible and useful. As relevant, consider adaptive monitoring, the TAC specific Scope of Work document and the Key Questions in your response.

As the proposed community-based monitoring program braids both Métis Traditional Knowledge and western science indicators together, it is important to consider how best to gather credible and useful data of each type.

Indigenous Traditional Knowledge is by nature credible and equivalent to empirical measurement. It is most useful and applicable when considered within the context of the Indigenous culture and location where it was developed. Therefore, the MNA will take care to maintain the integrity and holistic nature of Métis Traditional Knowledge by using and applying it only in appropriate contexts and locations. The sharing and use of Métis Traditional Knowledge will remain transparent by being regularly reviewed by Métis harvesters and Knowledge Holders, as well as Citizen representatives on the Askîy Advisory Council. MNA ECC staff will remain open to Citizen feedback regarding the appropriate use of submitted Traditional Knowledge and will amend analysis and application procedures as necessary.

Western scientific knowledge is most accurate, credible, and useful when it is collected and documented following a defined Standard Operating Procedure (SOP). Since the proposed project relies on hundreds of individual Métis Citizens to measure and submit fish health data, ensuring that indicators are evaluated in a comparable fashion is a challenge. The introduction of the Fish Health Index (FHI) tool, in combination with the development of an MNA Fish Health Community Monitor SOP, will provide a valuable set of instructions to help standardize how western scientific indicators of fish health are measured by both staff and Citizens. Additionally, to encourage the collection of repeated measurements at waterbodies of highest risk in the OSR, the MNA will encourage Citizens to continue monitoring efforts by offering small financial incentives and prizes.

Three styles of reporting will be used throughout the proposed program so that results are summarized and shared in ways that are accessible and useful to diverse audiences.

An annual OSM program technical report will be produced in March of 2025 to provide a summary of the success of workplan activities and a preliminary analysis of data gathered by both MNA staff and Community Monitors. Topics to be covered include the success of FHI tool integration into existing MNA monitoring programs, the growth of the Fish Health Community Monitor program, progress made on the MNA's Fish Health Community Monitoring SOP, and development status of the MNA's estimation of baseline fish health in the OSR. Significant changes to fish health and waterbodies that have been identified as locations of concern will also be reported.

To report back to MNA Citizens and the general public, a series of ArcGIS StoryMaps will be designed and published through the MNA website. StoryMap features will include details of monitoring activities, access to the completed FHI tool, relevant monitoring results, and recommendations for safe harvesting, among others. To accommodate Citizens without access to the technology or connectivity StoryMaps require, physical infographics and short reports in plain language will be printed and shared with Citizens at tradeshow booths, community gatherings, and the 2025 MNA Annual General Assembly. MNA ECC staff will be available at these events to discuss results with Citizens in-depth, and to answer any resulting questions. To address Métis youth, dynamic infographics summarizing program activities and results will be



posted to the MNA's social media pages. As preliminary analyses become available, short updates may be shared at earlier dates to keep Métis Citizens and Community Monitors appropriately informed.

Finally, a public report will be produced to ensure all methods and findings from our monitoring program are available to the public. This will ensure transparency and wide-spread usability of the MNA's monitoring framework and results. All results, aside from those deemed sensitive or confidential in nature, will be shared openly through these processes.

## 9.0 Efficiency

### Evaluation of Efficiency Criteria (Information Box Only- No action required)

Your workplan will be evaluated against the criteria below. A successful workplan would include:

- appropriately addressed a risk-informed allocation of resources
- identified the role and justification for each staff member on the proposed work plan
- identified in-kind and leveraged resources (e.g., resources and approaches are appropriately shared with other OSM projects where possible)
- established partnerships (value-added) and demonstrated examples of coordinated efficiencies (e.g., field, analytical)
- identified co-location of monitoring effort
- demonstrated monitoring activities and information collected are not duplicative
- considered sampling/measurement/methods compatibility to other data sources (e.g., AER)

Explain how your monitoring is integrated with other OSM projects and incorporates community-based participation and/or engagement in proposed monitoring activities. As relevant, consider adaptive monitoring, the TAC specific Scope of Work document and the Key Questions in your response.

Conducting efficient monitoring activities, establishing productive partnerships, and avoiding duplicative work are core values that the MNA shares with the OSM program. In addition to addressing the environment- and climate-related concerns of Métis Citizens, one of the main drivers of the proposed program is ending the systemic omission of Indigenous Traditional Knowledge in mainstream ecological research and conservation. While several communities involved in the OSM program are already acting on this objective by advocating for inclusion and consideration of First Nations' Traditional Knowledge, Métis Traditional Knowledge is generally not well-published or accepted by the broader scientific community. The MNA's proposed monitoring program will continue to fill this gap by documenting, practicing, and sharing Métis Traditional Knowledge and cultural indicators of fish health.

Indigenous community-based monitoring programs, such as the one proposed, are an efficient design in that the majority of observations are made during fishing excursions that are already a part of Citizens' regular routine. This is beneficial as it means neither MNA staff nor Citizens are required to spend extensive time or resources acquiring data. In total, the resources spent organizing Askîy Guardians Gatherings, acquiring prizes to incentivize Monitors, and compensating Métis harvesters and Knowledge Holders for their time is a small fraction of what might be required to gather an equivalent amount of data through formal field monitoring trips. The dataset resulting from the Fish Health Community Monitor program further streamlines in-depth monitoring by indicating which waterbodies in the OSR are of greatest concern. Utilizing this data, Targeted Ice Fishing Surveys can be planned and conducted at locations where need is greatest, as indicated by MNA Citizens.

The anticipated products of this program, including the FHI tool, the Fish Health Community Monitor SOP, and the resulting datasets, will be shared with OSM program organizers and any interested partners. The MNA intends to continue to explore opportunities for project integration and collaboration through the OSM program by attending ICBM- and surface water-themed workshops and by delivering presentations to the OSM community when invited.

Since MNA ECC staff concurrently manage a variety of projects, team members will allocate time to complete the tasks they are best suited for during each phase of the proposed project. A detailed overview of the MNA Environment Team's key members for this project and their roles and expertise will be provided in section 15 of this application.

## 10.0 Work Plan Approach/Methods

List the Key Project Phases and Provide Bullets for Each Major Task under Each Project Phase

### 1. Integrate the Fish Health Index tool into existing MNA fish health monitoring programs

- Work with MNA Communications staff to format and print the Fish Health Index (FHI) in multiple sizes suitable for distribution and use by Citizens
- Distribute the printed FHI resources to community members by making them available at community gatherings, tradeshow booths, mailouts, district offices, and other locations and events
- Create a demonstration kit and video to assist new harvesters/monitors with using the FHI tool for personal use and to contribute to the MNA Fish Health Community Monitoring program

### 2. Expand Targeted Ice Fishing and Fish Health Community Monitor programs

- Plan and hold one community ice fishing event during winter 2024/25 to recruit additional Community Monitors and demonstrate FHI tool
- Continue to monitor impacts to fish health by conducting ice fishing sampling at 1 lake of concern in OSRs
- Partner with watershed alliances and similar organizations to promote community-based monitoring programs at community events
- Compile MNA engagement data and research external data sources to contribute to establishing a pre-development baseline for fish health and community participation in fish harvesting activities within the OSRs

### 3. Revise and share the MNA's Indigenous Community-based Monitoring protocol

- Obtain feedback on the MNA's fish health community-based monitoring methodologies from the Aquatics TAC and other OSM communities
- Refine methods with feedback obtained and draft an Indigenous Community-based Monitoring Standard Operating Procedure (SOP)
- Work collectively with the Aquatics TAC to finalize the SOP and make available to other OSM communities
- Continue participating in OSM-led workshops, training sessions, and networking events, and explore ideas for project integration

### 4. Increase MNA and Métis community technical monitoring capacity

- Register new staff in GIS training to facilitate efficient and meaningful data management and analysis
- Register two staff in ECCC's CABI training and begin acquiring benthic sampling equipment and skills
- Continue producing educational materials for MNA Citizens, and make hands-on experiential learning a priority at summer and winter fishing events

### 5. Assess fish health monitoring outcomes and report results

- Continue to compile, analyze, and store Community Monitoring data and targeted ice fishing data
- Summarize relevant results for inclusion in OSMP's SER
- Summarize findings in the form of a StoryMap and make it accessible to Citizens via the MNA's website

Describe how changes in environmental Condition will be assessed

The proposed monitoring project will assess changes in environmental condition by using fish health data submitted by MNA Community Monitors to establish baseline estimates for culturally relevant waterbodies in the OSR. Data will be collected using a series of online reporting forms that braid Métis Traditional Knowledge Indicators and western science sampling protocols. Completion of fish health assessments will be facilitated by the Fish Health Index (FHI) Tool, which was developed with OSM support during the 2023/24 fiscal year. The resulting dataset will be stored and analyzed by MNA ECC staff members as part

of the Fish Health Community Monitor program. As successive fish health reports are completed, the MNA can compare annual fish health trends to determine if significant changes are taking place. If changes or waterbodies of concern are identified, additional resources in the form of Targeted Ice Fishing Surveys will be delivered to specific regions. Community Monitor forms are available at the following link: <https://albertametis.com/fish-health/>

Are there Benchmarks Being Used to Assess Changes in Environmental Condition? If So, Please Describe, If Not, State "NONE"

NONE

(e.g., objectives, tiers, triggers, limits, reference conditions, thresholds, etc.)

Provide a Brief Description of the Western Science or Community-Based Monitoring Indigenous Community-Based Monitoring Methods by Project Phase

#### 1. Integrate the Fish Health Index tool into existing MNA fish health monitoring programs

- Use the FHI tool to demonstrate fish health assessments using western science indicators (fork length, body weight, etc.) and Métis Traditional Knowledge indicators (vigour, colour, palatability) to new Community Monitors

#### 2. Expand Targeted Ice Fishing and Fish Health Community Monitor programs

- Test ice thickness using western science empirical measurements
- Set fishing nets using traditional Métis methods
- Assess fish health using braided western science indicators (fork length, body weight, etc.) and Métis Traditional Knowledge indicators (vigour, colour, palatability)
- Ask Métis harvesters for feedback on success of fishing excursion, impression and observations of overall fish and fish habitat health

#### 3. Refine MNA's fish health community-based monitoring methods and develop as an SOP to share with other OSR communities

- Include both western science and Métis community-based monitoring methodologies in instructional documents

#### 4. Increase MNA staff and community technical monitoring capacity

- Enroll staff in GIS training so both western science and Métis Traditional Knowledge can be communicated in more effective, accessible ways
- Enroll staff in ECCC CABIN training to increase western science technical capacity

#### 5. Analyze fish health monitoring data, determine outcomes, and report results

- Conduct western science statistical analysis on both Targeted Ice Fishing and Fish Health Community Monitor data
- Consider Métis Traditional Knowledge and western science findings together in the geographic and cultural context most appropriate for them
- Find appropriate ways to apply Métis Traditional Knowledge and western science findings

List the Key Indicators Measured, If Not Applicable, State N/A

#### Fish habitat health

- Water quality
- Presence/absence of shoreline vegetation
- Frequency and severity of algae blooms



#### External fish health

- Vigour
- Colour
- Presence/absence of growths
- Size
- Body proportions

#### Internal fish health

- Flesh colour
- Flesh smell
- Stomach contents
- Presence/absence of parasites

#### Palatability

- Taste
- Texture

## 11.0 Knowledge Translation

In the space below, please provide the following:

- Describe the plan for knowledge transfer and distribution of learnings from the project. This could include workshops, publications, best practice documentation, marketing plan, etc.
- Demonstrate that the knowledge transfer plan is appropriate for the intended end-users.

The MNA shares information with many of its Citizens through digital platforms, such as their website, newsletter, and social media accounts. The MNA's Facebook Page has approximately 22,500 followers, its Twitter account has nearly 5,000 followers, and the bi-weekly email newsletter is sent to over 25,000 individuals. The MNA also manages a database of over 4,000 harvesters and environmentally concerned Citizens who have agreed to be contacted by the MNA about pressing environmental issues. These platforms are frequently used to share program information and updates, recruit volunteers, and promote MNA community events.

Askîy Guardians Gatherings will be organized annually and promoted to Citizens through the MNA's website, as well as through posts on MNA social media accounts. The Fish Health Index (FHI) tool will be distributed to Citizens at Guardians Gatherings so it can be referred to during both group and individual fishing excursions. Both Métis Knowledge Keepers and MNA ECC staff will be on site at the 2024/25 Guardians Gathering to direct FHI tool use, answer program-related questions, and receive feedback from Citizens regarding program progress and materials. This feedback will also be presented back to members of the newly re-instated Askîy Advisory Committee (AAC) at quarterly meetings. Regular call-outs encouraging Citizens to become Community Monitors and report on their fish harvesting activities throughout the year will be done to encourage greater participation in the project, with participation also being incentivized through prize giveaways.

As data from the Fish Health Community Monitor and Targeted Ice Fishing Survey programs is submitted and summarized over the course of the 2024/25 fiscal year, short updates will be shared with the MNA community via newsletter articles, website content, and social media posts. One of the more engaging strategies the MNA uses to translate data for Citizen consideration is through ArcGIS StoryMaps (an example of which can be found here: <https://storymaps.arcgis.com/stories/0a8e922a5fb64f25b0e16a4a4331f2a5>). During spring 2025, relevant findings of this program will be translated into two types of formal reports: one public-facing report written in plain language and an OSM-tailored technical report. The OSM-tailored report will be written with the understanding that, once completed, report contents should be ready for inclusion in the Surface Water and ICBM sections of the upcoming OSM State of Environment report. This comprehensive suite of reports will be written and released yearly to provide transparency and useful information to both MNA Citizens and funding organizations.

Finally, a Standard Operating Procedure (SOP) detailing the establishment and logistics of the MNA's Fish Health Community Monitor Program will be drafted, reviewed, and shared with interested OSM program partners. This SOP will provide a framework that other communities and organizations can use to better include Indigenous Traditional Knowledge in their environmental monitoring initiatives.

## 12.0 External Partners

List by project or project phase each component that will be delivered by an external party (including analytical laboratories) and name the party. Describe and name the associate work plan/grant/contract for these services. \* state none if not required

NONE

\*To ensure complete work plan proposal submission, all grants and contracts listed in this section should also be captured in Grants & Contracts.

### 13.0 Data Sharing and Data Management

For 2024-25 the following approach will be taken by the OSM Program related to data sharing.

For all work plans of a **western science** nature funded under the OSM Program, data sharing is a condition of funding and must align with the principle of “**Open by Default**”. In this case, all data is to be shared with the OSM Program as directed by the OSM Program Data Management work plan.

For all work plans involving **Indigenous Knowledge** as defined below and funded under the OSM Program, data sharing is a condition of funding and the Indigenous Knowledge components of the work plan must align with the principle of “**Protected by Default**”. In this case, all data as defined as Indigenous Knowledge, are to be retained by the Indigenous community to which the Indigenous Knowledge is held.

*Indigenous Knowledge is defined as:*

“The knowledge held by First Nations, Inuit and Métis peoples, the Aboriginal peoples of Canada. Traditional knowledge is specific to place, usually transmitted orally, and rooted in the experience of multiple generations. It is determined by an Aboriginal community's land, environment, region, culture and language. Traditional knowledge is usually described by Aboriginal peoples as holistic, involving body, mind, feelings and spirit. Knowledge may be expressed in symbols, arts, ceremonial and everyday practices, narratives and, especially, in relationships. The word tradition is not necessarily synonymous with old. Traditional knowledge is held collectively by all members of a community, although some members may have particular responsibility for its transmission. It includes preserved knowledge created by, and received from, past generations and innovations and new knowledge transmitted to subsequent generations. In international or scholarly discourse, the terms traditional knowledge and Indigenous knowledge are sometimes used interchangeably.”

*This definition was taken from the Canadian Government's Tri-council Policy Statement for Ethical Research involving Humans (Chapter 9, pg. 113) and is an interim definition specific to the Oil Sands Monitoring Program.*

13.1 Has there, or will there be, a Data Sharing agreement established through this Project? \*

No

13.2 Type of Quantitative Data Variables:

Both

13.3 Frequency of Collection:

Other

13.4 Estimated Data Collection Start Date:

April 1, 2024

13.5 Estimated Data Collection End Date:

March 31, 2025

13.6 Estimated Timeline For Upload Start Date:

April 1, 2025

13.7 Estimated Timeline For Upload End Date:

June 30, 2025

13.8 Will the data include traditional knowledge as defined by and provided by an Indigenous representative, Community or Organization?

Yes

**Table 13.9 Please describe below the Location of Data and Data Type:**

Add a Data Source by clicking on the add row on the bottom right side of table

Name of Dataset	Location of Dataset (E.g.:Path, Website, Database, etc.)	Data File Formats (E.g.: csv, txt, API, accdb, xlsx, etc.)	Security Classification
MNA 2024-2025 lake fish sampling results	Locally saved file on MNA internal servers	.csv	Open by Default

**14.0 2024/25 Deliverables**

Add an additional deliverable by clicking on the add row on the bottom right side of table

Type of Deliverable	Delivery Date	Description
Key Engagement/Participation Meeting	Q2	Shoreline community fishing event
Key Engagement/Participation Meeting	Q4	Winter community ice fishing events
Other (Describe in Description Section)	Q3	ICBM SOP Fish Health Community Monitoring
OSM Program Annual Progress Report (required)	Q4	Final Report
Public Dissemination Document	Q2	Fish Health Index Tool - Printed documents to be distributed to community
Public Dissemination Document	Q4	Community reporting: ArcGIS StoryMap

## 15.0 Project Team & Partners

In the space below please provide information on the following:

- Describe key members of the project team, including roles, responsibilities and expertise relevant to the proposed project.
- Describe the competency of this team to complete the project.
- Identify any personnel or expertise gaps for successful completion of the project relative to the OSM Program mandate and discuss how these gaps will be addressed.
- Describe the project management approach and the management structure.

The MNA's Environment and Climate Change Department is a diverse team of individuals with wide-ranging expertise and competencies. The team's work is directed by a vision established by an MNA Provincial Council Resolution on Environment, focusing on ensuring MNA Citizens can continue to practice their culture and traditions in a resilient and interconnected ecosystem supported by clean air, water and land. The Environment Team engages with MNA Citizens about environmental concerns, and works to research, monitor, report on, and address those concerns for the benefit of the Métis Nation of Alberta and its Citizens.

The MNA Environment Team has been, and continues to be, involved in the successful management and delivery of variety of programs focused related to Chronic Wasting Disease, migratory birds, traditional plant monitoring, Indigenous community monitoring and capacity building, and Indigenous Protected and Conserved Areas. Projects undertaken through these programs have worked to investigate and address concerns of MNA Citizens regarding issues such as food security, the state of the environment (including fish, wildlife, and plant populations and habitats), and the preservation of Métis culture and traditions.

Key Members from the Métis Nation of Alberta:

**Project Lead:** Christine Grams, Environment Coordinator. Has a BSc in Zoology and is working on the completion of an MSc in Ecology from the University of Alberta. Has experience assessing the health of both live and lethally sampled fish based on a variety of indicators. Expertise is in the design and execution of field-based research projects. Responsibilities will include project management, including planning and leading monitoring activities, obtaining and managing research permits, engaging with Knowledge Holders and harvesters, overseeing data entry and analysis, and report writing.

**Project Support:** Kimberly Mosicki MA, Environment Manager. Has an MA in Anthropology. Experience working in community engagements, Traditional Knowledge projects, and field work. Responsibilities will include assisting with project management, including planning and running events, engaging with Knowledge Holders and harvesters, report writing, and leading public dissemination with the assistance of the MNA Communications team.

**Project Support:** Courtney Anderson BAsC, Environment Coordinator. Has a Bachelor of Applied Science degree in Environmental Management with expertise in environmental monitoring techniques and plant ecology. Has experience in vegetation identification and assessment, field data collection, community engagement, event organization, technical report writing, data analysis, and geographic information systems (GIS). Responsibilities will include serving as support throughout the project lifecycle including assisting with events, data collection, data entry and analysis, mapping, and report writing.

**Project Support:** Jac Curry BSc, Environment Coordinator. Has a Bachelor of Science degree double majoring in Biology & Environmental studies with a minor in Indigenous studies. Areas of expertise include a variety of wildlife monitoring techniques including remote monitoring, bird banding and point counts. Has experience coordinating and leading field teams, as well as field data collection, community engagement, and event organization. Responsibilities will include serving as support throughout the project lifecycle including assisting with events, data collection, data entry and analysis, mapping, and report writing.

**Project Support:** Tracey Hammer, P. Biol, Data Management Coordinator. Has both a Ph.D. and a MSc. in

Ecology, specializing in parasite ecology and behavioral ecology, and expertise with handling/monitoring small/large mammals and penguins. Has experience in project design, project management, field data collection, mark/recapture, behavioral observations, community engagement, event organization, technical report writing, database management, data analysis, and geographic information systems (GIS). Responsibilities will include community monitoring form management and updates, assisting with field monitoring activities and community events, data collection, data entry and analysis, mapping, and report writing.

Project Support: Annalena Thiesen, BA, Engagement Assistant. Has a Bachelor of Anthropology. Has experience with planning and implementing community engagements and events, engaging with Knowledge Holders and harvesters, and developing digital and physical materials to share information and project updates. Responsibilities will include assisting with the planning and implementation of engagement events, promoting events, data entry and analysis, reporting, and assisting during monitoring activities.

Project Support: Elizabeth Blanchette, BSc, Engagement Coordinator. Has a Bachelor of Science Specializing in Ecology, Evolution, and Environmental Biology. Has experience with planning and implementing community engagements and events, engaging with Knowledge Holders and harvesters, and developing digital and physical materials to share information and project updates. Responsibilities will include assisting with the planning and implementation of engagement events, promoting events, data entry and analysis, reporting, and assisting with field monitoring activities.

Project Support: Jenn Pylypiw MSc., Engagement Coordinator & Policy Analyst. Has a MSc in Climate Change, Impacts, Adaptation, and Mitigation. Has experience developing and conducting community engagements, qualitative data analysis, and providing policy recommendations. Responsibilities will be assisting with project management, event planning and promotion, development of published materials, and coordinating with MNA Communications staff.

Project Support: Jordan York MES., Conservation Manager. Has an MES in Environmental Studies: Northern Environments and Cultures. Expertise in Traditional Knowledge and Wildlife Management. Experience working in community engagement, traditional ecological knowledge projects, environmental monitoring, and field work. Responsibilities will include assisting with project management, including planning and running events, engaging with Knowledge Holders and harvesters, data entry and analysis, report writing, and leading public dissemination with assistance of the MNA Communications team.

Project Support: Craig Letendre, Harvesting Manager. Experienced harvester, including fishing using gill net. Responsibilities will include assisting with the planning and leading of monitoring activities and community events.

Administrative Assistant: Mystik Robinson-Tod BSc. Has a Bachelor of Science specializing in math and biology. Responsibilities include data entry, report writing, invoice and expense form processing, assisting with projects and engagements, and office admin duties.

Director: Andres Filella, Director of MNA Environment and Climate Change. Expertise in employee and project management, government relations, and citizen engagement. Responsibilities will include providing Senior project oversight and advice.

#### Partners:

Over the past several years the MNA Environment team has worked with several experienced and knowledgeable MNA harvesters to assist with the fishing activities and to share Traditional Knowledge and expertise with community members present. These include:  
Keith Grant, Dwight Knoll, Kirsten Letendre, Joshua Letendre, and Dean Foster.

#### Expertise gaps:

Additional MNA Environment and Climate Change staff will join the team as required to assist with planning and implementing community events and monitoring activities, data entry and analysis, and dissemination of the Fish Health Index tool to the MNA Community.

## 16.0 Project Human Resources & Financing

### Section 16.1 Human Resource Estimates

Building off of the competencies listed in the previous section, please complete the table below. Add additional rows as necessary. This table must include **ALL staff involved** in the project, their role and the % of that staff's time allocated to this work plan. The AEPA calculated amount is based on an estimate of \$120,000/year for FTEs. This number cannot be changed. The OSM program recognizes that this is an estimate.

**Table 16.1.1 AEPA**

Add an additional AEPA Staff member by clicking on the add row below the table. The total FTE (Full Time Equivalent) is Auto Summed (in Table 16.2.1) and converted to a dollar amount.

Name (Last, First)	Role	%Time Allocated to Project
Christine Grams	Project Lead	50
Kimberly Mosicki	Project Support	10
Jordan York	Project Support	6.6666667

**Table 16.1.2 ECCC**

Add an additional ECCC Staff member by clicking on the add row below the table. The total FTE (Full Time Equivalent) is Auto Summed (in Table 16.2.2) and converted to a dollar amount.

Name (Last, First)	Role	%Time Allocated to Project

The tables below are the financial tables for Alberta Environment & Protected Areas (AEPA) and Environment & Climate Change Canada. All work plans under the OSM Program require either a government lead or a government coordinator.

### Section 16.2 Financing

The OSM Program recognizes that many of these submissions are a result of joint effort and monitoring initiatives. A detailed "PROJECT FINANCE BREAKDOWN" must be provided using the Project Finance Breakdown Template provided, accessible [here](#). Please note that completion of this Project Finance Breakdown Template is mandatory and must be submitted along with each workplan.

### [PROJECT FINANCE BREAKDOWN TEMPLATE](#)

**Table 16.2.1 Funding Requested BY ALBERTA ENVIRONMENT & PROTECTED AREAS**

Organization - Alberta Environment & Protected Areas ONLY	Total % time allocated to project for AEPA staff	Total Funding Requested from OSM
Salaries and Benefits (Calculated from Table 16.1.1 above)	66.66666667	\$80,000.00
<b>Operations and Maintenance</b>		
Consumable materials and supplies		\$14,000.00
Conferences and meetings travel		\$5,000.00
Project-related travel		\$16,500.00
Engagement		\$19,500.00
Reporting		\$0.00
Overhead		\$15,000.00
Total All Grants (Calculated from Table 16.4 below)		\$0.00
Total All Contracts (Calculated from Table 16.5 below)		\$0.00
Sub-Total (Calculated)		\$150,000.00
<b>Capital*</b>		
AEPA TOTAL (Calculated)		\$150,000.00

\* The Government of Alberta Financial Policies (*Policy # A600*) requires that all **capital asset** purchases comply with governmental and departmental legislation, policies, procedures, directives and guidelines. **Capital assets** (*Financial Policy # A100*, Government of Alberta, January 2014) are tangible assets that: have economic life greater than one year; are acquired, constructed, or developed for use on a continuing basis; are not held for sale in ordinary course of operations; are recorded and tracked centrally; have a cost greater than \$5,000. Some **examples of capital asset equipment include:** laboratory equipment, appliances, boats, motors, field equipment, ATV's/snowmobiles, stationary equipment (pier/sign/weather), fire/safety equipment, pumps/tanks, heavy equipment, irrigation systems, furniture, trailers, vehicles, etc. (*Financial Policy # A100*, Government of Alberta, January 2014).



**Table 16.2.2 Funding Requested BY ENVIRONMENT & CLIMATE CHANGE CANADA**

Organization - Environment & Climate Change Canada ONLY	Total % time allocated to project for ECCC staff	Total Funding Requested from OSM
Salaries and Benefits FTE (Please manually provide the number in the space below)	0	\$0.00
<b>Operations and Maintenance</b>		
Consumable materials and supplies		
Conferences and meetings travel		
Project-related travel		
Engagement		
Reporting		
Overhead		
ECCC TOTAL (Calculated)		\$0.00

\* ECCC cannot request capital under the OSM program. Any capital requirements to support long-term monitoring under the OSM program should be procured by Alberta and captured in that budget table.

**Table 16.3**

**Complete ONE table per Grant recipient.**

Add a Recipient by clicking on add table below the table. The total of all Grants is Auto Summed in Table 16.2.1

GRANT RECIPIENT - ONLY: Name	
GRANT RECIPIENT - ONLY: Organization	
Category	
Salaries and Benefits FTE	Total Funding Requested from OSM
<b>Operations and Maintenance</b>	
Consumable materials and supplies	
Conferences and meetings travel	
Project-related travel	
Engagement	
Reporting	
Overhead	
GRANT TOTAL (Calculated)	<b>\$0.00</b>

**Table 16.4**

**Complete ONE table per Contract recipient.**

Add a Recipient by clicking on add row below the table.. This section is only to be completed should the applicant intend to contract components or stages of the project out to external organizations. The total of all Contracts is Auto Summed in Table 16.2.1

CONTRACT RECIPIENT - ONLY: Name	
CONTRACT RECIPIENT - ONLY: Organization	
Category	
Salaries and Benefits	Total Funding Requested from OSM
<b>Operations and Maintenance</b>	
Consumable materials and supplies	
Conferences and meetings travel	
Project-related travel	
Engagement	
Reporting	
Overhead	
CONTRACT TOTAL (Calculated)	\$0.00

**Table 16.5 GRAND TOTAL Project Funding Requested from OSM Program**

The table below is auto calculated, please do not try to manually manipulate these contents.

Category	Total Funding Requested from OSM
Salaries and Benefits Sums totals for salaries and benefits from AEPA and ECCC ONLY	\$80,000.00
<b>Operations and Maintenance</b>	
Consumable materials and supplies Sums totals for AEPA and ECCC ONLY	\$14,000.00
Conferences and meetings travel Sums totals for AEPA and ECCC ONLY	\$5,000.00
Project-related travel Sums totals for AEPA and ECCC ONLY	\$16,500.00
Engagement Sums totals for AEPA and ECCC ONLY	\$19,500.00
Reporting Sums totals for AEPA and ECCC ONLY	\$0.00
Overhead Sums totals for AEPA and ECCC ONLY	\$15,000.00
Total All Grants (from table 16.2.1 above) <b>Sums totals for AEPA Tables ONLY</b>	\$0.00
Total All Contracts (from table 16.2.1 above) <b>Sums totals for AEPA Tables ONLY</b>	\$0.00
SUB-TOTAL (Calculated)	\$150,000.00
Capital* <b>Sums total for AEPA</b>	
<b>GRAND PROJECT TOTAL</b>	\$150,000.00

Some **examples of capital asset equipment include:** laboratory equipment, appliances, boats, motors, field equipment, ATV's/snowmobiles, stationary equipment (pier/sign/weather), fire/safety equipment, pumps/tanks, heavy equipment, irrigation systems, furniture, trailers, vehicles, etc. (*Financial Policy # A100, Government of Alberta, January 2014*).

## 17.0 FINANCIAL MANAGEMENT

The OSM Program reserves the right to reallocate project funding during the current fiscal year on the basis of project performance and financial overspend or underspend.

Please check this box to acknowledge you have read and understand

In the space below please describe the following:

- Discuss how potential cost overruns and cost underruns will be managed.
- If this is a continuing project from last year, identify if this project was overspent or underspent in the previous year and explain why.
- Describe what risks and/or barriers may affect this project.

Regular financial updates and expenditure tracking will ensure there is no overrun or underrun of project funds. Potential risks or barriers that could impact the work is a resurgence of the COVID-19 pandemic, which could result in health and safety restrictions that prevent gatherings. In this event the focus group could be moved online, but in-person community events could be impacted. Should this happen a scope change might be needed to ensure safety of all Citizens and to prevent potential community transmission. Other risks could be inclement weather that impact or delay the proposed fishing activities, especially ice-fishing events, which could be impacted by too warm of weather or too cold of weather. Ice thickness will be tested to ensure safety for all participants and if inclement weather is expected, dates will be moved to ensure project deliverables are met.

## 18.0 Alternate Sources of Project Financing - In-Kind Contributions

**Table 18.1 In-Kind Contributions**

Add an In Kind Contribution by clicking on the table and then clicking on the add row on the bottom right side of table.

Description	Source	Equivalent Amount (\$CAD)
	<b>TOTAL</b>	<b>\$0.00</b>

**19.0 Consent & Declaration of Completion**

Should your application be successful, The OSM Program reserves the right to publish this work plan application. Please check the box below to acknowledge you have read and understand:

I acknowledge and understand.

**Lead Applicant Name**

Christine Grams

**Title/Organization**

Environment Coordinator, Métis Nation of Alberta

**Signature**

Christine Grams  Digitally signed by Christine Grams  
Date: 2023.11.03 13:54:53 -06'00'

**Government Lead / Government Coordinator Name (if different from lead applicant)**

**Title/Organization**

**Signature**

**Please save your form and refer to the instructions page for submission link.**

**Governance Review & Decision Process**

this phase follows submission and triggers the Governance Review

**TAC Review (Date):**

**ICBMAC Review (Date):**

**SIKIC Review (Date):**

**OC Review (Date):**

**Final Recommendations:**

**Decision Pool:**

**Notes:**

**Post Decision: Submission Work Plan Revisions Follow-up Process**

This phase will only be implemented if the final recommendation requires revisions and follow-up from governance

**ICBMAC Review (Date):**

**SIKIC Review (Date):**

**OC Review (Date):**

**Comments:**

**Decision Pool:**

**Notes & Additional Actions for Successful Work Plan Implementation:**

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Signature