2018-19 Work Plan Template

All fields with an * are mandatory

Project Description Summary		
Date *	Project/Work Plan Identifier (if applicable)	Program Type and Strategic Alignment *
12/2/2018	NEW	OSM - Long Term Monitoring
Program Category *	Status *	Dept. ID
Biodiversity, Land, Ecosystem Health Sciences	New Project	1104

Project Leadership / Contact information		
Project Title *	Key Words (max 10) *	
OSM Biotic Response Monitoring Plan	Long-term plan, biodiversity, environmental effects, biotic response, ecosystem health	
Surname *	Given Name *	Title *
Farr	Dan	Director, Biodiversity and Ecosystem Health Sciences
Organization *	Department	Division
Alberta Provincial	Alberta Environment and Parks	Environmental Monitoring and Science Division
Branch *	Section/Unit (if applicable)	Phone *
Science	Biodiversity and Ecosystem Health Sciences	7802297251
Email *	Mailing Address	City
dan.farr@gov.ab.ca	9888 Jasper Avenue	Edmonton
Postal Code	EMSD Executive Owner (If Applicable)	
T5J 5C6	Dr. Monique Dube	

Project Information	
Project Objective(s) (Bullet Form) *	1. Complete a conceptual framework for monitoring biotic response to oil sands development, drawing from Indigenous knowledge and classical science. 2. Complete a systematic review of evidence for biotic response to oil sands development. 3. Identify key questions about the potential response of biota to oil sands development, that could be addressed in Oil Sands Monitoring 4. Assess the extent to which current Oil Sands Monitoring (OSM) projects are addressing these key questions 5. Develop a long-term plan for monitoring biotic response to oil sands development that integrates current OSM projects, and identifies new monitoring to fill key gaps.
	Multi- Year
Plain Language Overview (100 words) *	The aim of this multi-year project is to develop a long-term plan for monitoring biotic response to oil sands development. A Science Team formed by the multi-disciplinary Alberta Environment and Parks Science Advisory Group will direct the project. Input and feedback from Indigenous community members and scientists will be obtained via workshops, webinars, and discussion papers. Key deliverables include a systematic review of evidence for biotic response, a gap analysis of current monitoring systems, and a long-term plan.
	Multi- Year

Project Duration *	Project Original Start Date *	Estimated Completion Date *
Multi-Year	1/4/2018	31/03/22

Specify Objectives This Project Will Address in 2018/2019. *	1. Complete a conceptual framework for monitoring biotic response to oil sands development, drawing from Indigenous knowledge and classical science. 2. Complete a systematic review of evidence for biotic response to oil sands development. 3. Identify key questions about the potential response of biota to oil sands development, that could be addressed in Oil Sands Monitoring 4. Assess the extent to which current Oil Sands Monitoring (OSM) projects are addressing these key questions
Specify Objectives This Project Will Address Beyond 2018/19 (if multi-year). *	5. Develop a long-term plan for monitoring biotic response to oil sands development that integrates current OSM projects, and identifies new monitoring to fill key gaps.

Co-Chair Decision (March 8, 2018)

***Decision Pool D: Project Not Funded.**

* This decision does not suggest this work is not important but to identify this will be an outcome of the Biological Monitoring Integration Workshop

* Key members of the project team will participate in a Biological Monitoring Integration Workshop to be informed by the Oil Sands Monitoring Secretariat.

* Funding in 2018/19 and beyond is dependent upon the findings of the Biological Monitoring Integration Workshop

List Key Questions/Hypotheses Related to Each Objective Stated Above. *	1. How do the main drivers of spatial variability and temporal change affect biodiversity in the oil sands region? - Most of the main drivers are known. Natural drivers include edaphic variation in topography, geological parent material, plus dynamic ecological processes such as natural disturbance and climate change. Anthropogenic drivers (stressors) include vegetation removal and disturbance, release of point-source and non-point source contaminants, consumptive use of wildlife (hunting, trapping), and invasive species. 2. How are species and assemblages impacted by oil sands development? - Oil sands development can be divided between mineable and in situ. The impacts of mineable oil sands development are intense and local. The impacts of in situ oil sands development are less intense and more dispersed, and are therefore more difficult to study, both conceptually and logistically. These differences will drive the manner in which syntheses are completed. 3. How do the impacts of oil sands development compare to and interact with the impacts of other human activities including forestry, transportation, and consumptive use of wildlife? 4. What are the cumulative effects of human activity in the oil sands region on biota? - A critical part of this will include an exploration of various definitions of cumulative effects, and defining what cumulative effects mean in the context of this project. 5. How can we design adaptive monitoring programs that effectively respond to multiple, shifting demands? Are there opportunities to streamline or rationalize monitoring activities?
Main Assumptions, Constraints, Dependencies. *	- Qualified personnel are available to complete the work.

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) *
☑ Federal Government ☐ Another AEP Division ☐ Another GoA Department ☑ University/Academic Institution ☐ Solely delivered by GoA ☐ Citizen Science ☑ Indigenous Community or Organization ☐ ENGO ☐ Other	Both	☑ Office or Laboratory ☐ Sub-regional ☐ Transboundary (provincial/territorial) ☐ Lower Peace Region ☐ Upper Peace Region ☐ North Saskatchewan Region ☐ Red Deer Region ☑ Lower Athabasca Region ☐ 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)	
Ecosystems and Predicting Change Legislated/Policy Requirement	

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
Biodiversity	No	No
AEP ONLY: Protected Public Health and Safety from Environmental		
No		

AEP ONLY: IMAG/IMSC Information Needs, Please Specify Which Need(s) is Being Addressed. File location M:\EMSD\Common\Portfolio Mgmt System Shared Docs	14. Biodiversity Monitoring: Long-term monitoring of key attributes of biodiversity (terrestrial, lentic, lotic) to assess changes due to various stressors is needed to assess management activities within parks and protected areas. 19. Provincial scale monitoring of Alberta's aquatic and terrestrial species.
AEP ONLY: How This Project Will Address Each Strategic Theme Selected Above.	This project will inform future biotic response monitoring activities in the oil sands region of Alberta.

Project Methodology

List the Key Project Phases and Provide Bullets for Each Major Task Under Each Project Phase. *	Phase 1. Conceptual framework - Draw from Indigenous knowledge and classical science; - Emphasize terrestrial ecosystems, while acknowledging functional linkages with wetland and aquatic ecosystems, to reflect the more advanced development of biotic response monitoring in aquatic and wetland ecosystems. - Complete a draft discussion paper identifying key drivers, stressors, and ecological pathways to biotic responses in the oil sands region. The discussion paper will include conceptual diagrams (e.g., Robinson et al. 2010), with supporting narrative. - Vet the discussion paper at a workshop, revise based on feedback. Phase 2. Systematic review - Prepare a systematic review protocol (Collaboration for Environmental Evidence 2013) and submit for publication in the journal Environmental Evidence. The protocol will describe the search strategy, including a priori inclusion criteria for potentially relevant studies, search terms, bibliographic databases and other sources, and criteria for assessing study quality. - Apply the protocol to complete a systematic review that includes narrative, quantitative, and qualitative synthesis elements; submit for publication in the journal Environmental Evidence. Phase 3. Key questions - Questions will be based on the conceptual framework and systematic review, above. - Vet the key questions in three workshops: Indigenous community members, classical scientists, combined session Phase 4. Review of current Oil Sands Monitoring projects - Webinar series, modelled after those in the OSM wetland projects, emphasizing what has been learned to date, and what findings can reasonably be expected within 5 years - Identify gaps in monitoring as defined by regulatory, scientific and societal needs. - Describe opportunities for greater integration between the biodiversity components assessing contaminant and land disturbance stressors, and with air and water monitoring components. - Identify ways in which Indigenous knowledge be incorporated in the monitoring of biotic response. Phase 5. Long-term plan - Integrate current OSM projects. - Identify new monitoring to fill in the gaps. Literature cited Collaboration for Environmental Evidence. 2013. Guidelines for Systematic Review and Evidence Synthesis in Environmental Management. Version 4.2. Environmental Evidence: www.environmentalevidence.org/Documents/Guidelines/Guidelines4.2.pdf Robinson, C., Duinker, P.N. and Beazley, K.F., 2010. A conceptual framework for understanding, assessing, and mitigating ecological effects of forest roads. Environmental Reviews, 18(NA), pp.61-86.
Describe How Changes in Environmental Condition Will Be Assessed. *	N/A
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". *	NONE

Provide a Brief Description of the Methods By Project Phase. *	Phase 1. Conceptual framework - Draw from Indigenous knowledge and classical science; - Emphasize terrestrial ecosystems, while acknowledging functional linkages with wetland and aquatic ecosystems, to reflect the more advanced development of biotic response monitoring in aquatic and wetland ecosystems. - Complete a draft discussion paper identifying key drivers, stressors, and ecological pathways to biotic responses in the oil sands region. The discussion paper will include conceptual diagrams (e.g., Robinson et al. 2010), with supporting narrative. - Vet the discussion paper at a workshop, revise based on feedback. Phase 2. Systematic review - Prepare a systematic review protocol (Collaboration for Environmental Evidence 2013) and submit for publication in the journal Environmental Evidence. The protocol will describe the search strategy, including a priori inclusion criteria for potentially relevant studies, search terms, bibliographic databases and other sources, and criteria for assessing study quality. - Apply the protocol to complete a systematic review that includes narrative, quantitative, and qualitative synthesis elements; submit for publication in the journal Environmental Evidence. Phase 3. Key questions - Questions will be based on the conceptual framework and systematic review, above. - Vet the key questions in three workshops: Indigenous community members, classical scientists, combined session Phase 4. Review of current Oil Sands Monitoring projects - The following projects will be included in this review: B1-1-1 Status and trends of biodiversity in the oil sands region B1-1-2 Biotic response of ungulates to oil sands activity B1-1-3 Biotic response of focal animal species to oil sands activity B1-1-4 Adaptive monitoring of focal plant species B1-1-6 DNA methods for boreal caribou B1-1-7 Colonial waterbird egg contaminants B1-1-7 Mammal & waterfowl contaminants & toxicity B1-1-7 Amphibian & wetland health B1-1-9 Biotic response of forest soil and vegetation to atmospheric deposition (Forest Health Monitoring) E2-3-1 Monitoring benthic macroinvertebrates in rivers and tributaries E2-3-1 new Examining the cumulative effects of multiple stressors on benthic macroinvertebrates using NMR-based metabolomics E1-1-2 Deltaic ecosystem monitoring E2-3-2 Monitoring fish health and community E3-1-1 Quantifying risk from oil sands to endangered whooping cranes W2-1-new Effects of tailings pond release on aquatic community health: a mesocosm approach WE1-1-1 Long-term wetland monitoring WE1-1-3 Biotic response of waterfowl to in situ oil sands footprint Phase 5. Long-term plan - Integrate current OSM projects. - Identify new monitoring to fill in the gaps.
List the Key Indicators Measured. *	TBA
Describe Sample Handling Procedures, If Not Applicable, State N/A. *	TBA
List SOPs that Will Be Used, If Not Applicable, State N/A.*	TBA
Describe the QA/QC Plan, If Not Applicable, State N/A. *	TBA
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.*	N/A
Components Delivered by Others	

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. *	N/A
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. *	N/A
Monitoring Site Locations and Coordinates (for all sites, please add them to the Monitoring Site Location tab - a separate excel sheet)	
Attach Map of Locations. Distinguish Indicators by Station if Necessary. Distinguish Sampling Frequency by Station if Necessary.	Science Team formed under the AEP Science Advisory Group (Office of the Chief Scientist)
Project Schedule	
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.	To be developed
FOR OIL SANDS MONITORING PROJECTS ONLY: Have You Coordinated With Other Project Leads On Field Logistics? If So, Please Specify. *	To be determined
Other	
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

Data Management and Digital Assets		
Will Data be Produced as a Result Of This Project? *	Type of Quantitative Data Variables	Frequency Of Collection
Yes	Discrete	Annually

Data Collection Period: Start Date - End Date	Timeline For Upload Period: Start Date - End Date
N/A	N/A

Is There a Data Sharing Agreement? (Yes or No).	N/A
Will the Data Include Traditional Knowledge as Defined by and Provided by an Indigenous Representative, Community or Organization (Yes / No).	Yes
Platform/Location of Data Storage.	EMSD M Drive

Project Deliverables		
Proposed 2018-19 Deliverable Type (for each deliverable outline document, presentation, meeting, etc.)		
☑ **Peer-reviewed Journal Publication**	☐ **Peer-reviewed Conference Proceeding**	☐ **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
Synthesis of evidence for biotic response to oil sands development (article for journal submission)		
☑ **Technical Report**	☐ **Book Chapter**	☐ **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
Systematic review protocol (Collaboration for Environmental Evidence 2013)		
Q4 - Deliverable, Comments	Q4 - Deliverable, Comments	Q4 - Deliverable, Comments
☐ **Conference Presentation(s)**	☐ **Stakeholder Presentation**	☑ **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.
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.
		Workshop with Indigenous community members. 2018. Location TBA. Participants from First Nations and Metis communities in the Oil Sands Region. Approx 60 participants.
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.
		Workshop with scientists. 2018. Edmonton or Calgary). Participants to include scientists at universities, government, and non-government organizations. Approx 60 participants.
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.
		Joint workshop with Indigenous community members and Scientists. 2018. Location TBA. Participants from First Nations and Metis communities in the Oil Sands Region, plus scientists at universities, government, and non-government organizations. Approx 120 participants.
☑ **EMSD Strategic & Operational Publication**	☐ **Other Documents**	
Q1 - Deliverable, Comments	Q1 - Deliverable, Comments	
Q2 - Deliverable, Comments	Q2 - Deliverable, Comments	
3 workshop reports (Indigenous communities / Western scientists / Both)		
Q3 - Deliverable, Comments	Q3 - Deliverable, Comments	
Discussion paper identifying key drivers, stressors, and ecological pathways to biotic responses in the oil sands region		
Q4 - Deliverable, Comments	Q4 - Deliverable, Comments	
Annual Report on project activities and deliverables in 2018-19.		
Proposed Deliverables After 2018/2019 for the project funds received in 2018/2019		
☑ **Peer-reviewed Journal Publication**	☐ **Peer-reviewed Conference Proceeding**	☐ **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
Systematic review (Collaboration for Environmental Evidence 2013)		
Q4 - Deliverable, Comments	Q4 - Deliverable, Comments	Q4 - Deliverable, Comments
☐ **Technical Report**	☐ **Book Chapter**	☐ **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
☐ **Conference Presentation(s)**	☐ **Stakeholder Presentation**	☐ **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.
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.
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.
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.
☐ **EMSD Strategic & Operational Publication**	☐ **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	
All Completed Products		**if a**
multi-year project, specify all completed products to date (consistent format for the fields below). Add rows as required.		
Journal Paper		
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)
Technical Report
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)
2)
3)
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
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
Dan Farr, Co-Principal Investigator	EMSD Science Branch	Project Direction
Samantha Song, Co-Principal Investigator	ECCC	Project Direction
New Hire (AEP Temporary Salary), Project Coordinator	EMSD Science Branch	Create and manage detailed project plan, organize workshops, write workshop reports, conduct literature searches, compilation, project communications
New Hire (AEP Temporary Salary), Indigenous Community Liaison	EMSD IKCMCS Branch	Build and maintain relationships with Indigenous community members needed to complete project milestones and deliverables
New Hire (AEP Temporary Salary), Biodiversity / Ecosystem Scientist	EMSD Science Branch	Lead the completion of key project deliverables, including systematic review and long-term monitoring plan.

AEP ONLY: Additional Human Resources Required from EMSD

Name & Role	Branch - Section	Estimated time (% of annual FTE)	Estimated Salary Range
New Hire (Temporary Salary), Project Coordinator	Science - Biodiversity Ecosystem	100	$90,000 - $110,000 (including 25 to cover benefits)
New Hire (Temporary Salary), Indigenous Community Liaison	Indigenous Knowledge, Community Monitoring, Citizen Science	100	$90,000 - $110,000 (including 25 to cover benefits)
New Hire (Temporary Salary), Biodiversity / Ecosystem Scientist	Science - Biodiversity Ecosystem	100	$90,000 - $110,000 (including 25 to cover benefits)
			Choose one
			Choose one
			Choose one
			Choose one
			Choose one
			Choose one
			Choose one

Financial Details and Budget Request

Source of Funding Requested Year 1 - 2018/19

	AEP ONLY: EMSD	OSM
Salaries and Benefits - AEP Chargeback		0
Salaries and Benefits - New OSM Staff		315000
Operations and Maintenance		1000
Consumable materials and supplies		1000
Conferences and meetings travel		8000
Field work travel		0
Project-related travel		3000
Engagement		2000
Reporting		4000
External Contracts - Funds to support Indigenous community member project participation		30000
Overhead		
Grants (to scientists in the SAG Science Team)		30000
Capital		
Total budget request for the year		394000
Total budget approved		

Source of Funding Requested Year 2 - 2019/20

	AEP ONLY: EMSD	OSM
Salaries and Benefits - AEP Chargeback		270000
Salaries and Benefits - New OSM Staff		
Operations and Maintenance		1000

Consumable materials and supplies		1000
Conferences and meetings travel		8000
Field work travel		0
Project-related travel		3000
Engagement		2000
Reporting		4000
External Contracts - Organization/Vendor/Suppliers		30000
Overhead		
Grants		30000
Capital		
Total budget request for the year		349000
Total budget approved		

Source of Funding Requested Year 3 - 2020/21		
	AEP ONLY: EMSD	OSM
Salaries and Benefits - AEP Chargeback		
Salaries and Benefits - New OSM Staff		
Operations and Maintenance		
Consumable materials and supplies		
Conferences and meetings travel		
Field work travel		
Project-related travel		
Engagement		
Reporting		
External Contracts - Organization/Vendor/Suppliers		
Overhead		
Grants		
Capital		
Total budget request for the year		
Total budget approved		

Source of Funding Requested Year 4 - 2021/22		
	AEP ONLY: EMSD	OSM
Salaries and Benefits - AEP Chargeback		
Salaries and Benefits - New OSM Staff		
Operations and Maintenance		
Consumable materials and supplies		
Conferences and meetings travel		
Field work travel		
Project-related travel		
Engagement		
Reporting		
External Contracts - Organization/Vendor/Suppliers		
Overhead		
Grants		
Capital		
Total budget request for the year		
Total budget approved		

Budget Request for the Entire Project	0	743,000

Project Approval(s)

Proposal Submitted by

Surname	Given Name	Organization
Farr	Dan	EMSD

Signature	Date
	12/2/2018

X

Dan Farr
Director, Biodiversity and Ecosystem Health ...

Proposal for OSM Reviewed by

Signature	Date
	12/02/18

AEP Administrator/Coordinator - Review	Signature	Date
	X Dan Farr, for Bill Donahue Director, Biodiversity and Ecosystem Health ...	

ECCC Administrator/Coordinator - Review	Signature	Date

OSM Project Approved by

AEP Co-Lead for OSM	Signature	Date

ECCC Co-Lead for OSM	Signature	Date

AEP ONLY: Proposal for EMSD Reviewed by

EMSD Director	Signature	Date

Dan Farr		22/01/18

AEP ONLY: EMSD Project Approved by		
EMSD Executive Director	Signature	Date
EMSD Chief Scientist	Signature	Date

OSM / EMSD Project Has Not Been Approved		
Project Status	Date Notified	Date Required
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		

OSM / EMSD Approval Post Removal of Condition(s)		
Name & Title	Signature	Date