

Ratified at TFN Community Meeting  
on June 23, 2025

TEMAGAMI FIRST NATION / TEME-AUGAMA ANISHNABAI

# Environmental Management Plan

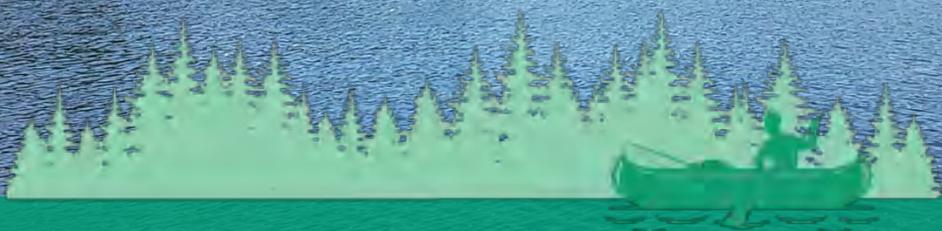
*UPDATED JANUARY 2025*

# Table of Contents

1	Introduction .....	2
2	Vision, Goals, and Priorities.....	11
3	Community Context.....	15
4	Land Development.....	20
5	Surface Water and Groundwater .....	25
6	Contamination and Fill Management .....	31
7	Vegetation and Wildlife .....	36
8	Food Security .....	41
9	Liquid, Solid and Hazardous Waste.....	45
10	Air Quality .....	49
11	Renewable Energy.....	52
12	Climate Change .....	55
13	Land Code and Environmental Management .....	59
14	Implementation.....	62
15	References .....	69
	Table 1-1: Overview of Key Activities to Develop the EMP.....	7
	Table 4-1: Concerns and Issues – Land Development .....	22
	Table 4-2: Environmental Policies – Land Development .....	23
	Table 5-1: Concerns and Issues – Surface Water and Groundwater .....	28
	Table 5-2: Environmental Policies – Surface Water and Groundwater.....	30
	Table 6-1: Overview of the Phase 2 ESA Results .....	32
	Table 6-2: Concerns and Issues – Contamination and Soil Management .....	34
	Table 6-3: Environmental Policies – Contamination and Fill Management .....	35
	Table 7-1: Concerns and Issues - Vegetation and Wildlife.....	38
	Table 7-2: Environmental Policies – Vegetation and Wildlife.....	39
	Table 8-1: Concerns and Issues - Food Security.....	43
	Table 8-2: Environmental Policies – Food Security .....	44
	Table 9-1: Concerns and Issues – Liquid, Solid and Hazardous Waste .....	46
	Table 9-2: Environmental Policies – Liquid, Solid and Hazardous Waste Management .....	48
	Table 10-1: Concerns and Issues – Air Quality.....	50

Table 10-2: Environmental Policies – Air Quality.....	51
Table 11-1: Concerns and Issues – Renewable Energy.....	53
Table 11-2: Environmental Policies – Renewable Energy .....	54
Table 12-1: Concerns and Issues – Climate Change .....	56
Table 12-2: Environmental Policies – Climate Change .....	57
Table 13-1: Overview of Applicable Federal Legislation .....	60
Table 14-1: Roles and Responsibilities for Implementation and Maintenance .....	62
Table A-1: The EMP Development Process.....	A-2
Table B-1: Potential Environmental Management Responses .....	B-2
Table C-1: Summary of Potentially Contamination on Bear Island .....	C-2
Table C-2: Overview of the Phase 2 ESA Results .....	C-7
Figure 1-1: Environmental Management Plan Focus Area, Bear Island.....	5
Figure 1-2: Overview of EMP Development Process .....	6
Figure 3-1: n'Daki Menan Traditional Territory & Family Lands.....	17
Figure 4-1: Potential Land Uses on Bear Island.....	21
Figure 5-1: Known Environmental Features on Bear Island .....	27
Figure 6-1: Potentially Contaminated Sites on Bear Island .....	33

Appendix A	Environmental Management Plan Development Process
Appendix B	Potential Environmental Management Responses
Appendix C	Summary of Potentially Contaminating Activities on Bear Island
Appendix D	Administrative Tasks
Appendix E	Implementation Schedule



# Section 01

Introduction



# 1 Introduction

## 1.1 Welcome to Our EMP

We, the Temagami First Nation (TFN) and Teme-Augama Anishnabai (TAA), have developed this Environmental Management Plan (EMP) to honor our environmental responsibilities under the Framework Agreement on First Nations Land Management (Framework Agreement).

Through the Framework Agreement on First Nations Land Management, TFN developed the *Temagami First Nation Land Code* (Land Code) to regain control over the management of its reserve lands and resources (ratified in June 2017; certified August 25, 2017). The Land Code replaces 40 land-related sections of the *Indian Act* with TFN's own way of operating and doing things.



An Environmental Management Plan (EMP) is a document that identifies existing and potential future environmental issues. It also identifies actions to address these issues. Actions can range from education materials to environmental policies.

### Our Environmental Responsibilities Under Land Code



Protect and assess environmental conditions on reserve lands to protect community members, wildlife, and the ecosystem.



Develop and enforce our own environmental policies and guidelines.



Comply with at least federal environmental legislation on reserve lands. Overall, TFN/TAA's goal is to approach environmental management practices from a standard that is higher than that of the government.



Be liable for environmental damage on reserve lands and any non-compliance with federal laws. If there is an existing problem on reserve that was there before Land Code, Canada continues to be responsible and liable for any actions or inactions that may have caused the problem.

To assist with the environmental management of reserve lands, the Framework Agreement requires us to establish a plan to protect the environment. This plan may include, among other items, an EMP, Environmental Assessment (EA) process, guidelines, plans, and policies. Once developed, the EMP includes tools to ensure we do our due diligence and manage liability risks as it pertains to the environment. By doing so, we close the "regulatory gap" created by opting out of the sections of the *Indian Act* on land management.



## 1.2 Purpose of the EMP

With the adoption of the Land Code, we have reclaimed our ability to govern and manage our reserve lands and resources. With this responsibility comes the need to take care of our lands and resources for the benefit of current and future generations. The development of the EMP is an important process that will help us maintain and improve the environmental health and quality of our community lands.



### Purpose of the Environmental Management Plan

- Describe current land uses, environmental features, and existing or anticipated environmental issues or challenges;
- Identify community environmental management priorities and specify policies or regulations that may be necessary or appropriate;
- Identify actions to mitigate environmental issues;
- Establish environmental policies based on best management practices to prevent or minimize future environmental impacts;
- Clarify roles and responsibilities related to environmental management, as well as environmental planning and reporting procedures;
- Increase environmental awareness in the community; and,
- Protect TFN / TAA lands and their environmental features for future generations.



## 1.3 Jurisdiction of the EMP

The EMP is applicable to Bear Island, our reserve lands (also known as Bear Island Reserve #1). The total area of Bear Island is 291 ha (2.91 km<sup>2</sup>). The current on-reserve population is approximately 273 residents, with an additional 588 Members living off-reserve.

Under Land Code, our reserve lands are subject to federal legislation but not provincial legislation. While provincial laws do not apply to reserve lands, it is our intention that environmental protection standards created by TFN and penalties for non-compliance must also be at least equal to those established by the province. However, the EMP may be more stringent in select areas.

Even though this EMP applies to reserve lands, collaboration with local jurisdictions and organizations is expected. This is due to the interconnectedness of the ecosystems and environmental issues and concerns.

Please refer to **Figure 1-1** for an overview of the focus area of this EMP.



### **n'Daki Menan**

While the focus of the EMP is on Bear Island, our homeland is known as n'Daki Menan, which encompasses approximately 4,000 sq. miles. Our sacred stories (aadizookan) tell us that we were placed on n'Daki Menan by the Creator (gichi manidoo) and provided with instructions to live (bimaadizi) and to coexist with all of our relatives in the creation n'Daki Menan.

Our sacred stories (aadizookan) of truth are taken from the animal world, the plant world, the waters, and the skies, and passed down from our ancestors.

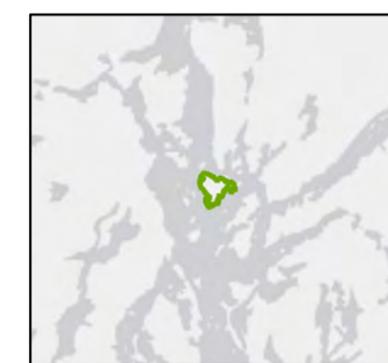
Teme-Augama Anishnabai bimaadizi and aadizookan translates into Indigenous law and sacred responsibilities, which will always be respected by TFN/TAA (Lands and Resources Committee).



**TEMAGAMI FIRST NATION  
ENVIRONMENTAL MANAGEMENT PLAN**

**FIGURE 1-1  
ENVIRONMENTAL MANAGEMENT PLAN FOCUS AREA,  
BEAR ISLAND**

- Point of Interest
- ▭ Bear Island



MAP DRAWING INFORMATION:  
BASE DATA PROVIDED BY MNRF  
MAP CREATED BY: GM  
MAP CHECKED BY: AB  
MAP PROJECTION: NAD 1983 UTM Zone 17N



PROJECT: 224497  
STATUS: DRAFT  
DATE: 2023-05-09



## 1.4 Preparing the EMP

The EMP was created by and for our community. A collaborative approach was used to gather knowledge and input on environmental concerns and opportunities and to identify environmental management priorities that form the basis of this EMP. The TFN/TAA community, youth, Elders, leadership, the Lands and Resources (L&R) Committee, and staff – all participated in creating this Plan. Dillon Consulting Limited assisted with the preparation of the EMP.



**Figure 1-2** below provides an overview of the EMP development process. **Table 1-1** provides a high-level overview of the key activities completed throughout the EMP development process. Please refer to **Appendix A** for additional detail on these activities.

Figure 1-2: Overview of EMP Development Process

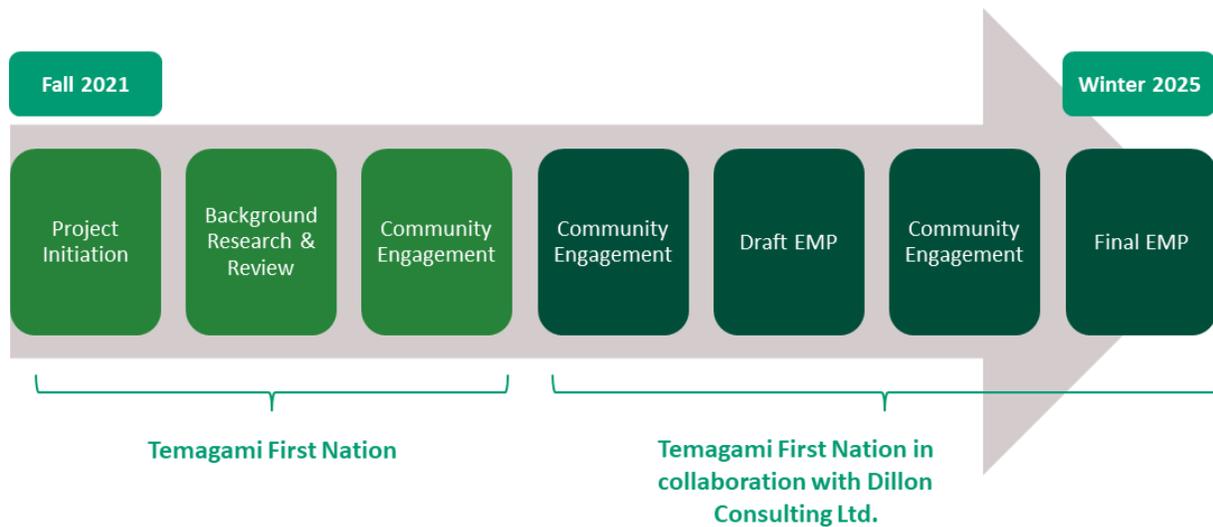




Table 1-1: Overview of Key Activities to Develop the EMP

 Background Research and Review	 Two Virtual Introduction Session	 Four Virtual and In-person Community Discussions	 Land Tours
 Four Elders Session	 One Online Survey	 Four Workshops with the L&R Committee	 Three Community Newsletters
 Five Community Open Houses	 Two Youth Sessions	 Draft EMP	 Final EMP



### Reflecting on the Past, Present and Future

- Hunting practices have changed. Now, we need permits.
- We use freezers for meat, not drying it like before.
- People grow or buy veggies, not just picking from nature.
- We eat different meats now. There are not as many bears and partridges anymore.
- Before, there were four Islands of Agriculture: Temagami Island, Bear Island, South Arm Island, and Wabun Island.
- People in the community watched the land to learn and observe changes.
- Fast boats affect learning about water and shores; in a canoe, you knew everything.
- Roads changed the community; some feel it was better and safer without them.
- In the past, women did not hunt because they created life, and men took life. In summer, roles could switch, with men becoming caretakers while women gathered food.



**We do not manage the environment; it tells us how we should take care of it. *TFN / TAA Youth***

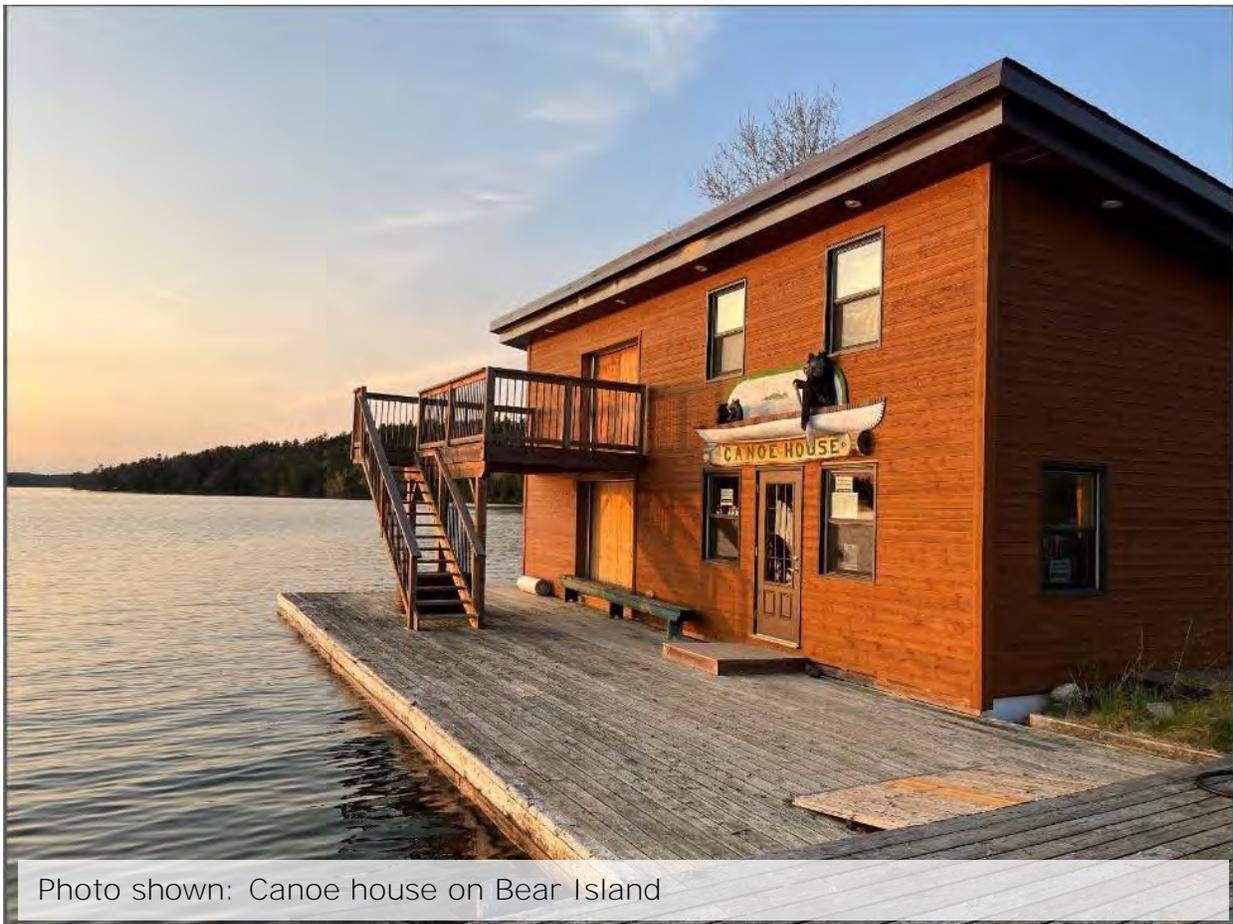


Photo shown: Canoe house on Bear Island



## 1.5 How to Read the EMP

Our EMP is intended for everyone – TFN/TAA environmental managers, planners, monitors and decision-makers, as well as all of the TFN/TAA community – to refer to when conducting any work related to the assessment, management, and monitoring of the environment. The EMP is organized as follows:



**Section 1 – Introduction:** Contains information about what an EMP is and its purpose, and the process through which this EMP was created.



**Section 2 – Vision, Goals, and Priorities:** Provides the foundation for the EMP and outlines the Environmental Management Priorities based on the input received through community engagement. The section also outlines the existing TFN/TAA Environment Management Tools.



**Section 3 – Community Context:** Provides contextual information about our community and our relationship to our land.



**Section 4 to 12– Environmental Management Priorities:** Includes an overview of the Environmental Management Priorities that guide the EMP, including considerations, issues and concerns, and policies.



**Section 13 – Framework Guiding Environmental Protection:** Refers to the Temagami First Nation Land Code and the ratification process for the EMP.



**Section 14 – Implementation:** Outlines the implementation of the EMP and who is responsible for each task during the implementation process.

**Appendices:** Provide additional information on engagement activities, potential environmental management responses, known contaminated sites, administrative tasks, and the Implementation Schedule for the environmental management actions identified by TFN/TAA community participants.



# Section 02

Vision, Goals, and Priorities



## 2 Vision, Goals, and Priorities

### 2.1 Vision

The EMP is guided by the vision statement that was developed for the Land Use Plan for Bear Island.

***"Honouring our ancestors and future generations, our land use reflects Anishnabai values and responsibilities to n'Daki Menan."***

The vision statement for the Land Use Plan was created in collaboration with the Lands and Resources Committee and the TFN/TAA community who shared their knowledge and provided guidance over the course of the Land Use Plan project.

### 2.2 Environmental Management Goals

Our environmental management goals are guided by our respect for n'Daki Menan, the land, environment and all the inhabitants. The following provides the environmental management goals for the EMP.



**Food Security:** Working towards food security is important to the cultural, social, and economic sustainability and health of our community. By promoting food security TFN/TAA practice and share traditional harvesting and hunting practices across generations, while increasing self-reliance.

**Circular Economy:** We aim to embrace innovation through the EMP by exploring ways to reduce the use of non-renewable resources, reuse waste (such as raw materials), and recycle to minimize our environmental footprint.

**Climate Change Adaptation:** As we are experiencing the impacts of a changing climate, we must protect the social, cultural, economic, spiritual, and environmental well-being of our community.

**Waste Reduction:** By reducing waste and practicing recycling and reuse of materials, we can minimize our impact on local and global lands and waters.



## 2.3 Environmental Management Priorities

The following nine priorities guide environmental management on Bear Island. The priorities are based on the background research, site visits, and engagement activities outlined in **Section 1.4** of this document.



### **Land Development**



### **Surface Water and Groundwater**



### **Contamination and Fill Management**



### **Vegetation and Wildlife**



### **Food Security**



### **Solid and Hazardous Waste Management**



### **Air Quality**



### **Renewable Energy**



### **Climate Change**

Below is an overview of the TFN/TAA land management tools and resources. Appendix B includes an overview of potential environmental management responses to address the issues and concerns identified within this plan, including Regulations; Policies; Guidelines and Best Management Practices; Education and Outreach; and Monitoring, and Reporting.



### 2.3.1 Current Land Management Tools and Resources



**Tribal Constitution:** The TFN Tribal Constitution guides community leaders and elected representation when making decisions for the community. It provides laws pertaining to membership, political representation, infrastructure, and the environment.

**Land Code:** Through the Framework Agreement, TFN developed a Land Code to regain control over the management of our reserve lands and resources (ratified in June 2017; certified August 25, 2017). Currently, the Land Code applies to reserve lands that are within the boundary of Bear Island Indian Reserve No. 1. However, any other future lands under TFN/TAA jurisdiction, such as those in the Proposed Settlement Lands that TFN may acquire, can also be protected under the Land Code if the Nation chooses to do so.

**Land Use Plan for Bear Island:** The Land Use Plan for Bear Island was approved in October 2022. The Land Use Plan identifies potential future land uses based on community priorities and needs and which areas should be protected. A key objective of the Land Use Plan is to protect significant environmental sites and areas.

**Implementation Plan:** The Implementation Plan (once approved) will provide information on development guidelines; outline the development approvals process; and provide tools to staff who process development applications.

**Housing Program:** The TFN Housing Policy is a policy that is developed for the betterment of Bear Island. The Housing Policy includes information on home inspections, the Residential Rehabilitation Assistance Program (RRAP) and housing upkeeps, which contribute to property maintenance and home improvements.

**Bear Island Forest Stewardship Plan:** The Bear Island Forest Stewardship Plan is a key document guiding forest management on the island. The intent of the Plan is to manage forest resources wisely, with uses primarily limited to the harvesting of timber for personal use. Additionally, harvesting firewood is an important practice for TFN/TAA. The Bear Island Forest Stewardship Plan needs to be updated.

**Phase 1 ESA:** As part of the Phase 1 ESA completed in 2015, sites with potential environmental concerns (APECs) were identified on Bear Island. The analysis was based on observations of on-site commercial, industrial, and institutional buildings and interviews with community members regarding potentially contaminating activities (PACs).

**Phase 2 ESA:** As part of the Phase 2 ESAs completed in 2021 and 2022, contaminants at the following sites have been cleaned up: Marina Area; Former Barge Landing and Construction Yard; Water Treatment Plant; Public Works Garage; and the Multi Use Facility.

**Memorandum of Understanding (MOU) with the Municipality of Temagami:** The MOU ratifies the harmonization of land use planning processes, zoning by-laws, and other areas between the jurisdictions.



# Section 03

Community Context



## 3 Community Context

### 3.1 Our People

We are the Temagami First Nation (TFN). Originally, we were known as the Teme-Augama Anishnabai (TAA), before colonial government interference. In 1876, following the creation of the *Indian Act*, the Federal Government separated people into Indian and Non-Indian peoples. This created for the first time a split of the people into different categories as recognized by an external government. As of 2017, Bear Island has a non-seasonal population of approximately 273 members. Approximately 588 members live in places such as North Bay.

### 3.2 Our Lands

#### 3.2.1 Bear Island

Bear Island is a triangular shaped island, and the second largest island in Lake Temagami. It is the home of our community and the administrative centre for TFN. Bear Island is located about 90 kilometres (km) northwest of the City of North Bay and 85 km south of the City of Temiskaming Shores. The closest urban centre is the Municipality of Temagami, 20 km northeast of Bear Island.

Although the community is located on Bear Island, it is within close proximity to the Municipality of Temagami. The town and the surrounding area draw tourists to its attractions, such as its boreal forests, lakes, mountains (such as Caribou Mountain), fishing, wildlife (such as the Grey Owl), camping sites, cottage vacationing, Provincial Parks (such as Finlayson Point Provincial Park), hiking trails and extensive canoe routes. Tourism serves a significant role in the region. Bear Island itself has various youth camps, dance camps, spiritual retreats, and canoe adventures for tourists.



Image 3-1: Aerial View of Bear Island



### 3.2.2 n'Daki Menan

Our homeland is known as n'Daki Menan, which encompasses approximately 1,035,995 hectares (ha) (10,360 km<sup>2</sup>). **Figure 3-1** provides an overview of the n'Daki Menan Traditional Territory and Family Lands.

Our stories tell us that we were put on n'Daki Menan by the Creator. It has been proven from archaeological research that we have lived here for at least 6,000 years. n'Daki Menan is comprised of 14 family territories. These territories provided for all our needs, well being physically, mentally and spiritually, all given from the land and its resources. Food and medicines from the animals and forest were plentiful. Medicines were readily available and used when needed. Our spirituality is connected to all living and non-living things on our homeland.

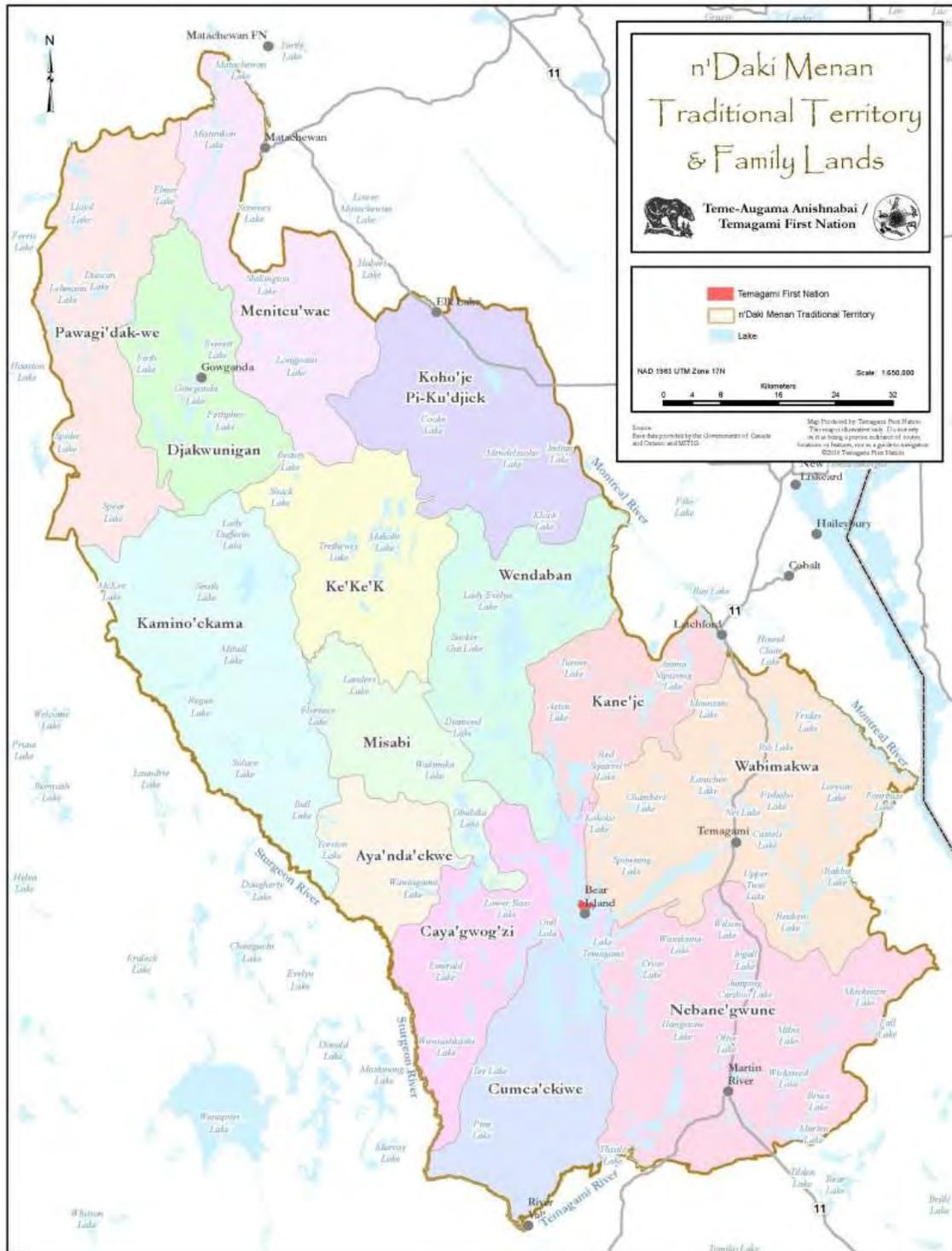
The TFN/TAA's relationship with n'Daki Menan (our land) begins with aadizookan, which are the sacred stories of truth taken from the animal world, the plant world, the waters, and the skies, and passed down from our ancestors. Our sacred stories (aadizookan) tell us the TAA were placed here in n'Daki Menan by Creator (gichi manidoo) and provided with instructions for TAA way to live (bimaadizi) to coexist with all of our relatives in the creation n'Daki Menan. Teme-Augama Anishnabai bimaadizi and aadizookan translates into Indigenous law and sacred responsibilities, which will always be respected by the TFN/TAA.

In the Vision of Co-Existence on February 10, 1992, TAA Chief Gary Potts said:

***"The neo colonial and reserve system mentality is behind us now. We are stepping out into the future from the past. We have had all of this land for Teme-Augama Anishnabai self- sufficiency for thousands of years."***



Figure 3-1: n'Daki Menan Traditional Territory & Family Lands



Source: Teme-Augma Anishnabai Website, <https://theta.ca/>



### 3.3 Teme-Augama Anishnabai Struggle for Justice

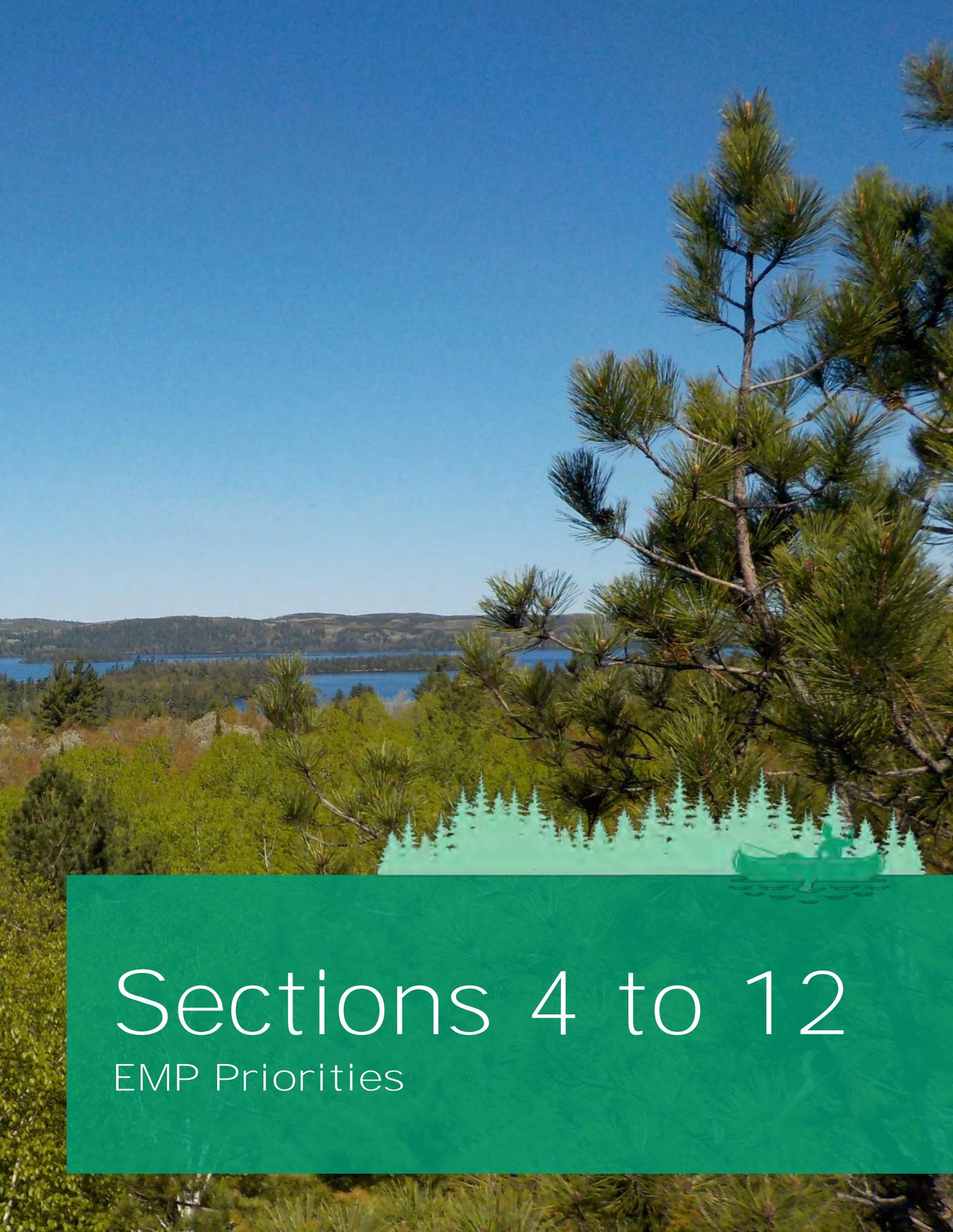
Our struggle for justice has been ongoing for over 143 years. In 1877, the Chief of the Temagami People (Tonene Whitebear) approached representatives of the Federal Department of Indian Affairs to ask for a reserve to protect his people from lumber interests, which was encroaching on our traditional lands. Six years later (1883) the Government began to pay treaty annuities without obtaining any formal cession of lands. The Government also promised to survey a reserve. A reserve was surveyed (the Austin Bay Reserve), which was comparable to other reserves in the Robinson Huron Treaty area (100 sq. miles). Ontario felt that the location was too rich in timber for it to be Reserve land.

The Temagami Forest Reserve is established. Our people were harassed in such that they must get permission to cut firewood and families are flooded out. As time goes on, Ontario takes the opinion that there is less and less reason for lands to be set aside for the Temagami Indians. It is not until 1971 that a Reserve is created on Bear Island over 1 sq. mile by a Federal government Order in Council; it is not a Treaty Reserve.

In 1973 the TAA (Chief Gary Potts, who was also the Chief of the Temagami Indian Band), in the face of continuing lack of responsiveness from either the Federal or Provincial Governments, register cautions against some 4,000 sq. miles (110 townships) and asserts ownership of our traditional lands. In light of the registration of the cautions, Ontario sues the TAA. In and out of Court for years, which culminated 1991 in the Supreme Court of Canada decision which stated that the Temagami Indians adhered to the Robinson Huron Treaty but noted that the Crown had breached its treaty and fiduciary duty, and that TAA did before admission have Aboriginal title.

As of today, 130 sq. miles of land have been set aside for a main land reserve. A draft Settlement Agreement has been completed but has yet to be ratified. It is hoped that respectful co-existence can be reached through a Settlement Agreement in the future.

In 2017, TFN became the 74<sup>th</sup> First Nation signatory to the Framework Agreement on First Nation Land Management. As signatories this allows the community to regain governance control over the resources on Reserve lands and develop environmental and land use practices which would follow higher standards under custom land laws.



# Sections 4 to 12

EMP Priorities



## 4 Land Development

### 4.1 Environmental Management Consideration

Bear Island's natural environment influences how it is being developed. The northern part of the island is mostly rocky and un-serviced. This means that development is mostly located in the southern part of the island along Wa-wa-te, also referred to as "the loop." This is where the majority of community services and infrastructure are located.

Existing land uses on Bear Island include housing, businesses, community buildings, and cultural space. In addition, there is a wood burning site, aggregate pit and a closed waste site. Infrastructure services include a Water Treatment Plant, wastewater lagoons, waste transfer station, and three phase electrical power. Please refer to **Figure 4-1** for an overview of the existing land uses based on the Land Use Plan for Bear Island.

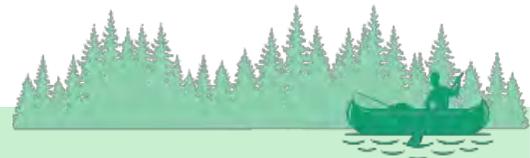
Potential future development includes a new school and up to 20 additional housing lots. However, based on space constraints there may only be room for 10 additional housing lots. To promote safety, there are speed limit signs and signs to watch for pedestrians/children on Bear Island. Also, no vehicles are allowed on school property.

#### Opportunities for Improvement

- Introduce development regulations
- Regulate light pollution
- Safely dispose of toxic building material
- Monitor importing of soil and fill

#### Areas Important to Youth!

The following areas on Bear Island were identified as important by TFN / TAA youth who participated in a January 2024 EMP workshop in North Bay: The youth building; ball diamond; climbing tree by the Old Fire Tower; High Rock; and, fishing spots.



#### Did you know!

We have Land Guardians who participate in ground truthing, field data collection throughout n'Daki Menan, assist with reporting as necessary, and develop and deliver education and awareness campaigns.

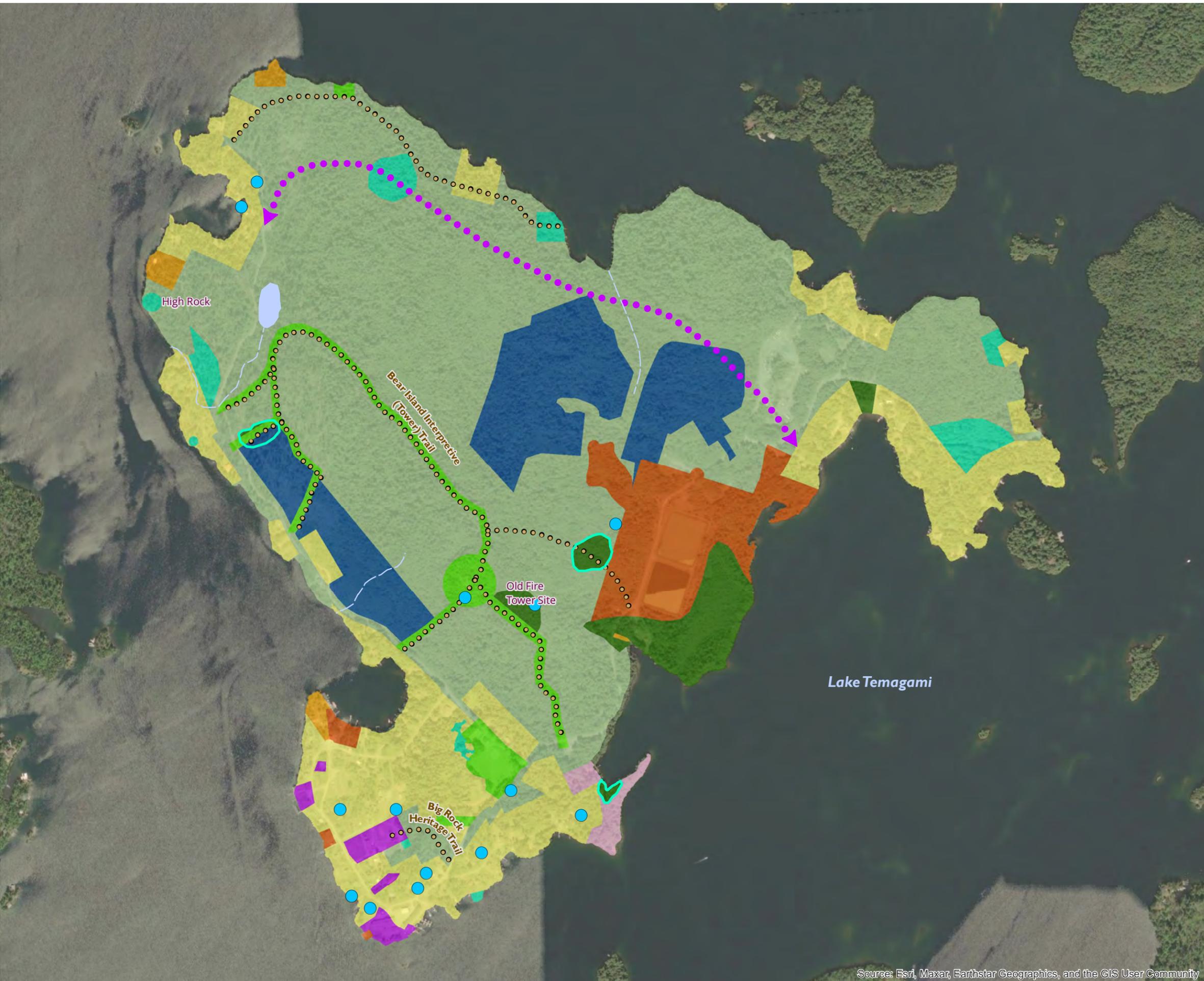
As part of a request to develop on Bear Island, you have to consider relevant documents, how a development may impact neighbours and the environment, and reach out to the Infrastructure and the Environmental Health Officer.

TFN / TAA community members are regularly sharing their environmental concerns and observations with the L&R Department.



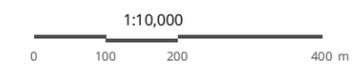
# TEMAGAMI FIRST NATION ENVIRONMENTAL MANAGEMENT PLAN

## FIGURE 4-1 PROPOSED LAND USES FOR BEAR ISLAND (REVISED)



- Spring
- Intermittent Watercourse
- ◀▶ Potential Future Road
- Trail
- Wetland Boundary
- Spring Pond

- ### Proposed Land Use
- Cemetery
  - Commercial
  - Community Buildings and Use
  - Cultural Heritage Protection and Enhancement
  - Environmental Protection
  - Holistic Management Area
  - Infrastructure
  - Potential Future Development
  - Recreation and Park
  - Housing (with Home-based Business)



MAP DRAWING INFORMATION:  
BASE DATA PROVIDED BY MNRF  
MAP CREATED BY: GM  
MAP CHECKED BY: AB  
MAP PROJECTION: NAD 1983 UTM Zone 17N



PROJECT: 224497  
STATUS: DRAFT  
DATE: 2024-11-15

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



## 4.2 Environmental Issues and Concerns

**Table 4-1** provides an overview of concerns and issues related to land development on Bear Island as identified through community engagement and background research. Please note that some of the concerns and issues have been or are being addressed by TFN/TAA. The table below provides an overview of what was heard through the engagement activities outlined in **Section 1.4** of this Plan.

### Environmental Management Actions and Implementation

Refer to **Appendix E** for an overview of the Implementation Schedule, including management actions identified by TFN/TAA community participants.

Table 4-1: Concerns and Issues – Land Development

Concerns and Issues	Input Received by TFN/TAA Community Participants
Light Pollution	<ul style="list-style-type: none"> <li>Light pollution creates ecological disruption by confusing the instinctive daily and seasonal cycles of animals and plants. In particular, lights shining toward the lake are excessively bright.</li> </ul>
Equipment / Vehicle Storage Area	<ul style="list-style-type: none"> <li>Pollution run-off into Lake Temagami is due, in part, to barges and heavy equipment not being parked or stored in designated areas.</li> <li>During the wintertime, road salts from the mainland are being brought to Bear Island across the ice road.</li> </ul>
Maintenance	<ul style="list-style-type: none"> <li>Cultural and spiritual areas (e.g., cemetery, church, rock painting, Screw Point) need consistent maintenance.</li> </ul>
Regulations and Standards	<ul style="list-style-type: none"> <li>Development standards on Bear Island should not be more lenient than on the mainland (e.g., property standards, water quality standards).</li> <li>Enforcement of existing guidelines and policies is inconsistent.</li> <li>A procedure is needed to incorporate community voices into changes to regulations and policies, etc.</li> <li>Policies should be in place that protect land features even if they become "private" property (e.g., Diving Rock).</li> </ul>
Environmental Monitoring	<ul style="list-style-type: none"> <li>Results of environmental monitoring, including reporting and testing results, are not easily accessible for community members.</li> <li>Currently, there is not a permanent contact to receive and manage reports regarding environmental issues and concerns.</li> </ul>
Community Engagement	<ul style="list-style-type: none"> <li>There is a need to build awareness on current laws and regulations and how they are being enforced.</li> </ul>



Concerns and Issues	Input Received by TFN/TAA Community Participants
	<ul style="list-style-type: none"> <li>• Press releases and communication documents can be unclear or overly complicated.</li> <li>• Information sessions are often the first-time individuals become aware of issues.</li> </ul>
Development Approvals Process	<ul style="list-style-type: none"> <li>• There is a need for ongoing education and outreach materials when it comes to land development.</li> <li>• Changes in land use from housing to commercial are being made without a review, which is resulting in heavy equipment close to the shoreline, increasing the potential for pollutant run-off into the lake.</li> <li>• An assessment, such as an Environmental Site Assessment, and a permitting process is needed at the beginning of development</li> <li>• An Environmental Assessments for Bear Island should be completed before any shoreline and construction developments.</li> <li>• Any changes made to a lot should have to go through a process (permitting process).</li> </ul>

### 4.3 Environmental Policies

An overview of existing and proposed environmental policies for responsible land use and development is provided in Table 4-2 below based on the Land Use Plan for Bear Island.

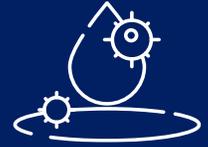
Table 4-2: Environmental Policies – Land Development

ID #	Environmental Policies
EP-LD-01	Land surveys and environmental and engineering reviews must be undertaken prior to development on reserve lands.
EP-LD-02	A Cultural and Environmental Impact Assessment application process will be prepared by TFN/TAA and may include additional requirements. Anything outlined in future Cultural and Environmental Impact Assessment application requirements will supersede what is in this Plan. In the interim, Canadian Environmental Assessment processes will apply (Policy 3.2.24, Land Use Plan for Bear Island).
EP-LD-03	TFN/TAA may request a study to be completed for new developments to demonstrate how environmental protection is considered (Policy 3.2.24, Land Use Plan for Bear Island).



ID #	Environmental Policies
EP-LD-04	All projects will require a project specific Environmental Management Plan to mitigate construction impacts. The project-specific document will be appropriate to the nature and scale of the project.
EP-LD-05	A development permit process and application has been prepared by the Housing Committee and Infrastructure Department, which must be followed as part of future development.
EP-LD-06	As part of Development Applications, demonstrate how new development will minimize any impacts on the natural, socio-economic, and cultural environment. If impacts are expected, the application must demonstrate how these will be mitigated.
EP-LD-07	Future environmental management standards that are being developed for <b>Bear Island and n'Daki Menan should be higher than</b> those by the Province.

# 5 Surface Water and Groundwater



## 5.1 Environmental Management Considerations

Bear Island is located on Lake Temagami within the Wanapitei and French Secondary Watersheds, and the Sturgeon Tertiary Watershed. Water features on the island include intermittent creeks and springs. A wetland is located in the southern part of Bear Island, close to the cemetery. Surface water run-off on Bear Island is managed through roadside ditches and culverts that drain into Lake Temagami. However, some areas on the island are relatively flat, resulting in poor drainage. Efforts are underway to update the culverts along North View Trail and by the Water Treatment Plant. These updates include dredging to remove sediments and debris around the culverts to improve drainage.

### Opportunities for Improvement

- Maintain biodiversity and vegetated areas
- Manage invasive species
- Safely dispose of toxic building material
- Monitor importing of soil and fill
- Manage and clean-up aging fuel tanks
- Move the gas pump closer to the lagoon area

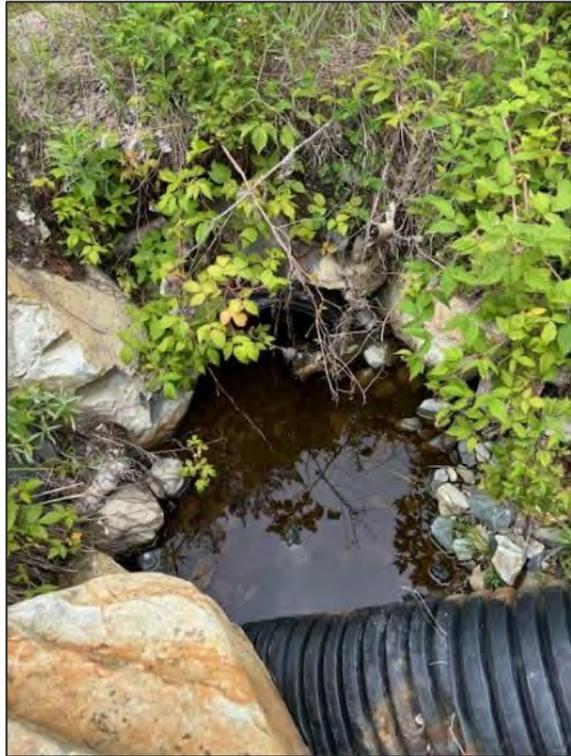
A Water Treatment Plant and distribution system are located in the southern part of the island. Homes and infrastructure that are located on, or near, the loop receive their drinking water from the Water Treatment Plant. Other areas, particularly in the north, receive their water via intake from Lake Temagami. As of January 2023, the Water Treatment Plant has capacity for 35 years and another 25 households.

There are no groundwater wells on Bear Island. While the depth to groundwater on the island is unknown, a review of water wells located on adjacent islands (Wingfood Island, Ogama Island and Adanac Island) indicate that the depth ranges from 16 m to 123 m (Government of Ontario, 2018). **Figure 5-1** provides an overview of the existing environmental features on Bear Island.



### Did you know!

Water testing is done daily for the Water Treatment Plant, annually for housing located on septic, and upon request. Water testing will also be offered to TFN/TAA community members whose houses are located off the loop. A student summer program is in place for residential water testing. Information on water testing results is being shared through the Bear Island Blast and community engagement.



Photos shown: Culverts being dredged and updated

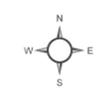
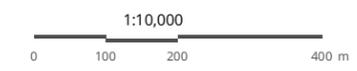


**TEMAGAMI FIRST NATION  
ENVIRONMENTAL MANAGEMENT PLAN**  
**FIGURE 5-1  
KNOWN ENVIRONMENTAL FEATURES ON  
BEAR ISLAND**

-  Spring
-  Intermittent Watercourse
-  Wetland Boundary
-  Trail
-  Spring Pond
-  Sugar Bush
-  Environmental Protection Area
-  Cultural Heritage Protection and Enhancement
-  Holistic Management Area



Lake Temagami



MAP DRAWING INFORMATION:  
BASE DATA PROVIDED BY MNRF  
MAP CREATED BY: GM  
MAP CHECKED BY: AB  
MAP PROJECTION: NAD 1983 UTM Zone 17N



PROJECT: 224497  
STATUS: DRAFT  
DATE: 2024-11-15

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



## 5.2 Environmental Issues and Concerns

**Table 5-1** provides an overview of concerns and issues relating to surface water and groundwater quality on Bear Island as identified through community engagement and background research. Please note that some of the concerns and issues have been or are being addressed by TFN/TAA. The table below provides an overview of what was heard through the engagement activities outlined in **Section 1.4** of this Plan.

### Environmental Management Actions and Implementation

Refer to **Appendix E** for an overview of the Implementation Schedule, including management actions identified by TFN/TAA community participants.

Table 5-1: Concerns and Issues – Surface Water and Groundwater

Concerns and Issues	Input Received by TFN/TAA Community Participants
Servicing Constraints	<ul style="list-style-type: none"> <li>Some home(s) do not have operational pumps and/or running water, which is impacting the quality of life for members. Access to basic resources such as running water should be a priority.</li> </ul>
Backflow	<ul style="list-style-type: none"> <li>Backflow issues for those connected to the water treatment system. When the water treatment operators flush the pipes <b>servicing “the loop,”</b> homes on the loop experience backflow. Residents experiencing this have health and financial concerns, such as property damages.</li> </ul>
Water Treatment Plant	<ul style="list-style-type: none"> <li>The Water Treatment Plan has capacity for another 25 houses.</li> <li>Concerns have been expressed on the integrity of the infrastructure.</li> </ul>
Water Quality and Safety	<ul style="list-style-type: none"> <li>Water safety concerns exist for those that draw water directly from Lake Temagami. Not all residences have UV (or similar) filters. UV filters are at the cost of individuals.</li> <li>The maintenance regimes for the filtration systems are unclear.</li> <li>Regular water testing has lapsed. There is a need for community members to access and interpret water testing results.</li> <li>Health concerns exist regarding drinking water from the water treatment systems. There are feelings that youth who are on the water treatment system are experiencing more cavities.</li> </ul>
Water Quality Communication	<ul style="list-style-type: none"> <li>Need to complete water testing for houses that are located off the loop. Participants identified a need for a Drinking Water Protection Plan for Lake Temagami.</li> </ul>



Concerns and Issues	Input Received by TFN/TAA Community Participants
	<ul style="list-style-type: none"> <li>• There is a need for notices and educational signage.</li> <li>• It was suggested that land use permits should be issued for all the campsites on Lake Temagami – on Bear Island and <b>n'Daki Menan</b> - to encourage clean-up by visitors and the TFN/TAA community.</li> <li>• Two campsites exist on Bear Island. Visitors need to obtain permission from TFN prior to using the campsites.</li> <li>• Policies or a plan should be in place for new builds to protect ground and surface water <b>on Bear Island and n'Daki Menan</b>.</li> </ul>
Alternative Water Sources	<ul style="list-style-type: none"> <li>• There is expressed disapproval for relying on water trucks that need to be barged in or cross the ice road in the event of an emergency.</li> <li>• No spring water has currently been identified on Bear Island as an alternative water source.</li> </ul>
Source Water Protection	<ul style="list-style-type: none"> <li>• Erosion and sediment control are crucial to avoid runoff or contamination into Lake Temagami and other nearby water bodies.</li> <li>• Source water should be protected by becoming a Blue Community for water not to be turned into a commodity.</li> <li>• More protection mechanisms are needed for Lake Temagami to secure water for 7 Generations.</li> </ul>
Partnerships	<ul style="list-style-type: none"> <li>• Water protection is not just the responsibility of Temagami First Nation. A need was identified to work with other who use the surrounding lake network (e.g., Town of Temagami, NGOs).</li> <li>• Concerns about houseboat companies on Lake Temagami regarding waste disposal and water contamination.</li> <li>• There is a need to check with cottages to see that their septic systems are tested and up to date to prevent water contamination.</li> </ul>



## 5.3 Environmental Policies

An overview of existing environmental policies for responsible surface water and groundwater management is provided in **Table 5-2** below based on the Land Use Plan for Bear Island.

Table 5-2: Environmental Policies – Surface Water and Groundwater

ID #	Environmental Policies
EP-VW-01	Include a minimum 30 m setback from the high-water mark for all lakes, creeks and watercourses unless otherwise determined and approved by TFN/TAA. Consult applicable provincial and federal Department of Fisheries and Oceans (DFO) standards when determining setback requirements (Policy 3.2.26, Land Use Plan for Bear Island).
EP-VW-02	Implement stormwater management practices to minimize the impact of polluted runoff flowing into Lake Temagami and nearby water bodies (Policy 3.2.7, Land Use Plan for Bear Island).
EP-VW-03	Require proposed development in proximity to the Lake Temagami shoreline to outline erosion and sediment control practices to avoid runoff or contamination into Lake Temagami and other nearby water bodies as part of the development application process (Policy 3.2.7, Land Use Plan for Bear Island).
EP-VW-04	Encourage new development to demonstrate how natural drainage patterns are protected to reduce strain on existing infrastructure as part of the development approval process (Policy 3.2.7, Land Use Plan for Bear Island).



## 6 Contamination and Fill Management

### 6.1 Environmental Management Considerations

In 2015, a Phase 1 Environmental Site Assessment (ESA) was completed for TFN by Dillon Consulting Ltd. The Phase 1 ESA identifies sites with potentially contaminating activities on Bear Island. The analysis was based on observations of on-site commercial, industrial, and institutional buildings, as well as interviews with community members. Additionally, grounds were screened for vegetative stress, soil discoloration or staining, and soil disturbance or fill placement.

#### Opportunities for Improvement

- Manage and clean-up aging fuel tanks
- Monitor importing of soil and fill
- Monitor invasive species
- Plant vegetation that is local to the area
- Clean-up contaminated sites
- Follow-up on potential asbestos in the old jail building

Based on the findings of the Phase 1 ESA, older buildings in the community have the potential to contain: PCBs; Asbestos Containing Materials; Lead; and, Mercury. Other potential substances, whose use could not be confirmed during the study include arsenic (e.g., herbicide); ozone depleting substances such as chlorofluorocarbons, Urea Formaldehyde Foam Insulation; and, radon gas. **Figure 6-1** provides an overview of the potentially contaminated sites on Bear Island based on the 2015 Phase 1 ESA.

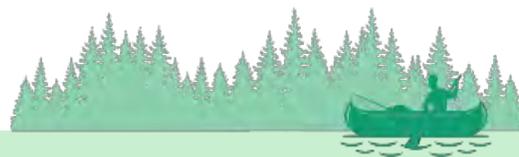
Since the completion of the Phase 1 ESA, Englobe Corp. was retained by TFN to complete a series of Phase 2 ESAs for the following sites on Bear Island: Marina Area; Former Barge Landing and Construction Yard; Water Treatment Plant; Public Works Garage; and, Multi Use Facility.

Based on conversations with Public Works, clean up of contamination at these locations has been completed. All of the sites, except for the Multi Use Facility, are listed under the Federal Contaminated Sites Inventory (FCSI). **Table 6-1** provides a high-level overview of the findings of the Phase Two ESAs. Please reach out to the TFN L&R Department for further information on the Phase Two ESA work completed. A summary of the potentially contaminating activities is included in **Appendix C**.



Table 6-1: Overview of the Phase 2 ESA Results

Sites	Status
<b>Marina Area</b>	No further environmental site assessment work and no environmental remedial work is required at the Site at the present time.
<b>Former Barge Landing and Construction Yard</b>	Clean-up has been completed for the Site.
<b>Water Treatment Plant</b>	Clean-up has been completed for the Site.
<b>Public Works Garage</b>	Clean-up has been completed for the Site.
<b>Multi Use Facility</b>	Clean-up has been completed for the Site.



### Did you know!

Spill kits are available on Bear Island at the main infrastructure warehouse.

**TFN is working on moving the garage (warehouse) and the gas pump closer to the lagoon.**

Home inspections were completed in the past to determine if any of the spray-on insulation products used included asbestos. Based on these inspections, the old jail was identified to have asbestos.

The Ministry used to take rain samples to gauge levels of pollution.



**TEMAGAMI FIRST NATION  
ENVIRONMENTAL MANAGEMENT PLAN**

**FIGURE 6-1  
POTENTIALLY CONTAMINATED SITES  
ON BEAR ISLAND**

 Area of Potential Environmental Concern



APEC #	Description
1	Community Fire Hall
2	Doreen Potts Health Centre
3	Family Healing and Wellness Centre
4	Sonny Moore Recreational Building
5	Marina Building
6	Former Hudson Bay Post
7	Water Treatment Plant
8	Air/Police Boat Garage
9	Dock Warehouse
10	Public Works Garage
11	Former Barge Landing Area
12	Community Wood Pile
13	Former Landfill
14	Historical Landfills
15	Garbage Compactor/Scrap Metal Dump
16	Waste Transfer Station
17	Lot 29 Beach – Reports of oil near beach
18	Construction Yard
19	Private Residence – Hydraulic oil leaks
20	Cemetery
21	Boat House
22	New Warehouse
23	Lakeview Gathering Place
24	Aggregate Pit

A Phase 2 ESA has been completed and the following sites are no longer considered potentially contaminated: Marina Area; Former Barge Landing and Construction Yard; Water Treatment Plant; Public Works Garage; and, Multi Use Facility.



MAP DRAWING INFORMATION:  
BASE DATA PROVIDED BY MNRF

MAP CREATED BY: GM  
MAP CHECKED BY: AB  
MAP PROJECTION: NAD 1983 UTM Zone 17N



PROJECT: 224497  
STATUS: DRAFT  
DATE: 2023-05-10



## 6.2 Environmental Issues and Concerns

**Table 6-2** provides an overview of concerns and issues related to contamination and fill management on Bear Island as identified through community engagement and background research. Please note that some of the concerns and issues have been or are being addressed by TFN/TAA. The table below provides an overview of what was heard through the engagement activities outlined in **Section 1.4** of this Plan.

### Environmental Management Actions and Implementation

Refer to **Appendix E** for an overview of the Implementation Schedule, including management actions identified by TFN/TAA community participants.

Table 6-2: Concerns and Issues – Contamination and Soil Management

Concerns and Issues	Input Received by TFN/TAA Community Participants
Invasive Species	<ul style="list-style-type: none"> <li>No soil testing is currently performed for soil brought to Bear Island.</li> <li><b>The importing of invasive species may alter the soil's natural composition.</b></li> <li>Would like to have a boat washing station at Landing Site to avoid transfer of aquatic invasive species from other waterbodies.</li> </ul>
Spill Management and Response	<ul style="list-style-type: none"> <li>There have been oil spills on Bear Island at the old garage as part of vehicle and equipment maintenance activities.</li> <li>Concerns regarding the management of leaks and spills, including reporting, clean-up/disposal, and other corrective actions.</li> <li>Concerns of contamination caused by buried machinery and abandoned vehicles at individual homes and Garbage Compactor/Scrap Metal Site.</li> <li>Participants expressed concern related to invasive aquatic species, boat maintenance, and the potential for leaking fluids.</li> <li>Enforcement of boat washing is a challenge. Integrating this practice with the Memorandum of Understanding with the Town of Temagami would be an asset.</li> </ul>
Database	<ul style="list-style-type: none"> <li>There is no database to log contamination events that have occurred on or around Bear Island.</li> </ul>
Environmental Clean-up	<ul style="list-style-type: none"> <li>The old fire tower is currently a danger and a contamination hazard.</li> <li>Abandoned/dumped cars, dumpsites, store sites, and buried machinery are present on Bear Island and may be affecting soil quality and the environment.</li> </ul>



Concerns and Issues	Input Received by TFN/TAA Community Participants
	<ul style="list-style-type: none"> <li>• TFN/TAA Citizen Suggestion: All vehicles on Bear Island should be registered for a fee. The fee could be used to pay for the removal of old, damaged, dangerous, and polluting rattle traps.</li> <li>• Proper disposal of unused vehicles is challenging and expensive. Currently, old machinery (e.g., motors) is being disposed of as part of annual clean-up. During the annual clean-up, individuals bring their old machinery to the end of their driveway for pick up.</li> <li>• There is currently no fund for public removal of abandoned vehicles.</li> </ul>
Asbestos in Old Buildings	<ul style="list-style-type: none"> <li>• Asbestos was used in the initial construction of old buildings (e.g., Old Band Office). There are still locations on Bear Island that may have asbestos.</li> </ul>

## 6.3 Environmental Policies

An overview of existing and proposed environmental policies for remediation of known contaminated sites and fill management is provided in **Table 6-3** below based on the Land Use Plan for Bear Island.

Table 6-3: Environmental Policies – Contamination and Fill Management

ID #	Environmental Policies
EP-CFM-01	Take measures to prevent and eliminate the spread of invasive species on TFN/TAA Lands (e.g., zebra mussels). Washing of boats before launching is one example of this. (e.g., zebra mussels). Invasive species are not confined to water. All life forms can also be invasive (Policy 3.2.28, Land Use Plan for Bear Island).
EP-CFM-02	Remediate contaminated sites as part of any new development pursuant to applicable environmental regulations to contribute to the health of the community and wildlife who inhabit the area (Policy 3.2.25, Land Use Plan for Bear Island).
EP-CFM-03	Meet or exceed provincial standards and health and safety requirements with respect to potential air, soil, and water contamination (Policy 3.2.29, Land Use Plan for Bear Island).

# 7 Vegetation and Wildlife



## 7.1 Environmental Management Consideration

Bear Island and n'Daki Menan has a rich biodiversity and is home to an abundance of vegetation and wildlife. A substantial area of Bear Island is covered by forests consisting of spruce, fir, birch, poplar, maple, cedar and mixed pine. Harvesting firewood is a significant resource and practice for the TFN/TAA community. Forest management on the island is guided by the Land Use Plan for Bear Island.

Bear Island contains a variety of wildlife habitat areas, including wooded areas, wetlands, creeks and riparian areas. Please refer to **Figure 5-1** in **Section 5** for an overview of environmental areas on Bear Island. Other environmental features include a variety of plants with medicinal purposes. These plants are harvested for their healing properties and include cedar, cherry trees (e.g., pin cherry, cherry bushes, cherry bark, and chokecherry), berry leaves, willow, poplar, tamarack, maple trees, yarrow, Labrador tea, birch and pine.

Commonly observed wildlife within the Temagami Area includes (but are not limited to) moose, beaver, American marten, American black bear, broad-winged hawk, osprey, great horned owl, barred owl, American black duck, great blue heron, black-throated green warbler, eastern garter snake, spring peeper, and eastern red-backed salamander (Crins et al., 2009; MNRF, 2018a). Fish spawning areas have been identified along the shorelines of the expansive lake system.

Please refer to **Section 2.3** of this plan for an overview of existing documents/tools that assist with environmental management on Bear Island.

### Opportunities for Improvement

- Maintain biodiversity and vegetated areas
- Manage and monitor invasive species
- Consider introducing hunting and fishing regulations for visitors on n'Daki Menan
- Safely dispose of toxic building materials
- Monitor importing soil and fill
- Manage and clean-up aging fuel tanks
- Clean-up contaminated sites

### Some of the Animals on Bear Island include:

- Larger mammals (moose, bear)
- Small mammals (squirrels, rabbit, beaver, muskrat)
- Raptors (eagles, hawks, osprey, owl)
- Waterfowl (ducks, geese, grey blue heron)
- Birds (warbler, partridge)
- Amphibians (frogs, toads, salamanders)
- Reptiles (snakes)
- Insects



Did you know!

Approximately 90% of buildings on Bear Island include a 60 feet buffer from the shoreline. The buffer is enforced through policy in the Land Use Plan for Bear Island.

An assessment of trees on Bear Island has been completed in the past and local vegetation lists have been started.



## 7.2 Environmental Issues and Concerns

**Table 7-1** provides an overview of concerns and issues related to vegetation and wildlife on Bear Island as identified through community engagement and background research. Please note that some of the concerns and issues have been or are being addressed by TFN/TAA. The table below provides an overview of what was heard through the engagement activities outlined in **Section 1.4** of this Plan.

### Environmental Management Actions and Implementation

Refer to **Appendix E** for an overview of the Implementation Schedule, including management actions identified by TFN/TAA community participants.

Table 7-1: Concerns and Issues - Vegetation and Wildlife<sup>1</sup>

Concerns and Issues	Input Received by TFN/TAA Community Participants
Biodiversity	<ul style="list-style-type: none"> <li>Special consideration is not given to plant species of cultural significance.</li> <li>TFN/TAA Citizen Suggestion: Consider planting oak, maple, tamarack, hazelnut, and apple trees.</li> </ul>
Habitat Loss and Destruction	<ul style="list-style-type: none"> <li>Climate change is having an impact on local wildlife habitat and vegetation range.</li> <li>Monoculture and biodiversity loss due to activities such as forestry and other developments damaging fish spawning beds.</li> <li>Mining on the Proposed Settlement Lands also identified as a concern for habitat loss and destruction.</li> </ul>
Vegetation and Wildlife Management	<ul style="list-style-type: none"> <li>Overgrown vegetation (e.g., tree branches, brush) is a safety issue for road traffic as roads are very narrow; however, the vegetation may be environmentally friendly as it provides wildlife habitat.</li> <li>It was noted that there is too much wildlife on Bear Island (e.g., foxes and raccoons) because people feed them.</li> <li>Droppings from invasive bird species (e.g., geese and cormorants) are affecting local plants and grass on Bear Island and n'Daki Menan.</li> <li>Make sure to not plant trees too close to each other or else they will not grow.</li> </ul>
Vegetation Inventory	<ul style="list-style-type: none"> <li>A need exists to incorporate Indigenous ecological knowledge into environmental management practices, such as plant identification to create a database.</li> </ul>

<sup>1</sup> Please refer to Table 6-2: Concerns and Issues – Contamination and Fill Management for an overview of concerns and issues related to invasive species.



Concerns and Issues	Input Received by TFN/TAA Community Participants
	<ul style="list-style-type: none"> <li>Traditional medicinal knowledge should be documented in detail and should include which areas these medicines are found on the land.</li> <li>Dr. Frank F. Mallory, a professor of biology at Laurentian University, wrote an 'encyclopedia' regarding plant medicine in Temagami, which could be useful to us for documentation.</li> </ul>
Traditional Knowledge	<ul style="list-style-type: none"> <li>Environmental protection practices do not adequately incorporate traditional stories and teachings.</li> </ul>
Ornamental Plants	<ul style="list-style-type: none"> <li>Ornamental plants are frequently not native to Bear Island, increasing the chance of an invasive event.</li> <li>TFN/TAA citizen Suggestion: Focus on the benefits of the plants being brought in, such as, medicinal, food yielding, or of sacred origin. These should be the minimum requirements to purchase/order plants.</li> <li><b>The Russian Maple planted at the new Elder's Complex</b> is not doing well in the local conditions.</li> </ul>

### 7.3 Environmental Policies

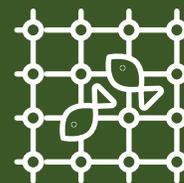
An overview of existing environmental policies for protection of vegetation and wildlife is provided in **Table 7-2** below based on the Land Use Plan for Bear Island.

Table 7-2: Environmental Policies – Vegetation and Wildlife

ID #	Environmental Policies
EP-VW-01	A Development Permit process and application will be prepared by the Lands Committee, which may provide additional requirements. Anything outlined in future Development Permit application requirements will supersede what is in the Land Use Plan for Bear Island (Policy 3.2.3, Land Use Plan for Bear Island).
EP-VW-02	As part of Development Applications, demonstrate how new development will minimize any impacts on the natural, socio-economic, and cultural environment. If impacts are expected, the application must demonstrate how these will be mitigated (e.g., water runoff to and from adjacent areas, stormwater management, etc.) (Policy 3.2.24, Land Use Plan for Bear Island).
EP-VW-03	TFN/TAA may request a study to be completed for new developments to demonstrate how environmental protection is considered (Policy 3.2.24, Land Use Plan for Bear Island).



ID #	Environmental Policies
EP-VW-04	Assess whether development impacts the habitat of Species at Risk, or other species that are of importance to TFN/TAA. Findings will be reviewed as part of the Development Application Process (Policy 3.2.27, Land Use Plan for Bear Island).
EP-VW-05	Preserve fish and wildlife habitat to the extent possible to protect environment. Consider appropriate rehabilitation of and for similar species within a reasonable period, generally one year, unless otherwise approved by TFN/TAA.
EP-VW-06	Tree removal is permitted for non-commercial purposes in some areas where it is compatible with the area intent and existing use (e.g., as part of existing buildings, road maintenance, collecting firewood for personal use).
EP-VW-07	Carry out forest management needs in accordance with the Bear Island Forest Stewardship Plan and any subsequent updates (Policy 4.10.1.6, Land Use Plan for Bear Island).
EP-VW-08	Consider appropriate habitat rehabilitation of and for similar species within a reasonable period, generally one year, unless otherwise approved by TFN/TAA.
EP-VW-09	The location of Species at Risk and other animals and plants who may be adversely affected by development must be protected through confirming <b>traditional knowledge on Bear Island and n'Daki Menan</b> .
EP-VW-10	Significant environmental sites set aside for protection can include, but are not limited to, wetlands, environmentally sensitive areas, sensitive nature sites, areas of traditional ecological knowledge, and species at risk areas. Significant environmental sites will continue to be mapped when new areas are identified, or as new information becomes available.
EP-VW-11	Maintain natural shoreline vegetation as an undisturbed buffer between the shoreline and the proposed structure, to preserve and enhance the visual and environmental integrity of the Lake Temagami Shoreline (Policy 3.2.26, Land Use Plan for Bear Island).



# 8 Food Security

## 8.1 Environmental Management Consideration

TFN/TAA community regularly hunt, trap, and fish. A variety of animals and birds are hunted and trapped for use as food and medicine, including moose, partridge, bear, duck, rabbit, beaver, and muskrat. On Bear Island, moose is a commonly hunted animal. Traditional knowledge such as how to prepare hunted moose, the medicinal properties of partridge, or the benefits of bear grease for curing certain ailments is shared between family members (Friday et al., 2016).

Fishing provides a major part of the traditional diet. Some of the most commonly harvested fish species across n'Daki Menan include pickerel, trout, whitefish, pike and bass. Similar to hunting and trapping, many of the traditions, techniques and knowledge around harvesting fish is passed down from Elders. A substantial portion of the island, particularly the south, provides berries for harvesting. Other harvested edible plants include cherries, apples, and wild carrots. TFN/TAA community members also produces maple syrup.

Approximately 90% of Bear Island is bedrock. The soil conditions on the island are therefore not favourable for agriculture. However, different projects are underway to promote food security on Bear Island. These include three greenhouses<sup>2</sup> that are being built by the Elders Building. One of these greenhouses is already working.

Also, there are community gardens by the Health Centre and the Elders Building that people are using and the clinic has initiatives underway to advance food security on the island.

As part of planning for the future TFN/TAA is considering an integrated approach to food security that includes hunting, fishing, gathering, greenhouse or related production, community gardens, and grocery stores.

### Opportunities for Improvement

- Prepare for hazardous events such as climate change and changing conditions of Lake Temagami
- Plan development to minimize impact on the environment
- Explore how to manage surface water run-off better (e.g., spills)
- Clean-up contaminated sites
- Monitor imported soil and fill

---

<sup>2</sup> Greenhouses exist that can carry almost 10 feet of snow.



Photo shown: First greenhouse for this project is up and is located behind the Elders Building



Did you know!

The Roots & Wings program engages youth in **cultural activities on n'Daki Menan**, including traditional harvesting practices.

The TFN / TAA community help each other with the processing of wild game often in exchange for meat. A cooler exists on Bear Island in which the wild game is stored.

**In December 2022, TFN's application to the Climate Change and Health Adaptation Program (CCHAP) was successful, and TFN received funding to support a project that aims to increase food security and resiliency in the face of climate change between 2023-24. TFN has already used this funding to purchase a greenhouse.**



## 8.2 Environmental Issues and Concerns

**Table 8-1** provides an overview of concerns and issues related to food security on Bear Island as identified through community engagement and background research. Please note that some of the concerns and issues have been or are being addressed by TFN/TAA. The table below provides an overview of what was heard through the engagement activities outlined in **Section 1.4** of this Plan.

### Environmental Management Actions and Implementation

Refer to **Appendix E** for an overview of the Implementation Schedule, including management actions identified by TFN/TAA community participants.

Table 8-1: Concerns and Issues - Food Security

Concerns and Issues	Input Received by TFN/TAA Community Participants
Food Security	<ul style="list-style-type: none"> <li>• There appears to be a decrease in fish, woodland caribou, elk, deer, and moose populations. Partridge and rabbit also used to be game that people hunted.</li> <li>• People are feeding foxes on Bear Island.</li> <li>• Despite the terrain and quality of soil on Bear Island, there are some independent businesses that rely on agricultural practices (e.g., maple bush, wild rice, community garden). These spaces should be preserved and promoted.</li> <li>• Participants identified a need for a greenhouse and the planting of fruit trees and potato gardens to ensure basic food supply.</li> <li>• There should be an option to develop personal greenhouses.</li> </ul>
Food Supply Chain Monitoring	<ul style="list-style-type: none"> <li>• Desire to assess and monitor harvesting practices (e.g., large game, fish) independently of the MNRF and other outside agencies.</li> <li>• It is unclear how the MNRF accounts for Indigenous big game harvest in wildlife management units.</li> </ul>
Communal Food Processing Station	<ul style="list-style-type: none"> <li>• There is no existing facility or system to distribute or share the spoils of a harvest/hunt</li> </ul>



## 8.3 Environmental Policies

An overview of existing environmental policies for the promotion of food security is provided in **Table 8-2** below based on the Land Use Plan for Bear Island.

Table 8-2: Environmental Policies – Food Security

ID #	Environmental Policies
EP-FS-01	Permit the keeping of small livestock (e.g., chicken and goats) and vegetable farming if any undesirable impacts on the surrounding land uses are minimized. The keeping of small livestock requires pre-approval from TFN and will consider proximity to others and number of animals which could impact noise and odour (Policy 4.1.1.12, Land Use Plan for Bear Island).
EP-FS-02	Promote the development of new home and community gardens to assist with food security (Policy 4.3.1.3, Land Use Plan for Bear Island).
EP-FS-03	Support the development of greenhouses to help the TFN/TAA community to grow their own food. Greenhouses may be used for community or commercial opportunities (Policy 4.2.1.4, Land Use Plan for Bear Island).
EP-FS-04	Permit the development of a sustainable fish hatchery (Policy 4.2.1.6, Land Use Plan for Bear Island).
EP-FS-05	Support creating community understanding and education opportunities through signage, medicine walks, and demonstration gardens that highlight traditional plants of cultural significance and medicinal value (Policy 4.6.1.8, Land Use Plan for Bear Island).
EP-FS-06	Preserve and enhance existing trapping, hunting, and fishing areas (Policy 4.6.1.9, Land Use Plan for Bear Island).
EP-FS-07	Promote the cultivation of medicinal plants and gardens to honour and share traditional practices across generations (Policy 4.6.1.5, Land Use Plan for Bear Island).
EP-FS-08	Maintain the Food Bank and communal fridge and freezer on Bear Island to promote food security.



## 9 Liquid, Solid and Hazardous Waste

### 9.1 Environmental Management Consideration

The southern part of Bear Island is serviced by a wastewater collection, treatment, and disposal system – the wastewater lagoons. This system accepts both grey water and sewage from residential homes located in proximity to the loop. The two lagoons are annually discharged into Lake Temagami. It has been recommended that the lagoon system be updated to an aerated lagoon.

As noted in the Phase 1 ESA and the Phase 2 ESA, a former Landfill Area is located southeast of the Community Wood Pile. This area was also referred to in previous environmental reports as a former landfill. A former Waste Disposal Area also exists, which was used for the disposal of household waste.

Today, a Waste Transfer Station is located to the south-east of the island and accepts household waste. Alternatively, Bear Island residents may bring their waste to the barge landing where it is collected and disposed of at the Briggs Landfill Site in Temagami. The barge landing also serves to load and unload construction materials, vehicles, and household waste. The community uses garbage compactors prior to the waste being transferred to the Briggs Landfill Site.

A recycling bin is located next to the garbage compactors and a hazardous waste depot exists. There is existing curbside pick-up of waste and recyclables for some of the Elders and those with disabilities through Community Support Services. It has been recommended that the Band provide weekly garbage collected by investing in a garbage truck that would take waste to the barge or ice road for transport to the landfill on the mainland.

#### Opportunities for Improvement

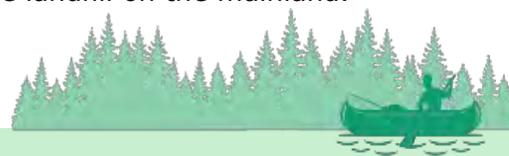
- Continue to provide education on recycling and composting
- Safely dispose of toxic building materials
- Monitor the integrity of the lagoon
- Consider developing regulations on waste management

Did you know!

Signs are posted in community buildings on Bear Island on how to sort waste.

A volunteer initiative exists to pick-up litter on Bear Island.

The TFN / TAA community on Bear Island are encouraged to take their waste to the containers at the access point.





## 9.2 Environmental Issues and Concerns

**Table 9-1** provides an overview of concerns and issues related to liquid, solid and hazardous waste on Bear Island as identified through community engagement and background research. Please note that some of the concerns and issues have been or are being addressed by TFN/TAA. The table below provides an overview of what was heard through the engagement activities outlined in **Section 1.4** of this Plan.

### Environmental Management Actions and Implementation

Refer to **Appendix E** for an overview of the Implementation Schedule, including management actions identified by TFN/TAA community participants.

Table 9-1: Concerns and Issues – Liquid, Solid and Hazardous Waste

Concerns and Issues	Input Received by TFN/TAA Community Participants
Recycling and Composting	<ul style="list-style-type: none"> <li>• Interest in a mandatory and enhanced recycling/composting program on Bear Island.</li> <li>• Consider a garbage collection service that provides weekly collection for residents on the island.</li> <li>• A recycling pick-up exists for Elders and people with disabilities. Everyone else drops off their own recycling.</li> <li>• Residents do not have access to a communal composting site. <b>“Compost juice” could be used to encourage plant growth.</b></li> <li>• Multiple workplaces contribute to single-use plastic pollution (e.g., water bottles, coffee cups, and plastic utensils).</li> </ul>
Hazardous Waste	<ul style="list-style-type: none"> <li>• Hazardous waste disposal days within the community are infrequent.</li> <li>• Participants identified a need for another drop-off station for electronic waste at the other end of Bear Island.</li> <li>• There is a community knowledge gap concerning the proper disposal of needles.</li> <li>• No clear process to prevent the burning of painted wood from the woodlot.</li> </ul>
Pet Waste	<ul style="list-style-type: none"> <li>• Uncollected pet waste is resulting in land/water contamination.</li> <li>• Pet waste frequently goes unaddressed and contributes to land/water contamination.</li> <li>• <b>Need for more “Pooper Scoopers” on Bear Island to help with the clean-up of pet waste.</b></li> </ul>
Rules and Regulations	<ul style="list-style-type: none"> <li>• Illegal dumping has occurred in various areas (e.g., bushes).</li> </ul>



Concerns and Issues	Input Received by TFN/TAA Community Participants
	<ul style="list-style-type: none"> <li>• It is unclear to residents what exactly can be disposed of at the woodpile.</li> <li>• It is unclear to residents what can be disposed of at the woodlot (e.g., disposal of pressure treated wood).</li> <li>• Major concerns regarding how things are discarded or disposed of within the community. There appears to be a knowledge gap concerning proper waste disposal.</li> <li>• TFN/TAA Citizen Suggestion: One idea is to have one garbage bag per household and tags can be purchased for additional bags. Explore whether there should be fines for lack of recycling and composting. Requirements should be in place on the accumulating of junk.</li> <li>• Clean-up of housing demolition debris and litter around housing can be very costly for the individual home-owners.</li> </ul>
<p>Septic System</p>	<ul style="list-style-type: none"> <li>• Concern that existing septic systems are not up to code and contribute to lake pollution.</li> <li>• TFN/TAA Citizen Suggestion: Inspect and ensure the septic systems are up to code and in good condition (on- and off-island) to avoid leakage impacts to Lake Temagami and drinking water.</li> </ul>
<p>Wastewater Lagoon Operation and Maintenance</p>	<ul style="list-style-type: none"> <li>• Lagoons are 25 years old and possibly need maintenance.</li> <li>• The filter bed is located between the lagoons and the lake. Concern for potential contamination of the lake from the sewage in the lagoons; especially for those in the immediate area that draw their water directly from the lake.</li> <li>• There are cattails growing at the edges of the lagoon. Concerns that this growth may be degrading the liner and increasing the risk of leaks.</li> <li>• Concerns about algae and/or duckweed growing on the surface of the lagoons. In some lagoons, duckweed can develop into a thick blanket that totally covers the water surface. When this happens, the blanket acts as a barrier and almost totally blocks all sunlight. Since sunlight is needed by algae to produce oxygen, wastewater in such lagoons can turn anaerobic with offensive odors. Without sufficient oxygen present, the facultative bacteria cannot thrive, reproduce or breakdown incoming raw sewage.</li> </ul>



## 9.3 Environmental Policies

An overview of proposed environmental policies for solid and hazardous waste management is provided in **Table 9-2** below.

Table 9-2: Environmental Policies – Liquid, Solid and Hazardous Waste Management

ID #	Environmental Policies
MA-SHWM-01	Littering, vehicle abandonment, and illegal dumping is prohibited on Temagami First Nation reserve lands.
MA-SHWM-02	Continue to provide waste disposal options to the TFN/TAA community on Bear Island, including the Waste Transfer Station, Hazardous Waste Disposal, Electronic Waste Site, Scrap and Metal Yard.
MA-SHWM-03	Existing and new infrastructure must meet or exceed provincial and/or federal, (as applicable) standards for safety and quality (Policy 4.7.2.2, Land Use Plan for Bear Island).
MA-SHWM-04	Locate new developments in areas where they can connect to the existing community systems to reduce the reliance of individual septic tanks. This policy does not apply to new development in remote areas on large lots that can accommodate on-site servicing (Policy 3.2.6, Land Use Plan for Bear Island).
MA-SHWM-05	Promote ongoing maintenance of new lagoon(s) and/or septic systems to maximize life span and to meet or exceed Federal standards, or other standards as prepared by TFN/TAA (Policy 3.2.9, Land Use Plan for Bear Island).

# 10 Air Quality



## 10.1 Environmental Management Consideration

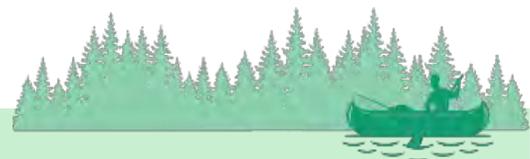
Air quality has been increasingly important to monitor and protect on Bear Island with the proliferation of personal motor vehicles. Historically, we have used a variety of transportation modes to travel throughout the traditional territory during our lifetimes. Traditional modes of travel, such as walking, snowshoeing, and paddling provide the community with better knowledge of the land and a deeper connection to its resources. Protecting traditional trails and routes is a way to protect TFN/TAA and Bear Island and resources and to preserve the community's opportunities to continue their deep connection to their land.

### Opportunities for Improvement

- Manage traffic on Bear Island
- Dispose of unused vehicles
- Monitor and regulate the burning of waste/hazardous waste at the wood burning site

In addition, as part of the Implementation Plan (IMP) that is being developed for Bear Island, the TFN/TAA community noted that they are supportive of the use of bikes on the Island. However, due to the Island's topography, getting around the Island without a motor vehicle is challenging for some. Therefore, a mix of transportation choices is preferred.

During the Phase 1 ESA in 2015, primarily petroleum hydrocarbons (PHC) odours were observed near some of the active above-ground storage tanks (ASTs) at the following locations: Doreen Potts Health Centre; Public Works Garage; Water Treatment Plant; Marina Site; and Construction Yard. PHC odours were also observed at the Lot 29 beach when collecting the soil sample at a depth of 0.5 m. As noted in Section 6, based on the Phase 2 ESAs completed in 2021 and 2022, clean up of contamination at these locations has been completed.



Did you know!

Gasoline and diesel consumption are currently being tracked for band vehicles through a key fob.

TFN / TAA is currently following provincial guidelines on outdoor burning.



## 10.2 Environmental Issues and Concerns

**Table 10-1** provides an overview of concerns and issues related to air quality on Bear Island as identified through community engagement and background research. Please note that some of the concerns and issues have been or are being addressed by TFN/TAA. The table below provides an overview of what was heard through the engagement activities outlined in **Section 1.4** of this Plan.

### Environmental Management Actions and Implementation

Refer to **Appendix E** for an overview of the Implementation Schedule, including management actions identified by TFN/TAA community participants.

Table 10-1: Concerns and Issues – Air Quality

Concerns and Issues	Input Received by TFN/TAA Community Participants
Fumes and Liquids from Combustion	<ul style="list-style-type: none"> <li>Concerns regarding fumes and liquids from the combustion of materials and fuels that are harmful to the environment and degrade air quality.</li> </ul>
Burning of Waste	<ul style="list-style-type: none"> <li>Air quality concerns due to the burning of treated wood and furniture at the wood burning site.</li> </ul>
Greenhouse Gas Emissions / Air Quality	<ul style="list-style-type: none"> <li>Increased number of vehicles on and around Bear Island (e.g., cars, trucks, four-wheelers, ATVs, skidoos, and boats). Most of the vehicles are older and not necessarily considered road worthy off-island.</li> <li>Need to determine air quality impacts of increased vehicle and boat traffic on and around Bear Island.</li> <li>Effects of increased vehicle traffic currently unknown</li> <li>An increased number of boats are parking at the Elders Complex, this may be affecting the environment.</li> <li>A policy is needed for idling vehicles (e.g., turn off engine if idling for more than 5 minutes).</li> </ul>
Fire Hazards	<ul style="list-style-type: none"> <li>It was suggested that no smoking should occur within 10 feet of community buildings and in Public Works vehicles.</li> <li>It was also noted that growth of brush is a fire hazard to the community.</li> </ul>
Net Zero	<ul style="list-style-type: none"> <li>A plan is needed to work towards net-zero (i.e., heat pump).</li> <li>Homes that are being built should follow a higher-standard than is currently being used (e.g., upgrades to insulation, windows, solar panels).</li> </ul> <p><b>Reaching 'net-zero emissions' means that we have to drastically cut down the amount of emissions we produce to as close to zero and remove emissions from the atmosphere. The</b></p>



Concerns and Issues	Input Received by TFN/TAA Community Participants
	<p>only way to cut the amount of greenhouse gases that we produce is to find new, greener methods to replace all our polluting technologies and bad habits. For example, we can shift from fossil fuels to renewable energy to generate the electricity we need in our daily lives, we can stop deforestation and instead plant more trees since they help absorb carbon emissions from the atmosphere and keep the air clean.</p>

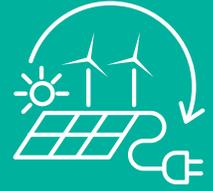
## 10.3 Environmental Policies

An overview of existing environmental policies for air quality are provided in **Table 10-2** below based on the Land Use Plan for Bear Island.

Table 10-2: Environmental Policies – Air Quality

ID #	Environmental Policies
EP-AQ-01	Meet or exceed the adopted federal and/or provincial building codes and energy efficiency codes in the Energy Plan (Policy 3.2.11, Land Use Plan for Bear Island).
EP-AQ-02	Protect existing traditional trails and routes. Trails and routes may provide opportunities for traditional modes of travel on Bear Island (Policy 4.6.1.10, Land Use Plan for Bear Island).

# 11 Renewable Energy



## 11.1 Environmental Management Consideration

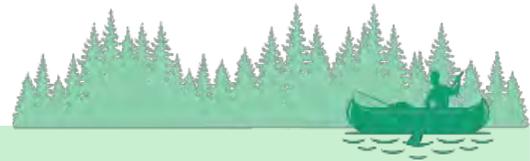
The TFN Lands & Resources Department has been successful in obtaining funding to develop a Community Energy Plan for Bear Island. The objective of the Community Energy Plan is to identify ways to improve energy efficiency and reduce electricity consumption, thereby reducing costs, as well as assess the possibility for green solutions on reserve.

The Minowaabandan-Gamiing Maawanjihidiwining, the Lakeview Gathering Place, is on geothermal heating.

In addition, the new school is being planned to be net-zero, including both energy and carbon. A net-zero carbon building means a high energy efficient building (minimum of 25% better than the National Energy Code) that produces onsite carbon-free renewable energy or high-quality carbon offsets in an amount sufficient to offset the annual carbon emissions associated with building Materials and operation.

### Opportunities for Improvements

- Continue to identify alternative energy sources
- Explore green and renewable energy as part of building design
- Continue to apply for energy subsidies
- Prepare for extreme weather events



### Did you know!

We have a Community Energy Champion who is identifying subsidies to upgrade our buildings, such as installing weatherproof windows.

The Minowaabandan-Gamiing Maawanjihidiwining, the Lakeview Gathering Place, and school are on geothermal heating and five houses use solar energy.

We now have solar panels on the Minowaabandan-Gamiing Maawanjihidiwining, the Lakeview Gathering Place.



## 11.2 Environmental Issues and Concerns

**Table 11-1** provides an overview of concerns and issues related to renewable energy on Bear Island as identified through community engagement and background research. Please note that some of the concerns and issues have been or are being addressed by TFN/TAA. The table below provides an overview of what was heard through the engagement activities outlined in **Section 1.4** of this Plan.

### Environmental Management Actions and Implementation

Refer to **Appendix E** for an overview of the Implementation Schedule, including management actions identified by TFN/TAA community participants.

Table 11-1: Concerns and Issues – Renewable Energy

Concerns and Issues	Input Received by TFN/TAA Community Participants
Alternative Energy Sources	<ul style="list-style-type: none"> <li>Participants noted that the community should not rely on one source of energy. Renewable energy (e.g., solar) and alternative energy sources (e.g., solar, woodstoves, gas stoves) provide resiliency during winter power outages.</li> </ul>
Green and Renewable Energy	<ul style="list-style-type: none"> <li>The cost of hydro bills is a concern for residents, particularly during the winter when hydro prices peak. Decreasing dependence on outside energy would help to alleviate this stress.</li> <li>Interest to transition towards green and renewable energy (e.g., wind and solar).</li> <li>Interest in shifting from carbon fuel vehicles to electric vehicles.</li> </ul>
Subsidies	<ul style="list-style-type: none"> <li>Need to identify solar and other energy subsidies to assist individuals who would like to retrofit their home.</li> </ul>



## 11.3 Environmental Policies

An overview of existing environmental policies promoting renewable energy is provided in **Table 11-2** below based on the Land Use Plan for Bear Island.

Table 11-2: Environmental Policies – Renewable Energy

ID #	Environmental Policies
EP-RE-01	Explore and encourage the use of renewable energy as part of the building design, such as solar electric, solar thermal, geothermal, and bioenergy systems (Policy 3.2.30, Land Use Plan for Bear Island).
EP-RE-02	Introduce the use of energy efficiency and alternative energy when retrofitting existing buildings or in new development.
EP-RE-03	Meet or exceed the adopted federal and/or provincial building codes and energy efficiency codes in the Energy Plan (Policy 3.2.11, Land Use Plan for Bear Island).
EP-RE-04	The use of alternative energy sources is encouraged where feasible and economically viable. Such uses may include, but are not limited to, wind, solar and geothermal (Policy 4.7.2.2, Land Use Plan for Bear Island).



# 12 Climate Change

## 12.1 Environmental Management Consideration

Climate change is increasingly impacting communities across Canada. Climate Change is a long-term shift in weather conditions identified by changes in temperature, precipitation, winds, and other indicators.

Bear Island consists primarily of forest cover. Periods of drought may affect the health of forests in northern regions of Ontario. Periods of prolonged drought can lead to reduced soil water content and the early death of trees. Annual precipitation is expected to increase in northern Ontario by 10 to 20% in addition to predicted increased periods of drought (Government of Canada, 2018a). Flooding could occur from periods of intense rainfall during downpours and thunderstorms, and increased precipitation throughout the year. While current monitoring programs for Lake Temagami do not exist (Government of Canada, 2018b), threats from flooding and rising lake levels are a growing concern from residents (Temagami Lakes Association, 2014a).

As part of community engagement completed for the Land Use Plan for Bear Island, the TFN/TAA community noted that they have noticed more severe weather events. In the winter of 2018 one of the community buildings collapsed due to heavy snow load on the roof. Bear Island does have a back-up generator in case power is lost. A lot of homeowners also have their own generator. In addition, most homeowners on Bear Island also have wood stoves and propane stoves. During the winter months Bear Island is accessible by an ice road, which may be impacted by climate change in the long-term.

### Opportunities for Improvement

- Prepare for extreme weather events
- Continue to explore Shoreline Erosion Management
- Be prepared for flooding
- Monitor if there is an increase of invasive species due to changes in climate

Extreme weather events are unusually severe climate conditions that can cause devastating impacts on communities and natural ecosystems (e.g., freezes, heavy downpours, tornado heat waves).



### Did you know!

Information on climate change currently being shared through the Bear Island Blast and community engagement events.

Ministry provides daily reports on dams and possibility of flooding coming within our area.



## 12.2 Environmental Issues and Concerns

**Table 12-1** provides an overview of concerns and issues related to renewable energy and climate change on Bear Island as identified through community engagement and background research. Please note that some of the concerns and issues have been or are being addressed by TFN/TAA. The table below provides an overview of what was heard through the engagement activities outlined in **Section 1.4** of this Plan.

### Environmental Management Actions and Implementation

Refer to **Appendix E** for an overview of the Implementation Schedule, including management actions identified by TFN/TAA community participants.

Table 12-1: Concerns and Issues – Climate Change

Concerns and Issues	Input Received by TFN/TAA Community Participants
Changes in Weather Patterns	<ul style="list-style-type: none"> <li>Climate change is affecting shifts in the natural cycles such as growing season and wildlife reproductive windows (e.g., fish and moose).</li> </ul>
Health	<ul style="list-style-type: none"> <li>Concerns that Lyme disease may become more prevalent in our area due to climate change.</li> </ul>
Introduced Species	<ul style="list-style-type: none"> <li>Potential impacts to the water quality of Lake Temagami due to non-local species increasing their range due to climate change.</li> <li>New species that are here due to climate change (e.g., geese, ducks) may impact local species in the area.</li> <li>Concerns expressed that cormorants are impacting the local fish population in Lake Temagami.</li> </ul>
Retrofitting of Buildings	<ul style="list-style-type: none"> <li>Need to look at the use of wood stoves, propane stoves, and generators in the community.</li> </ul>
Developing a Green Community	<ul style="list-style-type: none"> <li>Need to consider the clear-cutting of properties for firewood as well as the maintenance of medicinal plants.</li> <li>While clear cutting has been an issue in the past on Bear Island, it is no longer an issue.</li> </ul>
Communication During Extreme Weather Events	<ul style="list-style-type: none"> <li>A tool is needed to reach the community during extreme weather events.</li> <li>Existing communication tools used include notices, emails, social media, and tv screens in addition to check-ins by the TFN/TAA community.</li> </ul>



## 12.3 Environmental Policies

An overview of existing environmental policies to address climate change is provided in **Table 12-2** below based on the Land Use Plan for Bear Island.

Table 12-2: Environmental Policies – Climate Change

ID #	Environmental Policies
EP-CC-01	Consider the impacts of increased rain events and changes to the typical weather patterns which may exceed the current design capacity of existing infrastructure or impact the lifespan of the infrastructure (Policy 3.2.6, Land Use Plan for Bear Island).
EP-CC-02	Development must recognize and incorporate climate change mitigation and adaptation measures (Policy 3.2.31, Land Use Plan for Bear Island).



# Section 13

Legal Framework



# 13 Land Code and Environmental

## 13.1 Environmental Management for TFN/TAA

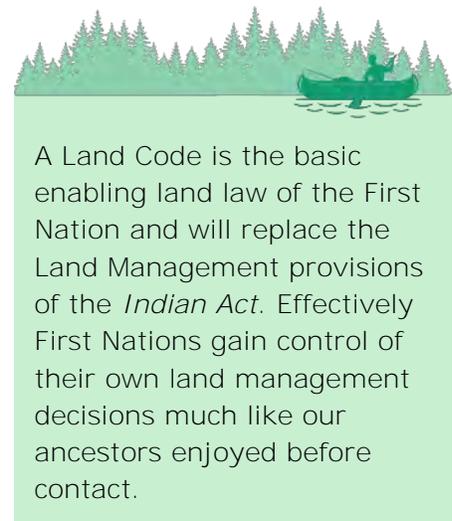
The Framework Agreement on First Nation Land Management was ratified and came into effect under the First Nations Land Management Act (FNLMA) in 1999. The First Nations Land Management Regime refers to the Framework Agreement and the FNLMA, which together provide the opportunity for First Nations to opt out of land-related sections of the *Indian Act* and assume jurisdiction over their Reserve lands and resources under their own land code (Aboriginal Affairs and Northern Development, 2013).

Through the Framework Agreement on First Nations Land Management, in 2017, TFN developed a Land Code to regain control over the day-to-day management of our Reserve lands and resources (ratified in June 2017; certified August 25, 2017). Currently, the Land Code only applies to the Reserve lands that are within the boundary of Bear Island Indian Reserve No. 1. However, any other future lands under TFN/TAA jurisdiction, such as those in the Proposed Settlement Lands that TFN may acquire, can also be protected under the Land Code if the Nation chooses to do so.

In many cases, First Nations seek to harmonize their environmental policies and laws with those of the province, regional districts, and/or local municipalities to promote effective and consistent environmental processes and to avoid duplication.

Although provincial and municipal legislation and regulations do not apply to TFN reserve lands, they may serve as best management practices or guidelines that can be used to develop environmental management policies and/or laws for TFN lands.

Federal environmental protection laws continue to apply to TFN reserve lands and TFN can be fined for non-compliance. Off-reserve, the majority of legislation governing environmental management and contaminated sites is provincial and does not apply to First Nation reserve lands – this is commonly referred to as the “regulatory gap.” An overview of applicable federal laws relevant to environmental management is provided in **Table 13-1** below.



A Land Code is the basic enabling land law of the First Nation and will replace the Land Management provisions of the *Indian Act*. Effectively First Nations gain control of their own land management decisions much like our ancestors enjoyed before contact.



Table 13-1: Overview of Applicable Federal Legislation

Legislation	Description
<b>Canadian Environmental Protection Act</b>	The <a href="#"><u>Canadian Environmental Protection Act</u></a> includes regulations on the release of various pollutants into the environment.
<b>Impact Assessment Act</b>	The <a href="#"><u>Impact Assessment Act</u></a> requires considerations for potential adverse environmental impacts and associated assessments prior to applicable land development activities.
<b>Species at Risk Act</b>	The <a href="#"><u>Species at Risk Act</u></a> identifies species at risk and prohibits harm, harassment and capturing of any listed species as well as damage to or destruction of their residence and critical habitat, as identified in species recovery plans.
<b>Migratory Bird Convention Act</b>	The <a href="#"><u>Migratory Bird Convention Act</u></a> prohibits disturbing the nests or eggs of migratory birds without a permit, as well as the deposit of oil, oil waste or other harmful substances to migratory birds in any waters or areas frequented by them.
<b>Fisheries Act</b>	The <a href="#"><u>Fisheries Act</u></a> requires protection for all fish and fish habitat, and prohibits the harmful alteration, disruption or destruction of fish habitat and the release of deleterious (harmful) substances into fish-bearing waters or water connected to fish-bearing waters. Death of fish by means other than fishing is also prohibited.
<b>Emergency Management Act</b>	The <a href="#"><u>Emergency Management Act</u></a> dictates responsibilities for managing emergencies from the federal perspective.
<b>Safe Drinking Water for First Nations Act</b>	The <a href="#"><u>Safe Drinking Water for First Nations Act</u></a> for First Nations Act allows the federal government to work with First Nations to develop regulations for access to safe drinking water, effective treatment of wastewater and the protection of drinking water sources of First Nations lands. Associated regulations have yet to be implemented.
<b>Canada Water Act</b>	The <a href="#"><u>Canada Water Act</u></a> enables a framework for collaboration among federal, provincial and territorial governments in matters relating to water resources.



# Section 14

Implementation



# 14 Implementation

For the EMP to become a respected and effective governance tool, all related roles and responsibilities and approaches to review and amendments must be clearly defined and communicated. The EMP is intended to serve as a living document that must evolve in response to changing environmental, operational and legislative conditions and priorities. An overview of the implementation and administration of the EMP is provided in the following sections.

Please refer to Appendix D for an overview of administrative tasks related to document control, data management, and tracking of information.

## 14.1 Roles and Responsibilities

The success of the EMP, and therefore the minimizing of environmental risks, is dependent on everyone. Table 14-1 describe the key roles and responsibilities for those associated with the successful implementation and maintenance of the EMP.

Table 14-1: Roles and Responsibilities for Implementation and Maintenance

Role	Potential Responsibilities <i>(To Be Refined)</i>
<b>TFN/TAA Community</b>	<ul style="list-style-type: none"> <li>• Empower each other to fulfill responsibilities.</li> <li>• Provide input and participate in community engagement processes related to the EMP.</li> <li>• Inform leadership, staff, and community of environmental concerns in a healthy way.</li> <li>• Become familiar with the EMP, work together to enact recommendations, and collaboratively support its implementation.</li> <li>• Be respectful to one another.</li> <li>• Approve and adopt the EMP.</li> </ul>
<b>Chief and Council</b>	<ul style="list-style-type: none"> <li>• Allocate staff and funding needed for its implementation.</li> <li>• Liaise with local, regional, provincial, and federal authorities, as needed.</li> <li>• Participate in any EMP reviews and updates, as required.</li> </ul>
<b>Lands &amp; Resources Department</b>	<ul style="list-style-type: none"> <li>• Bears primary responsibility for implementing the EMP.</li> <li>• Maintain the EMP and associated documents, as well as document control procedures.</li> </ul>



Role	Potential Responsibilities <i>(To Be Refined)</i>
	<ul style="list-style-type: none"> <li>• Conduct EMP reviews, as required.</li> <li>• Present technical comments related to a proposed activity/project to the Chief and Council for review.</li> <li>• Liaise with local, regional, provincial and federal authorities, as needed.</li> <li>• Conduct strategic environmental initiatives to support EMP strategies and actions.</li> <li>• Collaborate with other departments and organizations to support the implementation of the EMP.</li> </ul>
<b>Lands &amp; Resources Advisory Committee</b>	<ul style="list-style-type: none"> <li>• Assist in the exchange of information between the TFN/TAA community and Council regarding environmental matters.</li> <li>• Participate in EMP reviews and updates, as required.</li> </ul>
<b>Technical Staff (e.g., GIS, Infrastructure, Environmental, Biology, etc.)</b>	<ul style="list-style-type: none"> <li>• Provide technical input during any activity or project proposals and during reviews.</li> <li>• Provides technical background work related to an application or environmental management request (e.g., provides location of a proposed project relative to nearby environmental constraints).</li> </ul>
<b>Administrative Staff</b>	<ul style="list-style-type: none"> <li>• Inform leadership and/or staff of environmental concerns.</li> <li>• Report activities that are not consistent with the EMP to the appropriate authority.</li> <li>• Adhere to the legislation and policies set out in the EMP.</li> <li>• Participate in EMP reviews and updates, as required.</li> </ul>
Developers, Consultants, Contractors, and Other Outside Interested Parties	<ul style="list-style-type: none"> <li>• Adhere to the requirements set out in this EMP and applicable laws, regulations, and standards.</li> <li>• Communicate environmental responsibilities and requirements of this EMP to their staff and sub-contractors and record that communication.</li> <li>• Ensure all members of their staff and sub-contractors are trained to prevent or mitigate environmental impacts.</li> <li>• Ensure all labour, equipment and materials are available to execute the project activities and respond to environmental incidents.</li> <li>• Correct any non-compliance issues raised by Chief and Council, the Lands and Resources Department, and/or regulators.</li> <li>• Retain the services of a Qualified Environmental Professional to assess and mitigate risk associated with impacts to the environment.</li> </ul>



Role	Potential Responsibilities <i>(To Be Refined)</i>
	<ul style="list-style-type: none"> <li>• Provide documentation related to project activities upon request by the Lands &amp; Resources Department and/or Chief and Council, and as per TFN/TAA regulatory requirements and best management practices.</li> <li>• Follow the EMP and other appropriate documents.</li> <li>• Project reports to be submitted (monthly or quarterly, depending on the scale of the project) to the appropriate TFN departments.</li> <li>• Be respectful of the safety of the community.</li> <li>• Review the EMP and the Land Use Plan and carry-out projects in line with these plans.</li> </ul>

## 14.2 Implementation Schedule

Implementation is a key part of making the EMP a success. Please refer to **Appendix E** for the Implementation Schedule for each of the Environmental Management Priorities. It is anticipated that the schedule will be filled out in the summer of 2024.

## 14.3 Amendments and Reviews

The Lands & Resources Department is responsible for ensuring that the EMP and related documents are reviewed, updated, and maintained, as needed. To meet this commitment, the department should complete periodic amendments to the EMP – as required based on changes in legislation, standards, and/or best practices – and lead a full review at least once every 5 years (or sooner, if and as required).

### 14.3.1 Amendments

Amendments to the EMP may be required as changes are made to legislation or standard practices or based on changing community context. A change to the EMP may be requested when the change is minor as opposed to a significant amendment as referenced in the TFN Land Code.

Minor changes are those that:

- Maintain the general intent and purpose of the Land Use Plan;
- Align with the vision and objectives of the land use designations; and
- Align with the desirable outcome for the appropriate development or use of the land, building or structure.

Please refer to Section 5.6 of the Land Use Plan for Bear Island for additional information.



### 14.3.2 Full Review

At least once every 5 years (earlier if necessary), the Manager of the Lands & Resources Department will lead a full review of the EMP and its related documents. An EMP Review Team – consisting of the TFN/TAA community and staff, and/or leadership – will be established to champion the review.

Key aspects of the review will include, but will not necessarily be limited to, the following:

- Review and update the community context (e.g., ongoing or emerging issues, changes in features present, etc.) throughout the EMP, as required.
- Review and update the environmental management priorities based on emerging issues or community needs, as required.
- Review applicable legislation and indicate any changes that are needed, as they relate to the EMP.
- Complete a performance summary for the management actions contained in the EMP to determine implementation progress and identify any outstanding actions. Determine if outstanding actions are still relevant and needed.
- An update on the effectiveness and suitability of the EMP and the related environmental policies in relation to changing information and/or conditions.
- A summary of environmental incidences, including non-compliance, to determine if and how these incidences can be mitigated through EMP amendments (e.g., additional strategies/action items).
- A review of EMP-related budgets (e.g., training, enforcement) and adequacy and associated challenges that should be addressed.

The Manager of the Lands & Resources Department will provide Chief and Council with a summary of findings and recommended updates/revisions needed for the document for review and approval.



## 14.4 Policy Development

Policy development is required for effective environmental management and protection, and associated liability risk management for TFN reserve lands. The development and implementation of environmental policies can be used to operationalize components of the EMP and address environmental management concerns raised throughout the EMP development process.

The Temagami First Nation Land Code enables us to enact and enforce sound environmental management protection. A key part of our Land Code is that we vote as a community on matters that are important to us. Overall, TFN/TAA's goal is to develop environmental management standards that are higher than those implemented by the Province.

Key considerations when developing and implementing environmental management policies include, but are not limited to:

- Policies must be made available to everyone expected to follow them;
- Community education surrounding any policies and laws, including the rationale behind them, should be provided to encourage compliance;
- **Similar to federal and provincial laws, application of a “polluter pays”** principle to any laws related to environmental management is important to reduce liability of TFN for the actions of individuals, and to strengthen existing TFN policies related to environmental protection; and,
- Consistent compliance measures (e.g., education, warnings, checking, compliance orders) and enforcement measures (e.g., ticketing, fines, penalties, enforcement orders, conviction, and/or prosecution) are needed to make laws and associated regulations effective.



## 14.5 Education and Awareness

Engaging the TFN/TAA community and stakeholders is critical to the success of this EMP. To achieve the goals identified in the EMP, the community needs to be engaged and play an active role in environmental management. Education, training and outreach programs can contribute to positive change in attitudes and behaviours. These may include, but are not limited to:

- Collaborating with various external agencies (governmental and non-governmental) to develop environmental awareness and protection programs.
- Providing TFN/TAA community Members and non-Member residents with information on environmental resources within or adjacent to TFN reserve lands and associated threats through:
  - Posting information on community Facebook pages and in community newsletters;
  - Community workshops;
  - Informative signage in the community; and,
  - Circulating informational pamphlets.
- Raising awareness to empower all residents to identify and report environmental **incidences (e.g., “Community Environmental Watch”)** and **training for** the TFN/TAA community to work as environmental/construction monitors, field assistants, etc.

On-going education and opportunities to engage in stewardship activities help to instill a sense of pride among the TFN/TAA community and an understanding of accountability when it comes to environmental management. This, in turn, helps to manage existing issues and prevent future ones.



## 14.6 Capacity Building, Training and Sharing

Capacity building such as staff training may be required for effective environmental management and the implementation of the EMP and associated policies, laws, and procedures. In addition, employment opportunities for environmental management, monitoring, and inspection may become available as TFN begins to implement the EMP. To maximize these potential opportunities, TFN should take the following approach to build environmental capacity:

- Identify opportunities for sharing of tasks among knowledgeable staff;
- Allocate specific funds for training;
- Identify suitable candidates to take part in environmental training programs;
- Maintain a database of trained staff; and,
- Create short-term and long-term positions in environmental management, as needed.

## 14.7 External Supports

TFN will seek support of external expertise (e.g., skilled contractors, biologists, engineers, technicians, project managers, etc.) to manage existing and potential environmental issues given the potential range of expertise that may be required. TFN should develop and maintain a roster of qualified person(s) that can be called upon to provide technical expertise as needed. TFN should also strive to identify job shadowing and capacity building opportunities for the TFN/TAA community where external expertise is required (e.g., job shadowing for youth for environmental field work including wildlife surveys, water quality monitoring, etc.).

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# Appendix A

## Environmental Management Plan Development Process



## Appendix A

A collaborative approach involving the TFN/TAA community, Elders, leadership, the Lands and Resources (L&R) Committee, staff, and a technical consultant (Dillon Consulting Limited) was used to identify environmental management priorities that form the basis of this EMP. This approach was undertaken to ensure that the management actions and policies contained in this EMP are in line with the needs, vision and priorities of TFN/TAA.

Table A-1 provides a high-level overview of the key activities completed throughout the EMP development process.

Table A-1: The EMP Development Process

 <p><b>Background Research and Review</b></p>	<p>Existing community plans and studies were reviewed to help identify and gain a better understanding of potential environmental issues and management priorities for Bear Island.</p>
 <p><b>Introduction Session</b></p>	<p>Two virtual introductory sessions were held on September 27, 2021 to introduce the TFN/TAA community to the EMP. Notices were sent out to the TFN/TAA community by e-mail and posted on social media.</p>
 <p><b>Community Discussions</b></p>	<p>Two virtual and two in-person community engagement sessions were held on October 4 and 8, 2021, to provide the TFN/TAA community with an opportunity to share their environmental issues and concerns for Bear Island and n'Daki Menan. Notices were sent out via e-mail to all membership, placed into all mail-boxes on Bear Island and advertised on social media.</p>
 <p><b>Elders Session</b></p>	<p>A community discussion with the Elders took place on October 21, 2021. The session provided an opportunity for the Elders to share their environmental issues and concerns on Bear Island as well as on n'Daki Menan.</p>
 <p><b>Online Survey</b></p>	<p>A survey was completed in spring/summer 2022 to understand concerns and environmental priorities on TFN/TAA lands. A total of 310 responses were received on environmental concerns and issues. The TFN/TAA community were able to submit multiple responses to share additional information.</p>



### **Engagement with the Lands and Resources Committee**

A workshop with the Lands and Resources (L&R) Committee was held on July 25, 2022 at the Lakeview Gathering Place. The workshop included an overview of the EMP planning process, the vision for the Plan, and environmental issues and priorities. A total of eight L&R Committee members attended the meeting.



### **Community Open House #1**

A Community Open House was held on July 26, 2022, at the Lakeview Gathering Place. The Open House included a community dinner, followed by a presentation and activities on the EMP. Activities included a workshop-style activity on identifying known environmental concerns and issues and a priority setting activity. A total of 14 community members attended the Open House.



### **Elders Session**

A workshop with the Elders was held on July 26, 2022, at the Elders Building on Bear Island. A short presentation on the EMP was provided, followed by a discussion on the proposed EMP Priorities and known environmental concerns and issues. A total of 18 Elders attended the workshop.



### **Land Tours**

Multiple land tours were completed as part of the Land Use Plan project for Bear Island to reflect on how our reserve lands have been used and managed in the past, how they are used and managed today, and what we should consider for the future. Specifically, for the EMP, a boat tour of n'Daki Menan took place on July 27, 2022.



### **Draft EMP**

In August 2022, the draft EMP was developed based on all the inputs received through the activities above.



### **Engagement with the Lands and Resources Committee**

A workshop with the L&R Committee was held on February 6, 2023 at the Lakeview Gathering Place. The workshop included an overview of the work completed to date and a review of the draft Environmental Management Actions. A total of four L&R Committee members attended the meeting.



### **Community Open House #2**

A Community Open House was held on February 7, 2023, at the Lakeview Gathering Place. The Open House included a community dinner, followed by a presentation and activities on the EMP. Activities included a review of the proposed Environmental Management Actions for each Environmental Management Priorities. A total of 22 community members attended the Open House.



**Elders Session**

A workshop with the Elders was held on February 7, 2023, at the Elders Building on Bear Island. A short presentation on the EMP was provided, followed by a discussion on the top three Environmental Management Actions for each Environmental Management Priorities. A total of 11 Elders attended the workshop.



**Community Open House #3**

A Community Open House was held on May 16, 2023, at the Lakeview Gathering Place. The Open House included a community dinner followed by a presentation on the status of the EMP to date and an interactive activity on the EMP. The activity included reviewing the Elders Legacy Mapping Activity. Participants were also asked to brainstorm ways to bring the EMP to life, focusing on actions that could be taken by TFN/TAA community. A total of 28 community members attended the community session.



**Community Drop-in Open House #4**

On May 17, 2023, a drop-in session was held at the Minowaabandan-Gamiing Maawanjihidiwining, Lakeview Gathering Place from 9:30 am to 12:00 pm. The drop-in session provided community members the opportunity to come by and ask the Lands and Resources Department and the consultant team questions about the EMP or the Implementation Plan. A total of three community members stopped by the drop-in session.



**Elders Session**

A workshop with the Elders was held on May 16, 2023, at the Elders Building on Bear Island. A presentation on the EMP was provided with a focus on past feedback. In this session, This was followed by a Legacy Mapping Activity where Elders shared their own stories and memories with the land. A total of 13 Elders attended the workshop.



**Youth Session #1**

A session with the youth was held on May 17, 2023, at the Lakeview Gathering Place. This session provided the youth with an opportunity to learn about community and environmental planning on Bear island. There was a pizza lunch and presentation. The presentation was followed by various activity stations set-up by the Lands and Resources Department, including GIS mapping and tools used by the Land Guardians. A total of nine youth and two teachers attended the session.



### **Youth Session #2**

A session with the youth was held on January 11, 2024, at the North Bay Museum. There was a pizza lunch and presentation on why environmental management is important. The presentation was followed by various activities focused on a review of the draft EMP actions and what other environmental actions should be considered. A total of 6 youth attended the session.



### **Elders Session**

On August 20, 2024, the Dillon Staff hosted a workshop with the Elders on Bear Island. The workshop was held at the Elders Building from 11:00 am - 2:00 pm. The morning session focused on a short presentation on the status of the EMP, followed by a discussion on any outstanding items that needs to be addressed or changed in the EMP. Lunch was provided at noon. After lunch, the Elders worked in groups to discuss any gaps in the identified priority areas. A total of 12 Elders and 5 staff attended the workshop.



### **Community Open House #5**

On August 20, 2024, the Temagami First Nation Lands and Resources Department hosted a Community Open House on the EMP at the Lakeview Gathering Place from 5:00 pm – 8:30 pm. The Open House included a community dinner, followed by a presentation and an activity on the EMP. The activity included reviewing the Environmental Management Actions for each Environmental Management Priority Area. Participants worked in groups to review the different Priority Areas to see if there was any information missing or that needed to be changed for the final draft. They were also asked to fill out a 'leaf' for a Wish Tree about something they hope for through the EMP. A total of 40 people attended the Open House.



### **Community Newsletters**

Two newsletters were shared with the TFN/TAA community. The newsletters provided project updates at key stages of the EMP development process.



### **Final EMP**

The draft EMP was revised to develop the final EMP based on all input received from the TFN/TAA community, including youth, Elders, leadership, the Lands and Resources (L&R) Committee, staff.

# Appendix B

## Potential Environmental Management Responses



## Appendix B

**Table B-1** below provides an overview of potential environmental management responses to address the issues and concerns identified within this report.

Table B-1: Potential Environmental Management Responses

Response	Definition	Benefits	Limitations
<b>Laws and Regulations</b>	Enforceable, designed to achieve uniform compliance	Enforceable and authorized by the Framework Agreement. Clear direction on what is/is not permissible	<ul style="list-style-type: none"> <li>• Inflexible and costly to draft, implement and enforce.</li> <li>• Laws and Regulations must be enforceable and the penalty for non-compliance must be such that it deters repeat behaviour.</li> </ul>
<b>Policies</b>	Specific method or course of action to guide government	Flexible, easy to draft and easy to amend.	<ul style="list-style-type: none"> <li>• Not legally enforceable and should be consistent with other policies.</li> <li>• Too many policies, lack of organization, not clear which policies are active/inactive.</li> <li>• Must educate the community on an ongoing basis regarding policies. Must be easily accessible.</li> </ul>
<b>Guidelines and Best Management Practices</b>	A set of instructions offering clear direction to minimize impacts	Provides clear directions for proper conduct of tasks	<ul style="list-style-type: none"> <li>• Not legally binding, can become complex.</li> <li>• Must keep up with new and emerging information/methods.</li> </ul>
<b>Education and Outreach</b>	Communication of knowledge to improve awareness of issues and responses	Can result in positive change in attitudes and actions, and is adaptable	<ul style="list-style-type: none"> <li>• Not enforceable, requires thorough outreach program.</li> </ul>
<b>Monitoring and Reporting</b>	Collection and reporting of information on environmental quality	Provides measurable data that can be compared to guidelines, and allows for comparisons over time	<ul style="list-style-type: none"> <li>• Long-term commitment is needed, results may be difficult to interpret.</li> <li>• Costly, requires human capacity as well as instruments.</li> </ul>

# Appendix C

## Summary of Potentially Contaminating Activities on Bear Island



## Appendix C

Please refer to **Table C-1** below for a summary of potential contaminating activities on Bear Island based on the 2015 Phase 1 ESA.

Table C-1: Summary of Potentially Contamination on Bear Island

PCA #	Description	Rationale
1	<b>Community Fire Hall</b>	Storage of chemicals and an empty above-ground storage tanks (AST) was observed north of the Fire Hall building and halfway between the Fire Hall Building and the lake. Potential for release of contents (e.g., possibly Petroleum Hydrocarbons (PHCs) or paint) to the ground surface resulting in impacts to shallow soils.  <b>Potential Contaminants of Concern:</b> PHCs
2	<b>Doreen Potts Health Centre</b>	Active furnace oil AST and discarded jerrycan was observed east of the Doreen Potts Health Centre. Potential for release of contents to the ground surface from the release of residual gasoline from the jerrycan, filling AST and/or undocumented leaks or spills from the AST or associated piping resulting in impacts to soil and/or groundwater.  <b>Potential Contaminants of Concern:</b> PHCs
3	<b>Family Healing and Wellness Centre</b>	Two furnace oil ASTs are located outside of the Family Healing and Wellness Centre Building. Potential for release of contents to the ground surface from filling the ASTs and/or undocumented leaks or spills from the ASTs and associated piping resulting in impacts to soil and/or groundwater.  <b>Potential Contaminants of Concern:</b> PHCs
4	<b>Sonny Moore Recreational Building</b>	Gasoline AST was reportedly located adjacent to the Sonny Moore Recreational Building. Potential impacts to soil and/or groundwater around the former location of the AST from residual petroleum hydrocarbons and lead from the former use of the AST.  <b>Potential Contaminants of Concern:</b> PHCs, Lead
5	<b>Marina Building</b>	Based on the age of the building and flaking paint on the exterior of the building there is a potential for metal impacts to soil from paint. Gasoline AST and other unknown ASTs located around the building. Potential for release of contents to the ground surface from filling the ASTs and/or undocumented leaks or spills from the ASTs and associated piping resulting in impacts to soil and/or groundwater.  <b>Potential Contaminants of Concern:</b> Metals PHCs, Lead

PCA #	Description	Rationale
6	<b>Former Hudson Bay Post</b>	<p>The former Hudson Bay Post was reported to have burnt down. Potential for impacts to the soil and/or groundwater from the fire and potential buried material within the footprint of the former building that was burnt in the fire.</p> <p><b>Potential Contaminants of Concern:</b> Metals, PAH, Dioxins and Furans</p>
7	<b>Water Treatment Plant</b>	<p>One active AST, three former ASTs and documented spill from former Gasoline AST. Potential for release of contents to the ground surface from filling the ASTs, from the documented spill in 2012 and/or from other undocumented leaks or spills from the ASTs and associated piping resulting in impacts to soil, groundwater, sediment and/or surface water.</p> <p><b>Potential Contaminants of Concern:</b> PHCs, lead</p>
8	<b>Air/Police Boat Garage</b>	<p>A rusty-orange-stained area on the ground surface near the Air/Police Boat Garage was observed. Potential impacts to the soil at the location of the rusty-orange-stained area.</p> <p><b>Potential Contaminants of Concern:</b> Metals, PHCs, VOC</p> <p>Former storage area for heavy equipment. Potential of historical leaks or spills of fuel or hydraulic oil from the heavy equipment resulting in impacts to soil and/or groundwater.</p> <p><b>Potential Contaminants of Concern:</b> Metals, PHCs, VOC</p>
9	<b>Dock Warehouse</b>	<p>One gasoline AST is located to the west of the Dock Warehouse and one large premium gasoline AST is located north of the Dock Warehouse. Potential for release of contents to the ground surface from filling the ASTs and/or undocumented leaks or spills from the ASTs and associated piping resulting in impacts to soil and/or groundwater.</p> <p><b>Potential Contaminants of Concern:</b> PHCs, lead</p>
10	<b>Public Works Garages</b>	<p>Vehicle maintenance activities and chemical storage inside buildings. Potential for release through the floor drain or directly to the subsurface from maintenance activities/chemical storage.</p> <p><b>Potential Contaminants of Concern:</b> Metals, PHCs, VOCs</p>

PCA #	Description	Rationale
		<p>ASTs, jerrycans, car battery storage and reported diesel spill outside buildings. Potential for release of contents to the ground surface from filling the ASTs, undocumented leaks or spills from the ASTs and associated piping and/or from the storage of jerrycans and car batteries and resulting in impacts to soil and/or groundwater. There are also potential impacts to the soil and/or groundwater from the reported spill of diesel fuel.</p> <p><b>Potential Contaminants of Concern:</b> Metals, PHCs</p>
11	<b>Former Barge Landing Area</b>	<p>Two empty ASTs, a discarded jerrycan, an automotive battery and several discarded empty motor oil containers were observed on the ground surface near the former Barge Landing Area. Potential for release of contents to the ground surface from the long-term storage of the ASTs, jerrycan, oil containers and automotive battery resulting in impacts to soil and/or groundwater.</p> <p><b>Potential Contaminants of Concern:</b> Metals, PHCs, VOCs</p>
12	<b>Community Wood Pile</b>	<p>Empty drums and/or ASTs were formerly stored at the Community Wood Pile area. Potential impacts to soil and/or groundwater around the former or current location of the ASTs from residual hydrocarbons and lead. Soil fill piles were observed at the Community Wood Pile during the site visit.</p> <p><b>Potential Contaminants of Concern:</b> Metals, Inorganics, PHCs, PAHs, PCBs, VOCs, leads</p>
13	<b>Former Landfill</b>	<p>Reportedly used between 1971 to 1992 for unregulated disposal of domestic waste and construction and metal debris originating from Bear Island.<sup>3</sup> Potential impacts to soil and/or groundwater from previous waste disposal activities and buried waste.</p> <p><b>Potential Contaminants of Concern:</b> Metals, Inorganics, PHCs, PAHs, PCBs, VOCs</p>

<sup>3</sup> Three large empty ASTs were observed at the former landfill during the site visit. A geophysics survey and soil sampling program was carried out at the landfill in 1997. The soil analysis was limited to metals and groundwater was not sampled. Soil standards and laboratory procedures have changed since 1997 and the results of the previous investigation may not reflect actual current conditions.

PCA #	Description	Rationale
14	Historical Landfills	<p>Several former waste disposal areas. Some of the former waste disposal areas were likely used prior to the 1980s for unregulated disposal of domestic waste and construction and metal debris originating from Bear Island. Potential impacts to soil, groundwater, surface water and/or sediment from previous waste disposal activities and buried waste.</p> <p><b>Potential Contaminants of Concern:</b> Metals, Inorganics, PHCs, PAHs, PCBs, VOCs</p>
15	Garbage Compactor /Scrap Metal Dump	<p>The scrap metal dump and garbage compactor area are located in an unpaved area. Potential impacts to soil, groundwater and/or surface from the storage of scrap metal and garbage.</p> <p><b>Potential Contaminants of Concern:</b> Metals, Inorganics, PHCs, VOCs</p>
16	Waste Transfer Station	<p>The Waste Transfer Station was identified as an area where waste, discarded vehicles and hazardous materials were stored. Potential impacts to soil, groundwater, sediment and/or surface water from the storage of waste, vehicles and hazardous materials.</p> <p><b>Potential Contaminants of Concern:</b> Metals, Inorganics, PHCs, VOCs, PAHs</p>
17	Lot 29 Beach	<p>Oil was observed on the beach and on the lake near the shore. The oil was reported to be more apparent with an odour in warmer weather. Potential impacts to soil, groundwater, surface water and/or sediment from a potential oil spill.</p> <p><b>Potential Contaminants of Concern:</b> Metals, PHCs, VOCs</p>
18	Construction Yard	<p>Storage of equipment, fuel containers, and ASTs. Potential for release of contents to the ground surface from filling the AST, and/or undocumented leaks or spills from the AST and associated piping resulting in impacts to soil and/or groundwater. Potential impacts to soil and/or groundwater from the storage and potential spills from jerrycans, oil drums and containers and storage of equipment. Potential impacts to the soil at the oil-stained area on the ground surface.</p> <p><b>Potential Contaminants of Concern:</b> Metals, PHCs, VOCs</p>
19	Private Residence	<p>Hydraulic oil leaks from a crane located on this lot was observed. Potential impacts to the soil, groundwater, sediment and surface water from the reported spills of hydraulic fluid near the break wall.</p>

PCA #	Description	Rationale
		<p>Potential impacts to the soil and groundwater from the reported spills of hydraulic fluid in other areas, the observed stained areas and the reported placement of hydrocarbon impacted soil within the wood pile.</p> <p><b>Potential Contaminants of Concern:</b> PHCs, PAH, metals</p>
20	Cemetery	<p>It was reported that chemicals were formerly stored in a cellar located in a historical cemetery on the island. Potential impacts to soil, groundwater from potential spills of chemicals stored in the cellar. Potential impacts to groundwater from the potential use of formaldehyde and other chemicals used for burial preparation, and the degradation of coffin materials (e.g., metals, varnishes, sealers).</p> <p><b>Potential Contaminants of Concern:</b> Metals, Inorganics, PHCs, VOCs</p>
21	Roadways and Adjacent to Doreen Potts Health Centre	<p>Aggregates from the Sherman Mine Site has been used throughout the island as part of the road base and adjacent to the Doreen Potts Health Centre as a surface aggregate. Potential impacts to the underlying soils if the aggregates are considered to be acid producing rock.</p> <p><b>Potential Contaminants of Concern:</b> Metals</p>
22	Boat House	<p>Based on the age of the Boat House and flaking paint on the exterior of the building there is a potential for metal impacts (i.e., lead and/or mercury) to sediment and near shore soil from paint.</p> <p><b>Potential Contaminants of Concern:</b> Metals</p>
23	New Warehouse	<p>Reports of buried waste encountered during the construction of the new warehouse. There was also reports of a used oil AST located outside of the building. Potential impacts to soil and/or groundwater from buried waste and the former waste oil AST.</p> <p><b>Potential Contaminants of Concern:</b> Metals, Inorganics, PHCs, VOCs, PCBs</p>

Since the completion of the Phase 1 ESA, Englobe Corp. was retained by TFN to complete a series of Phase Two ESAs for the following sites on Bear Island:

- Marina Area
- Former Barge Landing and Construction Yard
- Water Treatment Plant
- Public Works Garage
- Multi Use Facility

All of the sites, except for the Multi Use Facility, are listed under the Federal Contaminated Sites Inventory (FCSI). **Table C-2** provides a high-level overview of the findings of the Phase Two ESAs. Please reach out to the L&R Department for further information on the Phase Two ESA work completed.

Table C-2: Overview of the Phase 2 ESA Results

Site	Potential Concern(s)	Phase 2 ESA Findings
Marina Area	Based on the information obtained and reviewed as part of the Phase 1 ESA, historical and current on-Site Potentially Contaminating Activities (PCAs) were identified that resulted in Areas of Potential Environmental Concern (APECs) at the Site.	Based upon the findings of the Phase 2 ESA the identified potential environmental concerns at the Site have been investigated and alleviated. As such, no further environmental site assessment work and no environmental remedial work is required at the Site at the present time.
Former Barge Landing and Construction Yard	Based on the information obtained and reviewed as part of the Phase 1 ESA, historical and current on-Site Potentially Contaminating Activities (PCAs) were identified that resulted in Areas of Potential Environmental Concern (APECs) at the Site.	Based on the findings of the Phase 2 ESA, the identified potential environmental concerns at the Site have been investigated and exceedances of PHC F2 and pH in the soil at BH1 on the property to the south, metals in the groundwater at BH/MW2, and metals and PAHs in the groundwater at BH/MW3 were detected above the applicable guidelines. As such, further environmental Site work and environmental remedial work is recommended.  As of today, the contaminants have been cleaned-up at the Site.

Site	Potential Concern(s)	Phase 2 ESA Findings
Water Treatment Plant	Based on the information obtained and reviewed as part of the Phase 1 ESA, historical and current on-Site Potentially Contaminating Activities (PCAs) were identified that resulted in Areas of Potential Environmental Concern (APECs) at the Site.	Based upon the findings of the Phase 2 ESA, the identified potential environmental concerns at the Site have been investigated and exceedances above the applicable site criteria are present in the soil at BH1 and within the groundwater at all investigated locations. As such, further environmental Site work and environmental remedial work is recommended.  As of today, the contaminants have been cleaned-up at the Site.
Public Works Garage	Based on the information obtained and reviewed as part of the Phase 1 ESA, historical and current on-Site Potentially Contaminating Activities (PCAs) were identified that resulted in Areas of Potential Environmental Concern (APECs) at the Site.	Based on the findings of the Phase 2 ESA, the identified potential environmental concerns at the Site have been investigated and exceedances of PHC F2 and pH in the soil at BH1, and metals and PAHs in the groundwater at BH/MW3 were detected above the applicable guidelines. As such, further environmental Site work and environmental remedial work is recommended.  As of today, the contaminants have been cleaned-up at the Site.
Multi Use Facility	From previous records (Englobe, 2019), contaminants from a suspected furnace oil above-ground storage tanks (AST) are present on the Site. In addition, Polycyclic Aromatic Hydrocarbons (PAH) impacts were identified in the groundwater downgradient of the for AST location. As such,	Additional environmental soil and groundwater sampling at the Site is recommended to delineate the extent of the plume.  As of today, the contaminants have been cleaned-up at the Site.

# Appendix D

## Administrative Tasks



## Appendix D

### Document Control

Document control is a means of keeping track of documents, procedures, and processes to ensure that the correct and most up-to-date versions are accessible to everyone. Document control is important given that environmental legislation, best management practices, procedures, and roles and responsibilities can change over time and the EMP must be updated and amended accordingly. The following document control measures will be implemented for this EMP:

- Include a date and version number on all documents;
- Review all documents on a pre-determined schedule;
- Revise documents as required;
- Obtain appropriate approvals and sign-offs on all revised documents prior to issuing or re-issuing;
- Remove and appropriately destroy/recycle all out-dated documents;
- Maintain an electronic master copy at the Lands and Resources Department; and,
- Store all documents in hard copy for a minimum of 5 years, and in electronic format for a minimum of 25 years.

## Effective Data Management and Tracking

Effective data management and tracking is important for environmental management for several reasons: it enables existing environmental features and issues to be properly documented and accessed by all TFN departments and staff, which is important given that efforts to address and/or avoid issues often require collaboration among staff and departments; and, it enables the progress of any efforts to address ongoing issues to be properly tracked to inform future actions.



Best practices for effective document and data management include:

**Central hub:** The use of a central hub is important because when each department stores its own files in their own ways, it can get confusing, and things can get lost.

**Naming conventions:** The use of consistent naming conventions is important to avoid duplication and/or confusion and to support easy searching and access. Documentation and naming guidelines should be established so that staff members are not creating and naming their own files independently. Putting the effort into developing a naming and organization system upfront will prevent future headaches.

**Log changes to documents:** Any modifications or changes to master documents or data should be logged to avoid confusion and prevent outdated documents or data from being used incorrectly.

**Access and permission:** Given that some information may be confidential or sensitive in nature, access considerations are important in terms of determining who can or should have access to specific documents and data, and who should not. Create and maintain a list that documents current access privileges and changes in access.

**Assign responsibilities:** Ensure anyone who has access understands what their responsibilities are in terms of document naming and management. Provide guidelines meant to support effective management before providing access.

# Appendix E

## Implementation Schedule



## Appendix E

Each Environmental Management Priority includes an Implementation Schedule. The Top 3 Environmental Management Actions identified by TFN/TAA community participants in the EMP development process are identified as follows:

- TFN/TAA community
- TFN/TAA Youth



The Implementation Schedule is organized as follows:



### Land Development



### Surface Water and Groundwater



### Contamination and Fill Management



### Vegetation and Wildlife



### Food Security



### Solid and Hazardous Waste Management



### Air Quality



### Renewable Energy



### Climate Change

Each of the actions has a lead and a support identified, which may include:

- Elders and TFN/TAA Community
- Chief and Council (C&C)
- Doreen Potts Health Centre (DHC)
- Economic Development
- Funding Coordinator
- Lands and Resources, incl., staff and the Lands and Resources Advisory Committee (L&R)
- Land Guardians
- Home and Community Care (HCC)
- Environmental Health Officer (EHO)
- Community Infrastructure Manager (CIM)
- Laura McKenzie Learning Centre
- Community Energy Champion (CEC)
- Police and Fire Services
- Ministry of Natural Resources (MNR)
- Public Health Agency of Canada (PHAC)
- *And others*

Depending on the status of the activity, the following timelines have been assigned:



## Land Development

ID #	Management Actions	Lead	Support	Ongoing	1-2 Years	2-5 Years	5+ Years	Not Started	In Progress	Complete
<b>MA-LD-01</b>	Develop and implement a by-law and/or development standards to regulate light pollution that applies to all areas of Bear Island. <ul style="list-style-type: none"> <li>Light should not shine out on lake.</li> </ul>	CEC	CIM/L&R							
<b>MA-LD-02</b>	Create an education and awareness program on the impacts of light pollution, which is shared through the Bear Island Blast.	L&R	CEC							
<b>MA-LD-03</b>	Develop a permitting process or by-law for the storing of heavy machinery and large equipment on Bear Island and off the shoreline. <ul style="list-style-type: none"> <li>As part of the permitting process, clearly define what is considered <b>"heavy machinery" and "large equipment."</b></li> <li>Keep heavy machinery away from shoreline.</li> </ul>	CIM	L&R							
<b>MA-LD-04</b>	Identify funding opportunities to restore and maintain cultural and spiritual areas (e.g., preserve rock paintings).	L&R	Funding Coordinator							

ID #	Management Actions	Lead	Support	Ongoing	1-2 Years	2-5 Years	5+ Years	Not Started	In Progress	Complete
<b>MA-LD-05</b>	<p>Develop and formalize an Environmental Site Assessment (ESA) and Environmental Assessment (EA) process to be completed prior to development projects.<sup>4</sup></p> <ul style="list-style-type: none"> <li>• Specific attention should be placed on the cutting/clear-cutting of trees, shoreline alterations, soil excavation, Species-at-Risk screening, invasive species screening, and timing window for construction.</li> <li>• Include a checklist to determine the level of potential impacts a development may have on various environmental features. The checklist should assist in identifying appropriate mitigation measures.</li> </ul>	L&R	CIM							
<b>MA-LD-06</b>	<p>Determine procedures, processing timelines, staffing, and financial resourcing requirements to enforce environmental laws, regulations, and standards once created.</p>	L&R								

<sup>4</sup> The TFN / TAA EA process will build on the current governmental EA process that is in place.

ID #	Management Actions	Lead	Support	Ongoing	1-2 Years	2-5 Years	5+ Years	Not Started	In Progress	Complete
<b>MA-LD-07</b> 	Identify a dedicated staff person (e.g., forester, environmental planner) to: <ul style="list-style-type: none"> <li>Review and process environmental considerations as part of the development approvals process as per the Land Use Plan for Bear Island.</li> <li>Receive and manage reports regarding environmental issues and concerns.</li> </ul>	L&R	CIM							
<b>MA-LD-08</b> 	Develop an online environmental database accessible to TFN/TAA community members to share environmental reports and testing results with the community in a timely manner. The database should be updated regularly.	L&R	TFN/TAA Community							
<b>MA-LD-09</b>	Promote the TFN/TAA community' <b>interest</b> through education, volunteering, and mentorship opportunities and build on local knowledge.	L&R	EHO							
<b>MA-LD-10</b> 	Develop and formalize Best Management Practices (BMP) for Environmental Monitoring. <ul style="list-style-type: none"> <li>Once the BMP is in place, a Monitoring and Reporting Program should be established to promote accountability.</li> </ul>	L&R								

ID #	Management Actions	Lead	Support	Ongoing	1-2 Years	2-5 Years	5+ Years	Not Started	In Progress	Complete
<b>MA-LD-11</b>	<p>Establish a Communications Strategy to promote a streamlined process to manage community engagement for land use and development decision making on reserve.</p> <ul style="list-style-type: none"> <li>For example, provide short handouts prior to a community information session to help the TFN/TAA community members prepare for the session.</li> </ul>	L&R								
<b>MA-LD-12</b>	Develop and implement a policy/by-law that addresses development permitting process, setback requirements, servicing requirements and considerations, and requirements for environmental review and assessment processes. <sup>5</sup>	L&R	CIM							
<b>MA-LD-13</b>	Develop a list of staffing requirements and funding needs to implement actions in the Environmental Management Plan.	L&R	Funding Coordinator							
<b>MA-LD-14</b>	Set-up an information session on infrastructure and environmental concerns and how these concerns can be addressed.	CEC	L&R							

<sup>5</sup> Please refer to Environmental Management Action MA-AQ-03 under Air Quality, on the need to maintain, upgrade, and develop walking trails. In addition, the Environmental Management Actions under Renewable Energy and Climate Change speak to upgrades to existing development and infrastructure to improve energy efficiency of existing buildings (e.g., window replacement) and address potential climate change related concerns (e.g., snow load on roofs).

## Surface Water and Groundwater

ID #	Management Actions	Lead	Support	Ongoing	1-2 Years	2-5 Years	5+ Years	Not Started	In Progress	Complete
<b>MA-SGW-01</b> 	New community buildings (e.g., school) and housing should be built in locations that allow for easy connection into the existing water system, to decrease the reliance on individual septic tanks. Alternatively, a septic system may be needed to support development for houses located off the loop on Bear Island.	CIM	L&R							
<b>MA-SGW-02</b>	Replace the existing septic beds on Bear Island that are older than 20 years.	CIM	L&R							
<b>MA-SGW-03</b>	Create a community awareness poster and/or information package on different water systems available (i.e., Water Treatment Plant and pumps), general maintenance practices, and costs for Bear Island.	L&R	CIM/CEC							
<b>MA-SGW-04</b>	Develop and implement a policy for regular water testing and reporting for houses located off the loop.	L&R	CIM							
<b>MA-SGW-05</b> 	Develop a program to support the installation of running water and a filtration system in homes.	CIM	L&R							
<b>MA-SGW-06</b> 	Develop a plan that identifies temporary and long-term alternative potable water (e.g., springs and streams) sources for Bear Island.	L&R								
<b>MA-SGW-07</b>	Update map with springs on Bear Island.	L&R								

ID #	Management Actions	Lead	Support	Ongoing	1-2 Years	2-5 Years	5+ Years	Not Started	In Progress	Complete
<b>MA-SGW-08</b>	Continue to map springs and streams on Bear Island.	L&R								
<b>MA-SGW-09</b> 	Develop stormwater management practices to help to: <ul style="list-style-type: none"> <li>Minimize the impact of polluted runoff flowing into Lake Temagami and nearby water bodies, such as road salt brought onto Bear Island from the mainland during the winter.</li> <li>Allow only sand to be used during the wintertime to manage ice roads.</li> <li>Reduce the strain that stormwater places on community infrastructure.</li> </ul>	L&R	CIM							
<b>MA-SGW-10</b>	Complete a Drainage Study for Bear Island.	L&R	CIM							
<b>MA-SGW-11</b>	Monitor houseboat companies on Lake Temagami regarding waste disposal and water contamination.	CIM	L&R							
<b>MA-SGW-12</b>	Check with cottages to see that their septic systems are tested and up to date to prevent contamination.	CIM	L&R							
<b>MA-SGW-13</b>	Complete a Feasibility Study on whether another Water Treatment Plant is needed.	CIM								
<b>MA-SGW-14</b>	Identify funding opportunities to complete a Feasibility Study for a Water Treatment Plant.	CIM	Funding Coordinator							
<b>MA-SGW-15</b>	Plant shrubs and trees along shoreline to help with stormwater run-off into Lake Temagami.	L&R	Land Guardians							

## Contamination and Fill Management

ID #	Management Actions	Lead	Support	Ongoing	1-2 Years	2-5 Years	5+ Years	Not Started	In Progress	Complete
<b>MA-CFM-01</b>	<p>Develop a Soil and Fill Management Plan to manage the potential of contaminants being introduced as part of development.</p> <ul style="list-style-type: none"> <li>Develop and implement Soil Management Guidelines for the TFN/TAA community and suppliers to ensure that they source quality materials from acceptable locations.</li> </ul>	L&R	EHO							
<b>MA-CFM-02</b>  	<p>Create community education materials on the following contamination topics:</p> <ul style="list-style-type: none"> <li>Soil management, fill management, invasive species, and spill response (including storage, use, and disposal of oil, fuel, paints, and solvents).</li> <li>Yard clean-ups and maintenance.</li> </ul>	L&R/ CIM	EHO/MNR							
<b>MA-CFM-03</b> 	<p>Approach the Ministry of Natural Resources and Forestry to clean-up the old fire tower site as it presents a hazard and begin court action.</p>	L&R	C&C/MNR							
<b>MA-CFM-04</b>	<p>Continue asbestos testing on all buildings (i.e., insulation and ceiling tiles) constructed before 1985.</p>	CIM	L&R							
<b>MA-CFM-05</b>	<p>Continue discussions with the Municipality of Temagami to build a boat washing station along the access road as part of the Town of Temagami Official Plan Update.</p>	L&R	C&C/ MNR							

ID #	Management Actions	Lead	Support	Ongoing	1-2 Years	2-5 Years	5+ Years	Not Started	In Progress	Complete
	<ul style="list-style-type: none"> <li>Boat should be washed when leaving the lake where it originates from if known to have zebra mussels.</li> </ul>									
<b>MA-CFM-06</b>	Identify or provide a subsidy to encourage community members to switch from two-stroke to four-stroke motors on their boats.	L&R	C&C							

## Vegetation and Wildlife Management

ID #	Management Actions	Lead	Support	Ongoing	1-2 Years	2-5 Years	5+ Years	Not Started	In Progress	Complete
<b>MA-VW-01</b>	Formalize the existing development approvals process to enforce appropriate buffers and setbacks established for development along the shoreline of Lake Temagami, cultural areas, and environmental features as outlined in the Land Use Plan for Bear Island and the Environmental Management Plan.	L&R								
<b>MA-VW-02</b> 	Develop and formalize a checklist to determine the level of potential impacts a development may have on various environmental features. The checklist should assist in identifying appropriate mitigation measures and actions to be taken based on an environmental site assessment or environmental assessment process.	L&R	CIM							
<b>MA-VW-03</b>	Update and incorporate the Bear Island Forest Stewardship Plan in land use decisions and to manage forest for carbon credits.	L&R	Land Guardians							
<b>MA-VW-04</b> 	Develop and formalize local vegetation planting standards based on local knowledge. <ul style="list-style-type: none"> <li>Introduce tree planting requirements as part of the development approvals process.</li> </ul>	L&R	Bear Island Community							

ID #	Management Actions	Lead	Support	Ongoing	1-2 Years	2-5 Years	5+ Years	Not Started	In Progress	Complete
<b>MA-VW-05</b> 	Develop an inventory of local plants and vegetation to help protect those areas from development. <ul style="list-style-type: none"> <li>Explore the opportunity to develop a seed bank as part of the vegetation inventory.</li> </ul>	L&R	TFN/TAA Community							
<b>MA-VW-06</b>	Research traditional stories and consider how they translate into environmental protections and concerns and into a methodology to develop an environmental law. <ul style="list-style-type: none"> <li>Potential opportunity to partner with the University of British Columbia.</li> </ul>	L&R	Elders & Historical Documents							
<b>MA-VW-07</b> 	Create education materials on the benefits of planting local vegetation (e.g., edible plants, medicines) instead of ornamental/non-local plants.	L&R								
<b>MA-VW-08</b>	Develop an understanding of beaver and wolf territory and behaviour patterns on n'Daki Menan.	L&R	Elders							
<b>MA-VW-09</b>	Create and implement a Bear-wise Initiative.	L&R								
<b>MA-VW-10</b>	Expand the list of animals for animal count/tracking purposes. <ul style="list-style-type: none"> <li>Explore partnerships (e.g., MNRF)</li> <li>Promote use of trapping</li> </ul>	L&R	Trappers							

ID #	Management Actions	Lead	Support	Ongoing	1-2 Years	2-5 Years	5+ Years	Not Started	In Progress	Complete
<b>MA-VW-11</b> 	Promote the planting and reintroduction of local species, including those that are medicinal. <ul style="list-style-type: none"> <li>Plant more medicinal plants for beautification to increase accessibility to these plants for those who cannot go out on the land to harvest.</li> <li>Explore the opportunity to bring the community together for tree planting days on Bear Island.</li> </ul>	L&R	Bear Island Community/ Housing							
<b>MA-VW-12</b>	Develop a policy on tree cultivation.	L&R	C&C							

## Food Security

ID #	Management Actions	Lead	Support	Ongoing	1-2 Years	2-5 Years	5+ Years	Not Started	In Progress	Complete
<b>MA-FS-01</b> 	Develop a monitoring program for the harvesting of game <b>on n'Daki Menan</b> , based on best stewardship practices. <ul style="list-style-type: none"> <li>• Complete annual monitoring off-reserve for hunting, netting, and other environmental poachers.</li> <li>• Identify who completes, tracks, and maps the monitoring.</li> <li>• Identify funding sources for monitoring program.</li> </ul>	L&R	Land Guardians							
<b>MA-FS-02</b> 	Complete a Feasibility Study on where to develop a greenhouse on and off Bear Island. <ul style="list-style-type: none"> <li>• Potential locations include Fridays Point (there was a garden in the past) and the north end of Bear Island.</li> <li>• Greenhouse should not be built on feasible housing lots.</li> </ul>	L&R/ Bear Island Community	HCC/ DHC							

ID #	Management Actions	Lead	Support	Ongoing	1-2 Years	2-5 Years	5+ Years	Not Started	In Progress	Complete
<b>MA-FS-03</b> 	Expand and maintain the existing community garden and/or develop a new community garden (incl., aquaponics) to plant additional foods, such as potatoes. <ul style="list-style-type: none"> <li>• Develop a program and/or education materials that assist interested individuals in creating their own food garden.</li> <li>• Host workshops in the community garden space.</li> </ul>	Bear Island Community	L&R							
<b>MA-FS-04</b> 	Continue to protect and enhance existing trapping, hunting, and fishing areas <b>on n'Daki Menan</b> . <ul style="list-style-type: none"> <li>• Develop Fish Health Monitoring Program as an ecosystem health indicator.</li> <li>• Map traplines (there are currently 27 trap lines).</li> <li>• Self-reporting by members as part of being stewards of the land.</li> </ul>	TFN/TAA Community/ Land Guardians	L&R							

ID #	Management Actions	Lead	Support	Ongoing	1-2 Years	2-5 Years	5+ Years	Not Started	In Progress	Complete
<b>MA-FS-05</b> 	Create workshops on traditional harvesting practices and how to butcher wild game to promote food security among the TFN/TAA community of all ages. Education should start with school aged children to instill traditional harvesting practices and values. <ul style="list-style-type: none"> <li>Offer programs related to traditional food preservation (e.g., fall hunting camp, including trapping in late fall).</li> </ul>	FHW/ TFN/TAA Community	L&R							
<b>MA-FS-06</b>	Build a communal food processing station that includes a place to properly dispose of or trade game.	HCC/FHW/ MGM	L&R							
<b>MA-FS-07</b>	Consider sending samples of what is being harvested (i.e., bas spots on a liver) and educate members on the process as part flyer in the Bear Island Blast.	L&R	Land Guardians/ Communications							
<b>MA-FS-08</b>	Explore the opportunity to build root housing for food preservation.	L&R								

## Liquid, Solid and Hazardous Waste

ID #	Management Actions	Lead	Support	Ongoing	1-2 Years	2-5 Years	5+ Years	Not Started	In Progress	Complete
 <b>MA-SHWM-01</b>	Create education materials and workshops on recycling and composting. Topics should be specific to Bear Island, such as how to discard pressure treated wood, batteries, old motor vehicles, technology, and other potential hazardous materials.	EHO	L&R							
<b>MA-SHWM-02</b>	Complete a Feasibility Study to determine the need and potential locations for additional waste/recycling sites on Bear Island, including a composting site.	EHO	CIM/L&R							
 <b>MA-SHWM-03</b>	Update the existing Dog By-law to include direction on the disposal of pet waste.	L&R	CIM							
 <b>MA-SHWM-04</b>	Develop and put-up signs to discourage illegal dumping <b>on n'Daki Menan</b> . <ul style="list-style-type: none"> <li>Signs should include information on fines when someone does not follow the rules.</li> </ul>	L&R	CIM							
<b>MA-SHWM-05</b>	Develop and formalize Best Management Practices (BMP) for recycling and enhance them.	EHO	L&R							
<b>MA-SHWM-06</b>	Identify financial support for individuals who cannot afford the inspections or cleaning of their septic system.	CIM	L&R							
 <b>MA-SHWM-07</b>	Schedule more regular waste pick-up days for all residents (e.g., one day for each type of waste), including hazardous waste disposal days on Bear Island.	CIM	L&R							

ID #	Management Actions	Lead	Support	Ongoing	1-2 Years	2-5 Years	5+ Years	Not Started	In Progress	Complete
<b>MA-SHWM-08</b> 	Follow-up on the life-span and maintenance of the wastewater lagoon, pipes, sewage system, and culverts.	CIM	L&R							
<b>MA-SHWM-09</b>	Invite someone who works at the lagoon to explain the maintenance process and operation information at an Elders/community meeting.	CIM	L&R							
<b>MA-SHWM-10</b>	Have someone who deals with recycling come to Bear Island to present and educate the community about the importance of recycling correctly and how to do so and the importance of sustainability.	EHO	L&R							
<b>MA-SHWM-11</b>	Monitor wastewater and grey water for houseboats, ice shacks, and glamping domes.	EHO	L&R							

## Air Quality

ID #	Management Actions	Lead	Support	Ongoing	1-2 Years	2-5 Years	5+ Years	Not Started	In Progress	Complete
<b>MA-AQ-01</b>	Develop and formalize an Outdoor Burning By-law and/or Guidelines on what is permitted and what is not permitted to be burned on Bear Island, including enforcement mechanisms (e.g., fines).	L&R	C&C/Fire Department							
<b>MA-AQ-02</b>	Create education materials on what is acceptable to burn and how-to re-purpose materials that are still usable rather than burning them.	L&R	EHO/ PHAC							
<b>MA-AQ-03</b> 	Develop and formalize policy on the idling of vehicles on Bear Island. <ul style="list-style-type: none"> <li>Create education materials on the impacts of vehicle idling to help improve air quality.</li> </ul>	L&R	EHO/ PHAC							
<b>MA-AQ-04</b> 	Protect, maintain, and upgrade existing trails and develop new trails (e.g., beach, shoreline) to promote walking among the TFN/TAA community.	L&R	TFN / TAA Community							
<b>MA-AQ-05</b>	Develop and formalize guidelines on no smoking within 9 metres (30 feet) of any entrance or exit of a community building to minimize fire hazards.	EHO	CIM/ C&C							
<b>MA-AQ-06</b> 	Develop a Net-Zero Plan to reduce greenhouse gas emissions and/or to ensure that any ongoing emissions are balanced by removals (e.g., new school).	CEC	CIM/L&R/ Energy Champion							

ID #	Management Actions	Lead	Support	Ongoing	1-2 Years	2-5 Years	5+ Years	Not Started	In Progress	Complete
<b>MA-AQ-07</b>	Bikes should be made available to encourage alternative modes of transportation. <ul style="list-style-type: none"> <li>• Bike parking would be helpful.</li> <li>• Provide electrical bikes.</li> </ul>	CEC	C&C							
<b>MA-AQ-08</b>	Develop a vehicle registration program to ensure that all vehicles permitted on Bear Island should be in suitable operating condition or meet accepted standards for safe driving on the road.	L&R	Police/ C&C							
<b>MA-AQ-09</b>	Develop guidelines to limit the garbage/waste that can be gathered in yards or individual places, including enforcement mechanisms (e.g., fines).	L&R	C&C/Fire Department							

## Renewable Energy

ID #	Management Actions	Lead	Support	Ongoing	1-2 Years	2-5 Years	5+ Years	Not Started	In Progress	Complete
<b>MA-RE-01</b> 	Explore multiple alternative energy sources for Bear Island that are community-owned to decrease dependence and over-reliance on one energy source.	CEC	CIM							
<b>MA-RE-02</b>	Work toward greater completion rates of surveys to gain a more accurate assessment of total residential energy use (ACEP Benchmarking Report, July 4, 2016).	CEC	CIM							
<b>MA-RE-03</b>	Confirm the number of households with smart meters and the number with smart meters that are not connected due to internet limitations (ACEP Benchmarking Report, July 4, 2016).	CEC	CIM							
<b>MA-RE-04</b>	Continue to identify gasoline and diesel consumption for Band-owned equipment for future analysis through the use of the key fob (ACEP Benchmarking Report, July 4, 2016).	CIM	TFN Programs							
<b>MA-RE-05</b> 	Continue to audit residential and Band buildings and investigate potential sources of funding for priority residential renovations (ACEP Benchmarking Report, July 4, 2016).	CEC	CIM							
<b>MA-RE-06</b> 	Continue to engage with Hydro One Networks to determine total electrical demand on the island and to identify historical peak and lull patterns (ACEP Benchmarking Report, July 4, 2016).	CEC	CIM							

ID #	Management Actions	Lead	Support	Ongoing	1-2 Years	2-5 Years	5+ Years	Not Started	In Progress	Complete
<b>MA-RE-07</b> 	Identify alternative energy subsidies to assist individuals with upgrading or retrofitting their homes. <ul style="list-style-type: none"> <li>Have workshops on Ontario Electricity Support Rebate.</li> </ul>	CEC								
<b>MA-RE-08</b>	Determine capability and suitability of alternative sources for new development or redevelopment on Bear Island and n'Daki Menan.	CEC								

## Climate Change

ID #	Management Actions	Lead	Support	Ongoing	1-2 Years	2-5 Years	5+ Years	Not Started	In Progress	Complete
<b>MA-CC-01</b> 	Create education materials on climate change considerations (e.g., importing plant species to Bear Island) and type of plant species of importance (e.g., natural medicines). Information could be shared as part of Climate Change Report.	L&R								
<b>MA-CC-02</b> 	Monitor areas where external wildlife (e.g., geese) and plant species have been observed to gain a better understanding of their impact on water and soil quality.	L&R	TFN/ TAA Community							
<b>MA-CC-03</b>	Identify potential programs and funding resources to assist with upgrading and retrofitting buildings for climate change related impacts (e.g., extreme weather events). Subsidies are provided based on the <b>homeowners'</b> level of income.	CEC								
<b>MA-CC-04</b>	Upgrades and retrofits of buildings is encouraged to manage potential climate change related impacts (e.g., extreme weather events).	L&R	TFN/ TAA Community							

ID #	Management Actions	Lead	Support	Ongoing	1-2 Years	2-5 Years	5+ Years	Not Started	In Progress	Complete
<b>MA-CC-05</b> 	Develop and formalize Design Guidelines and policies for the development of new buildings that incorporate climate change considerations (e.g., net zero housing development, building colours).	CIM	L&R							
<b>MA-CC-06</b> 	Explore emergency response communication tools for weather events (e.g., satellite phones, walkie talkies).	CIM/L&R/ Communications								
<b>MA-CC-07</b>	Introduce climate change in Laura McKenzie Learning Centre curriculum. <ul style="list-style-type: none"> <li>• Include information on the type of trees that grow in the area.</li> </ul>									