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

.

.

.

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:	Lakeland Métis Community Moose Camera Tracking Project
Lead Applicant, Organization, or Community:	Melina Scoville, President, Lakeland Métis Community Association
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***	Click or tap here to enter text.
Project Region(s):	Athabasca
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: 2022***	2025
Total 2022/23 Project Budget: *For the 2022/23 fiscal year*	$150,000.00
Requested OSM Program Funding: *For the 2022/23 fiscal year*	$150,000.00
Project Type:	Community Based Monitoring
Project Theme:	Terrestrial Biological Monitoring
Anticipated Total Duration of Projects (Core and Focused Study (3 years))	Year 3
Current Year	**Focused Study:** Year 1 of 3
	Core Monitoring: Choose an item.

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.	Melina Scoville
Job Title:	President
Organization:	Lakeland Métis Community Association
Address:	PO Box 929, Lac La Biche, AB T0A 2C0
Phone:	587-723-1138
Email:	Localpresident1909@rocketmail.com

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.

Lakeland Métis Community Association (LMCA) is developing a community-based monitoring project to monitor the effects of Steam Assisted Gravity Drainage (SAGD) development on the movements of moose in the South Athabasca Oil Sands Area. The objective of the Project is to incorporate the local knowledge of Métis harvesters in the identification of critical moose habitats in proximity to SAGD facilities. Next, Métis harvesters will work with wildlife biologists to track the presence and movement of moose in relation to two SAGD projects using a series of wilidlfe trail cameras. Métis harvesters will work with terrestrial ecologists to place the cameras. A control area not in proximity to a SAGD development will also be chosen. Trail camera data will be uploaded to Wild Trax https://www.wildtrax.ca/home.html Métis knowledge holders will assist with data analysis in collaboration with terrestrial ecologists. The main drivers of this Project are the need for collaboration between hunters and wildlife experts in assessing and monitoring the potential effects of SAGD operations on the presence of moose, the movements of individual moose, and the behaviour of moose cow-calf pairs in proximity to SAGD developments. Métis knowledge holders are skilled at identifying and differentiating between individual moose. Their skills will be supplemented by input of western-scientists on the placement of cameras, sampling methods and data collection techniques. The Project will deliver new data on moose behaviour in relation to SAGD Projects in line with the OSM objectives of identifying changes in local wildlife, assessing whether there is a link between identified changes and oil sands activity, and contributing to data on cumulative effects. Further, the Project will advance collaboration between Indigenous knowledge holders and scientists. Finally, the Project will enhance conditions for the exercise of Constitutionally protected Section 35 hunting rights by assessing conditions of the moose population. The deliverables of the Project will be a dateset of geo-referenced photographs of moose habitat, movement and behaviour stored in Wild Trax that can be shared with OSM partners. In addition, annual progress reports will be provided and peer-reviewed papers will be produced describing the Project, its methods, findings and contributions to OSM questions about baseline conditions, effects of oil sands activity on moose and contribution to cumulative effects.

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.

This project begins by establishing a simultaneous baseline condition of moose presence and movement in a critical moose habitat without SAGD facilities present. Next it collects information on moose presence and movement in proximity to two SAGD facilities. As such, the Environmental Effects Monitoring (EEM) framework seeks to compare observations about moose presence, movement and behaviour between a baseline condition and two SAGD conditions. That is, the Project is driven by the research question that asks what are the baseline conditions of moose presence, are there any SAGD (oil sands industry) related changes, and how do these observed changes fit with the current state of understanding of the cumulative effects of oil sands development on the local moose population? All three are core questions of the OSM program.

This project seeks to address a knowledge gap about how SAGD operations may impact moose presence and movement within localized habitats through effects pathways related to noise, traffic, human presence, odours or visual disturbances. Within critical moose habitats, the source of effects, the SAGD facilitiy, may generate effects on moose presence, movement or observable behaviours (flight, agitation, etc) due to noise, or other stimuli. The use of a control habitat without a SAGD facility will provide comparable baselines for moose behaviour without the SAGD operations.

This project contributes the the collection of baseline information, linkages to the effects of oils ands activities on moose, and discussions about cumulative effects by involving Indigenous harvesters in research about a keystone species for the exercise of Section 35 hunting rights.

To date, LMCA has identified local Métis hunters who are willing to participate in training, camera placement, and collaboration with terrestrial ecologists on methods and technological tools. Ongoing discussions are taking place with terrestrial ecologists to plan training and develop the conceptual and analytical framework for the study. The use of Wild Trax will enable a broader sharing of the collected data for use by policy makers, academics and government scientisits.

2.0 Objectives of the Work Plan

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

-To identify baseline conditions of moose presence, movement and behaviour in a critical moose habitat (without proximity to SAGD operations)
-Compare moose presence, movement and behaviour in baseline critical moose habitats with habitats in proximity to SAGD operations
-Determine whether SAGD operations have observable effects on moose presence, movement and behaviour to contribute to local discussions on the effects of SAGD operations on hunting success.
-Combine local Indigenous knowledge about moose habitat with techniques of wildlife camera tracking and data management using WildTrax which allows for remote uploads, analysis and sharing of trail camera data.
-Develop capacity for ongoing collaboration between IK holders and terrestrial ecologists

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:

Terrestrial Biology

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:

Choose an item.

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?

Click or tap here to enter text.

2. Are changes in water quality and/or water quantity and/or biological health 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. 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?

Click or tap here to enter text.

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

Click or tap here to enter text.

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:

Wildlife

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?

Changes to terrestrial ecosystems are occurring due to noise, odour, visual disturbance, habitat fragmentation and increased human presence in critical moose habitats near SAGD facilities. How do these changes effect moose presence, movement and behaviour compared to non-SAGD conditions?

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

Yes, SAGD related terrestrial ecosystem change in the South Athabasca Oil Sands Area has raised questions among Métis harvesters over the local effects on the moose population, its presence, movement patterns and behaviour.

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

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

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

The methodology is based on the multiple evidence based approach to Community Based Monitoring which combines Indigenous Knowledge and Western Scientific perspectives as equal but distinct sources of knowledge and expertise in the design of the EEM. In this case, hunters, Elders and knowledge holders will collaborate with terrestrial ecologists to identify critical moose habitats, two in proximity to SAGD facilities and one at a distance. The location and use of camera trapping and tracking methods will follow best practices and scientific rigor. The collaboration between IK holders and scientists in the analysis of the photo data, particularly to identify individual animals and track their movements through contiguous camera trap locations will generate compelling and comprehensive data on the local effects of SAGD facilities on moose presence, movement and behaviour.

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

Moose hunting is a core harvesting activity for Indigenous communities across the Oil Sands Area. Contributing to assessment of the cumulative effects of oil sands activity on the moose population in the South Athabasca Oil Sands is of interest to every Indigenous community in the region.

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?

Wildlife camera tracking as a monitoring method for the presence, movement and behaviour of moose will contribute to baseline conditions, identify the effects of SAGD operations on local behaivour of moose, and provide additional data to inform discussions about the cumulative effects of Oil Sands Development on moose.

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?

This EEM based on wildlife camera traps with input from local hunters on critical habitat identification and camera placement incorporates Indigenous priorities into the terrestrial biological theme area of the OSM. One of the objectives of the OSM is to incorporate Indigenous knowledge using multiple evidence based approaches to community based monitoring and to environmental effects monitoring more generally, particularly in the identification of the effects of oil sands on key species for the exercise of Section 35 rights.

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

The photos generated by this Project and the accompanying observations of moose presence, movement and behaviour in relation to oil sands SAGD facilities will enhance the quality, breadth and integrity of the data available for environmental reporting in the oil sands area.

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 OSM program asks if oil sands activity has generated changes to local conditions, in this case moose habitat, presence, movement and behaviour. 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 thise case, the Project will provide a localized example of a potential contribution to moose presence, movement and behaviour in relation to SAGD facilities, compared with a baseline case of no-facility. This will enable further study into the stressors caused by SAGD faciltiies as a source of change to moose habitat and behaviour. Is the effect pathway primarily because of noise, odour, presence of humans, habitat fragmentation, etc ? This can contribute to further research and investigation into cumulative effects of SAGD operations on moose across multiple effects pathways.

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 by LMCA based on consultation with its members who are moose hunters and who are concerned about the effects of SAGD operations on the local moose population. The choice of terrestrial biology and particularly moose habitat and behaviour as themes for monitoring was made by Indigeneous harvesters. Further, LMCA is leading the study in order to further develop its capacity for monitoring, particularly using wildlife camera tracking and remote sensing. LMCA 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.

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.

In the case of existing SAGD operations, observing moose behaviour against a pre-development baseline is not possible. Instead, by choosing critical moose habitats in the South Athabasca Oil Sands Area, two in proximity to SAGD facilities and one at a distance, the Project's methodology creates a baseline condition. The wildlife camera tracking will involve moose without SAGD present and moose with SAGD present in critical habitats. Any changes in presence, movement or behaviour can be attributed to SAGD operations.

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.

This project will take place at a subregional scale within critical moose habitats in proximity to SAGD plants compared to a control habitat removed from SAGD operations. The SAGD plants will be within the South Athabasca Oil Sands Area in the Conklin-Leismer area and the control group will be in a location with simliiar vegetation, topography and habitat suitability but away from the SAGD operations. The location and density of camera traps and the number of cameras at each location is informed by Wild Trax and terrestrial biologists.

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.

The trail camera data will be made publicly available and annual reporting is included as a deliverable. The study findings will be published and submitted to a journal for peer review.

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.

This Project will complement existing OSM projects performed by Indigenous communities who are monitoring berries and water quality. This Project focuses on moose which is a cultural keystone species for all Indigenous groups in the oil sands. By providing a variety of datasets (in this case photos) for additional species (beyond vegetation and water), this Project will enhance the quality of data available to OSM participants to better identify cumulative effects of oil sands activity on a species of particular interest to Indigneous people for the exercise of hunting rights. The Project will be focused on communication and input from TACs and Principal Investigators on Terrestrian Biology Monitoring 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

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

Phase 1 - Project Planning
-Identification of study participants, Indigenous Knowledge Holders (partially complete)
-Identificaiton of key moose habitats at landscape level, two in proximity to SAGD plants and one control location.
-Collaboration with Terrestrial Biological Monitoring TACs and Principal Investigators to identify areas for camera coverage, reduce redundancy, collaborate on data sharing, budget camera needs
Phase 2 – Training and Capacity Building
-Training workshop in the use and placement of Wildlife Camera Traps
-Orientation to Wild Trax Software and platform
-Wildlife camera purchase.
Phase 3 – Field Installation – Remote Sensing
-Placement of sets of wildlife cameras at each of the three locations, in collaboration with terrestrial ecologist
-Camera maintenance and replacement
Phase 4 -Data Analysis
-Data management and preliminary data analysis (identification of moose, removal of non-moose photos, observations of moose presence, movement, behaviour at each location)
Phase 5 -Reporting
-Annual Reporting
-Data sharing protocols
-Publication of article and findings for peer review

10.2 Describe how changes in environmental Condition will be assessed *

Observations of moose presence, movement and behaviour at control condition will establish a baseline by which to compare moose presence, movement and behaviour from photos taken in wildlife camera traps at SAGD locations

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

Reference conditions are provided by the control location without SAGD facility
(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 *

Phase 1 – Indigenous Knowledge is used to identify key moose habitat
Phase 2 – training by western scientists on camera placement methods and data management
Phase 3 – field installation involves collaboration between IK holders and scientists
Phase 4 – Data analysis involves collaboration between IK holders and ecologists
Phase 5 – Reporting and data sharing with permission of LMCA is performed primarily by western scientists

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

Geo-referenced photographs featuring presence of moose, movements of moose between contiguous sets of cameras by date and time, and behaviour of moose in video clips and photographs

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 critical moose habitats, choose locations close to SAGD plants and choose a control location.
Further, knowledge transfer and sharing between terrestrial ecologists and Métis IK holders will occur at planning and training workshop on the use of trail cameras and in process to choose camera placement.
Collaborative data anlaysis of photos and observations of movements, presence and behavour of moose on the trail cameras provides an additional opportunity for collaboration and knowledge transfer both ways, between IK holders and scientists.

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

-ABMI/Wild Trax for training and data management
-MSES Consultants – Dr. Brian Kopach, Terrestrial Ecology, geospatial analysis
-Oak Road Concepts – Dermot O'Connor, IK research facilitator

*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? *

YES

13.2 Type of Quantitative Data Variables:

Discrete

13.3 Frequency of Collection:

Monthly

13.4 Estimated Data Collection Start Date:

2022-04-01

13.5 Estimated Data Collection End Date:

2025-03-31

13.6 Estimated Timeline For Upload Start Date:

2022-05-01

13.7 Estimated Timeline For Upload End Date:

2025-03-31

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
LMCA Moose Camera Photos & Observations	Website – Wild Trax	HTML	Protected 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
OSM Program Annual Progress Report (required)	Q4	At the end of each year, progress report will be provided
Other (Describe in Description Section)	Q2	Data analysis workshops between Ecologists and IK holders to identify photos, make observations, decide on inclusion in dataset
Stakeholder or Community Presentation	Q1	Workshop to kickstart project, identify habitat locations, set camera locations
Peer-reviewed Journal Publication	Q4	In year 3, Q4, a peer reviewed publication will be submitted to a journal

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.*

Melina Scoville will act as Project Lead and Project Manager. Ms. Scoville has more than 10 years of experience in consultation and engagement with Proponents and the Alberta Government over the effects of oil sands developments on Métis rights and harvesting practices. Ms. Scoville will oversee the activities of several consultants.

Janice Elliott will serve as Community-based monitoring facilitator. She will liaise between consultants and IK holders. Ms. Elliott has ten years of experience working as a community-based IK researcher with LMCA.

Dr. Brian Kopach of MSES specializes in quantitative and spatial ecology with ten years of academic experience in the analysis of vegetation and wildlife within various ecological field studies in Western Canada, including in resource development zones. Dr. Kopach will provide training on the use of wildlife camera placement and sampling, scientific methods and will collaborate with IK holders to identify moose presence, movement and behaviour in trail camera data.

Dermot O'Connor of Oak Road Concepts specializes in the documentation of Indigenous Knowledge-based information and follows strict data sharing protocols based on free, prior and informed consent. Dermot will manage the data sharing and assist with reporting for this project.

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
Click or tap here to enter text.	Click or tap here to enter text.	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
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)*		**$0.00**
Total All Contracts *(Calculated from Table 16.5 below)*		**$150,000.00**
Sub- TOTAL *(Calculated)*		**$150,000.00**
Capital*		$0.00
AEP TOTAL *(Calculated)*		**$150,000.00**

* The Government of Alberta Financial Policies (*Policy # A600*) requires that all **capital asset** purchases comply with governmental and departmental legislation, policies, procedures, directives and guidelines. **Capital assets** (*Financial Policy # A100*, Government of Alberta, January 2014) are tangible assets that: have economic life greater than one year; are acquired, constructed, or developed for use on a continuing basis; are not held for sale in ordinary course of operations; are recorded and tracked centrally; have a cost greater than $5,000.

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

Table 16.2.2 Funding Requested BY ENVIRONMENT & CLIMATE CHANGE CANADA

Organization – Environment & Climate Change Canada ONLY	Total % time allocated to project for ECCC staff	Total Funding Requested from OSM
Salaries and Benefits FTE *(Please manually provide the number in the space below)*		
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	Click or tap here to enter text.
GRANT RECIPIENT - ONLY: Organization	Lakeland Métis Community Association
Category	**Total Funding Requested from OSM**
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
GRANT TOTAL *(Calculated)*	**$0.00**
GRANT RECIPIENT - ONLY: Name	Click or tap here to enter text.
GRANT RECIPIENT - ONLY: Organization	Click or tap here to enter text.
Category	**Total Funding Requested from OSM**
Salaries and Benefits	$0.00
Operations and Maintenance	
Consumable materials and supplies	0
Conferences and meetings travel	0
Project-related travel	$0.00
Engagement	$0.00
Reporting	0
Overhead	0
GRANT TOTAL *(Calculated)*	**$0.00**
GRANT RECIPIENT - ONLY: Name	Click or tap here to enter text.
GRANT RECIPIENT - ONLY: Organization	Click or tap here to enter text.
Category	**Total Funding Requested from OSM**
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
Reporting	$0.00
Overhead	0
GRANT TOTAL	**$0.00**

(Calculated)	
GRANT RECIPIENT - ONLY: Name	Click or tap here to enter text.
GRANT RECIPIENT - ONLY: Organization	Click or tap here to enter text.
Category	**Total Funding Requested from OSM**
Salaries and Benefits	$0.00
Operations and Maintenance	
Consumable materials and supplies	0
Conferences and meetings travel	0
Project-related travel	$0.00
Engagement	0
Reporting	0
Overhead	0
GRANT TOTAL *(Calculated)*	**$0.00**

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	Melina Scoville
CONTRACT RECIPIENT - ONLY: Organization	Lakeland Métis Community Association
Category	**Total Funding Requested from OSM**
Salaries and Benefits	$20,000.00
Operations and Maintenance	
Consumable materials and supplies	$5,000.00
Conferences and meetings travel	$2,000.00
Project-related travel	$2,000.00
Engagement	$0.00
Reporting	$0.00
Overhead	$30,000.00
CONTRACT TOTAL *(Calculated)*	**$59,000.00**
CONTRACT RECIPIENT - ONLY: Name	Métis IK Holders
CONTRACT RECIPIENT - ONLY: Organization	Lakeland Métis Community Association
Category	**Total Funding Requested from OSM**
Salaries and Benefits	$20,000.00
Operations and Maintenance	
Consumable materials and supplies	0
Conferences and meetings travel	0
Project-related travel	$4,000.00
Engagement	0
Reporting	0
Overhead	$0.00
CONTRACT TOTAL *(Calculated)*	**$24,000.00**
CONTRACT RECIPIENT - ONLY: Name	Janice Elliott
CONTRACT RECIPIENT - ONLY: Organization	Lakeland Métis Community Association
Category	**Total Funding Requested from OSM**
Salaries and Benefits	$20,000.00
Operations and Maintenance	
Consumable materials and supplies	0
Conferences and meetings travel	$2,000.00
Project-related travel	$2,000.00
Engagement	$0.00
Reporting	0

Overhead	0
CONTRACT TOTAL *(Calculated)*	**$24,000.00**
CONTRACT RECIPIENT - ONLY: Name	Dr. Brian Kopach
CONTRACT RECIPIENT - ONLY: Organization	MSES
Category	**Total Funding Requested from OSM**
Salaries and Benefits	$20,000.00
Operations and Maintenance	
Consumable materials and supplies	0
Conferences and meetings travel	$2,000.00
Project-related travel	$2,000.00
Engagement	0
Reporting	$0.00
Overhead	0
CONTRACT TOTAL *(Calculated)*	**$24,000.00**
CONTRACT RECIPIENT - ONLY: Name	Dermot O'Connor
CONTRACT RECIPIENT - ONLY: Organization	Oak Road Concepts Inc.
Category	**Total Funding Requested from OSM**
Salaries and Benefits	$15,000.00
Operations and Maintenance	
Consumable materials and supplies	$0.00
Conferences and meetings travel	$2,000.00
Project-related travel	$2,000.00
Engagement	0
Reporting	0
Overhead	0
CONTRACT TOTAL *(Calculated)*	**$19,000.00**

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*	$0.00
Total All Contracts (from table 16.2.1 above) *Sums totals for AEP Tables ONLY*	$150,000.00
Sub- TOTAL	$150,000.00
Capital* *Sums total for AEP*	$0.00
GRAND PROJECT TOTAL	$150,000.00

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

17.0 FINANCIAL MANAGEMENT

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

☒ *Please check this box to acknowledge you have read and understand*

In the space below please describe the following:

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

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 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

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.

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.