2021-2022 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 ***February 12, 2021 at 4:30 PM Mountain Standard time.*** *Late submissions will not be accepted.*	***February 12, 2021*** *4:30 PM MST*
Decision Notification	*Mid to Late April 2021*

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:

202122_wkpln_WorkPlanTitle_ ProjectLeadLastNameFirstName

Example:

202122_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:

202122_sup##_WorkPlanTitle_ ProjectLeadLastNameFirstName

Examples:

202122_sup01_OilSandsResiduesinFishTissue_SmithJoe

202122_sup02_OilSandsResiduesinFishTissue_SmithJoe

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202022_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 February 12, 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:	Fort McKay Community Dust Monitoring
Lead Applicant, Organization, or Community:	Ryan Abel, Fort McKay First Nation
Work Plan Identifier Number: *If this is an on-going project please fill the identifier number for 20/21 fiscal by adjusting the last four digits:* ***Example:*** *D-1-2020 would become D-1-****2021***	N/A
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: 2021***	2025
Total 2021/22 Project Budget: *For the 2021/22 fiscal year*	$119,725.00
Requested OSM Program Funding: *For the 2021/22 fiscal year*	$119,725.00
Project Type:	Community Based Monitoring
Project Theme:	Air & Deposition
Anticipated Total Duration of Projects (Core and Focused Study (3 years))	Year 3
Current Year	**Focused Study:** Year 1 of 3
	Core Monitoring: Year 1

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.	Ryan Abel
Job Title:	Senior Manager, Environment & Regulatory Affairs
Organization:	Fort McKay First Nation
Address:	P.O. Box 10 Eagle Ridge P.O., Fort McMurray, Alberta T9K 2Y4
Phone:	780.828.8809
Email:	rabel@fortmckay.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.

Fort McKay is a community located in the Athabasca Oil Sands Region in close proximity to a number of major oil sands surface mining operations. These surface mining operations have numerous dust emission sources and the impact of these dust emissions on particulate matter levels in the community and in the region is well documented. Current particulate matters monitoring in the region focuses primarily on PM2.5, which is an air quality parameter measured mostly through continuous ambient air monitoring but also through time integrated monitoring executed by Wood Buffalo Environmental Association (WBEA) at certain air monitoring stations. Some, but limited, continuous PM10 data is collect by WBEA and some PM2.5 and PM10 concentration and composition data is collected through time integrated monitoring. When it was operating, the Environment Canada Climate Change (ECCC) Oski-Otin monitoring station located in Fort McKay, also collected PM2.5, PM10 and particle size count data. In general, however, information on coarse particulate (especially PM>10 microns) emission, transport, ambient concentration and deposition is significantly lacking.

EPEA operating approvals for oil sands mining mining operations now have condition regarding dust management and monitoring, although the conditions vary in terms of specific requirements depending on the approval and when it was issued, with more recent approavals have more specific management and monitoring requirements. To date most opeartors have indicated that offsite monitoring of dust is, or should be done, by OSM, however no specific dust related monitoring is yet to be done by the OSM.

There are Alberta Ambient Air Quality Objectives (AAAQOs) for total suspended particulates (TSP) and Alberta Ambient Air Quality Guidelines (AAAQGs) for dustfall, but there is currently no dustfall monitoring in the region to determine if the dustfall Guidelines are being exceeded and no TSP monitoring to determine if the TSP AAAQOs are being met. Therefore the actual dustfall rates or TSP levels in Fort McKay and/or within the AOSR cannot be determined and/or compared against AAAQO and AAAQG values or compared to other dust related health and/or environmental effect thresholds that would allow an assessment of the possible magnitude and significance of current regional and community dust levels.

The proposed Fort McKay Community Dust Monitoring program will install dustfall monitors in the community and at several Traditional Territory locations (i.e. traplines) and will be executed in collaboration with, and in tandem with, WBEA, who will execute a similar dustfall monitoring program but on a regional scale and at select ambient air quality monitoring stations near oil sands facilities and/or at air monitoring stations located between Fort McKay and surface mining operations e.g. Barge landing, Ells River. Fort McKay South, Lower Camp, etc.. The program also involves the installation of a continuous/semicontinuous TSP monitor at the Bertha Ganter AMS.

The proposed community based monitoring program has four key components:
1. Community and Traditional Territory dustfall monitoring at approximately 5 sites in Fort McKay and 10 sites in Traditional Territory including traplines and at the Fort McKay Namur Lake air monitoring station.

This component of the program aims to gather dustfall data following standard procedures developed after ASTM D1739 "Standard Test Method for Collection and Measurement of Dustfall (Settleable Particulate Matter) and BC SOP-05c "Standard Operating Procedure for the Sample Collection of Dustfall (Settleable Particulate Matter) and Metals". Dustfall samplers will be designed and fabricated based on these standard procedures and located at the selected monitoring locations. Sample retrieval will occur once a month by a Field Technician who is a community member. Samples collected will be delivered to WBEA for laboratory determination of total soluble and total insoluble matter. This component of the program will provide information on how much dust settles in the community and Traditional Territory. Total Suspended Particulate (TSP) monitoring will be added to AMS 1 in Fort McKay in order to relate to ambient total particulate matter concentrations with dustfall measured rates and also to allow source attribution through pollution rose plotting of TSP, PM2.5 and PM0 levels and assumptions regarding the dust fraction associated with different PM2.5, PM10 and TSP levels.

2. Following total soluble and insoluble measurement the dustfall samples will be preserved by WBEA for future laboratory analysis with the analysis to be conducted based on discussion with WBEA and industry. For example determination of the composition of the dust samples through elemental analysis would allow dust source type attribution analysis using CMB and PMF techniques and existing dust source e.g, haul roads, coke piles, cleared lands, mine faces, etc, characteristization data that has been collected under the OSM.

3. A literature and information review will be conducted (including direction communication as required) to determine dustfall measurement and criteria used in other jurisdictions. The purpose is to inform possible future dustfall measurement program adjustments and to undertand how acceptable dusfall criteria have been determined and established in other jurisdictions and how/what critera might be applicable in Fort McKay (i.e. limits of change relevant to the Community), since the Alberta dustfall criteria is from 1975. The review will also include ambient TSP criteria.

4. Based on information collected through the other components of the monitoring program in 2022-2023, further planning decisions will be made on how to incorporate directional dust monitoring into the community dust monitoring program. The directionality of dust (i.e. which direction(s) the dust is coming from) will supplement the data already being collected (i.e. how much dust and what is in the dust), which can further inform source attribution and management actions for dust observed in Fort McKay.

Dust associated with surface mining operations is a major quality of life issue in Fort McKay. The overall goal of this work plan is to determine actual dustfall levels in the community, and within Fort McKay's Traditional Territory, as well as to identify the locations and specific dust source types contributuing to dust in the community. The collaboration with WBEA and industry, who will be executing a similar program on a regional basis, will provide information that will assist in dust management and mitigation efforts that the oil sands mining operators have agreed to work with Fort McKay on.

1.0 Merits of the Work Plan

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

- *Describe the key drivers for the project identifying linkages to the EEM framework particularly as it relates to surveillance, confirmation and limits of change (as per OC approved Key Questions).*
- *Explain the knowledge gap as it relates to the EEM framework that is being addressed along with the context and scope of the problem as well as the Source – pathway – Receptor Conceptual Models .*
- *Describe how the project meets the mandate of the OSM Program*
- *Discuss results of previous monitoring/studies/development and* what has been achieved to date.

The Fort McKay Community Dust Monitoring Program is driven by the need to quantify dustfall levels in the Community and throughout its Traditional territory and to better understand the composition of this dust and its sources. To date, there is limited information in the region related to fugitive dust emissions, composition, transport, ambient concentrations, and deposition. As a result, the effectiveness of dust mitigation and management measures adopted by surface oil sands operators are difficult to assess and quantify and, based on the dust problems in Fort McKay, the current dust management measures are inadequate.

Based on Fort McKay's experience of participating in EIA reviews of project development and amendment applications in the region, fugitive dust emissions are, by and large, not assessed in detail in most project applications. Fugitive dust estimates are generally based on emission factors published in US EPA AP-42. Of the various size fractions, most EIAs only include estimates for PM2.5. The predominant portion of fugitive dusts emitted from surface mining operations belong in the coarse fraction category (PM2.5-10 and >PM10 microns) and is the result of wheel entrainment, material handling, and/or wind-blown erosion. These sources are rarely included in oil sands project EIA dust estimates. Unsurprisingly, PM quantification studies under the OSM program have shown that fugitive dust emissions in the AOSR are likely significantly underestimated and that dust is one of the key emission source types that have the greatest impact on air quality in Fort McKay.

Dust generation and transport is a function of many variables including meterology (particularly wind gust and wind speed) and particle size of the dust particles and their moisture content. This is another area where significant knowledge gaps exist, since, as mentioned in the Project Summary section, there is very little particulate matter monitoring data in the region beyond PM2.5, and there has not been, and is not currently, any dustfall monitoring in the region.

In terms of the composition of dust in Fort McKay, information is also limited, though a study by the University of Alberta researchers ound that PET coke is an important source of PAHs in dust samples collected inside homes in the community - an indication that dust from coke piles is a likely source. Another study conducted by the Desert Research Institute (DRI) for WBEA identified some chemical signatures for different possible oil sands related fugitive dust sources and the wind speeds that would result in suspension of particulates from these sources into the air. These studies can be a reference when analyzing results from the proposed dust monitoring program with elemental analysis of dustfall samples collected in Fort McKay compared to the chemical signatures of different dust sources as determined by DRI.

While dust has been a long standing issue in the community, some community members have noted that dust levels seem to have increased in recent years. Dust is a nuisance in the community due to the need for increased maintenance (for example, furnace filter replacement) and cleaning of interior and exterior surfaces. Dust in the ambient environment limits the community members' ability to spend time outdoors for recreational activities and/or traditional practices. Dust is also a concern for the community in terms of human, vegetation, and wildlife health due to its presence in not only air, but also on vegetation such as berries. While surface mining operators have indicated that they have/will implement dust mitigation and management measures, the current lack of understanding of dust quantities

[STRESSOR], the activities and material handling and stockpiling resulting in dust emissions [SOURCE], the meteorological factors affecting the transport of dust [PATHWAY], and the amount of dust and dustfall in Fort McKay and in Fort McKay's Traditional territory [INDICATORS]. Since most, if not all, oil sands operators rely on adaptive management to inform their decision-making to continuously improving their dust mitigation performance, these information gaps regarding dust must be filled to apply continuous improvement at surface mining facilities and effective cumulative effects management of dust in Fort McKay and in the region.

The Fort McKay Community Dust Monitoring Program supports OSM objectives by:

- providing dustfall measurements at locations that will allow a determination of dustfall gradients from near source to distant from source

- informing management and regulatory action through gathering data that supports:
    1) the validation of EIA dust emission estimates;
    2) improving the understanding of the effectiveness of current dust mitigation and management measures used by surface mining operators;
    3) a determination of ambient air quality levels of TSP in Fort McKay relative to the current AAAQOs for TSP; and
    4) an evaluation of current dustfall levels relative to the current AAAQG values for dustfall, the adequacy of the current AAAQG for dustfall to address the nuisance issues associated with dust, and determination of whether/how dust related "limits of change" relevant to Fort McKay is to be established.

- conducting comprehensive and inclusive dust related monitoring through collaboration with WBEA and industry

- relevant monitoring using best available science with participation by Indigenous communities

- establishing/implementing rigorous monitoring that incorporates western science and Indigenous knowledge using methodical and sound approaches that meet highest standard of scientific integrity, and

- incorporating indigenous community based monitoring that monitors indicators relevant to Indigenous communities that respect potential impact to S. 35 rights.

2.0 Objectives of the Work Plan

List in point form the Objectives of the 2021/22 work plan below

The Fort McKay Community Dust Monitoring Program objectives for 2022-2023 are as follows:
1. Establish a dustfall monitoring SOP and fabricate dustfall monitoring samplers after established methodologies (ASTM D1739 and BC SOP-05c) in collaboration with WBEA and industry.
2. Install dustfall monitoring samplers at approximately 15 sites (5 within the Community of Fort McKay, including at AMS1 and AMS25; 1 at the Namur Lake AMS; and 4-9 throughout Fort McKay's Traditional Territory likely at trapline locations).
3. Install a total suspended particulate matter (TSP) monitor at AMS1.
4. Execute dustfall monitoring program which involves monthly retrieval of dustfall samples and sending samples to WBEA for laboratory analysis.
5. Analyze dustfall samples for total soluble and total insoluble matters, and follow-up elemental analysis (to be determined in collaboration with WBEA and industry).
6. Conduct literature and information review (including direct communication) on dustfall measurement and criteria in other jurisdictions and on TSP or other dust related ambient air monitoring criteria in other jurisdictions.
7. Conduct quarterly reporting in conjuction with WBEA and industry on dustfall monitoring results and correlations with respect to currently collected continuous and semi-continuous PM2.5, PM10 (and TSP at AMS1 once data is available).

8. Evaluate if/how to incorporate directional dust monitoring instrumentation in Fort McKay for Year 2023-2024 to determine directionality of dust sources.
9. Host/participate in 9 month program review with WBEA and industry to review dustfall data, operational/logistics issues and possible monitoring program adjustments for Year 2023-2024.
10. Plan and prepare 2023-2024 workplan based on results and learnings from 2022-2023.

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:

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 2021/22 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:

Quality

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?

Yes, changes have occurred in air quality in Fort McKay. Fort McKay Community members have long raised nuisance and health related concerns regarding dust levels in the Community with some Community members noting that there appears to be a trend of increasing levels of dust experienced in the community. Since there is no monitoring currently conducted to quantify dustfall in the community, there is no data the magnitude of the dust issue in the Community and trends in dust in the Community. Surface mining operations are a known and major sources of fugitive dust emissions associated with haul roads, material handling, and wind-blown erosion of tailings ponds and material piles. US EPA AP42 emission factors would indicate that coarse particulate matter fractions (PM > 10 microns) in fugitive dust are substantially higher than PM2.5 which is the fraction that current impact assessments and ambient air quality monitoring efforts focus on. This dustfall monitoring program will contribute to a better understanding and quantifying of surface oil sands mining operations' contribute to dust levels in Fort McKay and its Traditional Territories.

2. Are changes informing Indigenous key questions and concerns?

Information and data collection as part of the Fort McKay Community Dust monitoring program will inform key questions and concerns raised by the community through: - understanding how much dustfall there is and what is in the dust which will contribute to better understanding of, and prediction of how, dust in Fort McKay and its Traditional Territory may impact, or is impacting human, wildlife, and vegetation health. - understanding the composition of dust and the directionality of the dust sources contributing to dustfall levels, will result in a better understanding of what and where the key dust emissions sources are, enabling better adaptive management, decision-making, and resource prioritization for dust mitigation and management. - setting a baseline on existing dustfall levels at Namur Lake and in Fort McKay so that ongoing monitoring will be able to provide the data necessary to assist industry with evaluating the effectiveness of their respective dust mitigation and management efforts. - are dustfall levels in Fort McKay and within its Traditional Territories exceeding Alberta's Ambient air Quality Guidelines for Dustfall. - are ambient TSP levels in Fort McKay exceeding AAAQOs. - collecting the information necessary to assist regulators with the validation of regional dust emission estimates and dust impact predictions presented in project applications/EIAs.

3. 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 be provided into the OSM Program data management system.

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

Yes, dust monitoring standard operating procedures (SOPs) will be developed in collaboration with WBEA and industry, following available standard methods such as ASTM D1739 Standard Test Method for

Collection and Measurement of Dustfall (Settleable Particulate Matter) and BC SOP-05c Standard Operating Procedure for the Sample Collection of Dustfall (Settlable Particulate Matter) and Metals. Measures will be in place to ensure that there is consistency between methodology used for dustfall monitoring in Fort McKay and that used by WBEA for dustfall monitoring in the region.

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

The Fort McKay Community Dust Monitoring Program will be lead by the Fort McKay First Nation, supported by the Fort McKay Metis Nation, executed in collaboration with WBEA and industry to complement WBEA core OSM program.

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?

This program is a direct EEM project in that it will directly quantify dustfall levels in Fort McKay. As well, since there is no existing dust monitoring in Fort McKay or in the region, this program will, working in collaboration with WBEA, establish the foundation and methodology for dust monitoring. The data and learnings gathered from this program can be applied towards the transition/evolution of dust monitoring into a core program that will guide dust source management priorities consistent with one of the purposes of the OSM.

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 monitoring program aims to further the understanding of dust [STRESSOR] in terms of dustfall level in Fort McKay [INDICATOR], its composition which will provide information on its source in relation to surface mining operations (i.e. road dust, material piles, tailings ponds, etc.) [SOURCE] , and any trends and relationships with meteorological triggers (wind speed and wind gust) [PATHWAY].

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

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

3.3.6 Cross-Cutting Across Theme Areas

3.3.6.1 Sub Themes:

Choose an item.

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

Click or tap here to enter text.

3.3.6.2 Cross-Cutting - Key Questions

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

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

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

Click or tap here to enter text.

4.0 Mitigation

Evaluation of Mitigation Criteria (Information Box Only- No action required)
Your workplan will be evaluated against the criteria below. A successful workplan would potentially inform:

- efficacy of an existing regulation or policy
- an EPEA approval condition
- a regional framework (i.e., LARP)
- an emerging issue

Explain how your monitoring program informs management, policy and regulatory compliance. As relevant give consideration for the EEM framework and the approved Key Questions.

Currently, there is no direct or systematic monitoring in the region related to fugitive dust, whether in the form of dustfall or as coarse particulate matter (PM>10) levels in the ambient air. As a result, the impacts of dust are unknown and effectiveness of current dust mitigation and management efforts are difficult to evaluate, since there is no baseline nor is there ongoing measurements that would indicate whether dust levels in Fort McKay and its Traditional Territory are increasing or decreasing. Since there is no dustfall monitoring, no determination can be made as to whether dustfall levels in the community fall within the Alberta Ambient Air Quality Guideline values of 53 mg/100 cm2 in residential and recreation areas and 158 mg/100 cm2 in commercial and industrial areas.

The proposed community monitoring program in Fort McKay will assist in answering the following key questions following the EEM framework and key questions model:
- "Surveillance" – are there effects on the receiving environment (i.e. Fort McKay and Traditional Territory)?
- "Confirmation" – what is the extent of dustfall level and dust events in Fort McKay?
- "Focused" – do changes to the air impact Indigenous peoples and what are the relevant limits of change in terms of dust? Are measured dust levels likely to significantly impact human, wildlife, and vegetation health based on AAAQGs and AAAQOs and criteria used in other jurisdictions?
- "Investigation of cause" – what are the regional sources of dust in the air? what are the pathways and fate of dust from the various known sources?
- "Investigation of solution" – how do management of dust emission sources affect air quality and dustfall levels in Fort McKay and its Traditional Territory?
- "Moitoring observations vs EIA predictions" - How do the dustfall monitoring data compare with EIA-based dust emission estimates and air quality predictions? Are the mitigation measures effective?

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 Dust Monitoring Program will be administrated by the Fort McKay First Nation and the monitoring will be conducted by a trained community member(s). Dust is a key quality of life issue and concern in the community and there is substantial interest in better quantifying and articulating the extent of the issue to industry and regulator through scientific monitoring and emperical data.

Does this project include an Integrated Community Based Monitoring Component?

Yes

If YES, please complete the ICBM template in the link below and submit it with work plan.

Please note that completion of the ICBM template is mandatory if yes is indicated above and must be submitted along with each work plan that includes an integrated CBM component

ICBM TEMPLATE (CTRL+CLICK HERE)

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.

The proposed dust monitoring program will measure dustfall at 10-15 locations in Fort McKay and its Traditional Territory (including Namur Lake). Since there is no existing or historical dustfall data in the region, monitoring data collected at Namur Lake may be used to establish a baseline for comparison against data collected in the community.

Fort McKay will also work in collaboration with WBEA and industry, as WBEA has proposed a similar monitoring on a regional basis at select air monitoring stations. This regional dust monitoring is in part being driven by Facility EPEA Approval conditions requiring operators to conduct dust monitoring. Dustfall at these regional locations, some of which will be closer to surface mining operations will reflect near-source dust levels. Combined with Fort McKay community based monitoring, the collaboration will offer quantified information on dust transport in the region based on the gradient established through the collective dustfall monitoring network.

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.

The proposed monitoring program is focused on dust in Fort McKay which is recognized as the Indigenous community most affected by oil sands developments due to its proximity to major oil sands operations.

As discussed in the previous section, the propose monitoring program will be executed in tandem with WBEA's proposed dust monitoring efforts. Collectively, the overall dustfall monitoring network should provide empirical data on dust transport in the region as the monitoring sites will include the Fort McKay community, Fort McKay's Traditional Territory (including Namur Lake which may be used as surrogate for baseline conditions), and select ambient air monitoring stations in the region.

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.

Results collected through the proposed Fort McKay Community Dust Monitoring program will be documented and shared/reported on a quarterly basis with WBEA and industry.

An interim Program report will be prepared in Q2 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 First Nation, Fort McKay Metis Nation, WBEA and industry).

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.

The Fort McKay Community Dust Monitoring program will seek efficiency through:
- Collaboration and technical support between FMFN, FMMN, WBEA and industry
- Shared resources with WBEA for the fabrication and installation of dustfall samplers
- Shared resources with WBEA to meet laboratory analysis and sample storage sneeds
- Recruitment of local community members for dustfall sample collection and delivery to WBEA
- Integration and collaboration on data analysis and project reporting with WBEA and industry to incorporate additional data collected through their mirrored dust monitoring efforts in the region

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: Review established methodologies (ASTM D1739 and BC SOP-05c) and develop detailed design for dustfall bucket sampler and stand.

Phase 2: Fabricate (by WBEA) dustfall bucket samplers and stands.

Phase 3: Install dustfall bucket sampler and stand at approximately 10-15 sites (5 within Fort McKay, including at AMS1 and AMS25; 1 at Namur Lake AMS; and 4-9 throughout Fort McKay's traditional territory – likely at trapline locations). Due to accessibility restrictions, installation at the Namur Lake site will be coordinated with operational and maintenance activities at the Namur Lake AMS with FMFN's contractor.

Phase 4: Acquire and install a Total Suspended Particulate Matter (TSP) monitor at AMS1 with assistance from WBEA.

Phase 5: Execute the 2-year dustfall monitoring program at the selected sites, including monthly retrieval of samples and sending samples to WBEA for laboratory analysis. Due to accessibility restrictions, sample retrieval from the Namur Lake site will be coordinated with the operational and maintenance activities at the Namur Lake AMS with FMFN's contractor.

Phase 6: Analyze (by WBEA) dustfall samples for total soluble and total insoluble matters, and elemental analysis (to be determined in collaboration with WBEA and industry).

Phase 7: Conduct literature and information review (including through direction communication) on dustfall measurement and criteria in other jurisdictions.

Phase 8: Conduct quarterly reporting in conjunction with WBEA and industry on dustfall monitoring results and trends analysis with correlations to the currently collected relevant continuous and semi-continuous PM2.5, PM10 data (and TSP data at AMS1 once data is available).

Phase 9: Regular check-ins and lessons learned sessions held between FMFN, WBEA, and industry to review monitoring data and resolve operational/logistic issues as they arise, and discuss possible monitoring program adjustments for Year 2023-2024.

Phase 10: Conduct data analysis of community dust monitoring results. Analyze for relationships with dust monitoring data obtained by WBEA and industry, meterology, and air quality and other forms of monitoring by WBEA and ECCC (PM2.5, PM10, TSP, particle counting, etc.).

Phase 11: Base on data and learnings from Year 2022-2023, evaluate if/how to incorporate directional dust monitoring instrumentation in Fort McKay for Year 2023-2024 to determine directionality of dust sources.

Phase 12: Interim and final report preparation to detail project findings and recommendations.

10.2 Describe how changes in environmental Condition will be assessed *

The dustfall rate will be measured and recorded using dustfall samplers and an established SOP. TSP levels will be measured at AMS1 through additional TSP monitor installed for correlation to dustfall rates measured and also for compliance with the AAAQOs for TSP.

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

Dustfall rates will be compared to the Alberta Ambient Air Qality Guideline (AAAQG) values for residential and recreation areas and for commercial and industrial areas as appropriate depending on the location of the monitoring site.

Dustfall rates and TSP levels will also be compared to dustfall and TSP criteria used in other jurisdictions as found through the literature and information review. As the AAAQG and AAAQO levels for these parameters are from 1975, more recent and relevant criteria may be used in other jurisdictions.

(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 *

Dustfall rates will be measured using custom-built bucket samplers designed and constructed based on existing established methodologies. Laboratory analysis of dust samples collected will be performed by WBEA following standard procedures.

TSP monitoring will be measured with special instrumentation meeting specifications determined with support from WBEA.

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

Dustfall rates and ambient TSP levels (at AMS1 only).

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. Sample retrieval from the community dust monitoring sites (except Namur Lake) will be conducted by a trained community member9s). This field technician will have the opportunity to work in collaboration with WBEA staff responsible for a mirrored dust monitoring program carried out at select air monitoring stations.
2. There will be check-in and lessons learned sessions held between FMFN, WBEA, and industry.
3. Quarterly reporting will be prepared in conjuction with WBEA and industry to include dustfall monitoring results and trends/correlation analyses.
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

Project partner/integration – Wood Buffalo Environmental Association (WBEA) and industry participants
Laboratory analysis - WBEA
Project support – Fort McKay Metis Nation
Technical support – Air quality consultants to Fort McKay
TSP Monitoring supplier – to be determined

*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 2021-22 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:

2022-05-01

13.5 Estimated Data Collection End Date:

2024-04-30

13.6 Estimated Timeline For Upload Start Date:

2023-08-01

13.7 Estimated Timeline For Upload End Date:

2024-08-01

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
Dustfall rates	Database or website	csv	Open by Default
TSP ambient concentrations	website	csv	Open by Default
Dust elemental analysis	database	csv	Open by Default

14.0 2021/22 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)	Q2	Dustfall monitoring standard operating procedure and sampler design
Other (Describe in Description Section)	Q2	Dutfall monitoring sampler location map
Other (Describe in Description Section)	Q3	Dustfall monitoring quarterly 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 First Nation) – Ryan Abel
Ryan is the Senior Manager of Environmental & Regulatory Affairs with the Fort McKay First Nation and a member of the WBEA Governance Committee. Ryan spends much of his time protecting the ability of the FMFN to exercise their rights and practice traditional land use through the development of environmental mitigation and environmental agreements with companies looking to operate in Fort McKay's Traditional Territory.
- lead Fort McKay Community Dust Monitoring Program
- manage recruitment of and provide support to Field Technician(s) (community member(s))
- coordinate training, lessons learned sessions, and monitoring activities
- engage with FMFN community members
- liaison with OSM program administrator and project partners
- general project management and administration

Project Partner Representative (Fort McKay Metis Nation) – Adi Isaac Adiele
- engage with FMMN community members
- provide project coordination and support on an as-needed basis

Project Partner Representative (WBEA) – Sanjay Prasad
- facilitate community dust monitoring integration/collaboration with WBEA dust monitoring efforts
- facilitate the design, fabrication, and installation of dustfall samplers at Fort McKay community and Traditional Territory monitoring sites
- facilitate the receiving, storage, and laboratory analysis of dust samples collected by Fort McKay
- provide technical guidance with respect to dustfall and TSP monitoring
- provide input towards logistical and technical issues resolution for monitoring program
- provide support with the installation and maintenance of TSP monitoring equipment at AMS1

Field Technician(s) (Community Member(s)) – To Be Recruited
- conduct monthly dustfall sample retrieval and delivery to WBEA laboratory
- participate in training and lessons learned sessions
- provide input into project reporting

Senior Air Quality Consultant – David Spink, M.Sc., P.Eng.
- provide recommendation on dustfall monitoring sampler and network design, fabrication and installation
- support program lessons learned sessions and provide guidance on program adjustment on an as-needed basis
- conduct senior review of data analysis and project quarterly/interim/final reports
- provide guidance on and conduct senior review of literature/information review on dustfall measurement and criteria in other jurisdictions

Air Quality Consultant – Danlin Su, M.Eng., P.Eng.
- support dustfall monitoring sampler and network design, fabrication, and installation
- support program lessons learned sessions and provide guidance on program adjustment on an as-needed basis
- conduct data validation and analysis
- prepare project quarterly/interim/final reports
- conduct literature/information review on dustfall measurement and criteria in other jurisdictions

Air Quality Scientist (University of Toronto Assistant Professor)– Jeff Brook, Ph.D.
- provide advice on possible dustfall and ambient air quality PM data analyses approaches
- assist as required in conducting some of this analysis
- review/assist in the preparation of quarterly and annual reports
-liase with WBEA's science advisors on data analysis approaches

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)*		**$0.00**
Sub- TOTAL *(Calculated)*		**$0.00**
Capital*		$0.00
AEP TOTAL *(Calculated)*		**$0.00**

* 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	Ryan Abel
GRANT RECIPIENT - ONLY: Organization	Fort McKay First Nation
Category	**Total Funding Requested from OSM**
Salaries and Benefits	$84,230.00
Operations and Maintenance	
Consumable materials and supplies	$28,375.00
Conferences and meetings travel	$2,000.00
Project-related travel	$0.00
Engagement	$0.00
Reporting	$5,120.00
Overhead	$0.00
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	Click or tap here to enter text.
CONTRACT 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	$0.00
Reporting	$0.00
Overhead	$0.00
CONTRACT TOTAL *(Calculated)*	**$0.00**

Table 16.5 GRAND TOTAL Project Funding Requested from OSM Program

The table below is auto calculated, please do not try to manually manipulate these contents.

Category	Total Funding Requested from OSM
Salaries and Benefits ***Sums totals for salaries and benefits from 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*	$0.00
Sub- TOTAL	$0.00
Capital* *Sums total for AEP*	$0.00
GRAND PROJECT TOTAL	$0.00

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/FMFN. 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.

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

Ryan Abel

Title/Organization

Fort McKay First Nation

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.