2022-2023 OSM WORK PLAN APPLICATION

This form will be used to assess the merits of the proposed work plan and its fit with the Oil Sands Monitoring (OSM) Program mandate and strategic priorities. Applicants must complete the form in its entirety. Applicants that fail to use this form and complete all sections in the timeframe will not be considered.

OSM Work Plan Submission Deadline: The deadline for submission of proposed work plans is ***October 5, 2021 at 4:30 PM Mountain Standard time.***	***October 5, 2021*** *4:30 PM MST*
Decision Notification	*Mid to Late January 2022*

The OSM Program is governed by the Freedom of Information and Protection of Privacy Act (FOIP) and may be required to disclose information received under this Application, or other information delivered to the OSM Program in relation to a Project, when an access request is made by anyone in the public. Applicants are encouraged to familiarize themselves with FOIP. All work plans are public documents.

Work Plan Completion

Please ***Enable Macros*** *on the form when prompted.*

The applicant is required to provide information in sufficient detail to allow the evaluation team to assess the work plan. Please follow the requirements/instructions carefully while at the same time being concise in substantiating the project's merits. *The OSM Program is not responsible for the costs incurred by the applicant in the preparation and submission of any proposed work plan.*

When working on this form, please maintain Macros compatibility by always saving your draft and your final submission as a **Microsoft Word Macro-Enabled Document**, failure to do so will result in loss of form functionality**.** This form was created using Microsoft word 2016 on a PC and may not have functionality on other versions of Microsoft on PC or MACS.

All work plans under the OSM Program require either a government lead or a government coordinator. This will ensure that the financial tables (for Alberta Environment and Parks & Environment and Climate Change Canada) are completed accurately for work plan consideration. ***However,*** *if an* ***Indigenous community, environmental nongovernmental organization*** *or any other* ***external partner*** *is completing a work plan proposal, they would* ***only*** *complete the* ***grant or contract budget component*** *of the* ***Human Resources & Financials Section*** *for their project. The government coordinator within Alberta Environment & Parks would be responsible for completing the remaining components of the Human Resources and Financial Section of this Work Plan Application, as they are responsible for contract and grant facilitation of successful submissions. All other sections outside of* ***Human Resources & Financials Section*** *of this work plan proposal are to be completed in full by all applicants.*

The OSM Program recognizes that majority of work planning submissions are a result of joint effort and monitoring expertise. Should the applicant wish to submit supplemental materials in addition to their application additional resources are available in the Work Planning Form and Distribution Package, accessible here: **Work Planning Form and Distribution Package**

Should you have any ***questions*** *about completing this work planning form or uploading your final submission documents, please send all inquiries by email to:* **OSM.Info@gov.ab.ca**.

Work Plan Submission

*Upon completion of this application, please submit the appropriately named work plan (**Microsoft Word Macro-Enabled Document**) and all supporting documents to the link provided below. Failure to follow the naming convention provided may result in oversight of your application.*

*Please upload (by drag and dropping) the **WORK PLAN SUBMISSION & ALL SUPPORTING DOCUMENTS** here:*

WORK PLAN SUBMISSION LINK (CTRL+CLICK HERE)

Please use the following file naming convention when submitting your WORK PLAN:

202223_wkpln_WorkPlanTitle_ ProjectLeadLastNameFirstName

Example:

202223_wkpln_OilSandsResiduesinFishTissue_SmithJoe

If applicable, **please use the following file naming convention when submitting your supplementary or supporting files.** Please number them according to the guidance and examples provided:

202223_sup##_WorkPlanTitle_ ProjectLeadLastNameFirstName

Examples:

202223_sup01_OilSandsResiduesinFishTissue_SmithJoe

202223_sup02_OilSandsResiduesinFishTissue_SmithJoe

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202223_sup10_OilSandsResiduesinFishTissue_SmithJoe

Do not resave your work plan or documents under any other naming conventions. *If you need to make revisions and resubmit before the work planning deadline of October 5, 2021, **DO NOT** rename your submission. When resubmitting, simply resubmit with the exact naming convention so that it replaces the original submission. **DO NOT** add any additional components such as versioning or dates to the file naming convention. Please direct any questions regarding the submission or naming of submissions to **OSM.Info@gov.ab.ca**.*

Work Plan Application

PROJECT INFORMATION	
Project Title:	Willow Lake Métis Aquatics Monitoring
Lead Applicant, Organization, or Community:	Willow Lake Métis Nation
Work Plan Identifier Number: *If this is an on-going project please fill the identifier number for 20/21 fiscal by adjusting the last four digits:* ***Example:*** *D-1-2020 would become D-1-****2022***	Unknown – 2021-22 agreement yet to be received
Project Region(s):	Athabasca
Project Start Year: *First year funding under the OSM program was received for this project (if applicable)*	2021
Project End Year: *Last year funding under the OSM program is requested* ***Example: 2022***	2023
Total 2022/23 Project Budget: *For the 2022/23 fiscal year*	$181,528.00
Requested OSM Program Funding: *For the 2022/23 fiscal year*	$181,528.00
Project Type:	Community Based Monitoring
Project Theme:	Surface Water
Anticipated Total Duration of Projects (Core and Focused Study (3 years))	Year 5
Current Year	**Focused Study:** Choose an item.
	Core Monitoring: Year 2

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.	Destiny Martin
Job Title:	Sustainability Lead
Organization:	Willow Lake Métis Nation
Address:	6-232 Stony Mountain Road, Anzac, AB T0P 1J0
Phone:	780-334-0008
Email:	d.martin@wlmn.ca

PROJECT SUMMARY

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*

In the space below please provide a summary (300 words max) 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.

WLMN's proposed aquatics monitoring project will continue the work commenced by the Nation in 2021 to integrate western science and Indigenous Knowledge monitoring methods to answer key community questions regarding the impacts of oil sands development on surface water and fish. This work will be integrated with the regional OSM aquatics core monitoring program. At the same time, the project will continue to build Willow Lake's capacity for environmental monitoring work.

As planned for 2021-22, the project will use existing SOPs where possible (or contribute to the development/piloting of SOPs), and wil develop or adapt both Indigenous Knowledge and western science-based methods to collect date regarding surface water and fish. Willow Lake plans to use methods developed by Alberta Lake Management Society (ALMS) for collection of western science-based surface water quality data, and receive training in data collection from ALMS. SOPs provided by the facilitation centre for fish monitoring will be used. The project will focus on locations within Willow Lake Métis Nation's territory in proximity to oil sands developments. The Nation will continue to work closely with the OSM aquatics core monitoring team, the AU facilitation centre, and other Indigenous Nations where possible.

Following the community engagement, training, capacity building, and methods development that will take place through the 2021-22 project, the Nation will be well positioned to further refine monitoring methods and engage in the full cycle of seasonal monitoring that had been planned for the 21-22 project. This monitoring will again include two fish camps, surface water monitoring at 5 to 10 sites, and participation in the Government of Alberta aquatics work planned for Willow (Gregoire) Lake in 2022.

Western science data generated by the project will be provided to the OSM program. Other deliverables will include a community outcomes presentation, updates via the Nation website and Facebook page, and a final technical report.

The proposed project will deliver to OSM Projram objectives to track impacts from oil sands development; conduct comprehensive and inclusive monitoring; ensure relevant and rigorous monitoring; and incorporate Indigenous monitoring, endpoints, and community based monitoring.

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 the EEM 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 EEM framework 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*
- *Discuss results of previous monitoring/studies/development and* what has been achieved to date.

The key drivers for this project are to build Willow Lake Métis Nation monitoring capacity and address community concerns about water and fish within portions of the Nation's territory, traplines and harvesting areas that are in proximity to oil sands development. The knowledge gap being addressed is whether oil sands development is resulting in impacts to surface water and fish, thereby potentially affecting harvesting, land use and Section 35 rights.

This project will build on Willow Lake's 2021-22 project and continue the work of identifying culturally-relevant receptors and indicators, and collecting data through fish camps and surface water monitoring. These activities will help address gaps in the aquatics core monitoring program, and in understanding of current aquatic conditions in the portions of Willow Lake's traditional territory where oil sands development is occurring or has occurred in the past.

2.0 Objectives of the Work Plan

List in point form the Objectives of the 2022/23 work plan below

- increase Willow Lake Métis Nation capacity for environmental monitoring and effectively engage in environmental monitoring
- understand western science perspectives on the condition of water and fish within WLMN traditional lands/traditional use areas
- further define/describe WLMN IK perspectives on water and fish in the territory
- define WLMN indicators for surface water and fish
- contribute to OSM aquatics monitoring objectives/data collection

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)
- integrate western science with Indigenous Community-Based Monitoring
- addresses the EEM framework 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 Sub Theme

Please select from the dropdown menu below the theme(s) your monitoring work plan relates to:

Surface Water

3.2 Core Monitoring or Focused study

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. For the purposes of 2022/23 work planning all Community Based Monitoring Projects are Focused Studies.

Focused Study (includes Community-Based Monitoring)

3.3 Sub Theme Key Questions

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

3.4.1.2 Surface Water Key Questions

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

1. Are changes occurring in water quality, biological health (e.g., benthos, fish) and/or water quantity/flows, to what degree are changes attributable to oil sands activities, and what is the contribution in the context of cumulative effects?

Monitoring planned for 2022-23 will include western science sampling at 2 lakes in WLMN territory (with ALMS support), as well as development of IK indicators for surface water and site visits at additional waterbodies. Willow Lake also plans to conduct fish surveys at Gregoire/Willow and Winefred Lakes, with support from ECCC/AEP. The information gathered will contribute to understanding baseline or changed conditions to fish and surface water, and water and fish lab analysis will provide insight into whether observed changes are attributable to oil sands activities.

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

The pursuit of these topics in Willow Lake's planned project is the result of changes and concerns noted by Nation members.

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

Data collected through western science methods will follow relevant SOPs. All western science data that is collected will be considered 'open' and provided to the program (if the program has the capacity to receive it); Willow Lake will determine which Indigenous Knowledge data will be provided, if any.

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

Yes - see above.

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

The project will be integrated with the core aquatics monitoring program and will use any applicable existing methods related to the aquatic themes. Willow Lake will work with various OSM committees and other Indigenous Nations within the program.

6. 7.6. Where does the monitoring fit on the conceptual model within the EEM framework for the theme area and relative to the conceptual model for the OSM Program theme area? How will this work advance understanding transition towards of the conceptual model EEM framework?

Willow Lake is still building our understanding of the EEM framework. The project will respond to key community questions and build on previous work to define culturall relevant receptors and indicators. Using both WS and IK methods, the project will collect data along the pressure/stressor/pathway/response linkage to understand if and how changes in Willow Lake

observations of fish and water, and associated changes in land use and harvesting, can be connected to oil sands development.

7. Is the work plan contributing to Programmatic State of Environment Reporting?

Willow Lake is not familiar with the Programmatic Condition of the Environment Reporting. If this is the same as 'State of Environment Reporting', we understand this was complicated in 2020-2021, particularly with respect to integration of Indigenous Knowledge. As a result, we assume this work plan will not be contributing to such reporting but will participate if a sound approach can be developed to the inclusion of IK reporting.

3.3.2 Groundwater Theme

3.3.2.1 Sub Themes:

Choose an item.

3.3.2.2 Groundwater Key Questions

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

1.Are changes occurring in groundwater quality and/or quantity, to what degree are changes attributable to oil sands activities, are changes affecting other ecosystems, and what is the contribution in the context of cumulative effects?

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

6. Where does the monitoring fit within the EEM framework and relative to the theme area? How will this work advance transition towards the EEM framework?

Click or tap here to enter text.

7. Where does the monitoring fit on the conceptual model for the theme area and relative to the conceptual model for the OSM Program? How will this work advance understanding of the conceptual model?

Click or tap here to enter text.

8. Is the work plan contributing to Programmatic State of Environment Reporting?

Click or tap here to enter text.

3.3.3 Wetlands Theme

3.3.3.1 Sub Themes:

Choose an item.

3.3.3.2 Wetland - Key Questions

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

1. Are changes occurring in wetlands due to contaminants and hydrological processes, to what degree are changes attributable to oil sands activities, and what is the contribution in the context of cumulative effects?

Click or tap here to enter text.

2. Are changes in wetlands informing Indigenous key questions and concerns?

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

6. Where does the monitoring fit within the EEM framework and relative to the theme area? How will this work advance transition towards the EEM framework?

Click or tap here to enter text.

7. Where does the monitoring fit on the conceptual model for the theme area and relative to the conceptual model for the OSM Program? How will this work advance understanding of the conceptual model?

Click or tap here to enter text.

8. Is the work plan contributing to Programmatic State of Environment Reporting?

Click or tap here to enter text.

3.3.4 Air Theme

3.3.4.1 Sub Themes:

Choose an item.

3.3.4.2 Air & Deposition - Key Questions

Explain how your air & deposition monitoring program addresses the key questions below.

1. Are changes are occurring in air quality, to what degree are changes attributable to oil sands emissions, and what is the contribution in the context of cumulative effects?

Click or tap here to enter text.

2. Are changes informing Indigenous key questions and concerns?

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

6. Where does the monitoring fit within the EEM framework and relative to the theme area? How will this work advance transition towards the EEM framework?

Click or tap here to enter text.

7. Where does the monitoring fit on the conceptual model for the theme area and relative to the conceptual model for the OSM Program? How will this work advance understanding of the conceptual model?

Click or tap here to enter text.

8. Is the work plan contributing to Programmatic State of Environment Reporting? (Answer Box)

Click or tap here to enter text.

3.3.5 Terrestrial Biology Theme

3.3.5.1 Sub Themes:

Choose an item.

3.3.5.2 Terrestrial Biology - Key Questions

Explain how your terrestrial biological monitoring program addresses the key questions below.

1. Are changes occurring in terrestrial ecosystems due to contaminants and landscape alteration, to what degree are changes attributable to oil sands activities, and what is the contribution in the context of cumulative effects?

Click or tap here to enter text.

2. Are changes in terrestrial ecosystems informing Indigenous key questions and concerns?

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

6. Where does the monitoring fit within the EEM framework and relative to the theme area? How will this work advance transition towards the EEM framework?

Click or tap here to enter text.

7. Where does the monitoring fit on the conceptual model for the theme area and relative to the conceptual model for the OSM Program? How will this work advance understanding of the conceptual model?

Click or tap here to enter text.

8. Is the work plan contributing to Programmatic State of Environment Reporting?

Click or tap here to enter text.

3.3.6 Cross-Cutting Across Theme Areas

3.3.6.1 Sub Themes:

Choose an item.

If "Other" was selected from the drop down list above please describe below:

Click or tap here to enter text.

3.3.6.2 Cross-Cutting - Key Questions

Explain how your cross-cutting monitoring program addresses the key questions below.

1. Is data produced following OSM Program requirements and provided into the OSM Program data management system?

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

4. Where does the monitoring fit within the EEM framework and relative to the theme area? How will this work advance transition towards the EEM framework?

Click or tap here to enter text.

5. Where does the monitoring fit on the conceptual model for the theme area and relative to the conceptual model for the OSM Program? How will this work advance understanding of the conceptual model?

Click or tap here to enter text.

6. Is the work plan contributing to Programmatic State of Environment Reporting?

Click or tap here to enter text.

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 give consideration for the EEM framework and the approved Key Questions.

The proposed project will inform management, policy and compliance by contributing to the understanding of if or how oil sands development has affected traditional resources in the form of water and fish. Water in sufficient quality and quantity to support a healthy environment underpins the exercise of all Section 35 rights, and a deeper understanding of any impacts of oil sands development on surface water and fish could have implications for the exercise of rights and associated management, policy, regulatory compliance and both local and regional land use planning.

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 workplan has been designed to address WLMN concerns and curiosity regarding aquatic resources within the Nation's territory. These concerns have been documented through previous monitoring work, and regulatory and land use studies. Resulting information will fill gaps in the OSM program: being inclusive and responding to Indigenous concerns and understanding how changes to aquatic resources impact Section 35 rights. Willow Lake will work collaboratively with the AEP and ECCC scientific and technical staff, the ICBMAC, and the Athabasca University Facilitation Centre to build Nation capacity in western science and community-based monitoring, and data management, analysis, and interpretation, and implement monitoring. The Nation has recently hired a new Sustainability Department Lead who wil be managing this project, which will build on prior work done by the Nation, and extensively develop the capacity of this individual, the Elder/harvester steering committee, and guardians that will help to conduct site visits for the program.

Willow Lake Métis Nation's letter of support has been included, and given the research will be designed and led by Nation staff under the guidance of Nation leadership (with technical support from Certes Applied and Natural Sciences, and OSM personnel), it will meet community protocols.

Does this project include an Integrated Community Based Monitoring Component?

Yes

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 can be assessed against a baseline condition. As relevant give consideration for the EEM framework and the approved Key Questions.

Building on the work done in WLMN's 2021-22 project, this project will continue to collect western science and IK data for indicators and receptors relevant to WLMN. This data will contribute to defining a baseline and evaluate the state of the existing environment using both western science and IK monitoring approaches. In future years, the project will expand to develop IK thresholds, if possible, and demonstrate any changes that are outside natural variability.
Engagement, capacity building, and monitoring activities will provide opportunities for Willow Lake to define and document IK baselines and measure change of IK indicators.
By collecting both western science and IK data will allow comparisons of the two knowledge systems.

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 give consideration for the EEM framework and the approved Key Questions.

Willow Lake is working with the aquatics monitoring TAC to ensure that proposed data collection and methods will contribute to the regional aquatics program, at an appropriate scale, where western science data and methods are concerned.

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 give consideration for the EEM framework and the approved Key Questions.

Western science data must be "Open by Default" and IK is "Protected by Default".
One of the OSM objectives is to build capacity in communities for data management, analysis, and interpretation.
This workplan has deliverables to provide results to the Willow Lake Metis Nation community, possibly the broader local community, and to the OSM program through various mediums including presentations, flyers/brochures, website or FaceBook updates, and a final report.

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 give consideration for the EEM framework and the approved Key Questions.

As noted above, the project is integrated with the regional aquatics program/TAC and will be working to collect data to answer key questions about potential impacts of oil sands development on fish and surface water. This is a community-based project that will be run by WLMN through collaboration with OSM/AEP/ECCC.

10.0 Work Plan Approach/Methods

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

1. Project Management (ongoing throughout the project)
 - biweekly meetings between PI and technical lead
 - steering committee meetings
 - communications, financial management, meeting/training/data collection coordination
2. Project Initiation
 - equipment purchse
 - safety training
3. Scoping/Methods Development
 - community engagement to continue to refine IK indicators/receptors
 - work with Aquatics core monitoring team, facilitation centre and others to refine aplicable existing SOPs
 - continue to develop/refine IK data collection methods
4. Training (WLMN lead + guardian) and Database/Data Management Preparation
 - participate in ALMS surface water quality training (online)
 - prepare databases to receive monitoring data to align with existing WLMN data bases and work being done by data analytics TAC
 - data management and analysis training
5. Data Collection
 - conduct 8 cycles (4 winter, 4 summer) of ALMS surface water sampling at two lakes (10 days total)
 - conduct additional 8 days surface water site visits for IK indicators to additional sites
 - conduct fish camps/monitoring at Willow/Gregoire Lake and Winefred Lake with support from OSM personnel
 - participate in AEP surface water sampling at Gregoire/Willow Lake
6. Data Management and Analysis
 - complete site forms/upload data to appropriate databases (WLMN or AEP/OSM)
 - conduct analysis of IK data and western science data as applicable
7. Reporting
 - conduct a final community meeting (possiblyextended to broader Anzac community/school) to present project outcomes
 - prepare a project summary/flyer/brochure for WLMN website and Facebook page
 - prepare a final technical report to summarize project methods and outcomes

10.2 Describe how changes in environmental Condition will be assessed *

This project is primarily designed to confirm culturally relevant indicators and receptors for WLMN, and to begin to collect data to describe a baseline of aquatic conditions in the Nation's territory.

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

NONE

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

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

Western Science SOPs will be used for surface water quality data collection (ALMS) and fish monitoring (ECCC/AEP) at fish camps. This data will be provided to the aquatics core monitoring program to analyse. Community-based/IK methods will inform receptors and indicators, and development of IK methods for surface water and fish will be refined to the extent possible in the project (through collaboration with other Nations, if feasible).

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

Western Science key indicators for surface water will follow ALMS/AEP/ECCC SOPs and recommendations. Western Science indicators for fish remain to be determined through community engagement but will follow AEP/ECCC SOPs and recommendations. IK indicators will begin to be developed in the 2021-22 project and this work will be continued in 22-23.

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 this project will be distributed to WLMN members through presentations at in-person meetings, brochures/flyers and via the Nation website or Facebook page, A final project report will be prepared for WLMN's files, and this report may also be shared with the OSM program/AEP/ECCC. WLMN will also participate in regional/subregional meetings with the aquatics program, and share knowledge with other Indigenous Nations when such opportunities arise.

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

Certes Applied and Natural Sciences (Keely Winnitoy and George Jennnings) have been working with Willow Lake Metis Nation since 2017 and will be providing technical support throughout ths project. Paul Drevnick (AEP), Mark McMaster (ECCC) and Erin Ussery (ECCC) will support the application of western science aquatics methods. ALMS will support training and execution of surface water monitoring, and laboratory analysis costs for fish will be passed through AEP.

*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 2022-23 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.

Data Sharing and Data Management Continued

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

NO

13.2 Type of Quantitative Data Variables:

Both

13.3 Frequency of Collection:

Other

13.4 Estimated Data Collection Start Date:

2022-05-01

13.5 Estimated Data Collection End Date:

2023-03-01

13.6 Estimated Timeline For Upload Start Date:

2022-07-01

13.7 Estimated Timeline For Upload End Date:

2023-03-31

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 table and then clicking on the blue "+" symbol 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
ICBM IK data	WLMN computer/server	TBD	Protected by Default
ICBM Western Science Data	TBD	TBD	Open by Default

14.0 2022/23 Deliverables

Add an additional deliverable by clicking on the table and then clicking on the blue "+" symbol on the bottom right side of table.

Type of Deliverable	Delivery Date	Description
Key Engagement/Participation Meeting	Q1	A meeting will be held with the community at the end of the project to present on outcomes.
Other (Describe in Description Section)	Q1	Project bulletins will be prepared for the Willow Lake Metis Nation website and/or Facebook page.
Technical Report	Q1	A final technical report will be prepared to report on project methods and outcomes.
OSM Program Annual Progress Report (required)	Q1	If required by the program, an annual progress report will be provided in the first quarter of 2023.

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.*

Willow Lake Metis Nation
- Destiny Martin – WLMN Sustainability Lead and Principal Investigator/Project Manager
- Stella Lavallee - WLMN President (elected official, not included in budget)
- Justin Bourque – WLMN Vice-President (elected official, not included in budget)
- Jessica VanEe – WLMN Executive Assistant
- Willow Lake Metis Nation Elder/Harvester Steering Committee (membership TBD)
- Keely Winnitoy – Contractor, Certes Applied and Natural Sciences, and Technical Lead
- George Jennings - Contractor, Certes Applied and Natural Sciences, GIS and Data Management Lead

AEP/ECCC Integration
- Paul Drevnick, AEP Aquatics Monitoring Lead and Western Science Advisor
- Mark McMaster and Erin Ussery, ECCC Aquatics Monitoring Leads

ICBM Integration
- Ave Dersch, ICBMAC and Community Based Monitoring Advisor

Other collaborators:
ALMS Lake Keepers (ALMS provides training; sampling equipment, bottles, and COCs; coordination of laboratory analyses; data management; and support for evaluation and reporting)

With support from the OSM Facilitation Centre, the team outlined above has the expertise to complete the project. The Willow Lake Sustainability Lead and the Certes Technical Lead will meet on a bi-weekly basis to discuss project methods, timelines, and budget, and the Sustainability Lead will provide this information back to Willow Lake leadership. The Sustainability Lead will also conduct periodic meetings with the Elder/Harvester Steering Committee to provide them with updates and get feedback regarding the project.

Willow Lake Métis Nation and Certes have been working together since 2017 and have completed multiple regulatory land use studies, culture camps, and conducted a three year community based monitoring program funded by ECCC.

Paul Drevnick, Mark McMaster and Erin Ussery have offered to provide western science support to Willow Lake's program and Ave Dersch has offered to provide guidance regarding community based monitoring methods so that Willow Lake's approach can be aligned with what other Nations in the program are doing for aquatics monitoring. In 2022-23, WLMN will also work with ALMS to implement surface water quality monitoring.

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 AEP 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 AEP

Add an additional AEP Staff member by clicking on the table and then clicking on the blue "+" symbol on the bottom right side of 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
Drevnick, Paul	Support Aquatics Work	0%

Table 16.1.2 ECCC

Add an additional ECCC Staff member by clicking on the table and then clicking on the blue "+" symbol on the bottom right side of table. The total FTE (Full Time Equivalent) is Auto Summed in Table 16.2.2

Name (Last, First)	Role	% Time Allocated to Project
McMaster, Mark	Support Aquatics Work	0%
Click or tap here to enter text.	Click or tap here to enter text.	0

The tables below are the financial tables for Alberta Environment & Parks (AEP) 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 (ctrl + click the link below). Please note that completion of this Project Finance Breakdown Template is mandatory and must be submitted along with each workplan.

PROJECT FINANCE BREAKDOWN TEMPLATE (CTRL+CLICK HERE)

Table 16.2.1 Funding Requested BY ALBERTA ENVIRONMENT & PARKS

Organization – Alberta Environment & Parks ONLY	Total % time allocated to project for AEP staff	Total Funding Requested from OSM
Salaries and Benefits *(Calculated from Table 16.1.1 above)*	**0.00%**	**$0.00**
Operations and Maintenance		
Consumable materials and supplies		$0.00
Conferences and meetings travel		$0.00
Project-related travel		$0.00
Engagement		$0.00
Reporting		$0.00
Overhead		$0.00
Total All Grants *(Calculated from Table 16.4 below)*		**$169,158.00**
Total All Contracts *(Calculated from Table 16.5 below)*		**$12,370.00**
Sub- TOTAL *(Calculated)*		**$181,528.00**
Capital*		$0.00
AEP TOTAL *(Calculated)*		**$181,528.00**

* 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)*		
Salaries and Benefits		$0.00
Operations and Maintenance		
Consumable materials and supplies		$0.00
Conferences and meetings travel		$0.00
Project-related travel		$0.00
Engagement		$0.00
Reporting		$0.00
Overhead		$0.00
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 the table and then clicking on the blue "+" symbol on the bottom right side of table. The total of all Grants is Auto Summed in Table 16.2.1

GRANT RECIPIENT - ONLY: Name	Destiny Martin
GRANT RECIPIENT - ONLY: Organization	Willow Lake Métis Association
Category	**Total Funding Requested from OSM**
Salaries and Benefits	$127,350.00
Operations and Maintenance	
Consumable materials and supplies	$1,440.00
Conferences and meetings travel	$0.00
Project-related travel	$16,920.00
Engagement	$11,400.00
Reporting	$0.00
Overhead	$12,048.00
GRANT TOTAL *(Calculated)*	**$169,158.00**

Table 16.4

Complete ONE table per Contract recipient.

Add a Recipient by clicking on the table and then clicking on the blue "+" symbol on the bottom right side of 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	Laboratory Analysis of Fish Tissues
CONTRACT RECIPIENT - ONLY: Organization	To be paid by AEP
Category	**Total Funding Requested from OSM**
Salaries and Benefits	$0.00
Operations and Maintenance	
Consumable materials and supplies	$12,370.00
Conferences and meetings travel	$0.00
Project-related travel	$0.00
Engagement	$0.00
Reporting	$0.00
Overhead	$0.00
CONTRACT TOTAL *(Calculated)*	**$12,370.00**

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 AEP and ECCC ONLY***	$0.00
Operations and Maintenance	
Consumable materials and supplies *Sums totals for AEP and ECCC ONLY*	$0.00
Conferences and meetings travel *Sums totals for AEP and ECCC ONLY*	$0.00
Project-related travel *Sums totals for AEP and ECCC ONLY*	$0.00
Engagement *Sums totals for AEP and ECCC ONLY*	$0.00
Reporting *Sums totals for AEP and ECCC ONLY*	$0.00
Overhead *Sums totals for AEP and ECCC ONLY*	$0.00
Total All Grants (from table 16.2.1 above) *Sums totals for AEP Tables ONLY*	$169,158.00
Total All Contracts (from table 16.2.1 above) *Sums totals for AEP Tables ONLY*	$12,370.00
Sub- TOTAL	$181,528.00
Capital* *Sums total for AEP*	$0.00
GRAND PROJECT TOTAL	$181,528.00

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 financials will be reviewed by the Project Manager/PI and the technical lead on a monthly basis to determine any cost overruns/underruns. Any budget reallocation between phases will be determined and proposed to WLMN leadership for approval.

Capacity barriers within AEP/ECCC, ALMS, and the OSM Facilitation centre may limit the amount of training in western-science based monitoring that can be achieved through this project, and a lack of training in western-science based monitoring will limit WLMN's ability to collect western-science aquatics data.

The ongoing covid pandemic may limit/eliminate some of the anticipated project tasks including community engagement meetings, fish camps, and training opportunities.

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 blue "+" symbol on the bottom right side of table.

DESCRIPTION	SOURCE	EQUIVALENT AMOUNT ($CAD)
Click or tap here to enter text.	Click or tap here to enter text.	$0.00
	TOTAL	**$0.00**

19.0 Consent & Declaration of Completion

Lead Applicant Name

Destiny Martin

Title/Organization

Willow Lake Metis Nation, Sustainability Lead

Signature

Destiny Martin

Date

2021-10-04

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

Click or tap here to enter text.

Title/Organization

Click or tap here to enter text.

Signature

Click or tap here to enter text.

Date

Click or tap to enter a date.

PROGRAM OFFICE USE ONLY

Governance Review & Decision Process

this phase follows submission and triggers the Governance Review

TAC Review (Date):

Click or tap to enter a date.

ICBMAC Review (Date):

Click or tap to enter a date.

SIKIC Review (Date):

Click or tap to enter a date.

OC Review (Date):

Click or tap to enter a date.

Final Recommendations:

Decision Pool:

Choose an item.

Notes:

Click or tap here to enter text.

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):

Click or tap to enter a date.

SIKIC Review (Date):

Click or tap to enter a date.

OC Review (Date):

Click or tap to enter a date.

Comments:

Decision Pool:

Choose an item.

Notes & Additional Actions for Successful Work Plan Implementation:

Click or tap here to enter text.