



Wood Buffalo Environmental Association **Progress Report**

2026-2027

Q2: July - September

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1. Contract Scope and Delivery

This Progress Report is submitted quarterly by the Wood Buffalo Environmental Association (WBEA) on behalf of its members to Alberta Environment and Protected Areas (EPA) in accordance with the services and deliverables listed in Schedule A of the Government of Alberta contracts 24RSD823 and 24RSD828, as amended.

As per the Alberta EPA contracts (Table 1), the WBEA provides environmental monitoring services based on the annual Oil Sands Monitoring (OSM) work plans and associated costs.

Table 1. 2026-2027 Alberta EPA Contracts and Work Plans

Alberta EPA Contract	Work Plan Name	Work Plan Reference
24RSD823	Atmospheric Pollutant Active Monitoring Network	A-LTM-S-1-2627
24RSD828	Integrated Atmospheric Deposition Monitoring	A-PD-6-2627

2. Introduction

The WBEA is a multi-stakeholder, community-based, not-for-profit association that operates in the largest municipality in Canada. The WBEA monitors the air in the Regional Municipality of Wood Buffalo (RMWB) 24 hours a day, 365 days a year and conducts a variety of air, land, and odour monitoring programs. The information collected from all the WBEA's air monitoring stations between Conklin and Fort Chipewyan, most of which are located at or near oil extraction plants, is openly and continuously shared with stakeholders and the public on the WBEA's website (<https://wbea.org/>) and through annual reports, community engagement, and outreach activities.

An Air Quality Task Force was established in 1985 to address environmental concerns raised by the Fort McKay First Nation related to oil sands development. In 1990, this Task Force became the Regional Air Quality Coordinating Committee. Then in 1996 the area was endorsed as a regional airshed by the Clean Air Strategic Alliance (CASA). The WBEA was incorporated as an Alberta Non-Profit Society in 1997 and assumed responsibility for air quality monitoring within the boundaries of the RMWB. The WBEA became a working partner of the Alberta Environmental Monitoring, Evaluation and Reporting Agency (AEMERA) in 2014. With the dissolution of AEMERA on June 30th, 2016, the WBEA began working with the OSM Program and Alberta EPA to fulfill its mandate to provide independent ambient air monitoring in the region.

The WBEA submits annual work plans to the OSM Program. Once the work plans, and any required changes, are approved, the WBEA receives a contract with deliverables for the work from Alberta EPA. This Progress Report is a quarterly update on the work agreed to in the OSM Work Plans and the associated Alberta EPA Contract and includes program updates, exceedances and non-compliances, research and development overviews and adaptive monitoring progress.

Note: Ambient air and laboratory data must be quality assured and controlled prior to submittal to Alberta Environment's Air Data Warehouse and upload to the WBEA website. The data validation process follows one month behind the current month (i.e., data from May is reviewed throughout June and submitted by the end of June). **To ensure reporting of the most accurate data, this progress report will include data and statistics from the previous quarter (2026-2027 Q1) that have already been validated, where applicable.**

3. Atmospheric Pollutant Active Monitoring Network, 2026-2027 Work Plan Reference A-LTM-S-1-2627

The components of the Atmospheric Pollutant Active Monitoring Network Work Plan that are fulfilled, or supported, by the WBEA are described below:

(1) Long-term core ambient air monitoring network – includes continuous and time-integrated air monitoring. The Wood Buffalo Environmental Association (WBEA) operates 32 ambient air monitoring stations (AMSs) in the Athabasca Oil Sands Region (including the acute air monitoring station in Fort McKay - Waskōw ohci Pimâtisiwin). The Lakeland Industry and Community Association (LICA) operates 5 AMSs in the Cold Lake Oil Sands Region, and the Peace River Area Monitoring Program (PRAMP) operates 5 AMSs in the Peace River Oil Sands Region. All three airsheds collect time-integrated samples for the National Air Pollution Surveillance (NAPS) program and other parameters that cannot be collected through continuous monitoring. The long-term core air monitoring network was developed to fulfill EPEA Approval compliance monitoring requirements and satisfy community and scientific interests.

(2) Recommendations 14/15 in the report "Recurrent Human Health Complaints Technical Information Synthesis – Fort McKay Area" (Alberta Energy Regulator and Alberta Health, 2016) - continue to be implemented. Implementation of these recommendations will improve air monitoring consistency within 30 km of Fort McKay and allow improved characterization of the air pollutants and their sources that cause air quality and odour concerns in the community. The WBEA included the funds required to support the Rec 14/15 work in its 25/26 workplan submission, which received a significant budget reduction. As a result, the WBEA's ability to conduct these activities was impacted by the 25/26 OSM Funding decision.

(3) Odour Monitoring – The WBEA created an odour monitoring app (COMP) that allows the public to provide anonymous information on the odours they experience. The app collects information such as odour type, intensity, duration, time, and location. The long-term project is complete, so the proposed focus for this fiscal year was to be the creation of a 5-year review manuscript and public report; however, this was not supported by the 2025/26 funding decision. The app will be maintained but will no longer be actively advertised. All submitted odour observations and annual reports can be found at www.comp.wbea.org.

(4) Transition to an Adaptive Monitoring Approach – will continue in 2025-26. This will involve a structured approach to: (a) reviewing the existing monitoring network and document the purpose or objective for each station and for each parameter monitored at each station (completed); (b) developing a shared understanding of regulatory and community expectations that will guide any OSM adaptive monitoring framework based adjustments required to the current long-term surveillance program (in progress); (c) determining which air quality parameters are applicable for the Adaptive Monitoring approach (in progress); (d) quantifying baselines for selected parameters (in progress); and (e) establishing limits of change for selected parameters (future work).

In addition, the Atmospheric Pollutant Active Monitoring Network work plan includes collaboration with two community-based (FMFN and Fort McKay Metis Nation (FMMN)) monitoring projects, one for dust and one for odour that were approved for funding and commenced in 2022-23.

The following section provides details on the Q2 2026-2027 milestones and objectives under Workplan A-LTM-S-1-2627 (Atmospheric Pollutant Active Monitoring Network). Deliverables are from the Government of Alberta contract 24RSD823.

3.1 Continuous Monitoring – Operate a network of ambient air monitoring stations including the acute air monitoring station in Fort McKay (Waskōw ohci Pimâtisiwin - FMAQOAC Recommendation 1).

- i. Complete monthly calibrations at all ambient air monitoring stations in the WBEA network in compliance with Alberta's Air Monitoring Directive (AMD). Perform preventative maintenance and repairs, as required.*

In Q1 there were 249 analyzers/sensors operating in April and May, and 250 operating in June. Average operational uptimes for all equipment are included in Table 2. There were 23 less-than 90 operational uptime non-compliances last quarter: four in April, eleven in May and eight in June. See section 3.8.ii for details on these non-compliances.

Monthly calibrations were completed at all air monitoring stations, in compliance with the Air Monitoring Directive (AMD). Preventative maintenance and repairs were completed as needed.

Table 2. WBEA Continuous Monitoring Equipment Statistics, by Month, April to June 2026

Month	Average Operational Time (%)	# of Monitoring Equipment with Average Operational Uptime (%)						Total # of Equipment
		< 90*	90 to 92	93 to 94	95 to 96	96 to 98	98 to 100	
April 2026	99.0	4	6	3	4	12	220	249
May 2026	97.5	11	2	14	22	13	187	249
June 2026	97.6	8	2	4	16	6	214	250

*For details on equipment operating at less than 90% uptime, please refer to Section 3.8.ii: Table 8.

- ii. Perform annual calibrations on meteorological sensors at air monitoring stations.*

Annual meteorological calibrations at each station are conducted throughout the year. There were eight meteorological calibrations done this quarter plus 7 additional calibrations associated with the removal or installation of the sensors due to moving portable stations.

- iii. Provide locations of Portable Stations in the WBEA Network.*

The locations of portable stations in the WBEA Network for Q2 2026-2027 are listed in Table 3.

Table 3. Location of Portable Stations in WBEA Network, July to September 2026

WBEA Portable Number	July	August	September
AMS 101	WBEA Centre	WBEA Centre	WBEA Centre
AMS 102	Jackfish 1	Jackfish 1	Jackfish 1
AMS 103	WBEA Centre	WBEA Centre	WBEA Centre
AMS 104	WBEA Centre	WBEA Centre	WBEA Centre
AMS 105	Bertha Ganter – Fort McKay	Bertha Ganter – Fort McKay	Bertha Ganter – Fort McKay
AMS 106	WBEA Centre	WBEA Centre	WBEA Centre
AMS 28	Kirby North	Kirby North	Kirby North

iv. Provide continuous analyzer operation statistics, by month.

Continuous air quality analyzer operation statistics are provided in Table 4. These statistics do not include meteorological sensors. A total of fourteen analyzers operated below 90% uptime last quarter. THC and PM_{2.5} analyzers made up a majority (86%) of the less-than 90% uptimes this past quarter.

Table 4. Continuous Analyzer Operation Statistics by Parameter, April to June 2026

Month	No. of analyzer(s) below 90%	SO ₂	H ₂ S	TRS	THC	O ₃	NO ₂	CO	NH ₃	PM _{2.5}
April 2026	4	0	0	0	3	0	1	0	0	0
May 2026	7	0	0	0	2	0	1	0	0	4
June 2026	3	0	0	0	1	0	0	0	0	2
Numbers of analyzers in the network		28	18	12	21	11	24	1	2	15
Total Number of non- compliances 2026		1	0	1	7	0	3	0	0	7
Percentage of non-compliance by parameter		5.3%	0	5.3%	36.8%	0	15.8%	0	0	36.8%

3.2 Time-Integrated Monitoring – Operate and maintain the WBEA’s time-integrated sampling network.

i. Complete routine deployment and collection of time-integrated sampling. Perform preventative maintenance and repairs, as required.

The WBEA collected and deployed a total of 867 time-integrated samples from April to June 2026 (See Appendix B for time-integrated equipment present at each AMS location). Details on invalid samples and recovery percentages are provided below in Table 5. Most incidents leading to invalid samples from this quarter were due to tripped outlets, power failures and failing pumps.

Preventative maintenance and repairs were conducted by Deposition Technicians, as needed. Examples of maintenance conducted this quarter included replacing pumps and motors, recalibrating samplers, and resetting electrical outlets.

Table 5. Time Integrated Sample Collection - Incidents and Recovery, April to June 2026

Month	Invalid Samples	Total No. of samples	% Recovery	# NAPS days	Incidents per Sample Type						
					PM _{2.5}	PM ₁₀	VOC	PAH	Precip	TSP	Dustfall
April 2026	5	289	98.3	5	0	1	N/A	1	3	0	0
May 2026	4	289	98.6	5	0	0	N/A	2	2	0	0
June 2026	0	289	100.0	5	0	0	N/A	0	0	0	0
Q1 Total	9	867	99.0	15	0	1	N/A	3	5	0	0

ii. Perform quarterly calibrations and audits of sampling equipment.

Quarterly calibrations and audits of time-integrated sampling equipment were completed with one done in July and 6 done in August.

iii. Make time-integrated data available online.

Time-Integrated data can be accessed online at <https://wbea.org/data/time-integrated-data-search/>

iv. Submit time-integrated data with annual data report.

Time-Integrated data is submitted as part of the annual data report in Volume 2. The WBEA 2025 Ambient Data Annual Report was submitted March 31st, 2026, and can be found at <https://wbea.org/resources-section/annual-data-report/>

3.3 Continue the WBEA's Quality Assurance Program

i. Maintain the WBEA's Reference Centre, including monthly calibrations on reference analyzers, perform CGAs, and maintain primary reference materials.

Over the last quarter, regular maintenance and monthly calibrations were carried out on instruments in WBEA's Reference Centre. Two calibrations on ozone photometers were conducted this quarter.

ii. Complete annual internal audits at all WBEA ambient air monitoring stations.

The WBEA has an internal audit program that follows the same procedures as the Alberta EPA; however, the WBEA applies stricter audit criteria allowing the WBEA to initiate investigations and potential maintenance repairs before an AMS analyzer would fail Alberta EPA's audit. Three internal audits were completed this quarter (Table 6).

Table 6. WBEA Internal Audits of AMS Stations, July to September 2026

Air Monitoring Station	Audit Date	Parameters Audited	Audit Response	Follow-up
Pihew Point	Jul 24, 2026	SO ₂ , H ₂ S, THC	No issues observed with audit.	None required.
Wapasu	Jul 28, 2026	SO ₂ , H ₂ S, THC, O ₃ , NO _X , PM _{2.5}	No issues observed with audit. Manifold was cracked, advised technician to replace glassware.	None required.
Athabasca Valley	Aug 20 to 21, 2026	SO ₂ , TRS, NMHC, O ₃ , NO _X , CO, PM _{2.5}	No issues observed with audit	None required.

3.4 Modify operations and reporting to meet new requirements in the Air Monitoring Directive (AMD).

No changes to the AMD were identified in this quarter; therefore, no modifications in operations or reporting were required.

3.5 Continue partnership with Athabasca Chipewyan First Nation (ACFN) and Mikisew Cree First Nation (MCFN) to create an Indigenous-led air monitoring program in the Peace Athabasca Delta.

The WBEA, ACFN, and MCFN successfully completed the three-year plan to expand the air monitoring capabilities within the community of Fort Chipewyan and support the Air Quality Monitoring in the Peace Athabasca Delta Indigenous Community Based Monitoring (ICBM) work plan. ACFN and MCFN staff operate and maintain the Fort Chipewyan AMS and change-out all time-integrated and deposition samples. This work is ongoing and is now considered routine network operations. Reporting of all data collected through this initiative are included in the WBEA's routine monthly and annual reports, which are submitted to the Alberta EPA, and available on the WBEA's website.

3.6 Provide updates on Special Studies conducted by the WBEA to improve understanding of air quality in the RMWB region, monitoring methods, assessment of technology changes and method validation.

Due to budget reductions in the 2025/2026 fiscal year, the WBEA paused all special studies. This included the Continuous Hydrocarbon Instrument Evaluation Study and the Continuous Particulate Instrument Evaluation Study. In 2026/2027 several of these Special Studies will be wrapped up with the development of technical reports that will be provided to the AATC committee and/or WBEA members.

3.7 Fulfill monitoring requests from the Fort McKay Air Quality and Odours Advisory Committee (FMAQOAC) Recommendations 14/15 committee in accordance with the schedule outlined in the approved OSM Program work plan. Document all activities completed.

i. Analysis and reporting of RSC compounds for the Triggered Samplers.

This project was initiated through the Rec 14/15 committee with the intent to capture triggered samples during events of elevated TRS readings and/or during events of experienced odours within the community of Fort McKay. The Triggered RSC Sampler was installed at Bertha Ganter – Fort McKay AMS in February 2022. Due to ongoing issues, Rec 14/15 requested this project be suspended. The

ASG lab is developing methodologies to analyze RSC using triggered canisters in hopes to resume the program.

ii. Operation and maintenance of the VOC Gas Chromatograph analyzer.

The VOC Gas Chromatograph (GC) is deployed at Bertha Ganter – Fort McKay AMS compound. The WBEA has shifted operations to a remote contractor with analyzer expertise as the equipment is highly technical and time intensive to maintain. New support system equipment was installed between October 2025 and January 2026 and the final software set up was completed last quarter. The VOC GC appears to be now running smoothly and data is being QA'd monthly.

Historical data from the VOC GC is available, and data currently being collected will be, on the WBEA website under "Other Data" at <https://wbea.org/data/time-integrated-data-search/>. Establishing a process to upload the data from the remote contractor to the WBEA's database is in progress.

3.8 Provide data from the WBEA's ambient air monitoring network.

i. Maintain processing, validation, and reporting of all WBEA ambient air quality data. Make all data available on the WBEA's website.

During Q2 2026-2027, monthly ambient air data was reviewed, as per the WBEA's monthly data validation process. Quality controlled Level II data was made available on the WBEA's website 30 days after the end of the calendar month in which the data were collected, here:

(<https://wbea.org/data/continuous-monitoring-data/>)

WBEA time-integrated data was collected and centralized within a database. A catalogue containing sample types, number of data points, and date ranges is available to view on the WBEA website. The catalogue and download page are available at <https://wbea.org/data/time-integrated-data-search/>

ii. Report exceedances of the Alberta Ambient Air Quality Objectives and Guidelines, and non-compliances of the Air Monitoring Directive to the Alberta Government as established by WBEA's Immediate Reporting Protocol and the Fort McKay Acute Response Triggers (FMART) Process.

The WBEA follows the *WBEA Immediate Reporting Protocol* to report exceedances and non-compliances in the ambient air network to the appropriate stakeholder and regulator. In addition, members are notified of exceedances through the Air Quality Events app and are notified of exceedances and non-compliances through the GLC distribution list, quarterly committee meetings and the WBEA's ambient air monitoring monthly data reports. These reports can be found at <https://wbea.org/monthly-continuous-data-and-calibration-reports/>

In Q1 of 2026-2027, there were a total of 194 validated exceedances within the WBEA network (Table 7). Users can search all exceedances through the WBEA's Air Quality Events website (<https://wbea.org/data/air-quality-events/>). A majority of these events were exceedances of PM_{2.5} occurring in June.

Table 7. Total number of Exceedances by Parameter, from April to June 2026

Event Type	Parameter									Total
	H ₂ S	PM _{2.5}	NO ₂	O ₃	SO ₂	CO	Dustfall	TRS	TSP	
AAAQG	-	76	-	-	-	-	1	55	-	132
AAAQO	23	23	1	0	11	0	-	-	4	62
Total	23	99	1	0	11	0	1	55	4	194

Non-compliances of the AMD that occurred in the WBEA network in Q1 of 2026-2027 are listed in Table 8. There were 19 non-compliance events during this quarter. April had 4 non-compliance events, May had 9 and June had 6.

Table 8. WBEA Non-Compliances, April to June 2026

Reporting Period	Date Reported	Alberta EPA Reference Number	Location	Brief Description	Issue	Remedial Action
April	23-Apr-26	452378	Athabasca Valley	The THC/NMHC/CH ₄ analyzer at the Athabasca Valley AMS operated less than 90% of April 2026.	The daily span checks for the THC/NMHC/CH ₄ did not meet the Air Monitoring Directive (AMD) performance criteria for multiples consecutive days beginning on April 3, 2026. Multiple site visits were done to investigate and resolve the issue. Initial troubleshooting included routine calibrated with span adjustments performed. However, low daily span values persisted. Further investigation identified that degraded internal pump performance was the root cause of the issue. On April 7, 2026, the sample pump was replaced, the analyzer was recalibrated, and normal operation was restored. Data from this incident was invalidated for a total of 148 hours thus far for the month of April 2026.	Pump was replaced on April 7.
April	11-May-26	453132	Hangingstone Expansion	The NO/NO ₂ /NO _x analyzer at the Hangingstone Expansion AMS operated for less than 90% of April 2026.	The daily spans for the NO/NO ₂ /NO _x analyzers did not meet the Air Monitoring Directive (AMD) performance criteria for multiple days starting on April 25, 2026. During the analyzer troubleshooting, it was determined that degraded sample pump performance was contributing to instability in the daily span. On April 27, the sample pump was replaced, the analyzer was calibrated, and normal operations were restored. Due to this incident, a total of 88 hours of data were invalidated, with overall monthly operational uptime calculated at 88.8%.	Pump was replaced on April 27.
April	14-May-26	453269	Conklin	The THC/NMHC/CH ₄ analyzer at the Conklin AMS operated for less than 90% of April 2026.	Excessive baseline noise and drift was observed in the THC/NMHC/CH ₄ analyzer output signal starting on April 24, 2026. Site visits were conducted to investigate and address the baseline issue. Initial maintenance was to replace the carrier gas cylinder and to recalibrate the instrument. Several days after the maintenance, excessive baseline noise returned. Consequently, the analyzer was replaced on April 30, restoring normal operation. During data validation process, a total of 83 hours of data were invalidated, with the final operational time of 88.5% in April.	Analyzer replaced on April 30.

April and May	14-May-26	453282	Wapasu	The THC analyzer at the Wapasu AMS operated for less than 90% of April and May 2026.	Elevated station temperatures were identified on April 15, 2026, and a WBEA technician responded the following day to address the issue. However, after the breaker was reset, the HVAC unit remained non-functional. As an interim measure, a portable heater was installed to help maintain stable station temperatures. Ultimately, a third-party contractor conducted maintenance on May 12, 2026, after which normal HVAC system operations resumed. During this incident, fluctuating internal station temperatures affected the THC analyzer response, resulting in 73.1% operational time in April and 156 hours of data invalidated in May 2026.	HVAC was fixed on May 12, 2026.
May	13-May-26	453248	Fort McKay South	The NO/NO ₂ /NO _x analyzer at the Fort McKay South AMS operated for less than 90% of May 2026.	The HVAC unit at the air monitoring station failed to maintain a consistent internal temperature, resulting in fluctuating station temperatures that affected analyzer response during routine daily system checks on May 2 and May 4. The unstable station conditions caused the QA checks to fall outside AMD criteria. Site visits were conducted on May 4 to install a portable space heater and again on May 5 to calibrate the analyzer and stabilize station temperatures. Once conditions were stabilized, the response of the NO/NO ₂ /NO _x analyzer returned to normal operation. During data validation, data were invalidated back to the last acceptable daily span check from May 1, resulting in 102 hours of invalidated data. The final operational uptime for May 2026 will be confirmed upon completion of the monthly data validation process.	HVAC was fixed on May 5, 2026.
May	09-Jun-26	454437	Fort Hills	The PM2.5 analyzer at the Fort Hills AMS operated for less than 90% of May 2026.	From May 6 to 12, the PM2.5 analyzer displayed unstable cyclic responses suggesting, interference within the optical system. Maintenance was completed on May 12, consisting of optics and sensor cleaning and disposable filter replacement. The analyzer resumed normal operation following maintenance. Data validation resulted in the invalidation of 133 hours of data, with an operational uptime of 82.12% for May 2026. No exceedances of the Alberta Ambient Air Quality Objectives or Guidelines were observed during this period.	PM2.5 analyzers optics and sensor cleaning were done along with disposable filter replacement.

May	09-Jun-26	454438	Ells River	The PM2.5 analyzer at the Ells River AMS operated for less than 90% of May 2026.	From May 17 to 21, the PM2.5 analyzer exhibited unstable cyclic responses, suggesting interference within the optical system. Maintenance was completed on May 21, during which the analyzer was replaced. Following the replacement, the analyzer resumed normal operation. Data validation resulted in the invalidation of 99 hours of data, with an operational uptime of 83.20% for May 2026. No exceedances of the Alberta Ambient Air Quality Objectives or Guidelines were observed during this period.	PM2.5 analyzers optics and sensor cleaning was done along with disposable filter replacement.
May	23-Jun-26	455056	Fort Chipewyan	The PM2.5 analyzer at the Fort Chipewyan AMS operated for less than 90% of the time in May 2026.	Routine daily system checks on May 23 identified communication failures between the PM2.5 analyzer and the station data logger, resulting in periods where valid PM2.5 data were not recorded. The analyzer was rebooted on May 17, 2026; however, the communication failures persisted. Investigation determined the communication failures were caused by an internal communication component within the PM2.5 analyzer. Normal operation of the PM2.5 analyzer resumed on June 1, 2026, at 17:00 MST. Following the data validation process the unstable operations of the PM2.5 analyzer due to this incident resulted in 220 invalid hours and an operational time of 70% for May 2026.	Analyzer was reset to restore the operations.
May	26-Jun-26	455206	Ells River	The THC/NMHC/CH4 analyzer at the Ells River AMS operated for less than 90% of the time in May 2026.	During the month of May, multiple issues occurred with the THC/NMHC/CH4 analyzer, including a noisy baseline, an internal pump malfunction, adjustments to chromatograms and span (effectively requiring recalibration of the instrument), and a power failure. These issues did not occur concurrently but were intermittent in nature and distributed throughout the month. During periods of instrument instability, certain data were deemed invalid; however, other intervals of operation remained within acceptable performance criteria and were retained as valid. Corrective actions included analyzer replacement, QA checks, span adjustments, and full recalibration. Normal operation of the THC/NMHC/CH4 analyzer was ultimately restored on June 3 at 13:00 MST. Following the data validation process 96 hours were invalidated resulting in 87.1% operational uptime for May 2026.	Corrective actions included analyzer replacement, QA checks, span adjustments, and full recalibration.

May and June	15-Jun-26	454638	Lower Camp Met Tower	The WS/WD/VWS at the 163-meter elevation at Lower Camp Met Tower operated less than 90% of May and June 2026.	Throughout the month of May, intermittent flat-line readings were observed from the WS/WD/VWS sensor at the 163-m elevation. The issue remains unresolved, as WBEA relies on a qualified third-party contractor to perform tower-climbing activities and conduct the required instrument replacement. WBEA is actively coordinating with the contractor to schedule the maintenance work at the earliest available opportunity. Following data validation, 677 hours of data were invalidated for May and 150 hours of data have been invalidated to date in June.	Coordinating with the third party contractor to schedule the maintenance work at the earliest available opportunity to climb the tower and address the issue.
May and June	23-Jun-26	455030	Mannix	The AT/RH and WS/WD/VWS at the 90-meter elevation at Mannix AMS operated less than 90% for May and June 2026.	Throughout May and June 2026, intermittent flat-line readings and data acquisition system (DAS) failures were observed from the AT/RH and WS/WD/VWS sensors at the 90-meter elevation. This resulted in 86 % operational time for May and 345 invalid hours thus far in June. The issue remains unresolved, as WBEA relies on a qualified third-party contractor to perform tower-climbing activities and conduct the required sensor replacement. WBEA is actively coordinating with the contractor to complete the required maintenance at the earliest available opportunity. The affected sensors will be replaced once tower access can be scheduled with the qualified contractor.	Coordinating with the third party contractor to schedule the maintenance work at the earliest available opportunity to climb the tower and address the issue.
May and June	23-Jun-26	455055	Stony Mountain	The PM2.5 analyzer at the Stony Mountain AMS operated for less than 90% of the time in May and June 2026.	Routine daily system checks identified intermittent communication failures between the PM2.5 analyzer and the station data logger, resulting in periods where valid PM2.5 data were not recorded. Throughout May and June, WBEA conducted multiple site visits to investigate the issue. Troubleshooting activities included analyzer replacement, analyzer reboots, and modifications to the data logger configuration. Investigation determined the communication failures were caused by an internal communication component within the PM2.5 analyzer. Normal operation of the PM2.5 analyzer resumed on June 14, 2026, at 16:00 MST. Following the data validation process the unstable operations of the PM2.5 analyzer due to this incident resulted in 165 invalid hours and an operational time of 78% for May 2026, and 238 invalid hours during June 2026.	Troubleshooting activities included analyzer replacement, analyzer reboots, and modifications to the data logger configuration.

June	21-Jul-26	456390	Fort Hills	The total hydrocarbon (THC)/non-methane hydrocarbon (NMHC) /methane (CH4) analyzer at the Fort Hills AMS operated less than 90% of June 2026.	Throughout June 2026, the THC/NMHC/CH ₄ analyzer experienced multiple operational issues, including daily span checks that did not meet AMD criteria, baseline drift, and increased baseline noise affecting analyzer performance. Troubleshooting and maintenance activities were performed to address these issues, including analyzer recalibration, span adjustments, carrier support gas cylinder adjustments, chromatogram reviews, and optimization of analytical window settings. Due to continued performance issues, the analyzer was ultimately replaced with and the analyzer operations restoring on June 23, 2026. Following data validation, the combined impacts of these issues resulted in an operational time of 80% for the month of June 2026.	Replaced analyzer on June 23, 2026.
June	21-Jul-26	456391	Fort Hills	The PM2.5 analyzer at the Fort Hills AMS operated for less than 90% of June 2026.	From June 16 to 29, the PM2.5 analyzer experienced periods of flat-line readings and communication interruptions. Troubleshooting and maintenance activities, including analyzer resets, were conducted on June 19, 22, and 29. Following the final reset on June 29, normal analyzer operation was restored. Following the data validation process, the unstable operations of the PM2.5 analyzer due to this incident resulted in 103 invalid hours and an operational time of 86% for June 2026.	Reset was done on June 29 which restored normal operations for the instrument.
June	24-Jul-26	456573	Mannix	The WS/WD/VWS sensor at the 75-meter elevation at Mannix operated less than 90% of June 2026.	In June 2026, the WS/WD/VWS sensor at the 20-meter elevation experienced reduced data availability due to Data Acquisition System (DAS) failures causing communication issues and periods of unstable sensor operation resulting in flat-line readings. Following data validation, these issues resulted in an operational time of 83% for June 2026.	N/A

iii. Provide real-time air quality data from continuous air monitoring stations to EPA real-time website in the required format.

Real-time air quality data is provided on a continual basis to Alberta EPA via a secure file upload from the WBEA Data Management System.

iv. Submit Monthly Ambient Air Monitoring Report to the Alberta Government and submit data to the EPA Air Data Warehouse.

Table 9 lists the Monthly Air Monitoring Reports and Quality Assured Data that were submitted electronically via the Electronic Transfer System (ETS) to Alberta EPA.

Table 9. Schedule of Monthly Air Monitoring Reports and Quality Assured Data Submissions from April to June 2026

Monthly Air Monitoring Report and Quality Assured Data	Date Submitted
April 2026	May 29, 2026
May 2026	June 30, 2026
June 2026	July 30, 2026

v. Provide WBEA data to citizens, industry members, regulatory bodies, and governments so that it can be used to make informed decisions on health, facility compliance, and environmental management and policy. All data management and accessibility outcomes will be in alignment with the OSM Program direction.

The WBEA makes data accessible on the WBEA website. Data is further disseminated through the Alberta Data Warehouse, community outreach activities, and through WBEA committee meetings. The WBEA engages with members including Indigenous communities, industry, three levels of government, and non-government organizations. The WBEA works with Alberta EPA and OSM Program staff to ensure data management and accessibility outcomes are aligned.

vi. Any data not submitted to the Alberta Data Warehouse or not on the WBEA website will be provided directly to Alberta EPA in an agreed upon format within three months of data collection.

If data is not submitted to the Alberta Air Data Warehouse or not posted on the WBEA website, the WBEA will provide the data to Alberta EPA in an agreed-upon format and timeline.

vii. Submit the WBEA Ambient Air Monitoring Data Annual Report Volume 1-3.

The 2025 Ambient Air Monitoring Data Annual Report was submitted March 31st, 2026, and is available online at <https://wbea.org/resources-section/annual-data-report/>.

viii. Continuous monitoring data from the WBEA's ambient air monitoring network should be provided in near real-time in support of the EAMAS program, as amended from time to time.

The WBEA continued to provide access to RWDI to enable the retrieval of near real-time ambient air monitoring data from the WBEA network to support the EAMAS program.

3.9 Participate in Oil Sands Monitoring (OSM) programs related to optimizing and improving the active air monitoring network in the Athabasca Oil Sands Region (AOSR).

i. Participate in OSM Program committees, activities, workshops, and webinars.

The WBEA continued to support the OSM Program's Air and Deposition TAC in their efforts to optimize and improve the active air monitoring network through on-going and open communication with the project lead and TAC representatives, as required. The WBEA was not invited to participate in, or aware of, any related OSM initiatives in this quarter.

ii. Implement any additions, deletions, or any other changes to the WBEA active air monitoring network consistent with approved OSM Program workplan(s).

For the 2026/2027 fiscal year, activities will occur as per the workplan. Two changes to the workplan activities include: (1) triggered RSC sampling will be suspended (see section 3.7i) as per the direction of Rec 14/15 committee, and (2) the planned speciated particulate matter study from the NAWG recommendations cannot occur as the activity is time sensitive and the equipment parts will not arrive before the end of the summer field season.

iii. Document any additions, deletions, or any other changes to the WBEA continuous or time-integrated air monitoring network not indicated previously. Identify and describe any deviations from the approved OSM Program.

No additions, deletions, or other changes to the WBEA continuous or time-integrated air monitoring network were done that were not previously indicated.

iv. Participate in development of Adaptive Monitoring Approach for Active Air Monitoring Network.

See item 3.9(i).



4. Integrated Atmospheric Deposition Monitoring, 2026-2027 Work Plan Reference A-PD-6-2627

Atmospheric deposition is a critical pathway that links stressors to responses. Deposition monitoring data are used by the Oil Sands Monitoring Program to assess responses, and to help determine the source(s) of stressors.

The overall objectives of this project are:

- (1) Determine levels and changes of atmospheric deposition for specific pollutants that pose a likely risk for forest, river, lake, and wetland ecosystem function*
- (2) Quantify the contribution of OS emissions to deposition of pollutants of concern, particularly at ecological monitoring sites, and provide these data to ecological effects monitoring projects*
- (3) Deliver model outputs and deposition data required by other themes and OSM Program participants*

This work plan monitors the spatial and temporal changes in deposition of pollutants of concern at relevant ecological monitoring sites, including: acidifying (e.g., nitrogen, sulphur), alkalizing (i.e., base cations) and eutrophying (e.g., nitrogen) pollutants at forest and wetland sites; and contaminants (i.e., polycyclic aromatic compounds (PACs), other organic carbon compounds and trace metals) at forest, wetland, and aquatic sites. This work plan also contains environmental effects monitoring of soil and forest health indicators at co-located deposition monitoring sites. This allows for an assessment of if/how deposition is affecting forests.

Source apportionment analyses and chemical transport models can both determine the contribution of specific OS and non-OS sources to deposition. Deposition modelling and GIS techniques will support the estimation of deposition at ecological monitoring sites where deposition is not actually measured, and allow for determination of contribution of OS sources. The key modelling tool that will enable the above is GEM-MACH, which is an observation-evaluated tool that simulates emissions, transport, transformation, and deposition, and is used for scenario testing. GEM-MACH will be used in a 'service delivery role by 2024 (e.g., providing annual deposition maps, scenario-testing), with transition to that role finishing 2022-23, including comparison against surface observations. Beyond 2024, GEM-MACH will undergo periodic evaluations and updates as emissions evolve and inputs/science improves.



The following section provides details on the Q2 2026-2027 milestones and objectives under Workplan A-PD-6-2627 (Integrated Atmospheric Deposition Monitoring) and is based off the deliverables in the Government of Alberta contract 24RSD828.

4.1 Operate and maintain the Denuder and Passives sampling program, including routine sample changeouts and equipment maintenance.

Denuders and passives are co-located to understand gaseous atmospheric pollutants for deposition modelling. Routine sample changeouts for both samplers were completed monthly at all sites (Figure 1). Dates for this quarter's changeouts were:

July Changeout – July 6th to 10th 2026

August Changeout – August 4th to 6th 2026

September Changeout – August 31st to September 3rd, 2026

Denuders experience extreme fluctuations in temperature which has been noted to impact the flow rates. Consistent flow calibrations and audits have led to overall more consistent flow rates across the network. A new black box board was deployed in December 2025 at site 1004 to see if it helps keep the denuder flow constant during changes in temperature. Preliminary results show improvement of flow rates with the new black box. More monitoring will be done and then, assuming no issues, they will be deployed throughout the network.

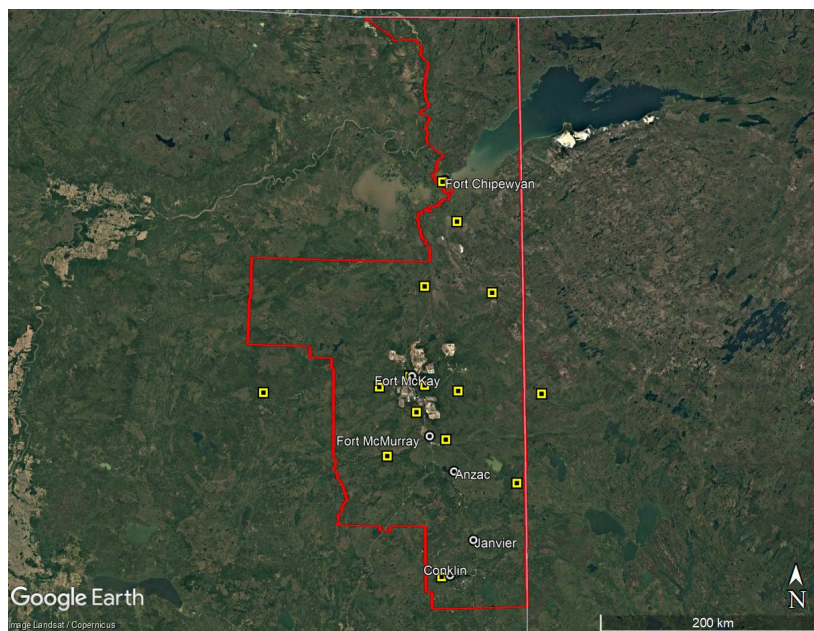


Figure 1. Map of the current denuder locations with co-located passives (yellow symbols).

4.2 Operate and maintain the Ion Exchange Resins (IER) network sampling program, including routine sample changeouts and equipment and site maintenance.

Routine sample changeouts occur in May and October so none were completed this quarter. Routine maintenance at sites was conducted as needed, (see Figure 2 for map of IER locations). Maintenance included fixing wildlife fences.



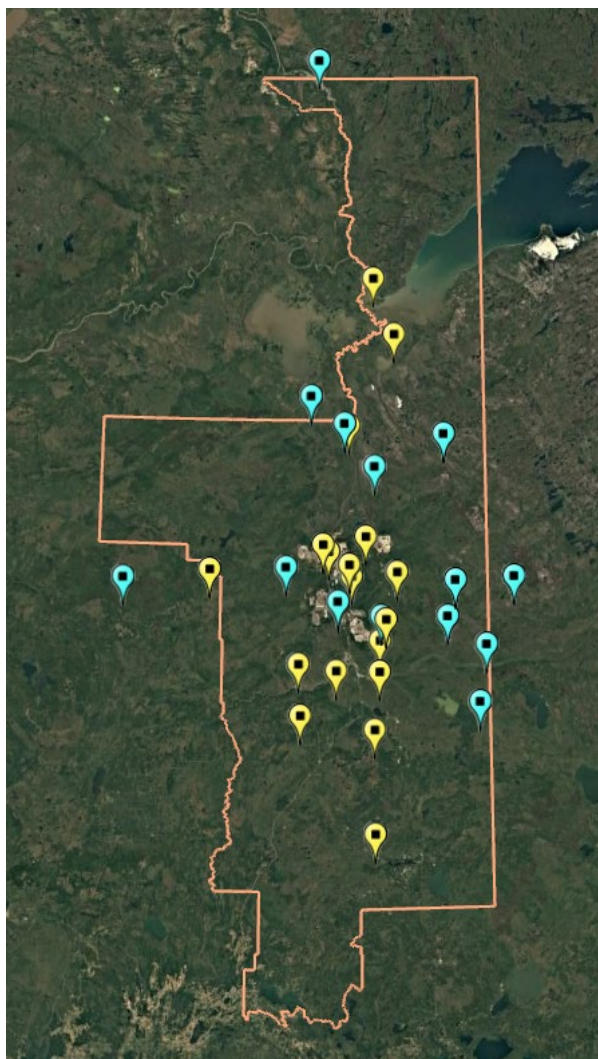


Figure 2. Map of the current IER freefall (yellow symbols) and throughfall (blue symbols) sites. Several of the symbols overlap on the map as freefall and throughfall are often paired at the same location.

4.3 Operate and maintain the Meteorological Towers data collection program, including tower inspections and maintenance, equipment maintenance, and annual calibrations.

The Regional Meteorological Network (MET) provides multi-level continuous, hourly measurements of meteorological conditions in remote areas around the Wood Buffalo region. The WBEA operates six meteorological towers. Data collected by these towers are used for deposition calculations and modelling. All remote meteorological data is reviewed weekly and validated monthly.

Based on the decision by the TEEM committee, mid-level meteorological sensors have begun to be removed this quarter. All towers are standardized and will maintain sensors at ground level and canopy height.

Site 2001 was burned by wildfires and therefore has not had data since May 2025. A new tower at that site was erected in July 2026. The WBEA Deposition team then installed monitoring equipment on the tower and at the site in early September 2026. Data will start to be collected in October 2026.

4.4 Operate and maintain the Forest Health Monitoring program, including data analyses.

The last field campaign for the Forest Health Monitoring (FHM) program was in 2024. The science advisor team has been working on analyses comparing deposition values with soil and vegetation trends. This last quarter Site Assessment field work was conducted at all active FHM sites. WBEA staff and members from nine Indigenous communities collected photos, observations and data points to help fill the 6-year gap between intensive monitoring campaigns.

Forest Health Workshops: A series of planning workshops was initiated in 2023, with the goal to (1) align all WBEA members on the FHM objectives and history, and (2) review and determine the path forward of the FHM program. Workshops have been held:

Workshop 1 – November 7th and 8th, 2023

Workshop 2 – January 30th and 31st, 2024

Workshop 3 – April 10th and 11th, 2024

Workshop 4 – February 19th and 20th, 2025

Field Workshop 5 – September 11th, 2025

Workshop 6 – June 11th, 2026

Workshop 7 – Early 2027

The workshop series has been influential in the progress, evolution and understanding of the FHM program.

2024 FHM Focus Studies: Two focus studies were approved by the TEEM committee and added to the 2024 Forest Health Monitoring Program. This included:

Indigenous Indicator - Deposition Impacts on *Cladonia mitis* Lichen (Focus Study): The WBEA proposed the addition of a chemical analysis of *Cladonia mitis* (Caribou lichen), a ground-dwelling lichen that is a key food source to the Woodland Caribou and makes up a major component to the understory biomass at the jack pine sites. The sampling program ran from September 9th to September 25th, 2024.

Updates from this quarter included:

- Began writing the draft data report.

Indigenous Indicator – Deposition Impacts on Traditional Food (Focus Study): The WBEA proposed the addition of blueberry collection and analysis at eight sites with known deposition levels. Ecological observations were also collected on the health of the blueberries. Seven sites were sampled between August 12 – 16th, 2024.

Updates from this quarter included:

- Report finalized and focus study completed.



4.5 Data & Reporting

- i. Maintain public access to WBEA deposition data via the WBEA website so that it can be used to make informed decisions on health, facility compliance, and environmental management and policy. All data management and accessibility outcomes will be in alignment with the OSM Program direction.*

Access to the searchable deposition database, plus additional datasets in excel files, can be found at <https://wbea.org/data/time-integrated-data-search/>

A new WBEA website was launched as a data visualization tool for the deposition and forest health monitoring data. This can be found at <https://dep.wbea.org/> This will be updated on a regular basis and currently shows deposition data (nitrogen, sulphur, base cations and potential acid input) from 2013 to 2024 on interactive maps.

4.6 Changes to the Monitoring Network.

- i. Participate in Oil Sands Monitoring (OSM) Program committees, activities, workshops and webinars related to optimizing and improving the atmospheric deposition monitoring network in the Athabasca Oil Sands region.*

The WBEA continued to support the OSM Program's Air and Deposition TAC in their efforts to optimize and improve the atmospheric deposition monitoring network through on-going and open communication with the project lead and TAC representatives, as required. The WBEA was not invited to participate in, or aware of, any related OSM committees, activities, workshops, or webinars this quarter.

- ii. Implement any additions, deletions or any other changes to the WBEA atmospheric deposition monitoring network consistent with approved OSM Program work plan(s).*

Based on the approved OSM Program workplans, there are no additions, deletions or changes to monitoring this quarter.

- iii. Document any additions, deletions, or any other changes to the WBEA atmospheric deposition monitoring network not indicated previously. Identify and describe any deviations from approved OSM Program work plan(s).*

Based on the 2026-2027 workplan, there were no additions, deletions, or other changes to the WBEA deposition monitoring network this quarter that were not previously identified.



5. Appendix A – Adhering to Contract Clauses

Clause 9

As per Clause 9, Personnel Replacement, of the WBEA Contracts with Alberta EPA, the WBEA is required to report any changes to the list of key personnel. The WBEA has made no changes to its key personnel list during this reporting period. Any changes would be communicated to the Alberta EPA within five business days of the change.

Clause 12

As per Clause 12, Conflicts of Interest and Ethical Conduct, of WBEA's Contracts with Alberta EPA, the WBEA is required to report all potential or perceived conflicts of interest. The WBEA noted the following potential or perceived conflicts of interest during this reporting period (Table 10). These conflicts are communicated to the Alberta EPA via email within five business days of each meeting.

Table 10. Declared Conflicts of Interest in Q2, July to September 2026

Date	Meeting	Member		Declared Conflict of Interest
		Name	Organization	
July 10, 2026	GC Meeting	Ryan Abel	Fort McKay First Nation	Participates on OSM Air and Deposition TAC and OSM Oversight Committee as alternate and OSM Indigenous Caucus
September 11, 2026	GC Meeting	Ryan Abel	Fort McKay First Nation	Participates on OSM Air and Deposition TAC and OSM Oversight Committee as alternate and OSM Indigenous Caucus
September 23, 2026	AATC	Courtney Brown	Canadian Natural	Participates on OSM Air and Deposition TAC
		David Spink	Fort McKay First Nation	Participates on OSM Air and Deposition TAC, participated in two Indigenous Community Based Monitoring (ICBM) project submissions that involve the WBEA (Fort McKay Métis Nation – odour project & Fort McKay First Nation – dust project)
		Greg Wentworth	Alberta EPA	Works for EPA and participates on OSM Air and Deposition TAC
		Danlin Su	Fort McKay First Nation	Participated in two ICBM project submissions that involve the WBEA (Fort McKay Métis Nation – odour project & Fort McKay First Nation – dust project)
September 24, 2026	TEEM	Courtney Brown	Canadian Natural	Participates on OSM Air and Deposition TAC
		David Spink	Fort McKay First Nation	Participates on OSM Air and Deposition TAC, participated in two Indigenous Community Based Monitoring (ICBM) project submissions that involve the WBEA (Fort McKay Métis Nation – odour project & Fort McKay First Nation – dust project)
		Greg Wentworth	Alberta EPA	Works for EPA and participates on OSM Air and Deposition TAC
		Carla Davidson	Fort McKay First Nation	Participates on OSM's Oversight committee



6. Appendix B – Summary of Air Monitoring Stations & Parameters in the WBEA Network

Continuous Monitoring Measurements

Table 11 provides a list of stations names and parameters measured by continuous methods, which include sulphur dioxide (SO₂), nitric oxide/nitrogen dioxide (NO/NO₂), ozone (O₃), PM_{2.5}, total reduced sulphur (TRS), hydrogen sulphide (H₂S), total hydrocarbons (THC), methane (CH₄), non-methane hydrocarbons (NMHC), carbon monoxide (CO), and ammonia (NH₃).

Table 11. Summary of stations and continuously measured parameters at WBEA AMS

Station name	SO ₂	NO/NO ₂ /NO _x	O ₃	PM _{2.5}	TRS	H ₂ S	THC	CH ₄	NMHC	CO	CO ₂	NH ₃
BERTHA GANTER-FORT MCKAY	X	X	X	X	X	X	X	X	X			X
BUFFALO VIEWPOINT	X	X	X	X		X	X	X	X			
MANNIX	X					X	X	X	X			
PATRICIA MCINNES	X	X	X	X	X		X	X	X			X
ATHABASCA VALLEY	X	X	X	X	X		X	X	X	X		
FORT CHIPEWYAN	X	X	X	X	X							
BARGE LANDING	X	X		X	X		X	X	X			
LOWER CAMP	X					X	X	X	X			
FORT MCKAY SOUTH	X	X	X	X	X		X	X	X			
ANZAC	X	X	X	X	X		X	X	X			
WAPASU	X	X	X	X		X	X					
STONY MOUNTAIN	X	X	X	X	X		X	X	X			
FIREBAG	X	X				X	X					
MACKAY RIVER	X	X				X	X					
CONKLIN	X	X	X	X	X		X	X	X			
JANVIER	X	X	X	X	X		X	X	X			
FORT HILLS	X	X		X	X	X	X	X	X			
WASKOW OHCI PIMATISIWIN	X					X						
JACKFISH 2/3	X	X				X						
SURMONT 2	X	x		X		X						
ELLS RIVER	X	X		X	X		X	X	X			
LEISMER	X	X				X						
SAWBONES BAY	X	X				X						
JACKFISH 1	X	X				X						
KIRBY SOUTH	X	X				X	X					
KIRBY NORTH	X	X				X	X					
BLACKGOLD	X	X				X	X					
HANGINGSTONE EXPANSION	X	X				X						
MONDAY CREEK	X	X				X						
BLACKROD	X	X				X						
PIHEW POINT	X					X	X	X	X			
EBRT	X	X				X						



Continuous Meteorological Measurements

Table 12 provides a listing of stations and meteorological parameters measured by continuous methods. Parameters measured include ambient temperature (Temp), relative humidity (RH), barometric pressure (BP), wind speed (WS), wind direction (WD), vertical wind speed (VWS), global radiation, precipitation, and leaf wetness.

Table 12. Summary of stations and meteorological parameters measured continuously at WBEA AMS

Station name	Temp	RH	BP	WS	WD	VWS	Global Radiation	Precipitation	Leaf Wetness
BERTHA GANTER-FORT MCKAY	X ^{1,2}	X ¹		X ²	X ²		X	X	X
LOWER CAMP MET TOWER	X ⁴	X ⁴		X ⁴	X ⁴	X ⁴			
BUFFALO VIEWPOINT	X ¹	X ¹		X ²	X ²				
MANNIX	X ⁵	X ⁵		X ⁵	X ⁵	X ⁵			
PATRICIA MCINNES	X ¹	X ¹		X ²	X ²				
ATHABASCA VALLEY	X ¹	X ¹	X	X ²	X ²				
FORT CHIPEWYAN	X ¹	X ¹		X ²	X ²		X		X
BARGE LANDING	X ¹	X ¹	X	X ^{2,3}	X ^{2,3}				
LOWER CAMP	X ¹	X ¹	X	X ²	X ²				
FORT MCKAY SOUTH	X ¹	X ¹		X ²	X ²				
ANZAC	X ¹	X ¹		X ³	X ³				X
WAPASU	X ¹	X ¹		X ²	X ²			X	
STONY MOUNTAIN	X ¹	X ¹		X ³	X ³		X	X	X
FIREBAG	X ¹	X ¹		X ²	X ²				
MACKAY RIVER	X ¹	X ¹		X ²	X ²			X	
CONKLIN	X ¹	X ¹		X ²	X ²				
JANVIER	X ¹	X ¹		X ^{2,3}	X ^{2,3}				
FORT HILLS	X ¹	X ¹		X ²	X ²				
WASKOW OHCI PIMATISIWIN	X ¹	X ¹		X ²	X ²				
JACKFISH 2/3	X ¹	X ¹		X ²	X ²				
SURMONT 2	X ¹	X ¹		X ²	X ²				
ELLS RIVER	X ¹	X ¹		X ²	X ²		X		
LEISMER	X ¹	X ¹		X ²	X ²				
SAWBONES BAY	X ¹	X ¹		X ²	X ²				
JACKFISH 1	X ¹	X ¹		X ²	X ²				
KIRBY SOUTH	X ¹	X ¹		X ²	X ²				
KIRBY NORTH	X ¹	X ¹		X ²	X ²				
BLACKGOLD	X ¹	X ¹		X ²	X ²				
HANGINGSTONE EXPANSION	X ¹	X ¹		X ²	X ²				
MONDAY CREEK	X ¹	X ¹		X ²	X ²				
BLACKROD	X ¹	X ¹		X ²	X ²				
PIHEW POINT	X ¹	X ¹		X ²	X ²				
EBRT	X ¹	X ¹		X ²	X ²				

¹ Parameter measured at 2m.

² Parameter measured at 10m.

³ Parameter measured at 20m.

⁴ Parameter measured at multiple elevations (i.e., 20m, 45m, 100m, 163m).

⁵ Parameter measured at multiple elevations (i.e., 20m, 45m, 75m, 90m).

* Decommissioned May 2026.



Time-Integrated Analysis Measurements

Table 13 provides a listing of stations and air quality parameters measured by time-integrated methods. Parameters measured include volatile organic compounds (VOC), particulate matter less than 2.5 µm aerodynamic diameter (PM_{2.5}) and associated metals and ions, particulate matter less than 10 µm aerodynamic diameter (PM₁₀) and associated metals and ions, polycyclic aromatic hydrocarbons (PAH), precipitation samples, dustfall, and total suspended particulates (TSP).

Table 13. Summary of parameters measured using Time-integrated methods at WBEA AMS

Station name	VOC	PM _{2.5}	PM ₁₀	PAH	Precip	TSP	Dustfall
BERTHA GANTER-FORT MCKAY	X	X	X	X	X	X	X
PATRICIA MCINNES	X	X	X	X			
ATHABASCA VALLEY	X	X	X	X			
FORT CHIPEWYAN	X	X	X	X			
BARGE LANDING	X						
FORT MCKAY SOUTH	X		X				
ANZAC	X	X	X	X			
WAPASU					X		
STONY MOUNTAIN					X		
CONKLIN	X	X	X	X			
JANVIER	X	X	X	X			
FORT HILLS	X		X				
ELLS RIVER	X		X			X	
CANADIAN NATURAL DF1							X
CANADIAN NATURAL DF2							X
CANADIAN NATURAL DF3							X
CANADIAN NATURAL DF4							X
CANADIAN NATURAL DF5							X
CANADIAN NATURAL DF6							X
CANADIAN NATURAL DF7							X
CANADIAN NATURAL DF8							X
CANADIAN NATURAL DF9							X
CANADIAN NATURAL AMS9							X



Additional Continuous/Semi-continuous Measurements

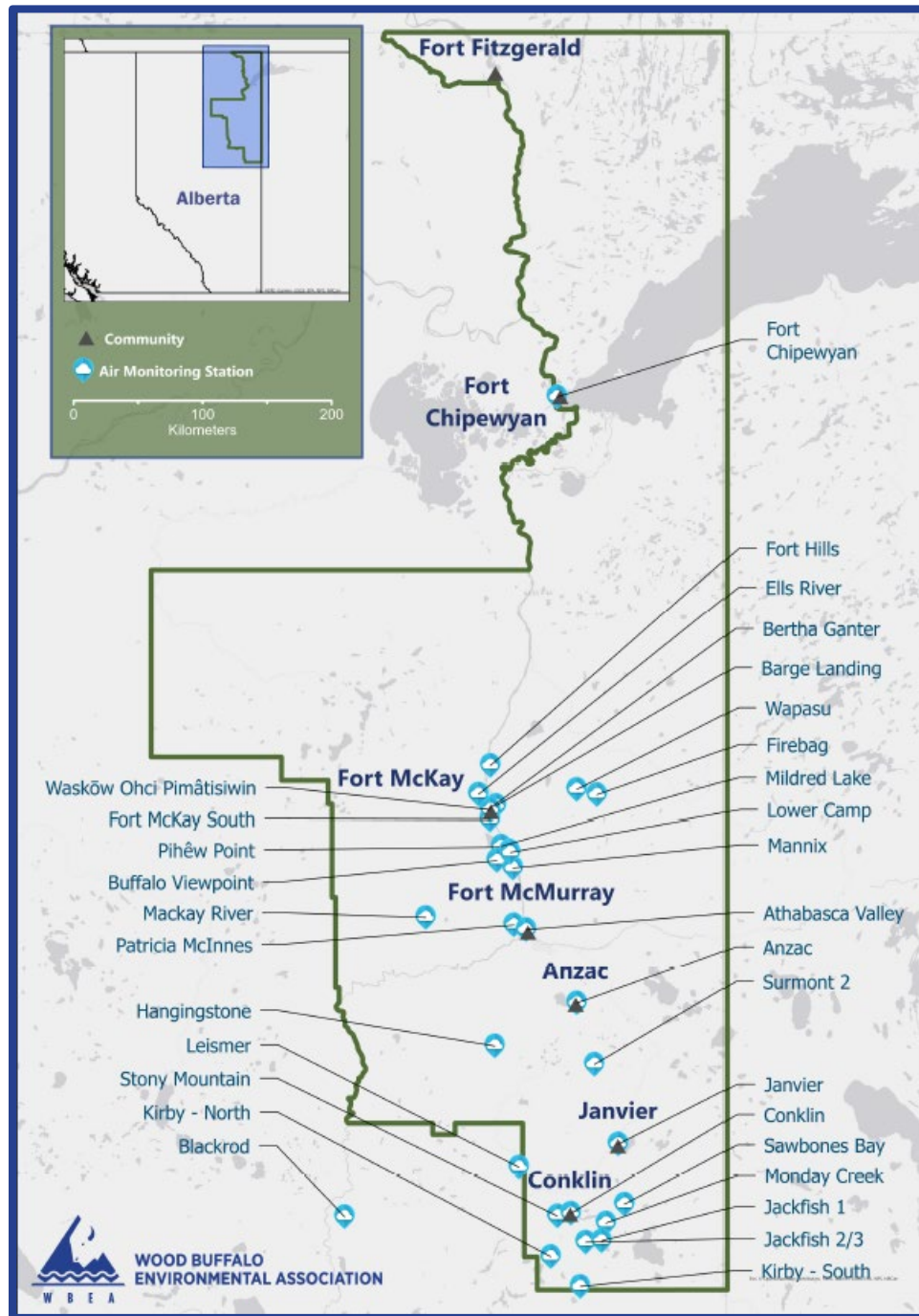
Table 14 provides a list of stations and continuous/semi-continuous methods that are additional to standard monitoring techniques. Parameters measured include visibility sensors, and volatile organic compounds (VOC) gas chromatograph (GC).

Table 14. Summary of stations and continuous/semi-continuous methods at WBEA AMS

Station name	Visibility Sensor	VOC GC
BERTHA GANTER-FORT MCKAY		X
BUFFALO VIEWPOINT	X	
LOWER CAMP	X	

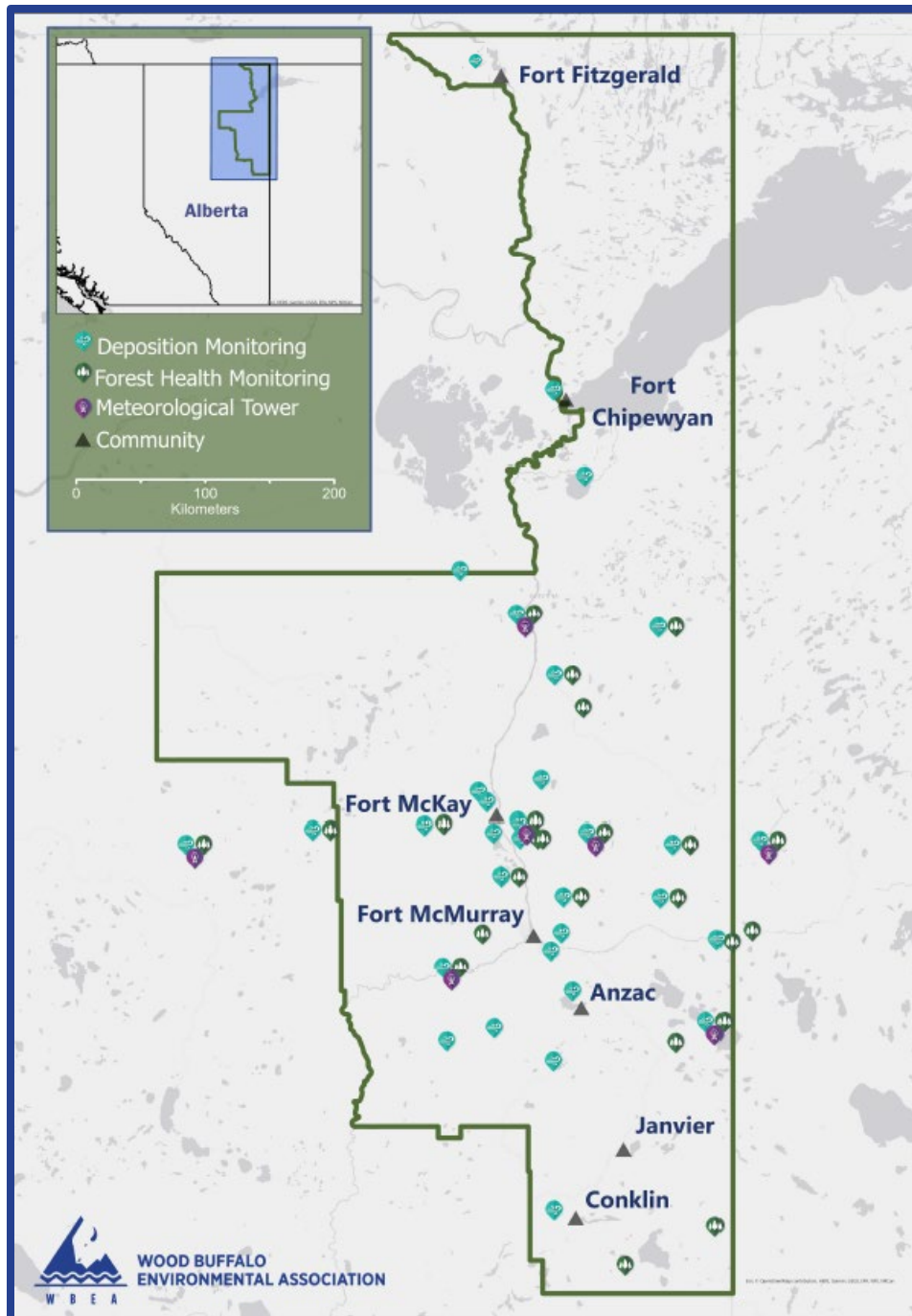


7. Appendix C – Maps of the WBEA Monitoring Networks



Continuous Ambient Air Monitoring Stations





Deposition Monitoring Network

