

Work Plan Application

Project Information	
Project Title:	2024-2025 MacKay River Community-Based Environmental Monitoring Program: Combined Surface Water and Groundwater Theme
Lead Applicant, Organization, or Community:	Margaret Luker, Fort McKay Métis Nation
Work Plan Identifier Number: If this is an on-going project please fill the identifier number for 24/25 fiscal by adjusting the last four digits: Example: D-1-2425 would become D-1-2425	
Project Region(s):	Oil Sands Region
Project Start Year: First year funding under the OSM program was received for this project (if applicable)	2022-2023
Project End Year: Last year funding under the OSM program is requested Example: 2024	2026-2027
Total 2024/25 Project Budget: From all sources for the 2024/25 fiscal year	\$587,577.00
Requested OSM Program Funding: For the 2024/25 fiscal year	\$587,577.00
Project Type:	Community Based Monitoring
Project Theme:	Cross-Cutting
Anticipated Total Duration of Projects (Core and Focused Study (3 years))	Year 5
Current Year (choose one):	Focused Study Year 3 of 3
	Core Monitoring Year 3 of 3

Contact Information

Lead Applicant/ Principal Investigator: Every work plan application requires one lead applicant. This lead is accountable for the entire work plan and all deliverables.	Margaret Luker
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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 proposed 2024-2025 MacKay River community-based environmental monitoring program (CBEMP) is a continuation of a program led by the Fort MacKay Métis Nation (FMMN). The FMMN is concerned about groundwater-surface-water interactions along the reach of the river adjacent to oil sands mining operations. The CBEMP combines surface water and groundwater field sampling efforts because of the importance of groundwater-surface-water interactions in controlling the water quality and quantity present in aquatic ecosystems, and facilitate the participation of community participants in the interconnectedness and contribute Indigenous knowledge. The execution of the two field sampling programs together will also help in optimizing the travel budgets.

The 2024-2025 MacKay River CBEMP workplan complements the OSM Program by directly addressing FMMN's concerns about the river within an adaptive monitoring framework. Specifically, the CBEMP aims to collect western-science information to complement and confirm (i.e., the second tier in the adaptive monitoring framework) the surveillance observations (i.e., the first tier) documented by the FMMN. The focus of the CBEMP is to assess surface-water quality, groundwater quality, sediment quality, vegetation quality, benthic invertebrates, springs and seeps, and aquatic organisms of concern to the FMMN along the reach of the MacKay River.

This workplan proposed by the FMMN includes monitoring in locations not currently covered by the core aquatic programs. This CBEMP integrates the community's traditional knowledge with western science and includes participation of community members for capacity building. The deliverables will include a technical report and public document summarizing the program as well as ongoing community engagement to share findings.

The FMMN wish to emphasize that this work plan was developed with consideration of input provided by representatives of the Groundwater Technical Advisory Committee, Indigenous Community-Based Monitoring Facilitation Centre, Environment and Climate Change Canada, and mining operators.

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.

Key Drivers: The main drivers for the proposed program are to address community concerns about surface water and groundwater quality and quantity along the MacKay River, to ensure that monitoring occurs in locations that are identified using Indigenous knowledge, and to build capacity within the community.

Knowledge gaps: The FMMN's surveillance of the MacKay River indicates changes to water quality and fish quality and quantity. Within the adaptive monitoring framework, the proposed program strives to confirm the surveillance by combining western science with Indigenous knowledge in a way that involves the community to build capacity and address community concerns, while also improving our understanding of baseline conditions so that confirmation activities can be directed to the most appropriate locations. Within the scope of source-pathway-receptor conceptual model development, pathways for groundwater connectivity with the surface water are being proposed to be explored using buried channels along the MacKay River.

Mandate connection: The proposed MacKay River CBEMP directly addresses part of the terms of reference for the Indigenous Community-Based Monitoring Advisory Committee: Indigenous community-based monitoring (ICBM) under OSM "empowers Indigenous communities to take ownership of the design and implementation of their own data collection, analysis, and response in relation to oil sands-related environmental changes of concern to their communities so that this information can be integrated into the Oil Sands Monitoring (OSM) program as a whole, facilitating regional analyses and better decision-making."

Key questions: From the scope of work document for the Groundwater TAC, "Where are the significant areas (e.g. groundwater dependent ecosystems) of groundwater connectivity (i.e. groundwater discharge/recharge) to surface waters such as streams, wetlands, springs and lakes?" From the scope of work document for the Surface Water TAC, "Are changes occurring in key components of the surface water program (quantity, quality, benthos, fish) inclusive of Indigenous concerns and to what degree are the changes attributable to oil sands activities and what is their contribution to cumulative effects in the aquatic receiving environment?" From the ICBM Applicants Guide for 2023-2024 Work Plans, "Are the fish healthy?" and "Is water quality changing due to oil sands development?"

Key recommendations from 2022-2023 work: "Combining the groundwater and surface water field programs and conducting the Indigenous knowledge interviews in the field at the time surface and groundwater samples were being collected was successful in gathering Indigenous knowledge on groundwater surface water interactions and encouraging knowledge sharing. The field activities were useful prompts for discussions about Indigenous knowledge related to groundwater surface water interactions and how community members have used water resources in the watershed. All of the participants of the field program (Community Members, hydrologists, hydrogeologists) thought that there would be great value in travelling along the reach of the MacKay River covered by the CBEMP monitoring locations by boat so that Indigenous knowledge and community concerns can be gathered along the entire river course." (Jaggi et al., 2023, p. 40).

2.0 Objectives of the Work Plan

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

1. **Reconnaissance:** In late July or early August, 2024 identify groundwater–surface-water interactions along this reach of the river in the form of potential groundwater discharge location along the MacKay River from the confluence with the Dunkirk River to the confluence with the Athabasca River. Key FMMN community members who have deep knowledge of the river and key western scientists, including traditional land use specialists, will conduct the 2-day reconnaissance by powered watercraft. Additional reconnaissance will be conducted using a drone with a thermal imaging camera attached to it. The thermal imaging camera will allow the mapping of groundwater discharge zone along the reach of the MacKay River and help identify key sampling locations for investigating groundwater–surface-water interactions.

2. **Field sampling:** Based on the information gathered during the 2022-2023 fieldwork and the reconnaissance outlined in Objective 1, perform surface water and groundwater sampling along the MacKay River between the confluence with the Dunkirk River and the confluence with the Athabasca River. Up to 11 surface water (from 8 core sites), 23 groundwater, 10 sediment, 12 plant tissue, 3 sentinel fish, and 3 benthic invertebrate samples will be obtained. The FMMN’s trained environmental monitors will support the environmental sampling.

Within the adaptive monitoring framework, the following field work items are proposed for 2024-25 CBEMP:

- The locations that have been identified as groundwater discharge zone, based on the 2021-22 and 2022-23 sampling, in the hyporheic zone along the reach of the MacKay River will be reviewed to install long-term drive points to enable easier annual sampling.
- The CTD (conductivity, temperature, depth) loggers are proposed to be installed at the MacKay River bridge and AOSTRA bridge to monitor long-term uninterrupted, real-time water level over the course of the freshet and baseflow in the MacKay River.
- Passive sampler for PAH (polycyclic aromatic hydrocarbon) analysis will be deployed at the MacKay River bridge in the summer and retrieved during the scheduled fall sampling to capture contaminant concentration fluctuations throughout the deployment period. This will provide a broader picture of the PAH fluctuations relative to the traditional grab sampling which only represent a single point in time.
- Sampling of vegetation to monitor groundwater quality along the MacKay River by collecting elemental analysis at stations closest to the oil and gas operations and two reference sites far upstream from the operations. This proposed method could offer a potentially more economical option to monitor groundwater quality.

3. **Reporting and engagement:** Based on the results of Objectives 1 and 2 and acknowledging a holistic or systems-based approach to groundwater-surface water interactions along the MacKay River, prepare one technical report, one public-facing report and one community-engagement presentation.

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 checked="" 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 checked="" 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

Cross Cutting

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?

Consistent with the ICBM Conceptual Model, the FMMN considers baseline to be the condition of the MacKay River prior to oil sands development on their traditional lands and limits of change are qualitative.

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?)

The FMMN community is concerned that oil sands activities have degraded groundwater quality and that discharges of that groundwater to the MacKay River are resulting in degraded surface water quality and impacting the health of aquatic ecosystems. Migration of oil sands process-affect water (OSPW) from the adjacent oil sands leases through groundwater and discharge of that groundwater via springs, and seeps are the main concern. Deterioration of fish health in the MacKay River have been noted by community members.

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

No

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

Yes. Community members have noted decreases in water level and deterioration in fish health in the MacKay River. Refer to the 2021-2022 surface water and groundwater reports for context.

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

Yes. The western science data will be provided to the OSM Program with an understanding that data produced by others will be shared with the FMMN (i.e., reciprocity).

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

Yes. Consistent with previous years' fieldwork, the proposed will used standard operating procedures and methodologies that are widely accepted in western science literature for the collection and analysis of environmental samples. The FMMN has retained western-science contractors such as Hatfield Consultants and InnoTech to guide field sampling procedures. Furthermore, the FMMN has adopted the same laboratories used in the core groundwater program. However, the FMMN continues to be open to any suggestions or feedback to ensure that data collected by this program can be integrated with other OSM data.

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

The proposed monitoring integrates western science and community participation by ensuring both western scientists and community knowledge holders are actively collaborating and co-learning in the field.

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?

This monitoring is in the confirmation stage of the adaptive monitoring framework. The concern about surface water and groundwater quality and quantity was identified by traditional knowledge. The FMMN recognizes the value in assembling time-series of data that can be compared to a baseline and natural

range of variability and there are components of the proposed program that will contribute to development of baseline, natural range of variability and potential change indicators using both western and Indigenous knowledge sources.

How will this work advance understanding transition towards adaptive monitoring?

This confirmation-stage proposal will, upon completion, progress knowledge to the next phase of the adaptive management framework: extent.

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.

Yes. The work plan is helping to investigate the following community questions about the state of the MacKay River: How polluted is the MacKay River? Can the community eat the fish from the river? The community may have other concerns that will be discussed during further community engagement.

3.3.2 Groundwater Theme:

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

3.3.2.1 Sub Themes

Quality

3.3.2.2 Groundwater Key Questions:

Explain how your groundwater monitoring program addresses the key questions below.

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

Consistent with the ICBM Conceptual Model, the FMMN considers baseline to be the condition of the MacKay River prior to oil sands development on their traditional territory and limits of change are qualitative.

Are changes occurring in groundwater quality and/or quantity 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?

The FMMN has identified changes in groundwater discharge quality along the reach of the river adjacent to oil sands mining as a concern based on observed changes in fish health, and visual cues. These observed changes have been identified through Indigenous knowledge, and the community would like to be involved in integration of western science methods to conduct confirmation monitoring of this potential oil sands impact. Changes in the quality of groundwater discharge have the potential to impact water quality in aquatic ecosystems in the river and to change traditional land use activities such as traditional food sources.

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

No

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

The proposed program will directly address concerns about groundwater discharge quality that have been identified by the community. This is a community-led monitoring program that incorporates western science and Indigenous knowledge to build community capacity and address a priority community concern.

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

Yes. The western science data will be provided to the OSM Program with an understanding that data produced by others will be shared with the FMMN (i.e., reciprocity).

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

Yes. Consistent with previous years' fieldwork, the proposed work will use standard operating procedures and methodologies that are widely accepted in western science literature for the collection and analysis of environmental samples. The FMMN has retained western-science contractors such as Hatfield Consultants and InnoTech to guide field sampling procedures. Furthermore, the FMMN has adopted the same laboratories used in the core groundwater program. However, the FMMN continues to be open to any suggestions or feedback to ensure that data collected by this program can be integrated with other OSM data.

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

The proposed monitoring integrates western science and community participation by ensuring both western scientists and community knowledge holders are actively collaborating and co-learning in the field.

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?

This monitoring is in the confirmation stage of the adaptive monitoring framework. The concern about surface water and groundwater quality was identified by traditional knowledge. The FMMN recognizes the value in assembling time-series of data that can be compared to a baseline and natural range of variability

and there are components of the proposed program that will contribute to development of baseline, natural range of variability and potential change indicators using both western and Indigenous knowledge sources.

How will this work advance understanding transition towards adaptive monitoring?

This confirmation-stage proposal will, upon completion, progress knowledge to the next phase of the adaptive management framework: extent.

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.

Yes. The work plan is helping to investigate the following community questions about the state of the MacKay River: How polluted is the MacKay River? Can the community eat the fish from the river? The community may have other concerns that will be discussed during further community engagement.

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.

The MacKay River CBEMP satisfies the FMMN community's needs (i.e., an emerging issue) and fits the philosophy of the ICBM Program Framework as well as the adaptive management framework, as previously described.

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

This program is a continuation of a program that was initiated by the community in 2017 and directly responds to the community's concerns and needs. The workplan will continue to define and refine culturally relevant receptors and indicators of groundwater and surface water quality degradation. The proposed workplan is a participatory field program that will include community members and western scientists and will implement SOPs that were developed by the relevant Technical Advisory Committee and adapted for community use to increase capacity within the community.

Does this project include an Integrated Community Based Monitoring Component?

No

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?

Yes. FMMN will continue to follow internal community practices as they have historically done. This will include cultural and spiritual practices both at meetings and in the field. Additionally, participants will collect samples in accordance with western science SOP used by the groundwater TAC and complete field level risk assessments (FLRA's) prior to each field component. As the water bodies are considered culturally significant and sacred to the community, it is paramount that community cultural and spiritual protocols are followed all through the program.

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.

There are opportunities to share information and Traditional Knowledge (TK) throughout all phases of the project. The participants may use this as an opportunity to share life stories, oral traditions, in situ observations, and participant observations which would be documented by the social scientist or the coordinator. These observations add to the understanding of the MacKay River environmental condition and impacts at the location. Information gathered by participants or scientists is owned by the community.

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. FMMN will continue to follow all internal community practices. In the MacKay River, samples are collected using western science along with the TAC groundwater Standard Operating Procedures. The location of sample collections will be guided by indigenous knowledge from the elders. During the sample collection, notetaking including life stories, oral traditions, in situ observations and any participant observations are shared and documented for continuous improvement of the overall program.

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

After the annual fieldwork and after the western-science data has been processed, a community-engagement meeting is held to discuss the findings and to obtain feedback from community members.

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

Community members are co-learners in the CBEMP and relate directly with western scientists supporting the CBEMP. The planning and verification meetings also provide a platform for the community to voice opinions and concerns regarding the approach, methods, and indicators.

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

The MacKay River CBEMP exists from internal concerns regarding the health and safety of the river. The CBEMP aims to provide data and learnings that are accessible, credible, and useful to the community to help address the concerns raised by community members and add to the understanding of oil sand environmental impacts on FMMN traditional territory and contribute to the OSM state of environment report.

In addition, projects like this build trust between Indigenous communities and funders (Industry/ Government) and demonstrate that the concerns of the community are being heard and taken into consideration.

The CBEMP helps FMMN Elders share Indigenous knowledge with other community members, especially the youth. The work plan also investigates the questions on groundwater-surface water interaction and the impact of oil sand development on the FMMN's traditional territory.

Furthermore, community capacity building has been built into the work plan to provide an opportunity for project champions to be support within the community though knowledge sharing and training for

community environmental monitors to collect the data during the field program.

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 information and learnings from the proposed workplan will be distributed to community members through pamphlets that summarize the workplan.

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 proposed 2024-2025 MacKay River CBEMP complements the core OSM Program monitoring along the river. The core OSM surface water and groundwater monitoring locations do not cover the areas of concern identified by the community, and neither program currently samples porewater or groundwater springs or seeps to characterize the quality of groundwater discharge to surface water. The 2024-2025 workplan will help compile Indigenous knowledge that can be used to improve estimates of baseline conditions and will add monitoring data that can be used to detect change in an area where Indigenous knowledge and community concern have identified deterioration in groundwater and surface water quality and quantity.

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.

Explain how your monitoring tracks regional and sub-regional state of the environment, including cumulative effects. As relevant, consider adaptive monitoring, the TAC specific Scope of Work document and the Key Questions in your response.

The proposed 2024-2025 MacKay River CBEMP is directly relevant to subregional concerns raised by the FMMN community. The proposed CBEMP monitoring locations will provide finer spatial resolution along the reach of the river where there is community concern. These locations are complementary to the coarser resolution sampling included in the surface water and groundwater OSM programs.

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.

The generated western science data will be shared with the OSM Program with the understanding that all western science data from along the MacKay River that has been generated by others will be shared with the FMMN (i.e., reciprocity and mutual transparency).

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.

As stated previously, the proposed 2024-2025 MacKay River CBEMP is an ICBM program that is led by the FMMN and engages its community members. The proposal harmonizes with the confirmation step of the adaptive monitoring framework. Furthermore, ECCC, oil sand operators, and the OSM Program were consulted for access to existing western-science data along the MacKay River. The FMMN has taking reasonable steps to mitigate the possibility of sampling redundancy along the river.

10.0 Work Plan Approach/Methods

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

1. Reconnaissance:

- > In late July or early August, 2024 identify potential seepage location along the MacKay River from the confluence with the Dunkirk River to the confluence with the Athabasca River.
- > Key FMMN community members who have deep knowledge of the river and key western scientists, including traditional land use (TLU) expertise, will conduct the 2-day reconnaissance by powered watercraft.
- > The deliverable will be an internal TLU-update report and a field report with coordinates, photographs, and narrative descriptions of areas for field sampling.
- > Additional reconnaissance will be conducted using a drone with a thermal imaging camera attached to it. The thermal imaging camera will allow the mapping of groundwater discharge zone along the reach of the MacKay River and help identify key sampling locations for investigating groundwater–surface water interactions.

2. Field sampling:

- > Based on the information gathered during the 2022-2023 and 2023-2024 fieldwork and the reconnaissance outlined in Objective 1, perform surface water and groundwater sampling along the MacKay River between the confluence with the Dunkirk River and the confluence with the Athabasca River.
- > Up to 11 surface water, 23 groundwater, 10 sediment, 12 plant tissue, 3 sentinel fish, and 3 benthic invertebrate samples will be obtained. The FMMN's trained environmental monitors will support the environmental sampling.
- > Within the adaptive monitoring framework, the following field work items are proposed for 2024-25 CBEMP:
 - The locations that have been identified as groundwater discharge zone, based on the 2021-22 and 2022-23 sampling, in the hyporheic zone along the reach of the MacKay River will be reviewed to install long-term drive points to enable easier annual sampling.
 - The CTD (conductivity, temperature, depth) loggers are proposed to be installed at the MacKay River bridge and AOSTRA bridge to monitor long-term uninterrupted, real-time water level over the course of the freshet and baseflow in the MacKay River.
 - Passive sampler for PAH (polycyclic aromatic hydrocarbon) analysis will be deployed at the MacKay River bridge in the summer and retrieved during the scheduled fall sampling to capture contaminant concentration fluctuations throughout the deployment period. This will provide a broader picture of the PAH fluctuations relative to the traditional grab sampling which only represent a single point in time.
 - Sampling of vegetation to monitor groundwater quality along the MacKay River by collecting elemental analysis at stations closest to the oil and gas operations and two reference sites far upstream from the operations. This proposed method could offer a potentially more economical option to monitor groundwater quality.
- > The deliverable will be organized data for compilation and interpretation in the subsequent report.

3. Reporting and engagement: Based on the results of Objectives 1 and 2 and acknowledging a holistic or systems-based approach to groundwater-surface water interactions along the MacKay River, the following deliverables will be prepared:

- > one technical report (examples from previous years are enclosed),
- > one public-facing report,
- > one community-engagement presentation, and
- > one set of community-engagement pamphlets.

Describe how changes in environmental Condition will be assessed

The FMMN community's traditional knowledge indicates that changes in environmental conditions along the MacKay River have occurred. The proposed CBEMP will gather additional western-science data to

complement traditional knowledge and to communicate the FMMN community's existing knowledge from a different perspective.

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

The FMMN people, especially the Elders, have been living on the land pre-oil sands development and post-oil sands development. They have observed the constant changes that have occurred in the MacKay River as result of low water quantity and quality. The Elders have also observed the changes in the quality of aquatic lives from the river. From a western-science perspective, present-day spatial differences in environmental-media quality along the MacKay River will be used to communicate changes in environmental conditions.

(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

Based on the completed 2021-2023 fieldwork, the braiding of Indigenous knowledge and western science during the Reconnaissance and Field Sampling phases will continue to occur through the conversations that naturally occur on the land among Elders, other community knowledge holders, and western scientists. Co-learning occurs through good relationships among all participants. During the Reporting and Engagement phase, western scientists and community members will have the opportunity to share learnings and reflect upon what should be investigated during subsequent fieldwork.

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

The key water quality indicators are consistent with those used in the OSM Program and may be revised if other culturally relevant indicators are identified by the Traditional Land Use study. The indicators that will be measured include:

>Surface water:

Field: dissolved oxygen, electrical conductivity, pH, temperature, turbidity

Lab: petroleum hydrocarbons, polycyclic aromatic hydrocarbons, naphthenic acids, stable isotopes, total and dissolved metals, and total and dissolved nutrients

>Sediment:

Field: in situ substrate and habitat characteristics

Lab: Petroleum hydrocarbons, polycyclic aromatic hydrocarbons, total metals, volatile organic compounds, naphthenic acids

>Fish tissue (i.e., *Couesius plumbeus* or lake chub):

Field: aging structures, carcass weight, gonad weight, length, liver weight, maturity, sex, and whole body weight

Lab: polycyclic aromatic hydrocarbons, and total metals

>Benthic invertebrate tissue:

Lab: polycyclic aromatic hydrocarbons, taxonomy, and total metals

> Plant tissue:

Lab: Full Scan of available elements: Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Se, Si, Sr, Ti, Tl, V, Zn

>Groundwater:

Field: hydraulic heads, water quality field parameters (temperature, conductivity, ORP).

Lab: routine water quality parameters (major ions), dissolved metals, dissolved nutrients, petroleum hydrocarbons (F12, BTEX), naphthenic acids (Orbitrap) ultra-low-level polycyclic aromatic hydrocarbons, stable water isotopes.

The final analytical program will be confirmed based on community concerns, the number of sampling locations, budget and the outcome of the western science data review. Analyses will be conducted at Bureau Veritas (routine, metals, organics), InnoTech Alberta (isotopes, speciated naphthenic acids), University of Alberta (plant tissue elemental analysis) and SGS AXYS (low level PAHs). Other laboratories, such as for biological and plant tissue, will be selected to harmonize with OSM Program laboratories.

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.

Knowledge gained through the CBEMP will first be shared with the FMMN community and then the OSM Program. Furthermore, this FMMN-led program may yield scholarly work that will be shared via presentations and peer-reviewed articles.

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

1. Reconnaissance:

- > Integral Ecology Group (IEG) will provide social science expertise
- > Hatfield Consulting will attend to benefit from the community's guidance in preparation for subsequent field sampling

2. Field Sampling:

- > Hatfield Consulting will support the FMMN in field sampling
- > InnoTech Alberta will provide reporting groundwater sampling support
- > Bureau Veritas, InnoTech Alberta, University of Alberta, and SGS AXYS will provide laboratory analytical services

3. Reporting and Engagement:

- > Hatfield and InnoTech Alberta will provide reporting support.

*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? *

Yes

13.2 Type of Quantitative Data Variables:

Discrete

13.3 Frequency of Collection:

Annually

13.4 Estimated Data Collection Start Date:

Jul 1, 2024

13.5 Estimated Data Collection End Date:

Oct 31, 2024

13.6 Estimated Timeline For Upload Start Date:

Nov 1, 2024

13.7 Estimated Timeline For Upload End Date:

Mar 31, 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
Environmental media analysis results	Laboratory reports	Typical format provided by laboratories	Open by Default
Indigenous knowledge	Reports produced by the FMMN	Docx or pdf	Protected 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
Technical Report	Q4	“FMMN MacKay River Community Based Environmental Monitoring Program: 2024-2025” To be delivered by March 31, 2025
Public Dissemination Document	Q4	“FMMN MacKay River Community Based Environmental Monitoring Program: 2024-2025” To be delivered by March 31, 2025
Stakeholder or Community Presentation	Q4	“FMMN MacKay River Community Based Environmental Monitoring Program: 2024-2025” To be delivered by March 31, 2025
Other (Describe in Description Section)	Q4	Community pamphlet on “FMMN MacKay River Community Based Environmental Monitoring Program: 2024-2025

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 following experienced team members will continue to deliver the 2024-2025 MacKay River CBEMP:

Margaret Luker: FMMN Agreement Relations Manager
Chiara Belvederesi: UCalgary postdoctoral fellow
Thomas Dyck: IEG social scientist
Aprami Jaggi: InnoTech geochemist
Michael Wendlandt: InnoTech ecohydrologist
Aurora Jansen: Hatfield environmental specialist

Project team will include Hatfield Environmental Consultants, InnoTech Alberta, University of Calgary, Integral Ecology Group, and FMMN. The project team has all the expertise that is needed to successfully complete the project.

Margaret Luker - Fort McKay Métis Nation (FMMN)

Margaret Luker will oversee the project team, track the budget, complete financial reporting, and provide overall project management and coordination between project technical experts and community members.

Margaret is an environmental and conservation science specialist with 20 years' experience focusing on environmental, indigenous, and regulatory issues in the Alberta oil sands. She comes with a strong project management, multi-stakeholder, and negotiation/facilitation background. She is currently managing all the agreements for the FMMN and served as interim Director for the McKay Metis Sustainability Centre which runs the FMMN community based monitoring program.

The general project management approach will include monthly project team meetings, or on a more frequent basis as needed. The project manager will provide quarterly updates to the project team.

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

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
Bickerton, Greg	Senior Hydrogeologist	

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)	0	\$0.00
Operations and Maintenance		
Consumable materials and supplies		
Conferences and meetings travel		
Project-related travel		
Engagement		
Reporting		
Overhead		
Total All Grants (Calculated from Table 16.4 below)		\$175,538.00
Total All Contracts (Calculated from Table 16.5 below)		\$412,039.00
Sub-Total (Calculated)		\$587,577.00

Capital*	
AEPA TOTAL (Calculated)	\$587,577.00

* 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
Operations and Maintenance		
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	Margaret Luker
GRANT RECIPIENT - ONLY: Organization	Fort McKay Métis Nation
Category	Total Funding Requested from OSM
Salaries and Benefits FTE	\$64,048.00
Operations and Maintenance	
Consumable materials and supplies	\$2,200.00
Conferences and meetings travel	\$7,084.00
Project-related travel	
Engagement	\$86,942.00
Reporting	
Overhead	\$15,264.00
GRANT TOTAL (Calculated)	\$175,538.00

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	Aurora Jansen
CONTRACT RECIPIENT - ONLY: Organization	Hatfield Consultants
Category	Total Funding Requested from OSM
Salaries and Benefits	\$47,000.00
Operations and Maintenance	
Consumable materials and supplies	\$15,075.00
Conferences and meetings travel	
Project-related travel	
Engagement	\$32,150.00
Reporting	\$6,500.00
Overhead	\$5,910.00
CONTRACT TOTAL (Calculated)	\$106,635.00
CONTRACT RECIPIENT - ONLY: Name	Aprami Jaggi
CONTRACT RECIPIENT - ONLY: Organization	InnoTech Alberta
Category	Total Funding Requested from OSM
Salaries and Benefits	\$27,500.00
Operations and Maintenance	
Consumable materials and supplies	\$20,515.00
Conferences and meetings travel	
Project-related travel	\$7,680.00
Engagement	
Reporting	\$34,058.00
Overhead	\$8,507.00
CONTRACT TOTAL (Calculated)	\$98,260.00
CONTRACT RECIPIENT - ONLY: Name	Thomas Dyck

CONTRACT RECIPIENT - ONLY: Organization	Integral Ecology Group
Category	Total Funding Requested from OSM
Salaries and Benefits	\$13,200.00
Operations and Maintenance	
Consumable materials and supplies	
Conferences and meetings travel	
Project-related travel	\$3,300.00
Engagement	
Reporting	\$5,500.00
Overhead	\$2,200.00
CONTRACT TOTAL (Calculated)	\$24,200.00
CONTRACT RECIPIENT - ONLY: Name	Jamie Unrao
CONTRACT RECIPIENT - ONLY: Organization	Phoenix Heli-Flight
Category	Total Funding Requested from OSM
Salaries and Benefits	
Operations and Maintenance	
Consumable materials and supplies	
Conferences and meetings travel	
Project-related travel	\$72,978.00
Engagement	
Reporting	
Overhead	\$7,297.00
CONTRACT TOTAL (Calculated)	\$80,275.00
CONTRACT RECIPIENT - ONLY: Name	Atikin Hehn
CONTRACT RECIPIENT - ONLY: Organization	Bureau Veritas
Category	Total Funding Requested from OSM
Salaries and Benefits	
Operations and Maintenance	

Consumable materials and supplies	\$30,745.00
Conferences and meetings travel	
Project-related travel	
Engagement	
Reporting	
Overhead	\$3,075.00
CONTRACT TOTAL (Calculated)	\$33,820.00
CONTRACT RECIPIENT - ONLY: Name	Pamela MacKenzie
CONTRACT RECIPIENT - ONLY: Organization	SGS AXYS Analytical
Category	Total Funding Requested from OSM
Salaries and Benefits	
Operations and Maintenance	
Consumable materials and supplies	\$62,590.00
Conferences and meetings travel	
Project-related travel	
Engagement	
Reporting	
Overhead	\$6,259.00
CONTRACT TOTAL (Calculated)	\$68,849.00

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	\$0.00
Operations and Maintenance	
Consumable materials and supplies Sums totals for AEPA and ECCC ONLY	\$0.00
Conferences and meetings travel Sums totals for AEPA and ECCC ONLY	\$0.00
Project-related travel Sums totals for AEPA and ECCC ONLY	\$0.00
Engagement Sums totals for AEPA and ECCC ONLY	\$0.00
Reporting Sums totals for AEPA and ECCC ONLY	\$0.00
Overhead Sums totals for AEPA and ECCC ONLY	\$0.00
Total All Grants (from table 16.2.1 above) Sums totals for AEPA Tables ONLY	\$175,538.00
Total All Contracts (from table 16.2.1 above) Sums totals for AEPA Tables ONLY	\$412,039.00
SUB-TOTAL (Calculated)	\$587,577.00
Capital* Sums total for AEPA	
GRAND PROJECT TOTAL	\$587,577.00

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.

Project management will include careful tracking of the budget associated with each of the subcontractors. The scope and budget for each of the subcontractors will be confirmed as part of the contracting process and they will all be fixed budgets. All subcontractors will be requested to provide updates if they anticipate being underspent, or if they think the scope needs to be adjusted to remain within budget. Potential risks to completion could include weather-induced delays to fieldwork. If this occurs, the FMMN will work with the OSM Program to identify contingencies.

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)
	TOTAL	\$0.00

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

Margaret Luker

Title/Organization

Fort McKay Métis Nation

Signature

Margaret Luker  Digitally signed by Margaret Luker
Date: 2023.11.03 15:53:51 -0600

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

Greg Bickerton

Title/Organization

Environment and Climate Change Canada

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:

Signature