

# 2018-19 Work Plan Template

All fields with an \* are mandatory

Project Description Summary			Co-Chair Decision (March 8, 2018)
Date *	Project/Work Plan Identifier (if applicable)	Program Type and Strategic Alignment *	<p>* Decision Pool A: Workplan approved.                      * Approved at \$49,547                      * Adaptive monitoring for this project must consider results of the network optimization exercise.                      *Funding expectations: as a minimum an annual progress report is required by February 28, 2019. All publications or products resulting from this work requires acknowledgement of funding from the Oil Sands Monitoring Program and are to be provided to the Oil Sands Monitoring Secretariat for tracking and any programmatic communications purposes. Work funded through the Oil Sands Program will be available for public dissemination.</p>
21/12/2017	A-CM-8-1819	OSM - Focus Study	
Program Category *	Status *	Dept. ID	
Air/Atmosphere/Climate	Existing Project	1104 - 03418	
Project Leadership / Contact information			
Project Title *	Key Words (max 10) *		
Acute Odour Monitoring Network Pilot Study	Recurrent Odours, Air Quality, Fort McKay, Oil Sands, Emergency Response		
Surname *	Given Name *	Title *	
Myrick	Bob	Director, Airshed Sciences	
Organization *	Department	Division	
Alberta Provincial	Alberta Environment and Parks	Environmental Monitoring and Science	
Branch *	Section/Unit (if applicable)	Phone *	
Science	Airshed Sciences	7802297290	
Email *	Mailing Address	City	
Bob.Myrick@gov.ab.ca	9888 Jasper Avenue	Edmonton	
Postal Code	EMSD Executive Owner (If Applicable)		
T5J 5C6	Bill Donahue		
Project Information			
Project Objective(s) (Bullet Form) *	The primary monitoring objective of the Acute Odour Monitoring Study is to provide the community of Fort McKay and the appropriate authorities with air quality data that, in conjunction with toxicity information, can be used to trigger emergency response actions.		
Plain Language Overview (100 words) *	The report called Recurrent Human Health Complaints Technical Information Synthesis – Fort McKay Area (Alberta Energy Regulator and Alberta Health, 2016) contains a recommendation on monitoring air quality for the purpose of emergency response. Recommendation 1 from the report is as follows: "Ambient air quality monitoring for acute concentrations of H <sub>2</sub> S and SO <sub>2</sub> should be instituted for the purposes of emergency response (including potential evacuation) in the community of Fort McKay within one year. Monitoring should be conducted by EP, funded by industry, and acute thresholds for H <sub>2</sub> S and SO <sub>2</sub> concentrations approved by Alberta Health in discussion with Fort McKay. Review of this monitoring program, including the need for additional parameters, should be conducted annually." This project plan is for the operation of the existing emergency response station in Fort McKay (called Waskôw ohci Pimâtišiwîn) and reviewing the monitoring program to determine if changes are required.		
Project Duration *	Project Original Start Date *	Estimated Completion Date *	
Multi-Year	1/1/2017	31/03/2022	
Specify Objectives This Project Will Address in 2018/2019. *	Specific objectives to be addressed in 2018-19 include: - Operation of the Waskôw ohci Pimâtišiwîn air monitoring station - Review the emergency response monitoring program in Fort McKay and determine if new parameters should be added (Recommendation 1)		
Specify Objectives This Project Will Address Beyond 2018/19 (if multi-year). *	Specific objectives beyond 2018-19 are: - Continued evaluation and improvement of emergency response air monitoring in the community of Fort McKay		
List Key Questions/Hypotheses Related to Each Objective Stated Above. *	Concentrations of H <sub>2</sub> S and SO <sub>2</sub> will be monitored for the purpose of providing the community of Fort McKay (Fort McKay First Nations and Fort McKay Métis) and the appropriate authorities with the air quality data that, in conjunction with toxicity information, can be used to trigger emergency response actions.		
Main Assumptions, Constraints, Dependencies. *	- Contracts with airshed organizations can be executed by April 1, 2018 - WBEA will have the expertise, resources and ability to deliver the monitoring program in 2018-19		
Partner Categories (select all that apply) * A partner is an individual, group, agency, community etc. that is an active participant in the project and in achieving the project deliverables.	Knowledge System *	Location (select all that apply) *	
<input type="checkbox"/> Federal Government <input type="checkbox"/> Another AEP Division <input type="checkbox"/> Another GoA Department <input type="checkbox"/> University/Academic Institution <input type="checkbox"/> Solely delivered by GoA <input type="checkbox"/> Citizen Science <input type="checkbox"/> Indigenous Community or Organization <input type="checkbox"/> ENGO <input checked="" type="checkbox"/> Other	Classical Science	<input type="checkbox"/> Office or Laboratory <input type="checkbox"/> Sub-regional <input type="checkbox"/> Transboundary (provincial/territorial) <input type="checkbox"/> Lower Peace Region <input type="checkbox"/> Upper Peace Region <input type="checkbox"/> North Saskatchewan Region <input type="checkbox"/> Red Deer Region <input checked="" type="checkbox"/> Lower Athabasca Region <input type="checkbox"/> Upper Athabasca Region	
AEP ONLY: Strategic Alignment to EMSD Outcomes			
AEP ONLY: Strategic Alignment to EMSD Science Plan, select 1-2 areas that apply (if Applicable)			
Human Relationship with the Environment			
Choose one			
AEP ONLY: Strategic Alignment to AEP Departmental Outcomes			
AEP ONLY: Environmental and Ecosystem Health and Integrity	AEP ONLY: Sustainable Economic Diversity	AEP ONLY: Social Well-Being	
Choose one	Choose one	Yes	
AEP ONLY: Protected Public Health and Safety from Environmental			
Yes			

<p>AEP ONLY: IMAG/IMSC Information Needs, Please Specify Which Need(s) is Being Addressed. File location M:\EMSD\Common\Portfolio Mgmt System Shared Docs</p>	<p>Info Need 10 (Airshed and Watershed Support): Data collected by this program will be available to authorities that are responsible for emergency response. This is a key local airshed issue.</p>
<p>AEP ONLY: How This Project Will Address Each Strategic Theme Selected Above.</p>	<p>Social Well Being and Protected Public Health and Safety from Environmental: The data collected by this program is intended to provide emergency response and health authorities with the information they need to respond to acute air quality incidents in Fort McKay.</p>
<p><b>Project Methodology</b></p>	
<p>List the Key Project Phases and Provide Bullets for Each Major Task Under Each Project Phase. *</p>	<ul style="list-style-type: none"> <li>- Operate and Maintain Waskōw ohci Pimātsiwin air monitoring station (emergency response station)</li> <li>- Determine if additional pollutants should be monitored from an emergency response perspective</li> </ul>
<p>Describe How Changes in Environmental Condition Will Be Assessed. *</p>	<p>Environmental condition will be assessed by comparing ambient air quality data with alert levels provided by Alberta Health.</p>
<p>Are There Benchmarks (e.g., objectives, tiers, triggers, limits, reference conditions, thresholds, etc.) Being Used to Assess Changes in Environmental Condition? If So, Please Describe, If Not, State "NONE". *</p>	<p>For H<sub>2</sub>S and SO<sub>2</sub> at the Waskōw ohci Pimātsiwin air monitoring station, alert levels have been established. If additional air quality parameters are added to the emergency response station, alert levels will need to be determined before implementing the monitoring equipment. Reference (Interim H<sub>2</sub>S/TRS/SO<sub>2</sub> Fort McKay Acute Emergency Response Process Alberta Health, 2017)</p>
<p>Provide a Brief Description of the Methods By Project Phase. *</p>	<ul style="list-style-type: none"> <li>- The Waskōw ohci Pimātsiwin air monitoring station is operated by WBEA and monitors H<sub>2</sub>S and SO<sub>2</sub> for emergency response in Fort McKay. Because this is an emergency response station, the instruments must be calibrated at a higher range than standard ambient analyzers. The warning system depends on the WBEA's existing data servers to send out timely email and text message alerts.</li> <li>- The frequency of SO<sub>2</sub> and H<sub>2</sub>S concentrations above the pre-determined acute air quality triggers will be assessed. Additional air pollutants to be monitored for emergency response purposes will be determined through the Fort McKay Air Quality and Odour Advisory Committee.</li> </ul>
<p>List the Key Indicators Measured. *</p>	<p>H<sub>2</sub>S and SO<sub>2</sub></p>
<p>Describe Sample Handling Procedures, If Not Applicable, State N/A. *</p>	<p>Sample handling procedures are provided in standard operating procedure documents located at <a href="http://www.wbea.org/resources/quality-assurance/standard-operating-procedures">http://www.wbea.org/resources/quality-assurance/standard-operating-procedures</a>.</p>
<p>List SOPs that Will Be Used, If Not Applicable, State N/A. *</p>	<p>Sample handling procedures are provided in standard operating procedure documents located at <a href="http://www.wbea.org/resources/quality-assurance/standard-operating-procedures">http://www.wbea.org/resources/quality-assurance/standard-operating-procedures</a>.</p>
<p>Describe the QA/QC Plan, If Not Applicable, State N/A. *</p>	<p>Quality assurance and quality control needs to be conducted in accordance with the Air Monitoring Directive and SOPs for data QA/QC developed by AEP and each airshed. Specific quality assurance plans are available from AEP and each airshed.</p>
<p>Describe How Indigenous Communities are Involved in the Project Design, Data Collection, and Analysis (Knowledge Co-creation) and How is their Consent Sought. If Not Applicable, State N/A. *</p>	<p>Fort McKay First Nation and Fort McKay Metis are involved through participation on the Fort McKay Air Quality and Odour and Advisory Committee. Indigenous communities are also involved through inclusion in WBEA.</p>
<p><b>Components Delivered by Others</b></p>	
<p>List by Project or Project Phase Each Component That Will Be Delivered by An External Party (including analytical laboratories) and Name the Party. State None if Not Required. *</p>	<p>All monitoring in this project plan is delivered by the Wood Buffalo Environmental Association (WBEA). AEP and Alberta Health will lead the process for identifying additional parameters that should be monitored by the emergency response station.</p>
<p>Will These Components be Delivered Under Grant or Contract or Both? Please Describe and Name the Associate Work Plan/Grant/Contract for These Services if Not Included Within This Work Plan. *</p>	<p>The monitoring at the emergency response (Waskōw ohci Pimātsiwin) station is delivered by WBEA through a contract with AEP.</p>
<p><b>Monitoring Site Locations and Coordinates (for all sites, please add them to the Monitoring Site Location tab - a separate excel sheet)</b></p>	
<p>Attach Map of Locations. Distinguish Indicators by Station if Necessary. Distinguish Sampling Frequency by Station if Necessary.</p>	<p>The Waskōw ohci Pimātsiwin air monitoring station is indicated in the tab called "WBEA Air Monitoring Stations".</p>
<p><b>Project Schedule</b></p>	
<p>FOR OIL SANDS MONITORING PROJECTS ONLY: A coordinated field monitoring schedule for the OSM Program is required. Please complete the attached document named "OSM Program Field Monitoring Schedule" in addition to this work plan. Fill as much as you can recognizing that scheduling changes will occur and the scheduling document will be updated regularly. Please note the scheduling document will be shared with stakeholders.</p>	<p>See "Monitoring Site Locations" tab.</p>

FOR OIL SANDS MONITORING PROJECTS ONLY: Have You Coordinated With Other Project Leads On Field Logistics? If So, Please Specify. *	Monitoring field logistics are coordinated by WBEA.	
<b>Other</b>		
Additional Details.	N/A	
Will Capacity Building and Training be a Component of the Project and If So, Explain How. If Not, State N/A.*	N/A	
Environmental Impact and Considerations.	N/A	
<b>Data Management and Digital Assets</b>		
Will Data be Produced as a Result Of This Project? *	Type of Quantitative Data Variables	Frequency Of Collection
Yes	Continuous	Real time
Data Collection Period: Start Date - End Date	Timeline For Upload Period: Start Date - End Date	
7/1/2017 to 3/31/2022	7/1/2017 to 3/31/2022	
Is There a Data Sharing Agreement? (Yes or No).	No	
Will the Data Include Traditional Knowledge as Defined by and Provided by an Indigenous Representative, Community or Organization (Yes / No).	No	
Platform/Location of Data Storage.	<a href="http://www.wbea.org/network-and-data/monitoring-stations/waskow-ohci-pimatisiwin">http://www.wbea.org/network-and-data/monitoring-stations/waskow-ohci-pimatisiwin</a>	

<b>Project Deliverables</b>		
Proposed 2018-19 Deliverable Type (for each deliverable outline document, presentation, meeting, etc.)		
<input type="checkbox"/> Peer-reviewed Journal Publication	<input type="checkbox"/> Peer-reviewed Conference Proceeding	<input type="checkbox"/> Non-peer reviewed Conference Proceeding
Q1 - Deliverable, Comments	Q1 - Deliverable, Comments	Q1 - Deliverable, Comments
Q2 - Deliverable, Comments	Q2 - Deliverable, Comments	Q2 - Deliverable, Comments
Q3 - Deliverable, Comments	Q3 - Deliverable, Comments	Q3 - Deliverable, Comments
Q4 - Deliverable, Comments	Q4 - Deliverable, Comments	Q4 - Deliverable, Comments
<input checked="" type="checkbox"/> Technical Report	<input type="checkbox"/> Book Chapter	<input type="checkbox"/> Public Dissemination Document
Q1 - Deliverable, Comments	Q1 - Deliverable, Comments	Q1 - Deliverable, Comments
Q2 - Deliverable, Comments	Q2 - Deliverable, Comments	Q2 - Deliverable, Comments
Q3 - Deliverable, Comments	Q3 - Deliverable, Comments	Q3 - Deliverable, Comments
Q4 - Deliverable, Comments	Q4 - Deliverable, Comments	Q4 - Deliverable, Comments

Updated Monitoring Plan for Recommendation 1 from the AER/AH Report "Recurrent Human Health Complaints Technical Information Synthesis" may be required if additional parameters are added.		
<input type="checkbox"/> Conference Presentation(s)	<input type="checkbox"/> Stakeholder Presentation	<input checked="" type="checkbox"/> Key Engagement/Participation Meeting *
Q1 - Deliverable, Comments	Q1 - Deliverable, Comments	Q1 - Deliverable, Comments
Choose one	Choose one	Name of Meeting, Year, Location, Dates, Participant Groups and Number of Participants. Fort McKay Air Quality and Odour Advisory Committee monthly meetings
Q2 - Deliverable, Comments	Q2 - Deliverable, Comments	Q2 - Deliverable, Comments
Choose one	Choose one	Name of Meeting, Year, Location, Dates, Participant Groups and Number of Participants. Fort McKay Air Quality and Odour Advisory Committee monthly meetings
Q3 - Deliverable, Comments	Q3 - Deliverable, Comments	Q3 - Deliverable, Comments
Choose one	Choose one	Name of Meeting, Year, Location, Dates, Participant Groups and Number of Participants. Fort McKay Air Quality and Odour Advisory Committee monthly meetings
Q4 - Deliverable, Comments	Q4 - Deliverable, Comments	Q4 - Deliverable, Comments
Choose one	Choose one	Name of Meeting, Year, Location, Dates, Participant Groups and Number of Participants. Fort McKay Air Quality and Odour Advisory Committee monthly meetings
<input type="checkbox"/> EMSD Strategic & Operational Publication	<input type="checkbox"/> Other Documents	
Q1 - Deliverable, Comments	Q1 - Deliverable, Comments	
Q2 - Deliverable, Comments	Q2 - Deliverable, Comments	
Q3 - Deliverable, Comments	Q3 - Deliverable, Comments	
Q4 - Deliverable, Comments	Q4 - Deliverable, Comments	
<b>Proposed Deliverables After 2018/2019 for the project funds received in 2018/2019</b>		
<input type="checkbox"/> Peer-reviewed Journal Publication	<input type="checkbox"/> Peer-reviewed Conference Proceeding	<input type="checkbox"/> Non-peer reviewed Conference Proceeding
Q1 - Deliverable, Comments	Q1 - Deliverable, Comments	Q1 - Deliverable, Comments
Q2 - Deliverable, Comments	Q2 - Deliverable, Comments	Q2 - Deliverable, Comments
Q3 - Deliverable, Comments	Q3 - Deliverable, Comments	Q3 - Deliverable, Comments
Q4 - Deliverable, Comments	Q4 - Deliverable, Comments	Q4 - Deliverable, Comments
<input checked="" type="checkbox"/> Technical Report	<input type="checkbox"/> Book Chapter	<input type="checkbox"/> Public Dissemination Document
Q1 - Deliverable, Comments	Q1 - Deliverable, Comments	Q1 - Deliverable, Comments

Q2 - Deliverable, Comments	Q2 - Deliverable, Comments	Q2 - Deliverable, Comments
Q3 - Deliverable, Comments	Q3 - Deliverable, Comments	Q3 - Deliverable, Comments
Q4 - Deliverable, Comments	Q4 - Deliverable, Comments	Q4 - Deliverable, Comments
Updated Monitoring Plan for Recommendation 1 from the AER/AH Report "Recurrent Human Health Complaints Technical Information Synthesis" may be required if additional parameters are added.		
<input type="checkbox"/> Conference Presentation(s)	<input type="checkbox"/> Stakeholder Presentation	<input type="checkbox"/> Key Engagement/Participation Meeting *
Q1 - Deliverable, Comments	Q1 - Deliverable, Comments	Q1 - Deliverable, Comments
Choose one	Choose one	Name of Meeting, Year, Location, Dates, Participant Groups and Number of Participants.
		Fort McKay Air Quality and Odour Advisory Committee monthly meetings
Q2 - Deliverable, Comments	Q2 - Deliverable, Comments	Q2 - Deliverable, Comments
Choose one	Choose one	Name of Meeting, Year, Location, Dates, Participant Groups and Number of Participants.
		Fort McKay Air Quality and Odour Advisory Committee monthly meetings
Q3 - Deliverable, Comments	Q3 - Deliverable, Comments	Q3 - Deliverable, Comments
Choose one	Choose one	Name of Meeting, Year, Location, Dates, Participant Groups and Number of Participants.
		Fort McKay Air Quality and Odour Advisory Committee monthly meetings
Q4 - Deliverable, Comments	Q4 - Deliverable, Comments	Q4 - Deliverable, Comments
Choose one	Choose one	Name of Meeting, Year, Location, Dates, Participant Groups and Number of Participants.
		Fort McKay Air Quality and Odour Advisory Committee monthly meetings
<input type="checkbox"/> EMSD Strategic & Operational Publication	<input type="checkbox"/> Other Documents	
Q1 - Deliverable, Comments	Q1 - Deliverable, Comments	
Q2 - Deliverable, Comments	Q2 - Deliverable, Comments	
Q3 - Deliverable, Comments	Q3 - Deliverable, Comments	
Q4 - Deliverable, Comments	Q4 - Deliverable, Comments	
<b>All Completed Products</b>		if a multi-year project, specify all completed
products to date (consistent format for the fields below). Add rows as required.		
<b>Journal Paper</b>		
Required Format: Author (follow APA citation format), Year, Title, Journal, Volume, Page Numbers, Open or Closed and Document Location		
Example: Jacoby, W. G. (1994). Public Attitudes Toward Government Spending. American Journal of Political Science, 38(2), 336-361.		
Fearon, J. D., & Laitin, D. D. (2003). Ethnicity, Insurgency, and Civil War. American Political Science Review, 97(01), 75. doi: 10.1017/S0003055403000534		
1)		
2)		
3)		
4)		
5)		
<b>Technical Report</b>		
Required Format: Author, Year, Title, Publisher Location, Name of Publisher, Publisher, Document Location		
Example: Author, F.M. (Publication Year). Title of Report (Report No. XXX). Publisher City, State: Publisher		
1) Alberta Energy Regulator and Alberta Health. 2016. Recurrent Human Health Complaints Technical Information Synthesis: Fort McKay Area. September 2016. <a href="https://www.aer.ca/documents/reports/FortMcKay_FINAL.pdf">https://www.aer.ca/documents/reports/FortMcKay_FINAL.pdf</a> .		
2) Alberta Environment and Parks. 2017. Monitoring Plan for Recommendation 1 from the AER/AH Report "Recurrent Human Health Complaints Technical Information Synthesis".		

3) Alberta Health. 2017. Interim H<sub>2</sub>S/TRS/SO<sub>2</sub> Fort McKay Acute Emergency Response Process.

4)

5)

**Book Chapter**

**Required Format: Author, Year, Title of Paper, Editors, Title of Book, Page Numbers, Location of Publisher, Name of Publisher, Document Location**

Example: Hemingway, E. (1999). The Killers. In J. Updike & K. Kenison (Eds.), *The Best American Short Stories of the Century* (pp.78-80). Boston, MA: Houghton Mifflin

1)

2)

3)

4)

5)

**Conference Proceeding**

**Required Format: Author, Year, Title of Paper, Editors, Title of Proceedings, Name of Conference, Location of Conference, Publisher Location, Name of Publisher, Document Location**

Example: Author of Paper, A., & Author of Paper, B. (Year, Month date). Title of Paper. In A. Editor, B. Editor, & C. Editor. Title of Published Proceedings. Paper Presented at Title of Conference: Subtitle of Conference, Location (inclusive page numbers). Place of Publication: Publisher.

1)

2)

3)

4)

5)

**Public Dissemination Document**

**Required Format: Author, Year, Title, Journal / Report, Volume, Publisher, Page Number, Number of Pages, Document Location**

1)

2)

3)

4)

5)

**AEP ONLY: EMSD Strategic and Operational Publication**

**Required Format: Author, Year, Title, Publisher Location, Name of Publisher, Publisher, Document Location**

1)

2)

3)

4)

5)

**Other Documents**

**Detailed Information of Other Documents**

1)

2)

3)

4)

5)

**Conference Presentation**

**Required Format: Presenter, Date, Location, Title, Platform or Poster, Conference Name**

1)

2)

3)

4)

5)

**Stakeholder Presentation**

**Required Format: Presenter, Date, Location, Title, Platform or Poster, Name of Meeting**

1)

2)

3)

4)

5)

**Key Engagement/Participation Meeting**

**Required Format: Meeting Host, Date, Location**

1)

2)

3)

4)

5)

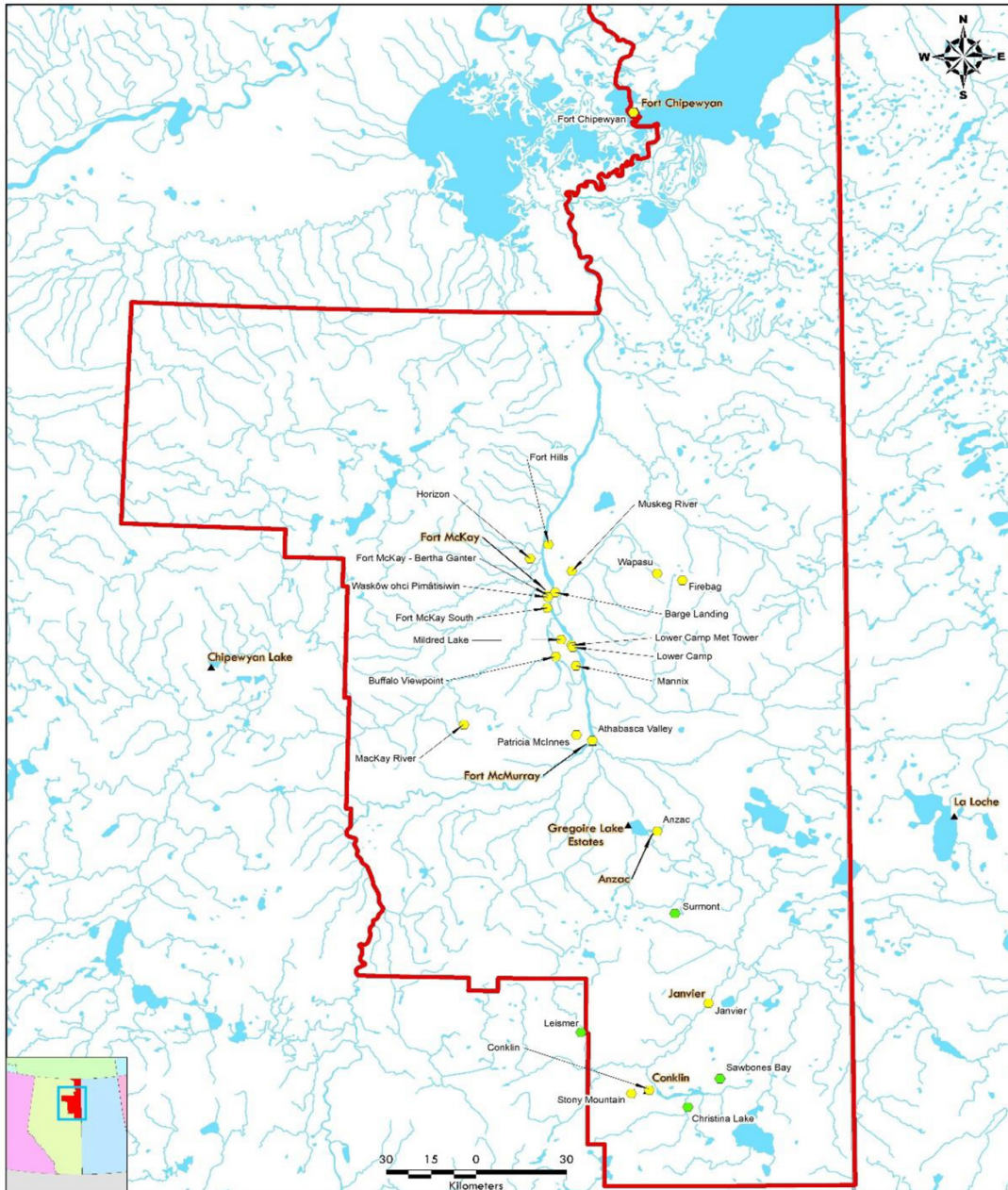
Human Resources / Staffing Plan (roles and responsibilities)		
Name & Role	Organization	Responsibilities
Sanjay Prasad	Wood Buffalo Environmental Association	WBEA Project Leadership
Bob Myrick	Alberta Environment and Parks	AEP Project Leadership
Zheng Yang	Alberta Environment and Parks	Science Support
AEP ONLY: Additional Human Resources		



<b>ECCC Co-Lead for OSM</b>	Signature	Date
<b>AEP ONLY: Proposal for EMSD Reviewed by</b>		
<b>EMSD Director</b>	Signature	Date
<b>AEP ONLY: EMSD Project Approved by</b>		
<b>EMSD Executive Director</b>	Signature	Date
<b>EMSD Chief Scientist</b>	Signature	Date
<b>OSM / EMSD Project Has Not Been Approved</b>		
<b>Project Status</b>	<b>Date Notified</b>	<b>Date Required</b>
The project is conditionally approved. The following conditions are required before approval is granted.		
List the Condition(s)		
Condition(s) Addressed / Approval Granted Choose one		
<b>OSM / EMSD Approval Post Removal of Condition(s)</b>		
<b>Name &amp; Title</b>	Signature	Date



Budget Item	Description	Total Cost
<b>CORE</b>		
<b>Operate and maintain Waskōw ohci Pimâtisiwin</b>		<b>\$37,547</b>
Labour	Monthly calibrations, reporting, maintenance, etc.	\$30,240
Materials & Consumables	Consumable parts for regular station operations, e.g. tubing, filters, valves, etc.	\$2,867
Expenses	Vehicle costs and insurance	\$4,440



Wood Buffalo Environmental Association  
Continuous Monitoring Network 2017



Legend

- Permanent Air Monitoring Stations
- Portable Air Monitoring Stations
- ▲ Community
- ▭ Regional Municipality of Wood Buffalo

**Add All Monitoring Site Locations and Coordinates (insert more rows if required)**

Site Identifier *	Location Name *	Long/Lat *
Site 1		
AMS 25	Waskow ohci Pimatisiwin	-111.63943/57.18367
Site 2		