



# 2023-2024 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 <b>October 31, 2022 at 4:30 PM Mountain Standard time</b> . Late submissions will not be accepted.	<b>October 31, 2022</b> 4:30 PM MST
<b>Decision Notification</b>	Mid to Late March 2023

## 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.

**Privacy:** 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.

**Technical Requirements:** 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.

**Government Lead/Coordinator:** 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.

**Supplemental Materials:** 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 Package accessible here: [2023-24 Work Planning Package \(Ctrl+CLICK\)](#)

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](mailto: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**:

**202324\_wkpln\_WorkPlanTitle\_ProjectLeadLastNameFirstName**

**Example:**

202324\_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:

**202324\_sup##\_WorkPlanTitle\_ProjectLeadLastNameFirstName**

**Examples:**

202324\_sup01\_OilSandsResiduesinFishTissue\_SmithJoe

202324\_sup02\_OilSandsResiduesinFishTissue\_SmithJoe

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202324\_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 31, 2022, **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](mailto:OSM.Info@gov.ab.ca).



## WORK PLAN APPLICATION

PROJECT INFORMATION	
<b>Project Title:</b>	Fort McKay Community Odour Monitoring
<b>Lead Applicant, Organization, or Community:</b>	Adi Isaac Adiele, Fort McKay Metis Nation
<b>Work Plan Identifier Number:</b> <i>If this is an on-going project please fill the identifier number for 22/23 fiscal by adjusting the last four digits: <b>Example:</b> D-1-2223 would become D-1-2324</i>	202324_wkpln_FortMcKayCommunityOdourMonitoring_AdielAdi
<b>Project Region(s):</b>	Athabasca
<b>Project Start Year:</b> <i>First year funding under the OSM program was received for this project (if applicable)</i>	2022
<b>Project End Year:</b> <i>Last year funding under the OSM program is requested <b>Example:</b> 2024</i>	2025
<b>Total 2023/24 Project Budget:</b> <i>For the 2023/24 fiscal year</i>	\$359,163.40
<b>Requested OSM Program Funding:</b> <i>For the 2023/24 fiscal year</i>	\$359,163.40
<b>Project Type:</b>	Community Based Monitoring
<b>Project Theme:</b>	Air & Deposition
<b>Anticipated Total Duration of Projects (Core and Focused Study (3 years))</b>	Year 3
<b>Current Year</b>	<b>Focused Study:</b> Year 2 of 3
	<b>Core Monitoring:</b> Choose an item.

CONTACT INFORMATION	
<b>Lead Applicant/ Principal Investigator:</b> <i>Every work plan application requires one lead applicant. This lead is accountable for the entire work plan and all deliverables.</i>	Adi Isaac Adiele
<b>Job Title:</b>	Manager, Environment & Land Use Sustainability
<b>Organization:</b>	Fort McKay Metis Nation
<b>Address:</b>	Box 119, Riverstone PO, Fort McMurray, Alberta T9K 2Y4
<b>Phone:</b>	403.397.1015
<b>Email:</b>	aadiele@fortmckaymetis.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.

This 2023/24 Work Plan represents the second year of a three year community-based odour monitoring program in Fort McKay. This monitoring program was approved by the OSM in 2022. The rationale for the program remains as per the 2022/23 Work Plan and is described below and throughout this application. The 2022/23 approved Work Plan was presented to the OSM Air TAC in June 2022 and input and comments were solicited from the Air TAC members to create awareness and ensure project credibility and alignment with the overall OSM program. The WBEA was and continues to be consulted on aspects of the project. In the preparation of the 2023/24 Work Plan, the Air TAC Scope of Work was reviewed to ensure that the proposal for Year 2 of community-based odour monitoring continues to provide relevant information to answering key questions under the Air and Deposition theme area monitoring objectives.

Fort McKay is a community located in proximity to a number of major oil sands projects and experiences odour impacts as a result of odorous emissions from oil sands activities in the region. Considerable work and monitoring related to understanding the sources contributing to odours in the community and the specific odorants responsible for the odours has been, and is, currently being undertaken. Prior to Year 1 of the community-based odour monitoring program, odour events in the community had only been recorded when a complaint is called in by a community member or staff of the McKay Metis Sustainability Centre (MMSC) and/or the Fort McKay Sustainability Department (FMSC) and/or if someone reports an odour observation in Fort McKay using the WBEA Community Odour Monitoring Program (COMP) app. This community-based monitoring program involves designated and trained community member odour monitors that, on a systematic basis, note and monitor odour events in the community at specified community locations and also conduct routine odour level monitoring at specific community locations. Upon commissioning of routine odour measurements using Nasal Ranger portable olfactometer in Year 1 of this program, approximately 40 measurements are taken per week by designated odour monitors. This will continue throughout Year 2 of the program.

The fundamental principle behind the program is that the Community that lives with the odours should be actively engaged in the characterization and quantifications of these odours which are a culturally relevant quality of life indicator for which, according to the ICBM Conceptual Model (August 2020), the limits of change thresholds are to be defined based on indigenous expectations. Thus, human nose-based monitoring conducted by members of the community is the only way to get an accurate understanding of the nature and magnitude of odour event impacts in the Community. By using western science based olfactometry measurement in combination with Community member noses and observations, a systematic sensory-based odour frequency, characterization and quantification dataset is being generated. Such a dataset is a necessary element of, and input to, odour management strategy development and mitigation of odours in the Community.

The monitoring is being done using portable olfactometers which provides a semi-quantitative measure of the odour units (OUs) during odour events and during the morning period. This program is the first time that such a systematic odour monitoring and recording program has been undertaken in the

Community and the first time that OUs are being measured in the Community. Many jurisdictions have criteria related to acceptable OU levels and the objective is to provide a comprehensive 2-year dataset on odour events and OU levels in Fort McKay to improve the current understanding of the frequency and magnitude of odour events in the Community.

During Year 1 of this program, a team of seven community member odour monitors were selected, trained, and equipped with four St. Croix Nasal Ranger units to obtain odour readings at 8 sites within the community. Three of the trained community members are designated as regular part-time odour monitors who are supervised and supported by the Fort McKay Metis Nation Sustainability Centre. The other trained community members act as back-up odour monitors on an as-needed basis. It is estimated that, on average, this will result in 5 regular scheduled odour monitoring events, plus two additional on-demand monitoring events per week. Formal SOPs have been established for odour measurement and data recording. When odour events are noted and measurements taken, these are also recorded using the WBEA COMP app which was modified to accommodate the recording of the odour observations and measurements from the project.

Recording of the odour monitoring data with WBEA, through the COMP app, means that this data will form part of the dataset that WBEA uses to produce its annual COMP report which includes Community odour breakdowns and analysis. Quarterly reporting was implemented as part of this program. In addition, WBEA's semi-continuous VOC and RSC monitoring data will be used, in conjunction with odour threshold (OT) values to relate OU measurements made under this proposed program to better determine and understand which specific VOCs and/or RSCs are contributing to odours in the Community. This type of linkage between specific air quality parameters and odour levels has been, and continues to be attempted, but suffers from the absence of quantitative odour level data which this program will provide. Air quality parameter – odour level linkages can assist with source attribution.

Odours in Fort McKay represent an oil sands development impact issues that translates to a significant quality of life issue for the Community. The goal of this work plan is to further qualitatively and quantitatively document odour issues in Fort McKay by engaging community members in a systematic odour measurement program. The collected information will assist in understanding and guiding management efforts to reduce odour levels in the Community. A final report, with Community input, will be prepared for submission to the OSM after two full years of monitoring and a presentation will be delivered to the community on the findings and recommendations.

## 1.0 Merits of the Work Plan

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

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

The Fort McKay Community Odour Monitoring Project is driven by the need to systematically document the frequency of odour events in the Community and the need to quantify the level of these odours and to link these odour levels to ambient air quality monitoring data. To date, odour levels in the Community have only been subjectively recorded and there has been no systematic recording of odour events in the Community. Odour issues resulting from emissions from oil sands activities in the region have long been regarded as a priority in Fort McKay. This project is relevant to “Surveillance”, “Confirmation”, and “Limits of Change” aspects of OSM Key Questions and Adaptive Monitoring as follows:

- “Surveillance” – current odour monitoring is limited to complaints and/or odour observations reported through the WBEA COMP app. While this type of surveillance has clearly identified that there are significant odour issues in Fort McKay, they require someone to be annoyed enough to lodge an odour complaint or to log an odour observation. This does not constitute a rigorous odour surveillance program. This project will provide comprehensive odour surveillance through the use of community member odour monitors that will continuously check for odours in the Community and record and measure odour events when they occur.

- “Confirmation” – The use of portable olfactometry provides a recognized and standard quantitative measure of odour levels which can be used to confirm the magnitude of odours. In conjunction with continuous and semi-continuous air quality data, associated meteorological data, and industry emission source profiles, odour levels can be linked to air emissions sources and locations to better understand priority sources for odorant emissions management.

- “Limits of Change” – Ambient OU levels are used by many jurisdictions as odour management criteria. Unlike the current approach used in Alberta which is based on odorant concentration levels in ambient air and is thus:

- 1) limited to a few parameters;
- 2) doesn't consider the additivity of odorants; and
- 3) only somewhat reflects what people may actually experience in terms of odours,

the use of portable olfactometry is a real measure of the odour levels being experienced by individuals. The results of this project could therefore be used to set a “limit of change” for odours based on OUs.

Currently there are a number of odour related monitoring activities developed and delivered by WBEA in the RMWB and in Fort McKay. WBEA's community odour monitoring program (COMP) allows community members to submit information about odours they experience through an online app and the information is compared to the ambient air data collected through the WBEA network. While the COMP



program complements the continuous and semi-continuous (VOCs and RSCs) air monitoring in identifying relationships or trends that relate odours to ambient air quality and meteorological condition, there is a gap in terms of both systematic recording of odour events in the community and characterizing and quantifying these odour events. This project's aim is to close this gap by having ongoing checking of odour levels in the community by community members. On a scheduled basis, and when odours are noticeable, community members will take odour unit measurements in the community through the use of portable olfactometer and also note and record certain odour characteristics. This project will also collaborate with WBEA where community odour monitors will be able to activate the air quality/odour triggered canister sampling being developed by WBEA as part of the AER/Alberta Health Fort McKay Air Quality and Odour program. This type of sampling, in conjunction with WBEA's semi-continuous VOC and RSC monitoring, will allow specific air quality parameters to be linked to odour events and assist in identifying the source(s) of these parameters. Another possible element of the odour monitoring program, that has been discussed with WBEA, is have an air quality alert signal sent to the odour monitors that will indicate that an odour related air quality parameter has reached a level that might result in odours. The odour monitors can then determine if there are associated odour levels in the community warranting olfactometry measurement.

In essence, this project seeks to further the understanding of relationships between odour levels in the community [RESPONSE], meteorology [PATHWAY], and ambient air quality data on odorous compounds [STRESSOR] associated with oil sands activities in the region [SOURCE/PRESSURE].

The Fort McKay Community Odour Monitoring Program supports the OSM objectives of:

- tracking impacts from oil sands development
- conducting comprehensive and inclusive monitoring
- relevant monitoring using best available science and participation by Indigenous communities
- implementing rigorous monitoring that incorporates western science and Indigenous knowledge using methodical and sound approaches that meet highest standard of scientific integrity
- incorporating indigenous community based monitoring that monitors indicators relevant to Indigenous communities that respect potential impact to S. 35 rights.

The Fort McKay Community Odour Monitoring Program is designed to support the State of Environment report in answering the Air and Deposition TAC Scope of Work Document questions related to linkage between oil sands-related odorous emissions, ambient concentrations of odorants, and their effects on the receiving environment (i.e. odour and Indigenous rights). The program also aims to develop and implement community-specific SOPs with the use of an established odour measurement technology (i.e. the Nasal Ranger).

## 2.0 Objectives of the Work Plan

List in point form the Objectives of the 2023/24 work plan below

- The Fort McKay Community Odour Monitoring Program objectives for 2023-2024 are as follows:
1. Continue to execute odour monitoring program by community odour monitors.
  2. Follow established formal odour monitoring SOP and, on an as-needed basis, make adjustments to odour measurement and equipment maintenance SOP as opportunities for improvement arise.
  3. Keep portable olfactometer (Nasal Ranger) well maintained.
  4. Provide regular refresher training and odour sensitivity testing to community odour monitors to maintain their competency.
  5. Continue to engage with community members regarding the need for systematic sensory-based community odour monitoring and recruit new Community members to do this type of monitoring.
  6. Provide onboarding training to new community monitors on an as-needed basis.
  7. Continue to work with WBEA to include the use of continuously measured ambient air quality levels of odour related parameters as triggers for possible odour event identification and olfactory monitoring.
  8. Continue to coordinate with WBEA to implement protocols with respect to odour reading entries into a variation of the COMP app.
  9. Continue to coordinate with WBEA on integration with triggered canister sampling program.
  10. Host check-ins and lessons learned sessions with community odour monitors at 18 month mark.



11. Plan and prepare 2024-2025 work plan to prepare final reports and other deliverables to OSM based on results and learnings from Year 2022-2024.



### 3.0 Scope

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

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

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

### 3.1 Sub Theme

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

Air

### 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 2023/24 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. Has baseline been established? Have thresholds or limits of change been identified?

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

4. 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.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

9. How will this work advance understanding transition towards adaptive monitoring?

Click or tap here to enter text.



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

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

Click or tap here to enter text.

2. Are changes occurring in groundwater quality and/or quantity relative to baseline? If yes, is there evidence that the observed change is attributable to oil sands development? (*Describe source-pathway-receptor and/or conceptual models*) and what is the contribution in the context of cumulative effects?

Click or tap here to enter text.

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

Click or tap here to enter text.

4. 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.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

9. How will this work advance understanding transition towards adaptive monitoring?

Click or tap here to enter text.

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

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 Wetlands - Key Questions**

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

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

Click or tap here to enter text.

2. Are changes occurring in wetlands due to contaminants and hydrological processes? If yes, is there evidence that the observed change is attributable to oil sands development? (Describe source-pathway-receptor and/or conceptual models) and what is the contribution in the context of cumulative effects?

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

9. How will this work advance understanding transition towards adaptive monitoring?

Click or tap here to enter text.

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

Click or tap here to enter text.

### 3.3.4 Air Theme

#### 3.3.4.1 Sub Themes:

Quality

#### 3.3.4.2 Air & Deposition - Key Questions

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

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

Prior to the start of this Community-based odour monitoring program, there has been no odour monitoring conducted in Fort McKay that is based on measurement of odour units. The results of this program will be analyzed in conjunction with ambient air monitoring data and possibly confirm or inform the need to update odour potential threshold for parameters such as TRS or NMHC that are related to/surrogates for odorants emitted by oil sands operations.

2. Are changes occurring in air quality? If yes, is there evidence that the observed change is attributable to oil sands development? (Describe source-pathway-receptor and/or conceptual models) and what is the contribution in the context of cumulative effects?

Yes, changes have occurred in air quality in Fort McKay and these are directly attributable to oil sands development. One of these air quality changes involves odorants that result in frequent odour events in the community. The oil sands developments surrounding Fort McKay are significant sources of odorant emissions and therefore the odour issues in Fort McKay are the result of the cumulative effects of a number of oil sands development related odorant emission sources. This project is focused on systematically recording and measuring odour events in Fort McKay to provide the first comprehensive dataset on both odour frequency and odour levels in Fort McKay. While the frequency and extent of odour events are also influenced by meteorology, understanding the relationships and trends between odour levels, ambient odorous compound levels, and meteorology supports better decision making in terms of cumulative effects management.

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

There are no unanticipated results in the data since the start of odour monitoring in August 2022 at the time of this Work Plan preparation.

4. Are changes in air quality informing Indigenous key questions and concerns?

Odours have been a long-standing issue and concern in Fort McKay. There are many indigenous key questions and concerns around odour and air quality. Specifically, this project aims to conduct monitoring within and by the community to measure the level of odour in the air, and in the case of odour episodes, measure the odorous compounds in the air that may be associated with odour reports or complaints in the community. This allows for further analysis on the relationship between qualitative (reports and complaints) and quantitative (odour unit readings) odour information collected in the community and continuous and semi-continuous ambient air quality data collected through the WBEA network.

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

Yes, data produced will follow OSM Program requirements and provided into the OSM Program data management system.

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



Yes, odour monitoring standard operating procedures (SOPs) have been developed with support from St. Croix Sensory Inc., the supplier for Nasal Ranger portable olfactometers. The SOPs cover Nasal Ranger operations and maintenance. The Program Lead and community members have also been trained on the administration of odour sensitivity testing which will occur on a routine basis to ensure adequacy in olfactory sensitivity of the community odour monitors.

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

The Fort McKay Community Odour Monitoring Program will be lead by the Fort McKay Metis Nation, supported by the Fort McKay First Nation, and executed in partnership with WBEA. This Program will complement and coordinate with the WBEA COMP which is a core OSM program.

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

The fundamental principle behind the program is that the Community that lives with the odours should be actively engaged in the characterization and quantifications of these odours which are a culturally relevant quality of life indicator for which, according to the ICBM Conceptual Model (August 2020), the limits of change thresholds are to be defined based on indigenous expectations. Thus, human nose-based monitoring conducted by members of the community is the only way to get an accurate understanding of the nature and magnitude of odour event impacts in the Community.

9. How will this work advance understanding transition towards adaptive monitoring?

The community-based monitoring of odour as an indicator of oil sands air emissions provides linkage to ambient air quality data as well as bridges the gap in ambient air quality monitoring where some, if not most, odorants are not being measured on a continuous basis. Program execution by community members ensures that the program outcome and feedback towards adaptive monitoring across the Core and ICBM programs are both meaningful and relevant.

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

This work plan will provide odour level measurements that could contribute to Programmatic State of Environment Reporting.





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

Click or tap here to enter text.

2. Are changes occurring in terrestrial ecosystems due to contaminants and landscape alteration? If yes, is there evidence that the observed change is attributable to oil sands development? (Describe source-pathway-receptor and/or conceptual models) and what is the contribution in the context of cumulative effects?

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

9. How will this work advance understanding transition towards adaptive monitoring?

Click or tap here to enter text.

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

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

Click or tap here to enter text.

5. How will this work advance understanding transition towards adaptive monitoring?

Click or tap here to enter text.

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

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 consider adaptive monitoring and the approved Key Questions in your response.

Currently odour issues are managed based on complaints and the ambient air levels of certain odorants or groups of odorants. There are significant limitations to both these management approaches as many Community members have given up calling in odour complaints as they don't see that making such complaints has resulted in any change/improvement in odour levels in the Community. Also the use of ambient air quality concentrations as an indicator of odour levels and frequency is very crude and is often unreliable measure for odour. By having trained and dedicated community members recording odour events, and directly measuring odour levels using a standardized olfactometer method, an accurate measure of the frequency and magnitude of odour in Fort McKay will assist in answering the following key questions:

- "Confirmation" – what are the frequency and extent of odour events?
- "Focused" – Do we have the right technology to detect odour events? Are measured odour levels likely to significantly impact well-being based on odour level criteria used in other jurisdictions?
- "Monitoring observations vs EIA predictions" – How do the OSM data compare with EIA-based predictions of air quality and are the mitigation measures working as planned?

## 5.0 Indigenous Issues

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

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

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

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

The Fort McKay Community Odour Monitoring Program was and will continue to be administrated by the Fort McKay Metis Nation the monitoring conducted by community members in Fort McKay. Odour is a key issue in the community and there is substantial interest in better quantifying and articulating the extent of the issue to industry and regulator through quantifiable data.

Concerns that lead to this monitoring emanated from community members who felt their rights to enjoy fresh air have been impacted from oil sand operations. Questions and indicators are approved by Fort McKay Métis collaboratively during project development and comments or concerns are addressed at a community meeting prior to each year of monitoring to ensure full consent is received. Monitoring activities are conducted in the community with community monitors that conduct daily monitoring (Monday to Friday) and during odor events in the community. Program activities are structured to facilitate the transfer of knowledge, skills, and values among participants and provide response to odor monitoring/event in the community. A letter of support from the Fort McKay Metis Nation leadership is included as a supplementary document to this work plan.

In July 2022, prior to commissioning of odour monitoring activities, a community tour took place with participation by all seven trained Community Odour Monitors, Nasal Ranger trainer Mike McGinley, and Fort McKay Metis Nation Program Lead Adi Adiele. Community Odour Monitors took the lead with monitoring location selection during this tour, and Mr. McGinley provided technical expertise in confirming the suitability of these locations.

The program work plan has been reviewed against the document "Interim Ethical Guidelines for Indigenous Community-Based Monitoring in the Oil Sands Monitoring Program" to ensure adherence to the guidelines.

Does this project include an Integrated Community Based Monitoring Component?

No

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



[ICBM WORK PLAN SUBMISSION LINK \(CTRL+CLICK HERE\)](#)

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

1. Are there any community specific protocols that will be followed?

Yes, the Odour Monitoring Program protocols are specific to Fort McKay, tailored based on instruction manuals for the Nasal Ranger.

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

Community Odour Monitors took the lead with monitoring location selection during this tour, and Mr. McGinley provided technical expertise in confirming the suitability of these locations. Location selection was based on knowledge of the community layout and experience of where odours are frequently detected.

Currently, there is no information or knowledge shared that is considered proprietary. The Program Leader will monitor for information sensitivity and ensure that the consent process is followed as needed.

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

Other than odour measurement and meteorological data recording, NO other activities under this program include the collection, sharing, interpretation, or application of Indigenous knowledge.

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

The Fort McKay Metis Nation and First Nation communities will receive updates on program progress and data collected. Where opportunities exist, monitoring locations and procedures will be assessed and, if necessary, adjusted, to ensure that they continue to be relevant to the communities.

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

The Fort McKay Metis Nation and First Nation communities will receive updates on program progress and data collected. Where opportunities exist, monitoring locations and procedures will be assessed and, if necessary, adjusted, to ensure that they continue to be relevant to the communities.

6. How does this work plan directly benefit your community? How does it support capacity building in your community?

All odour monitors will be trained Fort McKay community members. Program and technical support as well as regular refresher training will be provided to odour monitors to ensure their competency in Nasal Ranger operation and monitoring data quality.

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

An interim Program report will be prepared in Q1 of 2023/24 after the 1st full year of monitoring in 2022-2023. A final report will be prepared at the conclusion of the proposed program after the 2023-2024 monitoring year for submission in 2024/2025. A presentation will also be prepared and delivered to



community members and partners for this project (Fort McKay Metis Nation, Fort McKay First Nation, WBEA).



## 6.0 Measuring Change

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

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

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

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

The monitoring program will collect odour unit measurements in the community on both a regular, schedule basis and also when odour events occur. Regular, schedule monitoring will occur 5 days a week in the morning which is the time of the day when most odour complaints from the Community are made (based on the Dec. 2017 to Dec. 2019 AER odour complaint registry developed as part of the Fort McKay Air Quality and Odour (FMAQO) program. The program will also record other odour event information e.g. odour type, odour intensity, duration, time of day etc.. A number of pre-determined monitoring locations within the Community have been selected with the support of St. Croix Sensory Inc. (olfactometer supplier). These locations include both of the two ambient air monitoring stations in Fort McKay (WBEA AMS1 and AMS25) as well as locations that are of relevance to the community:

- community playground,
- Elsie Fabian School,
- ball fields,
- boat launch,
- lagoon, and
- McKay Metis Sustainability Centre (MMSC) office

The Nasal Ranger portable olfactometer quantifies odour levels by the community member odour monitors based dilution-to-threshold determinations – i.e. the number of dilutions needed to make the ambient air odour just detectable. In general, the “baseline condition” is when the community-based odour monitors do not detect an odour using their nose. The program design will take into consideration the olfactory sensitivity of the community odour monitors. Odour monitors will continue to operate as a team of 2 to 3 for duplicate readings. Consistently inconsistent results between team members will trigger additional olfactory sensitivity test. Odour monitors will also be re-tested for olfactory sensitivity on a monthly basis which will be done by community/MMSC individuals that have been trained to conduct sensitivity testing.

By having trained and dedicated community members recording odour events, and directly measuring odour levels using a standardized olfactometer method, an accurate measure of the frequency and magnitude of odour in Fort McKay will assist in answering the following TAC key questions:

- “Confirmation” – what are the frequency and extent of odour events?
- “Focused” – Do we have the right technology to detect odour events? Are measured odour levels likely



to significantly impact well-being based on odour level criteria used in other jurisdictions?

- "Monitoring observations vs EIA predictions" – How do the OSM data compare with EIA-based predictions of air quality and are the mitigation measures working as planned

## 7.0 Accounting for Scale

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

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

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

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

The monitoring program is focused on odours in Fort McKay which is recognized as the Indigenous community most affected by oil sands development related odours.

As the key receptors, members of Fort McKay are the appropriate ones to be assessing the frequency and extent of odour issues as identified in the Air and Deposition TAC Scope of Work.

## 8.0 Transparency

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

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

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

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

The results from each odour event monitoring will go into the WBEA COMP reporting system and be available in near real time. In conjunction with WBEA a quarterly odour event report will be generated and provided to the MMSC. The data will also be included in WBEA's COMP Program annual reports. An interim Program report will be prepared in Q1 of 2023/24 after the 1st full year of monitoring in 2022-2023. A final report will be prepared at the conclusion of the proposed program after the 2023-2024 monitoring year for submission in 2024/2025. A presentation will also be prepared and delivered to community members and partners for this project (Fort McKay Metis Nation, Fort McKay First Nation, WBEA).

## 9.0 Efficiency

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

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

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

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

The Fort McKay Community Odour Monitoring program will seek efficiency through:

- Collaboration and technical support between FMMN, FMFN and WBEA
- Selection of a monitoring device with a reliable and proven performance record i.e. the Nasal Ranger ( through interviews with other users (e.g. the City of Edmonton))
- Recruitment of local community members to conduct the monitoring
- Integration and resource sharing with existing odour monitoring efforts by WBEA and the Fort McKay Air Quality and Odour Program which has odour management in Fort McKay as one of its main focuses.

## 10.0 Work Plan Approach/Methods

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

Key phases of the Fort McKay Community Odour Monitoring Program Work Plan for 2023-2024 are as follows:

Phase 1: Continue to execute odour monitoring program:

- Community odour monitors obtain routine and on-demand odour measurements;
- Community odour monitors perform regular maintenance of Nasal Ranger units.

Phase 2: Odour monitoring program quality assurance:

- Regular olfactometer testing for odour monitors;
- Regular refresher training for odour monitors;
- Regular monitoring data quality reviews.

Phase 3: Continue ICBM odour program collaboration with WBEA Core ambient air monitoring program:

- include the use of continuously measured ambient air quality levels of odour related parameters as triggers for possible odour event identification and olfactory monitoring;
- coordinate with WBEA to implement protocols with respect to odour reading entries into a variation of the COMP app;
- coordinate with WBEA on integration with triggered canister sampling program.

Phase 4: Continue community engagement and recruitment of additional Community Odour Monitors

- engage with community members regarding the need for systematic sensory-based community odour monitoring and recruit new Community members to do this type of monitoring;
- demonstration of the use of Nasal Ranger for odour unit measurements;
- host check-ins and lessons learned sessions with community odour monitors at 18 month mark.

Phase 5: Program planning, enhancements, and reporting:

- Conduct data analysis of community odour monitoring results. Analyze for relationships with COMP odour reports and odour complaints to AER, ambient air quality monitoring data, meteorology, and odourous compound concentrations obtained through triggered odour event air quality sampling system;
- Regular quarterly reporting to OSM;
- Plan and prepare 2024-2025 work plan to prepare final reports and other deliverables to OSM based on results and learnings from Year 2022-2024;
- Ongoing program adjustment and enhancement as needs and/or opportunities arise;
- Interim and final report preparation to detail project findings and recommendations.

### 10.2 Describe how changes in environmental Condition will be assessed \*

The frequency and magnitude of odours will be measured and recorded using portable olfactometer and an established SOP.

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

Odour Unit levels relative to OU criteria established in other jurisdictions (Alberta does not have OU criteria)

(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 \*

Odour levels will be measured with portable olfactometer following an established SOP with other odour event characteristics recorded by the Community Odour Event Monitors.

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

Odour level as measured by odour units (OUs)



## 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.

1. Community odour monitors were recruited locally from the community.
2. Community odour monitors will be provided with regular refresher training on the monitoring protocol and use of the portable olfactometer.
3. There will be check-in and lessons learned sessions with community odour monitors at the 18 month marks.
4. Interim and final reports will be prepared after the first and second years of the monitoring program.
5. A presentation will be prepared and delivered to community members and partners after concluding 2 years of monitoring.

## 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

Portable olfactometer supplier – St. Croix Sensory Inc.  
Project support - Fort McKay First Nation  
Project partner/integration – Wood Buffalo Environmental Association (WBEA)  
Technical Support – Air quality consultants to Fort McKay

\*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:

Real Time

13.4 Estimated Data Collection Start Date:

2022-08-09

13.5 Estimated Data Collection End Date:

2024-08-08

13.6 Estimated Timeline For Upload Start Date:

2023-12-01

13.7 Estimated Timeline For Upload End Date:

2024-12-01

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

NO

**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
Odour Monitoring Measurements	Database	csv	Open by Default

## 14.0 2023/24 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
Other (Describe in Description Section)	Q1	Odour Monitoring Standard Operating Procedure
Other (Describe in Description Section)	Q1	Community Odour Monitor Training Record
Other (Describe in Description Section)	Q2	2022-2023 Interim Report

## 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.

Project Lead (Fort McKay Metis Nation) – Adi Isaac Adiele, MEB., P.Geol.

Adi has over 12 years of progressive experience, executing projects in various sectors such as consulting, government (federal, provincial, and municipal), oil & gas, mining, and Aboriginal communities.

- lead Fort McKay Community Odour Monitoring Program
- manage recruitment of community odour monitors
- coordinate training, lessons learned sessions, and monitoring activities
- engage with FMMN community members
- liaison with OSM program administrator and project partners
- general project management and administration

Project Partner Representative (Fort McKay First Nation) – Ryan Abel

- engage with FMFN community members
- provide project coordination and support on an as-needed basis

Project Partner Representative (WBEA) – Sanjay Prasad

- facilitate community odour monitoring integration with existing WBEA programs (COMP, ambient air monitoring, semi-continuous canister monitoring)
- provide technical guidance with respect to air quality monitoring on an as-needed basis

Community Odour Monitors – Brandon Paquette, Trace Quintal, Keely Courtorielle

- conduct field odour monitoring using portable olfactometer and sensory (nose-based) odour characterization
- collect and input monitoring results through established platform (i.e. variation of COMP app will be developed)
- participate in training and lessons learned sessions

Senior Air Quality Consultant – David Spink, M.Sc., P.Eng.

- provide recommendation on monitoring technology selection and procurement
- provide technical guidance on odour monitoring program development
- support program lessons learned sessions and provide guidance on program adjustment on an as-needed basis
- conduct senior review of data analysis and project interim/final reports.

Air Quality Consultant – Danlin Su, M.Eng., P.Eng.

- support odour monitoring program development
- support program lessons learned sessions and provide guidance on program adjustment on an as-needed basis
- conduct data validation and analysis
- prepare project interim/final reports



## 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
<b>Salaries and Benefits</b> <i>(Calculated from Table 16.1.1 above)</i>	<b>0.00%</b>	<b>\$0.00</b>
<b>Operations and Maintenance</b>		
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
<b>Total All Grants</b> <i>(Calculated from Table 16.4 below)</i>		<b>\$359,163.00</b>
<b>Total All Contracts</b> <i>(Calculated from Table 16.5 below)</i>		<b>\$0.00</b>
<b>Sub- TOTAL</b> <i>(Calculated)</i>		<b>\$359,163.00</b>
Capital*		\$0.00
<b>AEP TOTAL</b> <i>(Calculated)</i>		<b>\$359,163.00</b>

\* 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
<b>Salaries and Benefits FTE</b> <i>(Please manually provide the number in the space below)</i>		
Salaries and Benefits		\$0.00
<b>Operations and Maintenance</b>		
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
<b>ECCC TOTAL</b> <i>(Calculated)</i>		<b>\$0.00</b>

\* 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	Adi Isaac Adiele
GRANT RECIPIENT - ONLY: Organization	Fort McKay Metis Nation
<b>Category</b>	<b>Total Funding Requested from OSM</b>
Salaries and Benefits	\$303,515.00
<b>Operations and Maintenance</b>	
Consumable materials and supplies	\$19,358.40
Conferences and meetings travel	\$4,000.00
Project-related travel	\$18,000.00
Engagement	\$0.00
Reporting	\$8,890.00
Overhead	\$5,400.00
GRANT TOTAL <i>(Calculated)</i>	<b>\$359,163.40</b>

**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	Click or tap here to enter text.
CONTRACT RECIPIENT - ONLY: Organization	Click or tap here to enter text.
<b>Category</b>	<b>Total Funding Requested from OSM</b>
Salaries and Benefits	\$0.00
<b>Operations and Maintenance</b>	
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
CONTRACT TOTAL <i>(Calculated)</i>	<b>\$0.00</b>

**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
<b>Salaries and Benefits</b> <i>Sums totals for salaries and benefits from AEP and ECCC ONLY</i>	\$0.00
<b>Operations and Maintenance</b>	
<b>Consumable materials and supplies</b> <i>Sums totals for AEP and ECCC ONLY</i>	\$0.00
<b>Conferences and meetings travel</b> <i>Sums totals for AEP and ECCC ONLY</i>	\$0.00
<b>Project-related travel</b> <i>Sums totals for AEP and ECCC ONLY</i>	\$0.00
<b>Engagement</b> <i>Sums totals for AEP and ECCC ONLY</i>	\$0.00
<b>Reporting</b> <i>Sums totals for AEP and ECCC ONLY</i>	\$0.00
<b>Overhead</b> <i>Sums totals for AEP and ECCC ONLY</i>	\$0.00
<b>Total All Grants (from table 16.2.1 above)</b> <i>Sums totals for AEP Tables ONLY</i>	\$359,163.00
<b>Total All Contracts (from table 16.2.1 above)</b> <i>Sums totals for AEP Tables ONLY</i>	\$0.00
<b>Sub- TOTAL</b>	\$359,163.00
<b>Capital*</b> <i>Sums total for AEP</i>	\$0.00
<b>GRAND PROJECT TOTAL</b>	\$359,163.00

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 budget will be managed centrally by Project Lead/FMMN. Monthly cost reporting and invoicing will be submitted by external partners and contractors to ensure budget is on track with any variance in the budget highlighted and justified. Quarterly cost reporting will be provided to OSM.



## 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
<b>TOTAL</b>		<b>\$0.00</b>



## 19.0 Consent & Declaration of Completion

**Lead Applicant Name**

Adi Isaac Adiele

**Title/Organization**

Fort McKay Metis Nation

**Signature**

Click or tap here to enter text.

**Date**

2022-10-31

**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.