

5- YEAR LONG-TERM MONITORING OR OPERATIONAL ACTIVITY WORK PLAN

Changes to this Work Plan are only accepted via an Approved Addendum.

General Information	
Monitoring Category: <i>(From OSM long-term plan; choose from drop-down menu)</i>	Evaluation and Reporting
Strategic Monitoring Objective: <i>(From OSM long-term plan; choose from drop-down menu)</i>	Objective: Integration and Synthesis
Work Plan Unique Identifier:	R-2-1718
Monitoring Activity Title:	Reporting Ambient Monitoring Results – Watershed Evaluation and Integration
Geographic Location <i>(choose from drop-down menu, if Project Location is in more than one area choose from second drop-down)</i>	Location Not Applicable
Monitoring Site(s) Coordinates <i>(latitude and longitude)</i>	N/A
Monitoring Organization and Responsible Manager:	Environment and Climate Change Canada Joseph Culp
Date Monitoring initiated:	2013
Specific Monitoring Objective: <i>(State the monitoring objective addressed through this monitoring)</i>	This project is responsible for reporting on the results from each of the Water sub-projects, in an integrative way, will contribute to reporting on the status and trends of water quality, water quantity and ecosystem health and integrity, and will inform decisions regarding potential adjustments and changes to the monitoring program design.
Deliverables (Annual): <i>What Data Reports will be produced and when?</i>	Data synthesis, evaluation and reporting based on input from Water sub-projects

Monitoring Plan Summary: *Please summarize the monitoring including relevant information such as background, objectives, monitoring area, methods/monitoring design, assumptions, outcomes, and references. These should align with the information provided in Appendix 1: Annual Monitoring Schedule.*

A significant amount of physical/chemical/biological data and related environmental information exists from historical monitoring activities in the Alberta oil sands region, and has been augmented significantly from JOSM. This project is responsible for reporting on the results from each of the Water sub-projects, in an integrative way, and will contribute to reporting on the status and trends of water quality, water quantity and ecosystem health and integrity, and will inform decisions regarding potential adjustments and changes to the monitoring program design.

In 2016-17, under “Data Integration, Synthesis and Reporting (Water Program-wide)”, data analyses and interpretation included data synthesis and assessment reports on water quality (Athabasca mainstem and its tributaries; downstream receiving environments), the spring freshet, groundwater/surface water interactions, the multi-panel approach for quantifying water quality, assessment of SPMDs for water quality, fish toxicology, mainstem and tributary and benthic macro-invertebrates, deltaic ecosystem health, wild fish health, atmospheric deposition to lakes and snowpack, and hydrological/hydraulic and sediment transport modelling.

- 2017-18 – it is proposed to complete this data synthesis and reporting effort to include:
 1. Professional production of the 7 technical data synthesis report manuscripts delivered under this project in 2016-17;
 2. Completion of a water program-wide data synthesis report that synthesizes the 7 technical data synthesis reports into an overall water program data synthesis report;
 3. Initiation of the process of incorporating the technical data synthesis reports from the water program into a manuscript(s) for journal submission in 2018-2019.
- 2018 to 2022 – the project will develop annual updates to the data synthesis and integration reports from information provided by the various Water sub-groups.
- 2021-2022 – the data synthesis and assessment reports from each Water sub-group will be updated and a new water program-wide data synthesis report will be produced.

Appendix 1 – Annual Monitoring Schedule

(Please provide detailed information on the specifics of your monitoring schedule including – **locations, schedule, methods, SOPs, QA/QC data release, references**)

<u>Sampling Locations/Sites</u>	<u>Sampling Schedule (timing/frequency)</u>	<u>Compounds to be Analyzed</u>	<u>SOPs to be Consulted</u> <i>(hyperlinks accepted)</i>	<u>QA/QC Complete & Date Data to be Released</u>
The entire Alberta oil sands region.	Details are in the 5 year monitoring plans for each Water sub-group			

References:

Appendix 2 – Detailed Multi-Year Financial Breakdown: if changes are to be made then an Addendum must be Complete and Approved.

(Complete the following detailed financial breakdown; add or delete categories as required)

Budget requirements	Year 1 (201X- 201Y)		Year 2 (201X- 201Y)		Year 3 (201X- 201Y)		Year 4 (201X- 201Y)		Year 5 (201X- 201Y)	
	OSM Funding	External Funding	OSM Funding	External Funding	OSM Funding	External Funding	OSM Funding	External Funding	OSM Funding	External Funding
1) Salaries and benefits										
a) Appendix 3 - Totals										
2) Operations and Maintenance										
a) Vehicles and Transportation										
b) Helicopter										
c) Lab analysis										
d) Data management										
e) Field work										
3) Consumable Materials and supplies										
a) <i>(Describe Consumable Supply)</i>										
4) Travel										
a) Conferences and meetings <i>(identify conference/meeting)</i>										
b) Field work - travel										



c) Project-related travel	21,617									
5) External Contracts										
a) <i>(Describe External Contractor)</i>	35,383									
Grand Total (incl. O/H)	\$57,000								?	

Appendix 3 – Staffing Plan

(Complete the following detailed staffing plan; add or delete categories as required)

Responsible Role	Year 1 – Budget Allocation		Year 2 – Budget Allocation		Year 3 – Budget Allocation		Year 4 – Budget Allocation		Year 5 – Budget Allocation	
	OSM Funding	External Funding	OSM Funding	External Funding	OSM Funding	External Funding	OSM Funding	External Funding	OSM Funding	External Funding
Science Expertise										
Technical/Field Staff										
Administrative and Program Coordination										
Grand Total <i>(inserted into Appendix 2)</i>	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$

Appendix 4 - Approvals

Project Submitted by:		
Name:		
Organization:	Signature:	Date:
Project Approved by:		
Dr. Monique Dubé (AEP)		Dr. Kevin Cash (ECCC)
Signature		Signature
		
Date		Date