

FOCUSED STUDY ACTIVITY WORK PLAN

General Information

Work Plan Unique Identifier:	B-CM-4-1718
Focused Study Activity Title:	Environmental Monitoring Technician Training Program Pilot
Focused Study Category:	Monitoring Design and Method Improvement
Geographic Location (<i>choose from drop-down menu. If Project Location is in more than one area choose from second drop-down</i>)	Athabasca Oil Sands Region More than 2 Locations (Described in Detailed Monitoring Plan)
Monitoring Site(s) Coordinates (<i>latitude and longitude</i>)	N/A
Project Leader:	Krista Tremblett (Oversight) Zoey Wang (Coordination and delivery)
Organization and contact information:	IKCMCS Branch, EMSD, Alberta Environment and Parks 10 th Floor, 9888 Jasper Ave. Edmonton, AB. T5J 5C6 780.229.7265 (K.Tremblett) 780.229.7267 (M. Gubbels)
Date Study initiated:	August 2015
Monitoring Category: <i>(From OSM long-term plan; choose from drop-down menu)</i>	Indigenous Monitoring Program
Strategic Objective of Focused Study: (<i>From OSM long-term plan; choose from drop-down menu</i>)	Objective F1: Potential Impacts on Ecosystem Components Valued by Indigenous communities
Hypotheses: (<i>Briefly outline the specific hypotheses that your focused study is aiming to address</i>)	Enhanced technical skills and professional connections enable Indigenous participation in oil sands monitoring initiatives.
Deliverables: <i>What tangible goal (s) and/or product(s) will the monitoring produce and when?</i>	Goals <ul style="list-style-type: none"> • To enable Indigenous participation in field monitoring within communities, with industry or government; • To enhance technical competence in the field in surface water quality monitoring, wildlife monitoring and safety; • To provide an opportunity for scientists and Indigenous

	<p>communities to build connections and working relationships.</p> <p>Products</p> <ul style="list-style-type: none"> • Program schedule: June 2017 • Ten Indigenous community members from the oil sands region (Athabasca, Cold Lake, Peace River) recruited: June 2017 • Five 1-week modules: Aug-Dec 2017 • Graduation ceremony: Dec 2017 • Year 3 (2017/2018) Pilot Report: March 2018 • Three-year pilot evaluation report: Q1 2018/19
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Detailed Study Plan

(Please provide detailed information on the specifics of your focused study including – **(keywords, hypothesis and the assumptions and constraints behind your hypothesis)**)

Provide a maximum of 10 key words that describe this project. Use commas to separate them:

Community, Indigenous, monitoring, capacity building, Traditional Knowledge, training.

Describe how you will test your hypothesis:

Through engagement with Indigenous communities in the Oil Sands region, communities have expressed the desire to be equipped to participate in monitoring and help answer their own key questions.

An Indigenous Environmental Monitoring Technician Training Program Pilot was launched in 2015 to enhance community capacity related to the implementation of environmental monitoring in the oil sands region. 15 Indigenous students from across the oil sands region graduated from the program in February, 2016. Students completed course components in field safety, monitoring techniques, scientific methods, and Alberta's monitoring programs in the Province. The second year of the program concluded in December 2016. The program will be piloted for a third year in 2017, and a three-year summative evaluation will be conducted to assess program results and effectiveness. Evaluation data collected over the course of the three-year pilot through student and instructor surveys and, where possible, input from Indigenous Leadership, will be used to assess the feasibility and effectiveness of program content and format, delivery process, and the reactions of participants in the program. Students will also be surveyed one year post-program (e.g., 2015-16 students will be surveyed in 2016-17) to assess how the training may have contributed to increased participation in environmental monitoring in the oil sands region.

Program design

In 2015/16, the curriculum focused on surface water quality monitoring, wildlife monitoring techniques and fieldwork safety courses which followed the standards and protocols laid out by the Province of Alberta. Building upon an evaluation of implementation in 2015/16 and recommendations from the previous cohort¹, the program curriculum has been adapted to cover the full life-cycle of monitoring (design, data collection, , evaluation and reporting); and, to more closely align with the approved oil sands monitoring work plan for

2016/17², including surface water and fish health monitoring.

These areas of curriculum focus considered both the practicality of training delivery within the designed time frame and the interests and needs of both Indigenous communities and scientists.

Program format

- Five, one-week long course modules (August-December)
- Based in Edmonton
- Classroom and field delivery

Assumptions and Constraints behind the hypothesis and the testing method:

Assumption: Capacity building is a priority for Indigenous communities in the oil sands region.

Assumption: The natural progression from training and capacity development is employment, and efforts to recruit local Indigenous monitors will be an essential component in achieving community involvement in the implementation of environmental monitoring in the oil sands region.

Assumption: Capacity building will lead to opportunities for graduates to participate in environmental monitoring

Assumption: External partners will continue to provide in-kind support (e.g., computer lab, advice on content/format, delivery).

References:

1. Chai S-L & Hiltz M. Environmental Monitoring Technician Training Program for First Nations and Métis Communities in Northeastern Alberta 2015 Pilot Final Project Report. February 2016. 41 pp. Unpublished Report.
2. Environmental Monitoring in the Oil Sands 2016-2017 work plan projects summary table. Retrieved from <http://environmentalmonitoring.alberta.ca/activities/projects-summary/>.

Data Management

If this work generates data please summarize your project-level data management plan.

Deliverables	Timeframe
Data Collection Period: <i>Participant evaluation</i>	Start : 2017-08-01 End: 2017-12-31
Data Analysis Period: <i>Analysis of data</i>	Start : 2018-01-02 End: 2018-02-01
Data Release Date: <i>Metadata and data consistent, complete and meet basic standard format for publication in Open Data; on or linked to JOSM portal</i>	2018-04-01

Reporting and Publications

Provide information on the anticipated reports / publications. (Insert additional rows if needed)

Expected Subject/Titles of Publications or Reports	Short Description of Publication or Report	Expected Year of Publication
Environmental monitoring technician training pilot report: Year 3 2017/18	Report on the results for 2017-2018 delivery including: a. outputs (# of communities, students) and b. response (participant and instructor feedback).	2018
Environmental monitoring technician training pilot report – Three Year Review and Recommendations	Report on the overall results for the 3-year pilot program including assessments of: a. effectiveness of program design and delivery (process evaluation) and b. the outcomes of the program on the students and their communities (impact evaluation). The report will also include recommendations on the feasibility and value of transitioning from a pilot to long-term program.	2018

Technical / Professional Roles and Responsibilities

Identify members of the monitoring team/organization, their roles and responsibilities. Identify monitoring organization leads if different from overall monitoring activity lead. (Insert additional rows if needed)

Role	Responsibilities	Resource Name/Organization
Project Oversight	Guidance and oversight on project implementation, progress reporting, issue resolution , budget oversight	Krista Tremblett (EMSD)
Project Lead	Project coordination and delivery (recruitment, logistics, liaising with participants, coordinating instructors and guest speakers, evaluation)	Michael Gubbels (EMSD)
Project support	Advise on content; classroom and/or field delivery	EMSD, ECCC, TSAG, ABMI, COSIA, AER and other partner organizations

Deliverables (Year 1) If your Focus Study is longer than 1 year then complete **Appendix 3** for multi-year deliverables breakdown

Provide a summary of tangible quarterly deliverables. Identify major project areas (deliverables) and results that can be identified as a tangible goal. This could include: field work, lab work/ analysis, evaluation, data, reports, publications, SOPs etc. Do not define process as your Deliverable e.g. 'fly to Ft. McMurray to conduct fieldwork' or 'seek Director approval for report'.



Deliverable(s) (please provide enough information to support status reporting)
Q1 – April to June
Program schedule confirmed (5 one-week modules)
Students recruited
Program logistics confirmed (e.g., venues booked, participant accommodations confirmed etc.)
Q2 – July to September
Modules one and two delivered (August, module 1. September, module 2)
Student and instructor surveys for module 1 and 2
Q3 – October to December
Modules 3-5 delivered (October, module 3. November, module 4. December, module 5)
Student and instructor surveys for module 3, 4 and 5
Q4 – January to March
Year 3 (2017/2018) Pilot Report (March)

Detailed Financial Breakdown – Year 1 of 3 (2017-2018)

Also complete **Appendix B** for the multi-year financial breakdown

Budget requirements – List areas that require budget expenditures: (ADD OR DELETE BUDGET CATEGORIES AS REQUIRED)	OS Funding	External Funding (outside JOSM)
Consumable Materials & Supplies		
Course materials	\$12,000	\$
Sub-Total	\$12,000	\$
O&M – Travel, Lodging and Meals		
Travel, accommodation and meals	\$40,000	\$
Sub-Total	\$40,000	\$
O&M - External Contracts:		
Logistics support	\$10,000	\$
Technical/professional trainers (certified courses)	\$40,000	
Sub-Total	\$50,000	\$
Salaries:		
Project oversight	\$16,000	\$
Project lead/coordinator	\$43,000	\$
Sub-Total	\$59,000	\$
Total Salaries	\$59,000	\$
Total O&M	\$102,000	\$
2017-2018 GRAND TOTAL *	\$159,000	\$

Appendix 1 - Approvals

Project Submitted by:		
Name: Krista Tremblett		
Organization: Alberta Environment and Parks	Signature:	Date:
Project Approved by:		
Dr. Monique Dubé (AEP)		Dr. Kevin Cash (ECCC)
Signature		Signature
		
Date		Date