



# 2022-2023 OSM WORK PLAN APPLICATION

This form will be used to assess the merits of the proposed work plan and its fit with the Oil Sands Monitoring (OSM) Program mandate and strategic priorities. Applicants must complete the form in its entirety. Applicants that fail to use this form and complete all sections in the timeframe will not be considered.

OSM Work Plan Submission Deadline: The deadline for submission of proposed work plans is <b>October 5, 2021 at 4:30 PM Mountain Standard time.</b>	<b>October 5, 2021</b> 4:30 PM MST
<b>Decision Notification</b>	Mid to Late January 2022

The OSM Program is governed by the Freedom of Information and Protection of Privacy Act (FOIP) and may be required to disclose information received under this Application, or other information delivered to the OSM Program in relation to a Project, when an access request is made by anyone in the public. Applicants are encouraged to familiarize themselves with FOIP. All work plans are public documents.

## WORK PLAN COMPLETION

Please **Enable Macros** on the form when prompted.

The applicant is required to provide information in sufficient detail to allow the evaluation team to assess the work plan. Please follow the requirements/instructions carefully while at the same time being concise in substantiating the project's merits. The OSM Program is not responsible for the costs incurred by the applicant in the preparation and submission of any proposed work plan.

When working on this form, please maintain Macros compatibility by always saving your draft and your final submission as a **Microsoft Word Macro-Enabled Document**, failure to do so will result in loss of form functionality. This form was created using Microsoft word 2016 on a PC and may not have functionality on other versions of Microsoft on PC or MACS.

All work plans under the OSM Program require either a government lead or a government coordinator. This will ensure that the financial tables (for Alberta Environment and Parks & Environment and Climate Change Canada) are completed accurately for work plan consideration. **However, if an Indigenous community, environmental nongovernmental organization or any other external partner is completing a work plan proposal, they would only complete the grant or contract budget component of the Human Resources & Financials Section** for their project. The government coordinator within Alberta Environment & Parks would be responsible for completing the remaining components of the Human Resources and Financial Section of this Work Plan Application, as they are responsible for contract and grant facilitation of successful submissions. All other sections outside of Human Resources & Financials Section of this work plan proposal are to be completed in full by all applicants.

The OSM Program recognizes that majority of work planning submissions are a result of joint effort and monitoring expertise. Should the applicant wish to submit supplemental materials in addition to their application additional resources are available in the Work Planning Form and Distribution Package, accessible here: [Work Planning Form and Distribution Package](#)

Should you have any **questions** about completing this work planning form or uploading your final submission documents, please send all inquiries by email to: [OSM.Info@gov.ab.ca](mailto:OSM.Info@gov.ab.ca).



## WORK PLAN SUBMISSION

Upon completion of this application, please submit the appropriately named work plan (**Microsoft Word Macro-Enabled Document**) and all supporting documents to the link provided below. Failure to follow the naming convention provided may result in oversight of your application.

Please upload (by drag and dropping) the **WORK PLAN SUBMISSION & ALL SUPPORTING DOCUMENTS** here:

### [WORK PLAN SUBMISSION LINK \(CTRL+CLICK HERE\)](#)

Please use the following file naming convention when submitting your **WORK PLAN**:

**202223\_wkpln\_WorkPlanTitle\_ProjectLeadLastNameFirstName**

**Example:**

202223\_wkpln\_OilSandsResiduesinFishTissue\_SmithJoe

If applicable, please use the following file naming convention when submitting your **supplementary or supporting files**. Please number them according to the guidance and examples provided:

**202223\_sup##\_WorkPlanTitle\_ProjectLeadLastNameFirstName**

**Examples:**

202223\_sup01\_OilSandsResiduesinFishTissue\_SmithJoe

202223\_sup02\_OilSandsResiduesinFishTissue\_SmithJoe

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. .  
. .

202223\_sup10\_OilSandsResiduesinFishTissue\_SmithJoe

**Do not resave your work plan or documents under any other naming conventions.** If you need to make revisions and resubmit before the work planning deadline of October 5, 2021, **DO NOT** rename your submission. When resubmitting, simply resubmit with the exact naming convention so that it replaces the original submission. **DO NOT** add any additional components such as versioning or dates to the file naming convention. Please direct any questions regarding the submission or naming of submissions to [OSM.Info@gov.ab.ca](mailto:OSM.Info@gov.ab.ca).



## WORK PLAN APPLICATION

PROJECT INFORMATION	
<b>Project Title:</b>	SLFN Fish CBM (Year 3)
<b>Lead Applicant, Organization, or Community:</b>	Smith's Landing First Nation
<b>Work Plan Identifier Number:</b> <i>If this is an on-going project please fill the identifier number for 20/21 fiscal by adjusting the last four digits: <b>Example:</b> D-1-2020 would become D-1-2022</i>	Click or tap here to enter text.
<b>Project Region(s):</b>	Oil Sands Region
<b>Project Start Year:</b> <i>First year funding under the OSM program was received for this project (if applicable)</i>	2020/2021
<b>Project End Year:</b> <i>Last year funding under the OSM program is requested <b>Example:</b> 2022</i>	Core Monitoring for SLFN CBM (no end date)
<b>Total 2022/23 Project Budget:</b> <i>For the 2022/23 fiscal year</i>	\$151,195.00
<b>Requested OSM Program Funding:</b> <i>For the 2022/23 fiscal year</i>	\$151,195.00
<b>Project Type:</b>	Community Based Monitoring
<b>Project Theme:</b>	Cross-Cutting
<b>Anticipated Total Duration of Projects (Core and Focused Study (3 years))</b>	Year 3
<b>Current Year</b>	<b>Focused Study:</b> Choose an item.
	<b>Core Monitoring:</b> Year 3

CONTACT INFORMATION	
<b>Lead Applicant/ Principal Investigator:</b> <i>Every work plan application requires one lead applicant. This lead is accountable for the entire work plan and all deliverables.</i>	Becky Kostka
<b>Job Title:</b>	Lands and Resource Manager
<b>Organization:</b>	Smith's Landing First Nation
<b>Address:</b>	Box 2013 Fort Fitzgerald, AB T0V 1A0
<b>Phone:</b>	18676211960
<b>Email:</b>	lands@slfn196.com

## PROJECT SUMMARY

Should your application be successful, The OSM Program reserves the right to publish this work plan application. Please check the box below to acknowledge you have read and understand:

I acknowledge and understand

In the space below please provide a summary (300 words max) of the proposed project that includes a brief overview of the project drivers and objectives, the proposed approach/methodology, project deliverables, and how the project will deliver to the OSM Program objectives. The summary should be written in plain language.

The Smith's Landing First Nation Fall White Fish Camp program will be led and managed without the support of the SW TAC for the first time (as requested by the OSMP). The Fish CBMP will continue to build community capacity to develop ICBM programs that can be fully integrated with OSM Core Monitoring programs, and address community concerns. This program seeks to build capacity within Smith's Landing First Nation to work towards Program objectives through the establishment of appropriate, culturally identified indicators, baseline data and triggers to be used to assess the state of the environment in the oil sands region in a culturally appropriate way.

The program focuses developing IK indicators of change in fish texture, taste and appearance. Samples will be compared to Western Science indicators for chemical parameters linked to oilsands emission sources (trace elements, heavy metals, PAHs) and physical characteristics including lipid, protein and moisture content.

During years 1 and 2, SLFN struggled to find whitefish during the time and locations that SLFN Elders and Knowledge Holders had identified and were only successful in catch Northern Pike (jackfish). As such, jacks were sampled using the same methodology as MCFN had developed for whitefish. The lack of whitefish was surprising to SLFN, however, and feel that the Indigenous Knowledge was wrong due to changing environmental conditions. In the 3rd year, SLFN would like to continue monitoring jackfish as this seems to be the predominant species present in early fall.

SLFN has also identified a healthy whitefish population in Meyer's Lake, which is connected to the Slave River via that Dog River and are trying to understand if this population interacts with the river population in Year 3 and let members decide if they would like to change locations in year 4 and try to catch whitefish.

## 1.0 Merits of the Work Plan

All work plans under the OSM Program must serve the mandate of the program by determining (1) if changes in indicators are occurring in the oil sands region and (2) if the changes are caused by oil sands development activities and (3) the contribution in the context of cumulative effects. In the space below please provide information on the following:

- Describe the key drivers for the project identifying linkages to the EEM framework particularly as it relates to surveillance, confirmation and limits of change (as per OC approved Key Questions).
- Explain the knowledge gap as it relates to the EEM framework that is being addressed along with the context and scope of the problem as well as the Source – pathway – Receptor Conceptual Models .
- Describe how the project meets the mandate of the OSM Program
- Discuss results of previous monitoring/studies/development and what has been achieved to date.

This project was designed to answer SLFN community questions around the safety of consuming fish from the Slave River, impacts of oilsands development on fish populations SLFN members harvest, and why whitefish populations are declining or changing patterns on the Slave River, downstream from the oil sands development. This study adopted and implemented the Mikisew-Cree First Nation (MCFN)- CBM Whitefish Protocol to ensure consistency with this complementary upstream program. The SLFN whitefish study was conducted during the SLFN 2020 Fall Fish Camp at Hay Camp. Results were provided in:" Smith's Landing First Nation Fall Fish Camp" submitted by Becky Kostka to Kristin Hynes (March 15, 2021). □

## 2.0 Objectives of the Work Plan

List in point form the Objectives of the 2022/23 work plan below

Bring community together for 3rd Fish Camp on the Slave River at Hay Camp, using standardizations in data collection and methodology to enable data integration across media, programs and knowledge systems.

Initiate and undertake a fish surveillance monitoring program, repeating the jackfish sampling conducted in 2020, for comparison with previous data, as well as that conducted under SREQMP

As whitefish were not located last year where Elders and Knowledge Holders had predicted, additional surveillance work will be conducted with SLFN citizens to identify whitefish populations near Hay Camp. If whitefish are located, stable isotope samples will be used to compare with the population found in Meyer's Lake (connected to Slave River via Dog River) and start to understand potential interactions between lake population and river population.

Test methods and feed results into a regional approach to reporting.

Assess risks from consumption of jackfish by comparing estimated ingestion dose of chemical parameters to safe ingestion thresholds (as published by health Canada and US EPA).

Assess trends in chemical and physical parameters over the 3 year sampling period including establishing variability and ranges.

Apply results to address community concerns and questions around fish health and quantity.

### 3.0 Scope

#### Evaluation of Scope Criteria (Information Box Only- No action required)

Your workplan will be evaluated against the criteria below. A successful workplan would:

- be in scope of the OSM Program (e.g., regional boundaries, specific to oil sands development, within boundaries of the Oil Sands Environmental Monitoring Program Regulation)
- integrate western science with Indigenous Community-Based Monitoring
- addresses the EEM framework particularly as it relates to surveillance, confirmation and limits of change as per approved Key Questions.

have an experimental design that addresses the Pressure/Stressor, Pathway/Exposure, Response continuum

- produce data/knowledge aligned with OSM Program requirements and is working with Service Alberta
- uses Standard Operating Procedures/ Best Management Practices/ Standard Methods including for Indigenous Community-Based Monitoring

### 3.1 Sub Theme

Please select from the dropdown menu below the theme(s) your monitoring work plan relates to:

Surface Water

### 3.2 Core Monitoring or Focused study

Please select from the dropdown menu below if the monitoring in the work plan is "core monitoring" and/or a "focused study". Core monitoring are long term monitoring programs that have been in operation for at least 3 years, have been previously designated by the OSM program as core, and will continue to operate into the future. Focused studies are short term projects 1-2 years that address a specific emerging issue. For the purposes of 2022/23 work planning all Community Based Monitoring Projects are Focused Studies.

Focused Study (includes Community-Based Monitoring)

### 3.3 Sub Theme Key Questions

Please select from the dropdown menus below the sub-theme(s) your monitoring work plan relates to and address the Key Questions:

#### 3.3.1 Surface Water Theme

##### 3.3.1.1. Sub Themes:

Biological

##### 3.4.1.2 Surface Water Key Questions

Explain how your surface water monitoring program addresses the key questions below.

1. Are changes occurring in water quality, biological health (e.g., benthos, fish) and/or water quantity/flows, to what degree are changes attributable to oil sands activities, and what is the contribution in the context of cumulative effects?

During the first 2 years of the program SLFN's involvement in the core monitoring program SLFN struggled to find whitefish during the time and locations that SLFN Elders and Knowledge Holders had identified and were only successful in catch Northern Pike (jackfish). As such, jacks were sampled using the same methodology as MCFN had developed for whitefish. The lack of whitefish was surprising to SLFN, however, and feel that the Indigenous Knowledge was wrong due to changing environmental conditions. In the 3rd year, SLFN would like to continue monitoring jackfish as this seems to be the predominant species present in early fall. SLFN has also identified a healthy whitefish population in Meyer's Lake, which is connected to the Slave River via that Dog River and are trying to understand if this population interacts with the river population in Year 3 and let members decide if they would like to change locations in year 4 and try to catch whitefish.

2. Are changes in water quality and/or water quantity and/or biological health informing Indigenous key questions and concerns?

The program focuses on continuing to develop IK indicators of change in fish texture, taste, and appearance. Samples will be compared to Western Science indicators including lipid, protein, and moisture as provided by previous research of M. McMaster and K. Munikittrick.

3. Are data produced following OSM Program requirements and provided into the OSM Program data management system?

Yes All scientific data will be provided to the OSM data management system, however, the SLFN reserves the right to withhold Traditional Knowledge that is deemed sensitive by SLFN Knowledge Holders and harvesters.

4. Do methodologies use relevant Standard Operating Procedures/ Best Management Practices/ Standard Methods?

Yes the SLFN will continue to carry out the Fish camp in the same manner as the prior 2 years which includes utilizing the Mikisew Cree Whitefish Protocol and apply the same methodology to test methods and attempt to understand systemic change.

5. How does the monitoring identify integration amongst projects, themes or with communities?

We will continue to work closely with the core program and with other communities doing related work. This project seeks to gather SLFN Traditional Knowledge on fish health and developing materials to support Community Monitors in monitoring the health of fish harvested and relied on for subsistence.



6.7.6. Where does the monitoring fit on the conceptual model within the EEM framework for the theme area and relative to the conceptual model for the OSM Program theme area? How will this work advance understanding transition towards of the conceptual model EEM framework?

The monitoring intended to occur from the proposed project fits into the EEM framework by contributing to surveillance for the surface water category, focused on water and biological quality. Our continued monitoring work is intended to collect data to be used as baseline conditions to detect changes in fish health in surface water sources (water bodies and waterways) throughout the OSR. This work will advance understanding transition towards the conceptual model of the EEM framework by providing further insight into Culturally Relevant Indicators for assessing fish health from SLFN perspectives. Culturally relevant indicators and receptors considered within the conceptual model should not be limited to communities who have previously engaged in work related to fish health. Our work on aquatics covers surveillance, focused questions, and investigation of cause. The work supports investigation of cause and more focused effects monitoring by looking at a broad suite of western science variables which as well as Indigenous Indicators be more responsive to changes.

7. Is the work plan contributing to Programmatic State of Environment Reporting?

Information will be shared with the OSMP for inclusion in regional assessments of Fish health for the State of the Environment Reporting





**3.3.2 Groundwater Theme**

**3.3.2.1 Sub Themes:**

Choose an item.

**3.3.2.2 Groundwater Key Questions**

Explain how your groundwater monitoring program addresses the key questions below.

1. Are changes occurring in groundwater quality and/or quantity, to what degree are changes attributable to oil sands activities, are changes affecting other ecosystems, and what is the contribution in the context of cumulative effects?

Click or tap here to enter text.

2. Are changes in groundwater quality and/or quantity informing Indigenous key questions and concerns Indigenous concerns and health?

Click or tap here to enter text.

3. Are data produced following OSM Program requirements and provided into the OSM Program data management system?

Click or tap here to enter text.

4. Do methodologies use relevant Standard Operating Procedures/ Best Management Practices/ Standard Methods?

Click or tap here to enter text.

5. How does the monitoring identify integration amongst projects, themes or with communities?

Click or tap here to enter text.

6. Where does the monitoring fit within the EEM framework and relative to the theme area? How will this work advance transition towards the EEM framework?

Click or tap here to enter text.

7. Where does the monitoring fit on the conceptual model for the theme area and relative to the conceptual model for the OSM Program? How will this work advance understanding of the conceptual model?

Click or tap here to enter text.

8. Is the work plan contributing to Programmatic State of Environment Reporting?

Click or tap here to enter text.



**3.3.3 Wetlands Theme**

**3.3.3.1 Sub Themes:**

Choose an item.

**3.3.3.2 Wetland - Key Questions**

Explain how your wetland monitoring program addresses the key questions below.

1. Are changes occurring in wetlands due to contaminants and hydrological processes, to what degree are changes attributable to oil sands activities, and what is the contribution in the context of cumulative effects?

Click or tap here to enter text.

2. Are changes in wetlands informing Indigenous key questions and concerns?

Click or tap here to enter text.

3. Are data produced following OSM Program requirements and provided into the OSM Program data management system?

Click or tap here to enter text.

4. Do methodologies use relevant Standard Operating Procedures/ Best Management Practices/ Standard Methods?

Click or tap here to enter text.

5. How does the monitoring identify integration amongst projects, themes or with communities?

Click or tap here to enter text.

6. Where does the monitoring fit within the EEM framework and relative to the theme area? How will this work advance transition towards the EEM framework?

Click or tap here to enter text.

7. Where does the monitoring fit on the conceptual model for the theme area and relative to the conceptual model for the OSM Program? How will this work advance understanding of the conceptual model?

Click or tap here to enter text.

8. Is the work plan contributing to Programmatic State of Environment Reporting?

Click or tap here to enter text.



**3.3.4 Air Theme**

**3.3.4.1 Sub Themes:**

Choose an item.

**3.3.4.2 Air & Deposition - Key Questions**

Explain how your air & deposition monitoring program addresses the key questions below.

1. Are changes occurring in air quality, to what degree are changes attributable to oil sands emissions, and what is the contribution in the context of cumulative effects?

Click or tap here to enter text.

2. Are changes informing Indigenous key questions and concerns?

Click or tap here to enter text.

3. Are data produced following OSM Program requirements and provided into the OSM Program data management system?

Click or tap here to enter text.

4. Do methodologies use relevant Standard Operating Procedures/ Best Management Practices/ Standard Methods?

Click or tap here to enter text.

5. How does the monitoring identify integration amongst projects, themes or with communities?

Click or tap here to enter text.

6. Where does the monitoring fit within the EEM framework and relative to the theme area? How will this work advance transition towards the EEM framework?

Click or tap here to enter text.

7. Where does the monitoring fit on the conceptual model for the theme area and relative to the conceptual model for the OSM Program? How will this work advance understanding of the conceptual model?

Click or tap here to enter text.

8. Is the work plan contributing to Programmatic State of Environment Reporting? (Answer Box)

Click or tap here to enter text.



**3.3.5 Terrestrial Biology Theme**

**3.3.5.1 Sub Themes:**

Choose an item.

**3.3.5.2 Terrestrial Biology - Key Questions**

Explain how your terrestrial biological monitoring program addresses the key questions below.

1. Are changes occurring in terrestrial ecosystems due to contaminants and landscape alteration, to what degree are changes attributable to oil sands activities, and what is the contribution in the context of cumulative effects?

Click or tap here to enter text.

2. Are changes in terrestrial ecosystems informing Indigenous key questions and concerns?

Click or tap here to enter text.

3. Are data produced following OSM Program requirements and provided into the OSM Program data management system?

Click or tap here to enter text.

4. Do methodologies use relevant Standard Operating Procedures/ Best Management Practices/ Standard Methods?

Click or tap here to enter text.

5. How does the monitoring identify integration amongst projects, themes or with communities?

Click or tap here to enter text.

6. Where does the monitoring fit within the EEM framework and relative to the theme area? How will this work advance transition towards the EEM framework?

Click or tap here to enter text.

7. Where does the monitoring fit on the conceptual model for the theme area and relative to the conceptual model for the OSM Program? How will this work advance understanding of the conceptual model?

Click or tap here to enter text.

8. Is the work plan contributing to Programmatic State of Environment Reporting?

Click or tap here to enter text.



**3.3.6 Cross-Cutting Across Theme Areas**

**3.3.6.1 Sub Themes:**

Choose an item.

If "Other" was selected from the drop down list above please describe below:

Click or tap here to enter text.

**3.3.6.2 Cross-Cutting - Key Questions**

Explain how your cross-cutting monitoring program addresses the key questions below.

1. Is data produced following OSM Program requirements and provided into the OSM Program data management system?

Click or tap here to enter text.

2. Do methodologies use relevant Standard Operating Procedures/ Best Management Practices/ Standard Methods?

Click or tap here to enter text.

3. How does the monitoring identify integration amongst projects, themes or with communities?

Click or tap here to enter text.

4. Where does the monitoring fit within the EEM framework and relative to the theme area? How will this work advance transition towards the EEM framework?

Click or tap here to enter text.

5. Where does the monitoring fit on the conceptual model for the theme area and relative to the conceptual model for the OSM Program? How will this work advance understanding of the conceptual model?

Click or tap here to enter text.

6. Is the work plan contributing to Programmatic State of Environment Reporting?

Click or tap here to enter text.

## 4.0 Mitigation

### **Evaluation of Mitigation Criteria (Information Box Only- No action required)**

Your workplan will be evaluated against the criteria below. A successful workplan would potentially inform:

- efficacy of an existing regulation or policy
- an EPEA approval condition
- a regional framework (i.e., LARP)
- an emerging issue

Explain how your monitoring program informs management, policy and regulatory compliance. As relevant give consideration for the EEM framework and the approved Key Questions.

This work may be useful for regional or subregional frameworks. Concerns identified within OSR in the SLFN Regions maybe related to changes in biodiversity, declines in fish abundance, fish health, and water quality. Fishing remains important to the culture today. Our Aboriginal right to hunt and fish for food is protected under section 35 of the Constitution Act, 1982. SLFN continues to exercise their right by harvesting fish for subsistence (food) purposes. Ongoing monitoring of fish health in Alberta is important for ensuring food security. Declines in fish abundance and health and changes in biodiversity within the OSR is an emerging issue. A monitoring program involving SLFN perspectives and using culturally relevant indicators is important to identifying areas of concern and ensuring the concerns are addressed.

## 5.0 Indigenous Issues

### **Evaluation of Indigenous Issues Criteria (Information Box Only- No action required)**

Your workplan will be evaluated against the criteria below. A successful workplan would potentially:

- Investigate Indigenous communities key questions and concerns
- Includes culturally relevant receptor(s) and indicator(s)
- Include or be driven by Indigenous communities (participatory or collaborative)
- Develop capacity in Indigenous communities
- Include a Council Resolution or Letter of Support from one or more Indigenous communities
- Describe how ethics protocols and best practices regarding involvement of Indigenous peoples will be adhered to
- Provide information on how Indigenous Knowledge will be collected, interpreted, validated, and used in a way that meets community Indigenous Knowledge protocols

Explain how your monitoring activities are inclusive and respond to Indigenous key questions and concerns and inform the ability to understand impacts on concerns and inform Section 35 Rights

The fish CBM program addresses key questions around fish health, fish population, impacts and is beginning to work on integrated, basin scale approaches to cumulative effects on aquatic systems. Fish health and safe consumption of fish (and other traditional foods) have been identified by SLFN members based on their Dene Charie assessment methods which is directly ties to Aboriginal Rights under s. 35.

Does this project include an Integrated Community Based Monitoring Component?

No

## 6.0 Measuring Change

### **Evaluation of Measuring Change Criteria (Information Box Only- No action required)**

Your workplan will be evaluated against the criteria below. A successful workplan would potentially:

- assess changes in environmental conditions compared to baseline (e.g., validation of EIA predictions)
- report uncertainty in estimates and monitoring is of sufficient power to detect change due to oil sands development on reasonable temporal or spatial scales
- include indicators along the spectrum of response (e.g., individual, population, community)
- focus on areas of highest risk (where change is detected, where change is greater than expected, where development is expected to expand (collection of baseline))
- measure change along a stressor gradient or a stressor/reference comparison

Explain how your monitoring identifies environmental changes and can be assessed against a baseline condition. As relevant give consideration for the EEM framework and the approved Key Questions.

This project will create a program to establish baseline conditions from which poor fish health can be detected and changes in fish health can be monitored through a braided approach of western science sampling protocols (fork length, total length, weight, sex, and maturity) and SLFN Traditional Knowledge for fish health indicators. Interpretation of the 20/21 and 21/22 results should determine needs for long term core monitoring of Fish in the Slave River and if monitoring data is sufficient to answer community questions regarding fish health and biodiversity. Baseline information will be determined using Indigenous Knowledge consultation and the development of Indigenous Indicators □



## 7.0 Accounting for Scale

### **Evaluation of Accounting for Scale Criteria (Information Box Only- No action required)**

Your workplan will be evaluated against the criteria below. A successful workplan would potentially be:

- appropriate to the key question and indicator of interest
- relevant to sub-regional and regional questions
- relevant to organism, population and/or community levels of biological organization
- where modelled results are validated with monitored data
- where monitoring informs on environmental processes that occur at a regional scale. e.g. Characterizing individual sources to gain a regional estimate of acid deposition and understand signal from individual contributing sources.

Explain how your monitoring tracks regional and sub-regional state of the environment, including cumulative effects. As relevant give consideration for the EEM framework and the approved Key Questions.

The monitoring proposed for this project fits into the EEM framework by contributing to surveillance for the surface water category, focused on water and biological quality indicators. Our project seeks to establish a monitoring program which investigates fish biodiversity and fish health on waterways and waterbodies from which SLFN citizens harvest fish within the OSR. The project will be establishing data on baseline conditions of fish health gathered by SLFN Community Monitors. Data collected will help answer key questions regarding changes in fish health and can expand into assessments of water quality. As fish are often considered indicator species for aquatic ecosystems, detection of declines in fish health will provide insight into potential changes in water quality.

## 8.0 Transparency

### **Evaluation of Transparency Criteria (Information Box Only- No action required)**

Your workplan will be evaluated against the criteria below. A successful workplan would potentially include:

- a plan for dissemination of monitoring data, including appropriate timing, format, and aligns with OSM program data management plan
- demonstrated transparency in past performance
- identified an annual progress report as a deliverable
- reporting of monitoring results occurs at timing and format that is appropriate for recipient audience.

Explain how your monitoring generates data and reporting that is accessible, credible and useful. As relevant give consideration for the EEM framework and the approved Key Questions.

Data is made available to the OSM program for use in publications and other research work. We report directly to SLFN leadership and the community at large. We will produce a final report on the program after the fiscal year has ended.

## 9.0 Efficiency

### **Evaluation of Efficiency Criteria (Information Box Only- No action required)**

Your workplan will be evaluated against the criteria below. A successful workplan would include:

- appropriately addressed a risk-informed allocation of resources
- identified the role and justification for each staff member on the proposed work plan
- identified in-kind and leveraged resources (e.g., resources and approaches are appropriately shared with other OSM projects where possible)
- established partnerships (value-added) and demonstrated examples of coordinated efficiencies (e.g., field, analytical)
- identified co-location of monitoring effort
- demonstrated monitoring activities and information collected are not duplicative
- considered sampling/measurement/methods compatibility to other data sources (e.g., AER)

Explain how your monitoring is integrated with other OSM projects and incorporates community-based participation and/or engagement in proposed monitoring activities. As relevant give consideration for the EEM framework and the approved Key Questions.

This proposed project hopes to gather Traditional Knowledge on fish health and developing materials to support Community Monitors in monitoring the health of fish harvested and relied on for subsistence. Methodologies for identifying a fish health could also be shared with the OSM program and may be of assistance to other OSM communities who wish to explore Traditional Knowledge regarding fish health within their own community.

The monitoring goal of this project is to gather western science and SLFN Traditional Knowledge based fish health data for the purpose of a long-term monitoring effort to detect changes and highlight areas of concern for further investigation of impact sources. We hope to continue the monitoring program in future years to ensure the SLFN community members can continue to be empowered to monitor and gain awareness of the state of fish health in water ways and water bodies from which they harvest. Where appropriate, communities could pool fish health data from various surveys across the OSR to provide further insight into the state of waterways and waterbodies in the area.

## 10.0 Work Plan Approach/Methods

### 10.1 List the Key Project Phases and Provide Bullets for Each Major Task under Each Project Phase \*

1. Community Engagement, Planning, and Conference Calls
2. Jackfish sampling (to align with year 1 and 2 sampling)
3. 5 Day Fall Fish Camp
4. Lab Analysis based on standardized sampling using MCFN Whitefish camp methods from 2018
5. Data analysis (year over year comparisons, descriptive statistics)
6. Reporting (including contribution to OSM SOE reporting)

### 10.2 Describe how changes in environmental Condition will be assessed \*

Indigenous Knowledge (Dene Chanie) Indicators and thresholds (for cultural aspects)  
Western Science indicators and thresholds (for integrated Dene Chanie and western science aspects)

### 10.3 Are There Benchmarks Being Used to Assess Changes in Environmental Condition? If So, Please Describe, If Not, State "NONE" \*

Yes. Dene Chanie indicators and thresholds have been identified by SLFN in their impact assessment methodology which described SLFN specific values and aspects which are used as Rights indicators and thresholds for assessing status and changes.  
Western science guidelines for tissue consumption will be adopted from Health Canada (Toxicity Reference Values to support Human Health Risk Assessment (Health Canada 2010) and the US EPA safe consumption limits (<https://www.epa.gov/sites/default/files/2015-06/documents/volume2.pdf>)  
Western science methods for assessing trends and changes over the 3 year period will be adopted from standard statistical methods for environmental monitoring data (Statistical Procedures for Analysis of Environmental Monitoring Data and Risk Assessment

(e.g., objectives, tiers, triggers, limits, reference conditions, thresholds, etc.)

### 10.4 Provide a Brief Description of the Western Science or Community-Based Monitoring Indigenous Community-Based Monitoring Methods by Project Phase \*

Phases 1, 5 and 6 (section 10.1) Dene Chanie indicators and thresholds have been identified by SLFN in their impact assessment methodology which described SLFN specific values and aspects which are used as Rights indicators and thresholds for assessing status and changes.  
Western science guidelines for tissue consumption will be adopted from Health Canada (Toxicity Reference Values to support Human Health Risk Assessment (Health Canada 2010) and the US EPA safe consumption limits (<https://www.epa.gov/sites/default/files/2015-06/documents/volume2.pdf>)  
Western science methods for assessing trends and changes over the 3 year period will be adopted from standard statistical methods for environmental monitoring data (Statistical Procedures for Analysis of Environmental Monitoring Data and Risk Assessment

### 10.5 List the Key Indicators Measured, If Not Applicable, State N/A \*

**Key Indicators:**

- Dene Chanie indicators
  - NíChu Ku (Land & Water): Will the land be healthy for our grandchildren?
  - Háyoŕla (Community): Will the community be filled with love?
  - Dēne Ch'anie (Culture): Will the culture be treasured?
  - Lá k'e (Economy): Can we provide for our families?
  - Dēne t'ezl (Responsibilities): Will SLFN ethics and protocols be respected?
  - Dēne Dáyıŕŕę (Spirituality): Will spiritual relationships be valued?
- baseline fish health conditions collected using western science sampling protocols (e.g., fork length, round weight, total length, weight, sex, and maturity).
- Contaminant Indicators Mercury, Metals, BV, PAHS, SGS-AXYS, Ageing, N-S, stable isotopes
- abnormalities noted through visual inspection of fish sampled by Community Monitors.



- changes in fish health conditions for waterbodies and waterways within the OSR, as determined by analysis of reports from Community Monitors
- exposure dose (estimated using risk assessment methods)

## 11.0 Knowledge Translation

*In the space below, please provide the following:*

- Describe the plan for knowledge transfer and distribution of learnings from the project. This could include workshops, publications, best practice documentation, marketing plan, etc.
- Demonstrate that the knowledge transfer plan is appropriate for the intended end-users.

A communication expert and anthropologist have been included in the project team to support the translation of the western science components to community appropriate and accessible materials. Materials will include plain language summaries with supporting visual aids. These will be presented to SLFN members who participate in fish camp at a workshop. Materials will also be broadcast within the community using social media feeds the Lands Department maintains.

## 12.0 External Partners

List by project or project phase each component that will be delivered by an external party (including analytical laboratories) and name the party. Describe and name the associate work plan/grant/contract for these services. \* state none if not required

AEP Laboratory analysis and processing  
Integrated Toxicology Solutions (data analysis and reporting)  
Prairie Fish consulting (Dene Charie values and aspects analysis and knowledge translation, reporting)  
Wapiti Studios (science translation and communication materials)  
PGL (field program sampling coordination)

\*To ensure complete work plan proposal submission, all grants and contracts listed in this section should also be captured in Grants & Contracts.

## 13.0 Data Sharing and Data Management

For 2022-23 the following approach will be taken by the OSM Program related to data sharing.

For all work plans of a **western science** nature funded under the OSM Program, data sharing is a condition of funding and must align with the principle of "**Open by Default**". In this case, all data is to be shared with the OSM Program as directed by the OSM Program Data Management work plan.

For all work plans involving **Indigenous Knowledge** as defined below and funded under the OSM Program, data sharing is a condition of funding and the Indigenous Knowledge components of the work plan must align with the principle of "**Protected by Default**". In this case, all data as defined as Indigenous Knowledge, are to be retained by the Indigenous community to which the Indigenous Knowledge is held.

*Indigenous Knowledge is defined as:*

"The knowledge held by First Nations, Inuit and Métis peoples, the Aboriginal peoples of Canada. Traditional knowledge is specific to place, usually transmitted orally, and rooted in the experience of multiple generations. It is determined by an Aboriginal community's land, environment, region, culture and language. Traditional knowledge is usually described by Aboriginal peoples as holistic, involving body, mind, feelings and spirit. Knowledge may be expressed in symbols, arts, ceremonial and everyday practices, narratives and, especially, in relationships. The word tradition is not necessarily synonymous with old. Traditional knowledge is held collectively by all members of a community, although some members may have particular responsibility for its transmission. It includes preserved knowledge created by, and received from, past generations and innovations and new knowledge transmitted to subsequent generations. In international or scholarly discourse, the terms traditional knowledge and Indigenous knowledge are sometimes used interchangeably."

*This definition was taken from the Canadian Government's Tri-council Policy Statement for Ethical Research involving Humans (Chapter 9, pg. 113) and is an interim definition specific to the Oil Sands Monitoring Program.*

**Data Sharing and Data Management** *Continued*

13.1 Has there, or will there be, a Data Sharing Agreement established through this Project? \*

NO

13.2 Type of Quantitative Data Variables:

Choose an item

13.3 Frequency of Collection:

Choose an item.

13.4 Estimated Data Collection Start Date:

Click or tap to enter a date.

13.5 Estimated Data Collection End Date:

Click or tap to enter a date.

13.6 Estimated Timeline For Upload Start Date:

Click or tap to enter a date.

13.7 Estimated Timeline For Upload End Date:

Click or tap to enter a date.

13.8 Will the data Include traditional knowledge as defined by and provided by an Indigenous representative, Community or Organization?

Choose an Item

**TABLE 13.9 Please describe below the Location of Data and Data Type:**

*Add a Data Source by clicking on the table and then clicking on the blue "+" symbol on the bottom right side of table*

Name of Dataset	Location of Dataset (E.g.: Path, Website, Database, etc.)	Data File Formats (E.g.: csv, txt, API, accdb, xlsx, etc.)	Security Classification
<i>Fish Sample Analysis Health results</i>	Laptop, database	XLX, CVS	Open by Default
<i>IK indicators</i>	Laptop, database	XLS, CVS	Protected by Default



## 14.0 2022/23 Deliverables

Add an additional deliverable by clicking on the table and then clicking on the blue "+" symbol on the bottom right side of table.

10.1 List the Key Project Phases and Provide Bullets for Each Major Task under Each Project Phase \*

1. Community Engagement, Planning, and Conference Calls - July/ Aug 2022
2. Jackfish sampling (to align with year 1 and 2 sampling) – Sept 2022
3. 5 Day Fall Fish Camp – Sept 2022
4. Lab Analysis based on standardized sampling using MCFN Whitefish camp methods from 2018 (Oct/Nov 2022)
5. Data analysis (year over year comparisons, descriptive statistics) – Dec/ Jan 2022
6. Reporting (including community verification and results sharing workshop and contribution to OSM SOE reporting- Feb/ March 2022)

Type of Deliverable	Delivery Date	Description
Key Engagement/Participation Meeting	Q2	Fall fish camp (5 days)
Stakeholder or Community Presentation	Q4	Community results sharing, verification meeting
Choose an item.	Choose an item.	Click or tap here to enter text.

## 15.0 Project Team & Partners

**In the space below please provide information on the following:**

- Describe key members of the project team, including roles, responsibilities and expertise relevant to the proposed project.
- Describe the competency of this team to complete the project.
- Identify any personnel or expertise gaps for successful completion of the project relative to the OSM Program mandate and discuss how these gaps will be addressed.
- Describe the project management approach and the management structure.

Becky Kostka, Lands & Resources Manager  
Mark McMaster ECCC Fish Health  
Cochise Paulette, Lands Coordinator  
Lawrence Beggair, Crew Leader  
Lands Monitoring Crew (Robert McDonald, Kelly Mandeville, Riley Mandeville Hessdorfer, Felix Beaver)  
Christina Trotter, PGL Environmental  
Mandy Olsgard, ITS Ltd.



## 16.0 Project Human Resources & Financing

### Section 16.1 Human Resource Estimates

Building off of the competencies listed in the previous section, please complete the table below. Add additional rows as necessary. This table must include **ALL staff involved** in the project, their role and the % of that staff's time allocated to this work plan. The AEP calculated amount is based on an estimate of \$120,000/year for FTEs. This number cannot be changed. The OSM program recognizes that this is an estimate.

#### Table 16.1.1 AEP

Add an additional AEP Staff member by clicking on the table and then clicking on the blue "+" symbol on the bottom right side of table. The total FTE (Full Time Equivalent) is Auto Summed (in Table 16.2.1) and converted to a dollar amount.

Name (Last, First)	Role	% Time Allocated to Project
Click or tap here to enter text.	Click or tap here to enter text.	0%

#### Table 16.1.2 ECCC

Add an additional ECCC Staff member by clicking on the table and then clicking on the blue "+" symbol on the bottom right side of table. The total FTE (Full Time Equivalent) is Auto Summed in Table 16.2.2

Name (Last, First)	Role	% Time Allocated to Project
Click or tap here to enter text.	Click or tap here to enter text.	0%

The tables below are the financial tables for Alberta Environment & Parks (AEP) and Environment & Climate Change Canada. All work plans under the OSM Program require either a government lead or a government coordinator.

### Section 16.2 Financing

The OSM Program recognizes that many of these submissions are a result of joint effort and monitoring initiatives. A detailed "PROJECT FINANCE BREAKDOWN" must be provided using the Project Finance Breakdown Template provided, accessible here (ctrl + click the link below). Please note that completion of this Project Finance Breakdown Template is mandatory and must be submitted along with each workplan.

## [PROJECT FINANCE BREAKDOWN TEMPLATE \(CTRL+CLICK HERE\)](#)

**Table 16.2.1 Funding Requested BY ALBERTA ENVIRONMENT & PARKS**

Organization – Alberta Environment & Parks ONLY	Total % time allocated to project for AEP staff	Total Funding Requested from OSM
<b>Salaries and Benefits</b> <i>(Calculated from Table 16.1.1 above)</i>	<b>0.00%</b>	<b>\$0.00</b>
<b>Operations and Maintenance</b>		
Consumable materials and supplies		\$0.00
Conferences and meetings travel		\$0.00
Project-related travel		\$0.00
Engagement		\$0.00
Reporting		\$0.00
Overhead		\$0.00
<b>Total All Grants</b> <i>(Calculated from Table 16.4 below)</i>		<b>\$0.00</b>
<b>Total All Contracts</b> <i>(Calculated from Table 16.5 below)</i>		<b>\$0.00</b>
<b>Sub- TOTAL</b> <i>(Calculated)</i>		<b>\$0.00</b>
Capital*		\$0.00
<b>AEP TOTAL</b> <i>(Calculated)</i>		<b>\$0.00</b>

\* The Government of Alberta Financial Policies (Policy # A600) requires that all **capital asset** purchases comply with governmental and departmental legislation, policies, procedures, directives and guidelines. **Capital assets** (Financial Policy # A100, Government of Alberta, January 2014) are tangible assets that: have economic life greater than one year; are acquired, constructed, or developed for use on a continuing basis; are not held for sale in ordinary course of operations; are recorded and tracked centrally; have a cost greater than \$5,000.

Some **examples of capital asset equipment include:** laboratory equipment, appliances, boats, motors, field equipment, ATV's/snowmobiles, stationary equipment (pier/sign/weather), fire/safety equipment, pumps/tanks, heavy equipment, irrigation systems, furniture, trailers, vehicles, etc. (Financial Policy # A100, Government of Alberta, January 2014).

**Table 16.2.2 Funding Requested BY ENVIRONMENT & CLIMATE CHANGE CANADA**

Organization – Environment & Climate Change Canada ONLY	Total % time allocated to project for ECCC staff	Total Funding Requested from OSM
<b>Salaries and Benefits FTE</b> <i>(Please manually provide the number in the space below)</i>		
Salaries and Benefits		\$0.00
<b>Operations and Maintenance</b>		
Consumable materials and supplies		\$0.00
Conferences and meetings travel		\$0.00
Project-related travel		\$0.00
Engagement		\$0.00
Reporting		\$0.00
Overhead		\$0.00
<b>ECCC TOTAL</b> <i>(Calculated)</i>		<b>\$0.00</b>

\* ECCC cannot request capital under the OSM program. Any capital requirements to support long-term monitoring under the OSM program should be procured by Alberta and captured in that budget table.

**Table 16.3**

**Complete ONE table per Grant recipient.**

*Add a Recipient by clicking on the table and then clicking on the blue "+" symbol on the bottom right side of table. The total of all Grants is Auto Summed in Table 16.2.1*

GRANT RECIPIENT - ONLY: Becky Kostka	SLFN Fall Fish Camp Study (Year 3)
GRANT RECIPIENT - ONLY:	Smith's Landing First Nation
<b>Category</b>	<b>Total Funding Requested from OSM</b>
Salaries and Benefits	\$12,000
<b>Operations and Maintenance</b>	
Consumable materials and supplies	\$14,700
Conferences and meetings travel	\$0.00
Project-related travel	\$15,000
Engagement	\$48,750
Reporting	\$10,000
Overhead	\$10,045
GRANT TOTAL <i>(Calculated)</i>	<b>\$110,495 \$0.00</b>

**Table 16.4**

**Complete ONE table per Contract recipient.**

*Add a Recipient by clicking on the table and then clicking on the blue "+" symbol on the bottom right side of table. This section is only to be completed should the applicant intend to contract components or stages of the project out to external organizations. The total of all Contracts is Auto Summed in Table 16.2.1*

CONTRACT RECIPIENT - ONLY: Name	Click or tap here to enter text.	
CONTRACT RECIPIENT - ONLY: Organization	AEP contract for lab analysis for 50 samples	
<b>Category</b>	<b>Total Funding Requested from OSM</b>	
Salaries and Benefits	\$40,900	
<b>Operations and Maintenance</b>		
Consumable materials and supplies	\$0.00	
Conferences and meetings travel	\$0.00	
Project-related travel	\$0.00	
Engagement	\$0.00	
Reporting	\$0.00	
Overhead	\$0.00	
CONTRACT TOTAL <i>(Calculated)</i>	<b>\$40,900</b>	<b>\$0.00</b>

**Table 16.5 GRAND TOTAL Project Funding Requested from OSM Program**

*The table below is auto calculated, please do not try to manually manipulate these contents.*

Category	Total Funding Requested from OSM
<b>Salaries and Benefits</b> <i>Sums totals for salaries and benefits from AEP and ECCC ONLY</i>	\$0.00
<b>Operations and Maintenance</b>	
<b>Consumable materials and supplies</b> <i>Sums totals for AEP and ECCC ONLY</i>	\$0.00
<b>Conferences and meetings travel</b> <i>Sums totals for AEP and ECCC ONLY</i>	\$0.00
<b>Project-related travel</b> <i>Sums totals for AEP and ECCC ONLY</i>	\$0.00
<b>Engagement</b> <i>Sums totals for AEP and ECCC ONLY</i>	\$0.00
<b>Reporting</b> <i>Sums totals for AEP and ECCC ONLY</i>	\$0.00
<b>Overhead</b> <i>Sums totals for AEP and ECCC ONLY</i>	\$0.00
<b>Total All Grants (from table 16.2.1 above)</b> <i>Sums totals for AEP Tables ONLY</i>	\$0.00
<b>Total All Contracts (from table 16.2.1 above)</b> <i>Sums totals for AEP Tables ONLY</i>	\$0.00
<b>Sub- TOTAL</b>	\$0.00
<b>Capital*</b> <i>Sums total for AEP</i>	\$0.00
<b>GRAND PROJECT TOTAL</b>	\$0.00

Some **examples of capital asset equipment include:** laboratory equipment, appliances, boats, motors, field equipment, ATV's/snowmobiles, stationary equipment (pier/sign/weather), fire/safety equipment, pumps/tanks, heavy equipment, irrigation systems, furniture, trailers, vehicles, etc. (*Financial Policy # A100, Government of Alberta, January 2014*).



## 17.0 FINANCIAL MANAGEMENT

**The OSM Program reserves the right to reallocate project funding during the current fiscal year on the basis of project performance and financial overspend or underspend.**

Please check this box to acknowledge you have read and understand

**In the space below please describe the following:**

- Discuss how potential cost overruns and cost underruns will be managed.
- If this is a continuing project from last year, identify if this project was overspent or underspent in the previous year and explain why.
- Describe what risks and/or barriers may affect this project.

We have already been experiencing cost overruns for our fish camp which SLFN has been supplementing from it's own funding. We are increasing the costs to try to account for this. Do not expect the program to be underspent; if it is we will either apply to the Program to reallocate funding to additional CBM work, or prepare to invoice for actual expenditures.



## 18.0 Alternate Sources of Project Financing – In-Kind Contributions

Table 18.1 In-kind Contributions

Add an In Kind Contribution by clicking on the table and then clicking on the blue "+" symbol on the bottom right side of table.

DESCRIPTION	SOURCE	EQUIVALENT AMOUNT (\$CAD)
Click or tap here to enter text.	Click or tap here to enter text.	\$0.00
<b>TOTAL</b>		<b>\$0.00</b>



## 19.0 Consent & Declaration of Completion

**Lead Applicant Name**

Becky Kostka

**Title/Organization**

Lands & Resources Manager, Smith's Landing First Nation

**Signature**

Becky Kostka

**Date**

2021-10-07

**Government Lead / Government Coordinator Name** (if different from lead applicant)

Click or tap here to enter text.

**Title/Organization**

Click or tap here to enter text.

**Signature**

Click or tap here to enter text.

**Date**

Click or tap to enter a date.



## PROGRAM OFFICE USE ONLY

### **Governance Review & Decision Process**

*this phase follows submission and triggers the Governance Review*

**TAC Review (Date):**

Click or tap to enter a date.

**ICBMAC Review (Date):**

Click or tap to enter a date.

**SIKIC Review (Date):**

Click or tap to enter a date.

**OC Review (Date):**

Click or tap to enter a date.

**Final Recommendations:**

**Decision Pool:**

Choose an item.

**Notes:**

Click or tap here to enter text.

### **Post Decision: Submission Work Plan Revisions Follow-up Process**

*This phase will only be implemented if the final recommendation requires revisions and follow-up from governance*

**ICBMAC Review (Date):**

Click or tap to enter a date.

**SIKIC Review (Date):**

Click or tap to enter a date.

**OC Review (Date):**

Click or tap to enter a date.

**Comments:**

**Decision Pool:**

Choose an item.

**Notes & Additional Actions for Successful Work Plan Implementation:**

Click or tap here to enter text.