

Work Plan Application

Project Information	
Project Title:	Fish Health and Water Quality
Lead Applicant, Organization, or Community:	Athabasca Landing Métis Community Association
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
Project End Year: Last year funding under the OSM program is requested Example: 2024	2025
Total 2024/25 Project Budget: From all sources for the 2024/25 fiscal year	\$75,000.00
Requested OSM Program Funding: For the 2024/25 fiscal year	\$75,000.00
Project Type:	Community Based Monitoring
Project Theme:	Surface Water
Anticipated Total Duration of Projects (Core and Focused Study (3 years))	Year 3
Current Year (choose one):	Focused Study Year 2 of 3
	Core Monitoring Year 2 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.	Joey Donald with technical support from Keegan Hicks
Job Title:	Programs Manager (Contractor)
Organization:	Athabasca Landing Métis Community Association
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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**.

In Year 2 of this Project, ALMCA will continue with the baseline of fish health and water quality sampling completed in 2023-24 for sampling on Rock Island Lake and Lac La Biche in collaboration with aquatic resource scientists from the Alberta Environment and Protected Areas. This will further develop and implement community-based monitoring in water bodies of interest to Athabasca Landing Métis Community Association in the oil sands region. ALMCA is interested in monitoring water quality in lakes where its members exercise their fishing rights including Lac La Biche and Rock Island Lake. As such, in addition to its current water quality sampling, ALMCA will continue its sampling and also collect and analyze fish tissue samples for various contaminants in both Rock Island and Lac La Biche. The purpose of this methodological choice is to collect data to test for linkages between water quality and fish health in these lakes of importance to ALMCA harvesters. This will enable comparisons between two lakes that are within the oil sands region but relatively far away from open pit mines to see if there are effects pathways from water quality to fish health (and by extension, to the safety of human consumption).

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.

This project seeks to collect additional data in Year 2 to analyze in comparison to baseline conditions from Year 1 for water quality in Lac La Biche and Rock Island Lake within the South Athabasca Oilsands and to provide reference data for comparison with lakes closer to the open pit oil sands mines. As such, the Environmental Effects Monitoring (EEM) framework seeks to collect observations about water quality, link water quality with fish health and enable inferences as to the safety of human consumption of fish from these lakes. The Project is driven by the research question that asks what are the current conditions of water quality, fish health and safety for human consumption in the South Athabasca Oilsands area?

This project contributes the the collection of baseline information, linkages to the effects of oils and activities on water quality, fish health and discussions about cumulative effects by involving Indigenous harvesters in research about a a topic with implications for the exercise of Section 35 fishing rights. This project will further develop capacity for ongoing collaboration between ALMCA and aquatic ecologists in the analysis of data, the identification of cumulative effects pathways and the implementation of adaptive management frameworks.

To date, ALMCA has recruited and trained ALMCA monitors in collaboration with AEP and Alberta Lakes Monitoring Society in water sampling and fish tissue sampling. In the previous year, two lakes were monitored twice per year. For the present year, ALMCA plans to sample each of Lac La Biche in three seasons, winter, spring and fall for water quality and then sample fish tissue in the same days to check for any links between water quality and fish tissue safety for human consumption.

2.0 Objectives of the Work Plan

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

The objectives of the work plan are to answer the following questions:

How does the water quality in Lac La Biche compare to Rock Island Lake?

Does water quality affect the health of the fish in both lakes?

Are the fish in these lakes safe to eat?

How does water quality in the south Athabasca oilsands area (Lac La Biche) compare to water quality in Rock Island Lake which

The questions above address Regional Assessment #1-Aquatics Monitoring (Surveillance and Current Baseline Program).

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

Quality

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?

Baseline water quality and fish health were established in Year 1 and this project seeks to compare additional year data with these baseline water quality conditions.

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?)

This Project will collect additional years to compare against baseline data on lake surface water quality and fish health in two lakes that are within the oil sands area but relatively far away from open pit mines to contribute to region wide cumulative effects studies.

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

Data collection has just begun and results have yet to be fully analyzed.

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

Yes, the data about water quality and fish health will address Indigenous community concerns about the safety of consuming wild fish from lakes within the oil sands area.

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

Yes, data produced will follow OSM data review and tracking form, SIKIC and ICBMAC protocols for data sharing and protection of confidential information or Indigenous Knowledge. Data will be made available to AEP for comparison with other lakes and water sampling projects.

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

All water sampling and fish tissue collection will follow standard operating procedures based on training provided by Alberta Lakes Monitoring Society and AEP. OSM has a maturing fish program that will provide your community with the Standard Operating Procedures (SOPs) to answer these Community questions and concerns from a western science perspective. Much of this is based on the Fish Camp model originally developed by Athabasca Chipewyan First Nation and Mikisew Cree First Nation along with ECCC fisheries biologists. Further to this, we are also looking for other communities to help us complete the SOPs to track changes in fish based on indicators observed by Elders and land users (e.g., whitefish flesh firmness).

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

Water quality and fish health is a key concern among Indigenous fish-consumers and is in line with the OSM priorities in aquatics and surface water monitoring.

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 program fits into #1-Aquatics Monitoring (Surveillance and Current Baseline Program) FISH

- Are the fish healthy?
- Are the fish safe for my family and my community to eat?
- Are there enough fish to feed my family and my community in waterbodies/watercourses that are accessible and culturally important?
- Are the same fish species there that there used to be there?

How will this work advance understanding transition towards adaptive monitoring?

This work includes the repetitive and systematic collection of data on environmental components or indicators in two regionally dispersed oil sands area lakes to test specific hypotheses on the link between water quality and fish health for the purposes of establishing cause and effect relationships, as well as the regular review and modification of indicators as needed to ensure monitoring remains effective. Should different fish tissue indicators be required for testing, these can be adapted. Further, waterborne contaminants can be identified based on ongoing monitoring and adapting indicators to additional contaminants if necessary.

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 project will provide context and information needed for management decisions based on systematic and repeated collection of water and fish quality data in two regionally dispersed oil sands area lakes. This work will help Indigenous communities and scientists understand industry activities and processes and how they may affect the water and this project will orient monitoring and research in a way that can drive change in environmental performance based on systematic data collection.

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 OSM program asks if oil sands activity has generated changes to local conditions, in this case water quality and fish health. The OSM also asks if the observed changes are attributed to oil sands development. Further, it asks what are the stressors that contribute to cumulative effects. In this case, the Project will provide two sets of baseline data from lakes that are relatively far from the open pit oil sands but are still within the oil sands area that can be compared with data from other lakes in closer proximity to the oil sands. This will enable further study into the stressors caused by oil sands facilities as a source of change to the regional watershed and its impact on fish health. This can contribute to further research and investigation into cumulative effects of oil sands development on water quality, fish health and by extension on human decisions on whether or not to consume wild fish.

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 Project is designed and led by ALMCA, an Indigenous Community. The origin of the Project came out of consultation with ALMCA members who enjoy fishing and who are concerned about the effects of oil sands operations on the local and regional watersheds and by extension on fish health. The choice of indicators and themes for monitoring were made by ALMCA harvesters. ALMCA is leading the study in order to further develop its capacity for monitoring, particularly using water quality and fish health sampling. ALMCA has internal protocols for the protection and dissemination of its Indigenous Knowledge based on free, prior and informed consent among individual participants and community consent to authorize sharing of knowledge in the form of datasets, photographs, observations, etc. Data collection, ownership, control and dissemination of Indigenous knowledge based information will follow the Ethical Guidelines for Indigenous Community Based Monitoring in the Oil Sands Monitoring Program.

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?

ALMCA has internal protocols for the protection and dissemination of its Indigenous Knowledge based on free, prior and informed consent among individual participants and community consent to authorize sharing of knowledge in the form of datasets, photographs, observations, etc. Data collection, ownership, control and dissemination of Indigenous knowledge based information will follow the Ethical Guidelines for Indigenous Community Based Monitoring in the Oil Sands Monitoring Program. ALMCA also has protocols for fishing and handling fish, including during fish sampling.

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 opportunities for Indigenous participants to share knowledge in site selection, fish net placement, during data analysis workshops and in preparation of publication of findings. Free prior and informed consent will be obtained from participants and collection and treatment of Indigenous knowledge will follow the Ethical Guidelines for Indigenous Community Based Monitoring in the Oil Sands Monitoring Program. Risks and potential harms will be assessed using self-reporting by participants and periodic reinforcement and repetition that free, prior and consent has been obtained from participants prior to each meeting, focus group or work session.

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.

The collection and use of Indigenous Knowledge will be conducted in alignment with the Interim Ethical Guidelines and ALMCA's own internal process for engaging with members, collecting Indigenous Knowledge and publishing findings. These are based on free, prior and informed consent, community-based ownership, control, access and possession of any information collected and inclusion of traditional knowledge holders as co-authors in any publications resulting from this project.

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

ALMCA is organizational lead for this study. Indigenous Knowledge will inform water sampling site selection and fishing net placement to ensure sampling is successful, as well as data analysis and reporting. All data collected will be retained by ALMCA (even if it is shared with OSM) and any publications resulting from this Project will be developed in collaboration with ALMCA and external consultants and ALMCA Indigenous Knowledge holders will be identified as co-authors on any publication.

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

ALMCA and its harvesters/community members provided the origins for this study based on the identification of changes to water quality and fish health in relation to oil sands development as a key Indigenous community concern or question. The choice of which species of fish to sample, the use of gill nets in sampling, and the selection of sites for study were all made by ALMCA and its harvesters based on Indigenous Knowledge and key community concerns.

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

This Project has already expanded community capacity to participate in adaptive monitoring through collaboration in water sampling training with Alberta Lakes Monitoring Society. 8 community members have participated in workshops for Year 1 of this Project and 4 harvesters have been identified to work part time as water monitors. Participation in this project has also enhanced ALMCA's capacity to participate in adaptive monitoring for other species.

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 findings of this study will published as an article in a peer reviewed journal with participating

community members as co-authors. Community members will also be consulted during the phase of revisions and edits to the article. The article itself will be available to community members as a record of involvement and as a source of pride in contributing to the scientific literature.

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 collection of water samples and fish tissue samples will be used to set baselines based on year 1 activities recently conducted. The expansion of multiple seasons of water sampling and adding in fish tissue testing will enable greater comparisons over time between water quality and fish health in multiple seasons in a more systematic way. By maintaining the regular seasonal sampling over three years of the Project, baseline levels of water quality and fish health can be determined which can be used to test in later years following subsequent oil sands development and cumulative effects.

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.

This project will collect data from two lakes that are within the oil sands region but relatively far from open pit oil sands mining. The data from these lakes can be used by other scientists and/or communities to compare with data from lakes that are in closer proximity to the oil sands. This will enable a regional and cumulative effects analysis with a broader range of data from more lakes with additional indicators for water quality and fish health which, together, may be of use in determining whether fish from the lakes are safe for human consumption.

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 data will be shared with OSM Aquatic Resources Leads including Keegan Hicks and Mark McMaster.

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.

This Project will complement existing OSM projects performed by Indigenous communities without duplicating efforts of other groups. This Project focuses on water quality and fish health in lakes which are important to ALMCA but the data will be made available to all Indigenous groups in the oil sands and to OSM participants. By providing data from two additional lakes, this Project will enhance the quality of data available to OSM participants to better identify cumulative effects of oil sands activity on fish species of interest to Indigenous people for the exercise of fishing rights. The Project will be focused on communication and input from Aquatics Area leads to ensure efficiency and collaboration. This will ensure this Project compliments and does not replicate aspects of existing core monitoring in the South Athabasca Oil Sands Area.

10.0 Work Plan Approach/Methods

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

Phase 1: Study design - Athabasca Landing Metis Community Association (ALMCA) will meet with AEP (Keegan Hicks) Environment and Climate Change Canada (Mark McMaster) and supporting consultants to design the methodology for the project based on Standard Operating Procedures for fish tissue sampling in the OSM. ALMCA will also have a community staff member trained to participate in OSM water quality sampling projects targeting mercury, metals and PACs. The product of the study design phase will be a plan for collecting information on fish samples for Walleye, Northern Pike, Yellow Perch, Lake Whitefish and Burbot at two fish camps on Lac la Biche and Rock Island Lake. A community member will also be trained and ready to begin collecting water samples from Lac La Biche and Rock Island.

Phase 2: ALMCA will have the capacity to send 2 community staff members to collect water samples from Lac La Biche and Rock Island submit them through the OSM water sampling program. This person will also share information and locations with other Metis Communities. Samples will be tested for mercury, metals and PACs depending on existing protocols.

Phase 3: Fish Camp at Lac la Biche - ALMCA will host a fish camp at Lac la Biche and will collect fish tissue samples for the project. The fish samples will be analyzed for mercury, metals and organics to determine if the fish are safe to eat. ALMCA will choose samples of Pike and Walleye from among each of the five species most commonly fished from Lac La Biche (Walleye, Northern Pike, Yellow Perch, Lake Whitefish and Burbot). A final report will be developed to report on participation in the fish camp and the fish tissues sample results. Any data collected will be added to the ALMCA monitoring database.

Phase 4: Fish Camp at Rock Island Lake - ALMCA will host a fish camp at Rock Island Lake and will collect fish tissue samples for the project. The fish samples will be analyzed for mercury, metals and organics to determine if the fish are safe to eat. Samples will be collected for Northern Pike or Walleye out of the five species most commonly fished from Rock Island Lake (Walleye, Northern Pike, Yellow Perch, Lake Whitefish and Burbot). A final report will be developed to report on participation in the fish camp and the fish tissues sample results. Any data collected will be added to the ALMCA monitoring database.

Phase 5: Indigenous Knowledge of Fisheries in Lac La Biche and Rock Island Lake - ALMCA will hold a one day workshop with harvesters who participated in the fish camps to document indigenous knowledge of the fisheries, describe past and current use of the lakes for subsistence fishing, identify environmental risks to the fishery and get input on a plan for sustainable fisheries management for the next generation. The findings from the Fish Camp sampling expeditions as well as the Indigenous knowledge workshop will be summarized in an article that will be submitted for publication in a peer reviewed journal.

Describe how changes in environmental Condition will be assessed

Changes in environmental condition (water quality and fish health) will be assessed based on a combination of western scientific standards and Indigenous community members' perceptions of the safety of consuming fish from these lakes based on findings and observations of fish health.

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

Benchmarks and reference conditions were established in Year 1. Data from Year 2 will be compared with these baselines to determine whether there are any observed changes in the environmental conditions of water quality and fish health.

(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

Phase 1 - Indigenous Knowledge is used to identify key fish species and select locations for water monitoring and setting nets while western scientists advise on water sampling indicators and tests.

Phase 2 - field water and fish tissue sampling involves collaboration between IK holders and scientists
Phase 3 & 4 - Fish camp is primarily geared toward sharing Indigenous knowledge but also sharing scientific knowledge with participants.
Phase 5 - Reporting and data sharing with permission of ALMCA involves ALMCA participants in information, data and knowledge sharing workshops that will inform data analysis of sample and test results which are primarily performed by western scientists. Reporting, edits and review provided by ALMCA monitoring participants.

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

Mercury, metals and organics levels in Lac La Biche and Rock Island Lake.
Health of tissue in key indicator species Walleye, Northern Pike, Yellow Perch, Lake Whitefish and Burbot

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 will be shared at a planning workshop to identify species of interest and select locations and timing of sampling and fishing.

Further, knowledge transfer and sharing between aquatic ecologists and Métis IK holders will occur at planning and training workshops to refresh sampling methodologies and procedures.

Workshops to analyze data and draft a publication to be submitted for peer review will provide extensive opportunities for knowledge sharing within the community and with the outside world, including among policy makers and scientists through the scientific literature.

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

Alberta Lakes Monitoring Society.
OSM Aquatics Leads Keegan Hicks and AEP lab personnel
ECCC Fish Expert Mark McMaster

*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:

Quarterly

13.4 Estimated Data Collection Start Date:

November 15, 2023

13.5 Estimated Data Collection End Date:

March 31, 2025

13.6 Estimated Timeline For Upload Start Date:

December 15, 2023

13.7 Estimated Timeline For Upload End Date:

March 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, accddb, xlsx, etc.)	Security Classification
Water quality in Lac La Biche	Database	CSV	Open by Default
Fish tissue health from Lac La Biche	Database	CSV	Open by Default
Water quality in Rock Island Lake	Database	CSV	Open by Default
Fish tissue health from Rock Island Lake	Database	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	Q1	Planning meeting with ALMCA monitors and AEP scientists to identify locations, frequency and sampling methods and test types.
Key Engagement/Participation Meeting	Q2	Knowledge sharing meeting with monitors and AEP scientists to share results of data collection and findings, and plan for next set of sampling activities
Key Engagement/Participation Meeting	Q3	Knowledge sharing meeting with monitors and AEP scientists to share results of data collection and findings, and plan for next set of sampling activities
Key Engagement/Participation Meeting	Q4	Knowledge sharing meeting with monitors and AEP scientists to share results of data collection and findings, and plan for next set of sampling activities
Condition of Environment Report	Q4	Results of sampling and tissue testing summarized for each lake in a time series.
OSM Program Annual Progress Report (required)	Q4	At end of fiscal year 2024-25
Peer-reviewed Journal Publication	Q4	Preparation of findings in collaboration with Métis knowledge holders.

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.

Joey Donald, Project Lead, experienced in organizing community based monitoring, recruiting and retaining monitors, organizing field expeditions and knowledge sharing meetings
ECCC - Mark McMaster, PhD, Research Scientist at Environment Canada, Endocrinology, Toxicology
AEP - Keegan Hicks, PhD, Fish Biologist

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

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)		
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)		\$0.00
Total All Contracts (Calculated from Table 16.5 below)		\$75,000.00
Sub-Total (Calculated)		\$75,000.00
Capital*		
AEPA TOTAL (Calculated)		\$75,000.00

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

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	Joey Donald
CONTRACT RECIPIENT - ONLY: Organization	Contractor for Athabasca Landing Métis Community Association
Category	Total Funding Requested from OSM
Salaries and Benefits	\$20,000.00
Operations and Maintenance	
Consumable materials and supplies	\$2,500.00
Conferences and meetings travel	\$2,000.00
Project-related travel	
Engagement	
Reporting	
Overhead	
CONTRACT TOTAL (Calculated)	\$24,500.00
CONTRACT RECIPIENT - ONLY: Name	AEP contract: SGS AXYS (organics)
CONTRACT RECIPIENT - ONLY: Organization	AEP
Category	Total Funding Requested from OSM
Salaries and Benefits	\$6,000.00
Operations and Maintenance	
Consumable materials and supplies	
Conferences and meetings travel	
Project-related travel	
Engagement	
Reporting	
Overhead	
CONTRACT TOTAL (Calculated)	\$6,000.00
CONTRACT RECIPIENT - ONLY: Name	AEP contract: BASL (mercury)

CONTRACT RECIPIENT - ONLY: Organization	
Category	Total Funding Requested from OSM
Salaries and Benefits	\$1,000.00
Operations and Maintenance	
Consumable materials and supplies	
Conferences and meetings travel	
Project-related travel	
Engagement	
Reporting	
Overhead	
CONTRACT TOTAL (Calculated)	\$1,000.00
CONTRACT RECIPIENT - ONLY: Name	AEP contract: BV (metals)
CONTRACT RECIPIENT - ONLY: Organization	
Category	Total Funding Requested from OSM
Salaries and Benefits	\$1,500.00
Operations and Maintenance	
Consumable materials and supplies	
Conferences and meetings travel	
Project-related travel	
Engagement	
Reporting	
Overhead	
CONTRACT TOTAL (Calculated)	\$1,500.00
CONTRACT RECIPIENT - ONLY: Name	AEP contract: North-South (ageing)
CONTRACT RECIPIENT - ONLY: Organization	
Category	Total Funding Requested from OSM
Salaries and Benefits	\$1,000.00
Operations and Maintenance	

Consumable materials and supplies		
Conferences and meetings travel		
Project-related travel		
Engagement		
Reporting		
Overhead		
CONTRACT TOTAL (Calculated)	\$1,000.00	
CONTRACT RECIPIENT - ONLY: Name	ALMCA Community Based Monitors - 4 individuals	
CONTRACT RECIPIENT - ONLY: Organization		ALMCA
Category		Total Funding Requested from OSM
Salaries and Benefits	\$35,000.00	
Operations and Maintenance		
Consumable materials and supplies		
Conferences and meetings travel	\$6,000.00	
Project-related travel		
Engagement		
Reporting		
Overhead		
CONTRACT TOTAL (Calculated)	\$41,000.00	
CONTRACT RECIPIENT - ONLY: Name	Total Funding Requested from OSM	
CONTRACT RECIPIENT - ONLY: Organization		
Category		
Salaries and Benefits		
Operations and Maintenance		
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	\$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	\$0.00
Total All Contracts (from table 16.2.1 above) Sums totals for AEPA Tables ONLY	\$75,000.00
SUB-TOTAL (Calculated)	\$75,000.00
Capital* Sums total for AEPA	
GRAND PROJECT TOTAL	\$75,000.00

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.

Costs overruns or underruns will be managed by quarterly financial forecasting and tracking based on a risk management approach. Project planning phase will include coordination, scheduling, role definition, task allocation and deliverables tracking. Regular data sharing and discussion meetings each quarter will be accompanied by budget and project management update.

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

Diane Scoville

Title/Organization

Contractor on Behalf of Athabasca Landing Métis Community Association

Signature

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

Ron Donald

Title/Organization

President - Athabasca Landing Metis

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