Bingwi Neyaashi Anishinaabek

# Environmental Management Plan

Final July 2019

Prepared with support from DST Consulting Engineers, A Division of Englobe

# ABBREVIATIONS

| | |
|---|---|
| AST | Above-ground storage tank |
| BNA | Bingwi Neyaashi Anishinaabek |
| CCME | Canadian Council of Ministers of the Environment |
| CEAA | Canadian Environmental Assessment Act |
| CEPA | Canadian Environmental Protection Act |
| CIRNAC | Crown-Indigenous Relations and Northern Affairs Canada |
| DST | DST Consulting Engineers Inc. |
| EA | Environmental Assessment |
| ECCC | Environment and Climate Change Canada |
| EMP | Environmental Management Plan |
| ESA | Environmental Site Assessment |
| FCSAP | Federal Contaminated Sites Action Plan |
| FNLMA | First Nations Land Management Act |
| GCDWQ | Guidelines for Canadian Drinking Water Quality |
| INAC | Indigenous and Northern Affairs Canada (now ISC and CIRNAC) |
| ISC | Indigenous Services Canada |
| ISWM | Integrated Solid Waste Management |
| LABRC | Lands Advisory Board |
| MTSA | Municipal Type Services Agreement |
| ON | Ontario |
| O. Reg. | Ontario Regulation |
| R.R.O. | Revised Regulations of Ontario |
| SARA | Species at Risk Act |
| SPP | Source Protection Plans |
| USEPA | United States Environmental Protection Agency |

# TABLE OF CONTENTS

# 1 ENVIRONMENTAL MANAGEMENT PLAN

## 1.1 INTRODUCTION

After becoming a signatory to the *Framework Agreement* in January 2012, Bingwi Neyaashi Anishinaabek (BNA) ratified its Land Code in March 2014. This action allows the community to opt out of the land management portions of the Indian Act and returns the responsibility of land management and governance to the First Nation. While an Environmental Management Plan (EMP) is not a requirement under the *Framework Agreement*, they have proven to be useful tools for other First Nations as they develop regimes to meet their land stewardship goals and obligations. This EMP provides an outline to assist BNA in identifying environmental issues, past, present, or future, that may affect the lands and community of BNA, and provide high-level direction in managing and/or resolving these issues

## 1.2 PREPARATION OF THE ENVIRONMENTAL MANAGEMENT PLAN

A primary goal of the EMP is to guide the environmental management actions of BNA as the community implements its Land Code, develops its infrastructure, and its people return to living on their land year-round. The EMP was prepared by BNA, with support from DST Consulting Engineers (DST), and is intended to guide BNA in protecting, preserving, and improving the environment for future generations, and aiding BNA in becoming more self-reliant in meeting the community's environmental stewardship goals.

## 1.3 MEETINGS AND COMMUNITY CONSULTATION

Throughout the development of the EMP, engagement between the BNA First Nation, DST, and the First Nations Land Advisory Board Resource Centre (LABRC) was an important component in identifying BNA's environmental concerns and community management goals. A list of recorded community meetings and consultation efforts has been summarized in Table 1.

**Table 1. Summary of meetings and consultation activities**

| Date | Type | Location | Attendees | Purpose of Meeting |
|---|---|---|---|---|
| 31/01/2019 | Kickoff Meeting | DST Thunder Bay Office | David Harper – LABRC<br>Jennifer Predie – LABRC<br>Audrey Mandula – BNA<br>Brian Petrie – BNA<br>Conor Lee Kam – LL58FN<br>Bob Wright – DST<br>Ed Collins – DST<br>Sarah Moreth – DST | Collaborative EMP Workshop |

| | | | | |
|---|---|---|---|---|
| | | | Sam Voore – DST<br>David Vardy – DST<br>Vanessa Van Schaik – DST | |
| 23/03/2019 | Community Meeting | Victoria Inn Thunder Bay | Chief Joe Ladouceur<br>Brian Petrie – BNA<br>Jordan Hatton – BNA<br>BNA Membership<br>Bob Wright – DST<br>Sarah Moreth – DST | Inform community regarding EMP process; collect input on environmental issues |
| 03/05/2019 | Site Visit | Bingwi Neyaashi Anishinaabek | Chief Joe Ladouceur<br>Jordan Hatton – BNA<br>Brian Petrie – BNA<br>Natalie Hutchinson - BNA<br>Bob Wright – DST<br>Sarah Moreth – DST | Improve understanding of current site conditions, priorities, and challenges for development |
| 25/05/2019 | Community Meeting | | Bob Wright – DST | Present the Draft EMP to BNA |

# 2 Environmental Management Plan Goals, Objectives and Issues

## 2.1 Goal of environmental management plan

The purpose of this document is to guide BNA towards meeting its responsibility to govern and manage its land under the Framework Agreement. The First Nation aims to ensure that human activities and community development are carried out with minimal negative impacts to the environment, building a prosperous and sustainable community that will support future generations.

## 2.2 Objectives

- Identify environmental features that are important to the community
- Identify issues that may threaten these environmental features
- Develop guidelines and/or policies to regulate human activities in order to protect the environment
- Identify applicable federal laws and regulations, and identify areas where BNA laws may be required
- Promote wider community involvement in protecting the environment

## 2.3 BNA environmental issues

The BNA First Nation has identified a number of issues concerning environmental and natural resources associated with BNA lands. A comprehensive list of issues and related concerns was developed through meetings, community surveys, and discussions between BNA, DST, and LABRC.

| Community Issue | Potential Concerns |
|---|---|
| **Solid Waste Management** | • Unauthorized disposal, burning, or storage of waste<br>• Lack of recycling or waste diversion programs<br>• New landfill site required<br>• Potential impacts of wood waste from on-reserve sawmill<br>• No separate disposal procedures for hazardous wastes, including household, commercial, and industrial hazardous wastes |
| **Wastewater Management** | • Potential for the discharge of household sewage, industrial, and commercial wastewater into surface water |

- Lack of stable funding to retain qualified staff to inspect and maintain systems
- Lack of monitoring and enforcement for septic system standards

**Fuel Storage and Handing: Spill Response**

- Potential for fuel spills related to construction projects, personal and recreational use of fuel products, and future commercial or industrial operations on or near the reserve
- Lack of community knowledge and training in safe fuel handling practices

**Groundwater and Surface Water Protection**

- Potential for sewage or fuel contamination of ground and surface water
- Lack of water quality monitoring
- Contamination from nearby industry, both on- and off-reserve, including increased turbidity to surface waters caused by forestry or mining activities

**Wildlife and Habitat Protection**

- No system for incorporating traditional knowledge into wildlife management
- No monitoring of local wildlife populations
- Lack of information about invasive species and species at risk
- Decline of moose and blueberry abundance
- Potential for forestry-related herbicides to impact local species

**Cultural Resources**

- Traditional knowledge which includes, but is not limited to, traditional stories, ceremonies, dances, crafts, ideologies, hunting and trapping methods, food gathering methods, food preparation and storage, spiritual beliefs, medicines and other knowledge is threatened by modernization
- No formal process for including traditional knowledge in management decisions
- Conflict between traditional practices and laws of the federal and provincial governments

| | |
|---|---|
| **Soil Quality** | • No BNA policy or law for dealing with contaminated sites on BNA lands, including who bears responsibility when contamination occurs<br>• No BNA policies to prevent importation of contaminated fill |
| **Emergency Response Plans** | • BNA lacks emergency response plans (e.g., flooding, wildfires, severe storms, spills)<br>• Currently only one road in or out of the community |
| **Limited Environmental Capacity of Staff** | • Lack of staff familiarity with environmental legislation, and no dedicated staff position for environmental issues<br>• Lack of staff training opportunities<br>• Lack of enforcement policies for environmental laws, including applicable federal laws that require First Nation enforcement |
| **Unsustainable Resource Management and Development** | • No policies or enforcement mechanisms to ensure resource development on reserve lands is performed sustainably<br>• Limited participation in regional resource management decisions (e.g. forestry, mining) by provincial or federal governments or businesses |
| **Community Health** | • BNA lacks policies to protect drinking water quality<br>• Lack of information on abundance and potential contamination of traditional foods<br>• Food security concerns<br>• Indoor/outdoor air quality |

## 2.4 POTENTIAL RESPONSES

There are several different options available to address environmental concerns, each with its own benefits and drawbacks. The five options, listed below, are compared in Table 2.

- Policies
- Guidelines and Best Management Practices

- Education and Outreach
- Monitoring and Reporting
- Laws and regulations
    - Federal: The laws and regulations listed under this heading apply to federal lands, including First Nations.
    - Provincial: The Ontario laws and regulations listed under this heading apply to the lands surrounding BNA and are provided for reference purposes. In Section 3.1 of the Framework Agreement, BNA agrees to promote consistency in environmental regimes by harmonizing its regimes with those of the province of Ontario
    - BNA: For those environmental regimes that require enforcement to ensure compliance, BNA will draft environmental protection laws that apply to both members and non-members living and working on BNA lands.

Table 2. Options available to address environmental concerns developed through the Matsqui First Nation EMP (Matsqui FN EMP, 2012)

| **Response** | **Definition** | **Benefits** | **Limitations** |
|---|---|---|---|
| Policies | Specific method or course of action to guide government | Flexible, easy to draft, and easily amended | Not legally enforceable and should be consistent with other policies |
| Guidelines and Best Management Practices | A set of instructions offering clear direction to minimize impacts | Provides clear directions for proper conduct of tasks | Not legally binding, can become complex |
| Education and Outreach | Communication of knowledge to improve awareness of issues and responses | Can result in positive change in attitudes and actions, and is adaptable | Not enforceable, requires thorough outreach program |
| Monitoring and Reporting | Collection and reporting of information on environmental quality | Provides measurable data that can be compared to guidelines, and allows for comparisons over time | Long-term commitment is needed, results may be difficult to interpret |
| Laws and Regulations | Enforceable legislation designed to achieve uniform compliance | Enforceable and authorized by the Framework Agreement | Inflexible, costly to implement and enforce |

# 3 RESPONSES TO ENVIRONMENTAL ISSUES

## 3.1 SOLID WASTE MANAGEMENT

### 3.1.1 Key Features

The way that BNA handles solid waste is currently in a state of transition. Current residents and visitors to the reserve must dispose of their own solid waste at the nearby MacDiarmid Landfill, located to the north of the community (Figure 1, Appendix A). This landfill, also used by the nearby community of Biinjitiwaabik Zaaging Anishinaabek (Rocky Bay First Nation), is set to be closed in the near future, although the exact date has not been set.

A Solid Waste Management Plan, completed in February by DST, identifies the most appropriate methods for dealing with solid waste over a 25-year period. There are currently no recycling or other waste reduction/diversion programs in effect.

Plans are underway to build a waste transfer station on Industrial Lot 2, immediately south of the on-reserve sawmill. Solid waste will be collected weekly and stored at the transfer station and periodically transferred to the Beardmore Landfill, operated by the Municipality of Greenstone, under a future Municipal Type Service Agreement (MTSA). The Municipality of Greenstone is in the process of creating a new landfill, which will eventually replace the Beardmore Landfill as the final destination for solid waste generated by BNA.

### 3.1.2 Potential environmental threats

Potential environmental threats associated with BNA's solid waste management have been identified and are summarized below:

- Improper management and storing of solid wastes can lead to an overall degradation of the environment due to contaminants (air, soil, water)
- Adverse effects on wildlife that are exposed to solid waste, consume solid waste or inhabit waste storage and disposal areas
- Leachate caused by precipitation infiltrating solid waste storage areas and potentially contaminating surface or groundwater
- Risk of fire caused by poor management of solid waste
- Improper storage of wood waste from sawmill could cause leachate to degrade nearby surface water quality
- Lack of community knowledge about waste management, including proper storage and disposal of common items such as batteries, car parts, waste oil, tires, or household hazardous materials.
- Unauthorized dumping, burning, or storage of waste

- High impact on landfills due to absence of regional recycling or other waste diversion opportunities

### 3.1.3 Management goals

- Provide stable and economical waste disposal method that caters to long-term needs of the community and minimizes negative environmental impacts
- Maximize community participation in waste reduction and diversion
- Ensure that hazardous waste is identified and managed appropriately in line with provincial guidelines
- Provide waste diversion options at the transfer station site
- Protect wildlife by limiting access to solid waste

### 3.1.4 Management regime

**Laws and Regulations**

**Federal**

- *Indian Act (1985)*
    - Indian Reserve Waste Disposal Regulation
- *Canadian Environmental Protection Act (1999)*
    - Export and Import of Hazardous Waste and Hazardous Recyclable Materials
- *Transportation of Dangerous Goods Act (1992)*
- *Migratory Birds Convention Act (1994)*

**Provincial**

Provincial laws are listed as reference points for developing BNA's environmental laws in order to harmonize laws and regulations on First Nation lands with provincial regulations.

- *Environmental Protection Act* (1990)
    - Part V: Waste Management
    - Ontario Regulation (O. Reg.) 85/16: Registrations Under Part II.2 of the Act – End-of-life-vehicles
    - O. Reg. 351/12: Registrations Under Part II.2 of the Act – Waste Management Systems
    - O. Reg. 232/98: Landfilling Sites
    - O. Reg. 102/94: Waste Audits and Waste Reduction Work Plans

- O. Reg. 101/94: Recycling and Composting of Municipal Waste
- Revised Regulation of Ontario (R.R.O.) 1990, Reg. 347: General – Waste Management

**Municipal**

- Municipality of Greenstone By-law 09-48 ("The Garbage By-law")

**BNA (suggested)**

- Create a law that prohibits dumping or open-burning of solid waste on reserve and enforces appropriate disposal of hazardous wastes. This law should include appropriate enforcement measures and penalties

## Policies

In order to ensure that solid waste generated within the community is disposed of appropriately, BNA will enact the following:

- Establish a policy addressing the storage and removal of derelict vehicles
- Coordinate household hazardous waste collection with the Municipality of Greenstone

## Guidelines and Best Management Practices

BNA will consider the following guidelines and best management practices when drafting environmental law, enacting waste management policies, and planning educational initiatives, until the community develops its own best management practices. These will come at a future date when a permanent residential population has been established and the specific needs of the community are better understood.

BNA's Solid Waste Management Plan (SWMP) was prepared by DST in March 2019. The SWMP includes an analysis of several possible waste disposal options, and concludes that an on-reserve waste transfer station that will store solid waste until it can be transported to the Beardmore landfill is the most appropriate for the first 25 years of BNA's community development. In addition to the equipment and operational requirements outlines in the SWMP, BNA will consider the following initiatives:

- Provide and maintain waste receptacles in public areas, including containers for cigarette butts
- Maintain regularly scheduled "open" hours for members to drop off waste at the transfer station

- Progress towards providing weekly roadside pickup of residential solid waste
- Establish a "re-use" center to divert usable items from the landfill

Section 2.4 provides details on potential waste diversion options, including recycling and hazardous waste disposal. In managing solid waste, BNA should focus first on waste prevention, followed by waste diversion, and then disposal.

The Zero Waste Hierarchy presented by the Recycling Council of British Columbia (RCBC) offers a guide to strategies and policies for achieving a Zero Waste system (Appendix B). It expands the traditional 3 R's (Reduce, Reuse, Recycle) to include Re-consider, Recover, and Retain, and encourages everyone from policy-makers to individuals to move from a linear use of resources to a closed-loop system, in which resources are recycled back into the production of new products instead of being discarded. This results in both less waste being discarded and less raw materials used for production.

## Education

Community involvement in waste management initiatives requires members to understand what is required of them and why their participation is essential. To ensure strong participation from the community, BNA will enact the following educational measures:

1) **To increase participation in waste diversion and appropriate waste storage/disposal:**

- Distribute the waste pick-up and transfer station schedule to all BNA households, and make it available online
- Provide information on how to recycle (if it becomes available), compost food waste, and otherwise reduce waste to be landfilled. This information may be communicated by written material, community workshops, clothing swaps, or other events
- Provide information on what constitutes household hazardous waste and how to store, use, and dispose of it appropriately. This should include information on the negative effects of improper disposal

2) **To protect the environment from inappropriately disposed-of waste**

- Encourage community members to dispose of fish waste in a traditional manner
- Create anti-dumping signage (e.g. “Help us protect our lands; please don’t litter or dump waste”)
- Organize periodic community clean-ups

**Monitoring and Reporting**

Ongoing monitoring to track the effectiveness of solid waste management initiatives will inform future management decisions. Possible monitoring activities include the following actions:

- Designate routine surveillance of potential/known dumping areas and inspection of waste disposal sites (such as a transfer station)
- Provide a telephone number to call to report illegal dumping
- Conduct periodic waste audits to assess whether the amount and composition of residential waste is affected by diversion initiatives

## 3.2 WASTEWATER MANAGEMENT

### 3.2.1 Key Features

There are no community wastewater systems in place on BNA lands, and there are currently no plans to construct one to service new developments. If feasible, all wastewater will be managed through individual septic systems rather than through a sewer system. If a situation arises in which septic systems are not feasible, BNA will consider alternatives, including a community wastewater system.

Installation and maintenance of septic systems will be the responsibility of the homeowner, or, in the case of Band-owned buildings, the Band Council. Unlike the provinces and territories, First Nations communities do not have legally enforceable standards for safe drinking water. While Band-owned septic systems must comply with the *Protocol for Decentralised Water and Wastewater Systems in First Nations Communities* (outlined in Section 3.2.4) in order to receive funding from ISC, this protocol does not apply to individually-owned infrastructure.

### 3.2.2 Potential environmental threats

Potential environmental threats associated with wastewater management have been identified and summarized below:

- Potential discharge of household sewage, industrial, and commercial wastewater into surface water and groundwater

- Lack of stable funding to retain qualified staff to inspect and maintain systems
- Poor drainage in Phase II and III housing areas (identified during DST's Site Visit on May 3, 2019) may require that septic systems use raised drain fields or secondary treatment to protect groundwater from poorly treated effluent
- Potential for contamination of drinking water wells

### 3.2.3 Management goals

- Ensure septic tanks are installed according to national standards (CSA B65)
- Protect ground water and surface water from wastewater contamination
- Prevent damage to aquatic ecosystems due to wastewater contamination

### 3.2.4 Management regime

**Laws and Regulations**

**Federal**

- *Canadian Environmental Protection Act (1999)*
- *Safe Drinking Water for First Nations Act (2013)*
    - Regulations under this Act are in development through consultation with First Nations. The intent is for these regulations to harmonize First Nations water and wastewater regulations with those of the provinces and territories.

**Provincial**

- *Environmental Protection Act (1990)*
    - R.R.O. 1990, Reg. 358: Sewage systems
- *Ontario Building Code (2012)*
    - Section VIII
- *Clean Water Act (2006)*

**Policies**

The *Protocol for Decentralised Water and Wastewater Systems in First Nations Communities* (April 2010) provides requirements for ISC-funded, Band-managed septic systems. The protocol requires that decentralized wastewater systems conform to CSA B65 – National Installation Standard for Decentralised Wastewater Systems.

https://www.aadnc-aandc.gc.ca/DAM/DAM-INTER-HQ/STAGING/texte-text/dsp_1100100034992_eng.pdf

All ISC-funded septic systems must be inspected during construction by a qualified inspector or an appropriate inspection agency. The Environmental Public Health Program provides inspection services to First Nations.

**Guidelines and Best Management Practices**

The Environmental Public Health Program provides wastewater services to First Nations communities, including advice on design, construction and operation of wastewater systems, septic system inspection services, annual well testing services, and more.

https://www.canada.ca/en/indigenous-services-canada/services/first-nations-inuit-health/health-promotion/environmental-public-health.html

**Education**

BNA will provide resources in the form of a brochure or information sheet, available online and in the band office, detailing proper septic system maintenance. The Environmental Public Health Program provides educational resources on septic system maintenance and risk reduction related to sewage discharge.

## 3.3 Fuel Storage and Handling

### 3.3.1 Key Features

At the time of this report's completion, there are no commercial fuel facilities located on the reserve. The following sections provide direction to ensure that any future fueling stations are constructed in accordance with the strictest environmental protection laws.

Non-commercial sources of petroleum products on the reserve may include Above Ground Storage Tanks (ASTs) for heating appliances and fuel for recreational vehicles stored in jerry cans.

### 3.3.2 Potential environmental threats

While fuel storage on BNA lands is currently limited to jerry cans used to fuel recreational vehicles and sawmill equipment, this document considers possible future sources of fuel including ASTs or commercial fuel sales. Potential environmental threats associated with fuel storage and handling have been identified and summarized below:

- Fuel spills contaminating soil and groundwater
- Lack of staff training at fuel facilities and spill response
- Poorly maintained facilities and tanks
- Lack of regular inspections
- No standard operating procedures/best practices

- Improper/unsafe location of potential future fuel facilities

### 3.3.3 Management goals

Present

- Increase community awareness of potential risks to the environment and to human health related to improper personal fuel use and storage

Future

- Fuel spill response plans
- Maintain a record of potentially contaminating activities
- Put safe work procedures into practice
- Abide by all requirements for location and installation of future fuel facilities and ASTs

### 3.3.4 Management regime

**Laws and Regulations**

**Federal**

- *Canadian Environmental Protection Act (1999)*
- *Storage Tank System for Petroleum Products and Allied Petroleum Products Regulations (2008)*
- *Transportation of Dangerous Goods Act (1992)*
    - Transportation of Dangerous Goods Regulations

**Provincial**

- *Technical Standards and Safety Act (2000)*
    - O. Reg. 211/01: Propane Storage and Handling
    - O. Reg. 212/02: Gaseous Fuels
    - O. Reg. 213/01: Fuel Oil
    - O. Reg. 217/01: Liquid Fuels

**Policies**

BNA will comply with all relevant federal legislation governing the use and storage of petroleum products. In regards to the following storage tank systems, which do not fall under federal regulations, BNA will comply with the applicable provincial standards to ensure adequate environmental protection.

- Storage containers with a capacity of less than 230 litres

- Indoor storage tanks where the building supplies the required level of secondary containment
- Pressurized tanks (e.g. propane)
- ASTs with a capacity of 2500 litres or less that are used for heating or for emergency power generations
- Storage tanks systems regulated by the National Energy Board of the Canada Oil and Gas Operations Act

BNA will require that all industrial and commercial operations on the reserve whose staff are expected to handle fuel employ Standard Operating Procedures for fuel handling, including appropriate personal protective equipment, spill prevention measures, and spill response measures. These operations will also be required to provide a spill kit appropriate to the volume and type of fuel typically handled or stored on site, and all staff should be trained in the use of the spill kit.

### Guidelines and Best Management Practices

The Canadian Council of Ministers of the Environment (CCME) has created a document entitled "Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products" for use by owners of storage tanks, industry members, and government entities with authority to regulate petroleum storage tanks. The code provides a set of technical requirements and may be adopted by any authority having jurisdiction.

BNA will follow the recommendations outlined in the CCME code to govern the use of above-ground storage tanks by individuals and for the purpose of commercial fuel sales.

### Education

The use of safe fuel handling and storage practices by individuals as well as owners/employees of commercial fuel facilities are important in preventing spills. Band employees who are required to handle petroleum products as part of their duties will be trained in safe handling procedures and spill response measures.

BNA will provide a pamphlet or handout, available online or in the band office, describing the types of approved containers for storing petroleum for personal use and outlining safe handling practices, with special emphasis on handling fuel on or near bodies of water.

**Monitoring and Reporting**

Individuals who handle petroleum products, particularly in remote or ecologically sensitive areas, should be familiar with when and who to call in case of a spill. In Ontario, either of the following two numbers may be called in case of a leak or spill.

| | |
|---|---|
| 1-613-239-6065 | 1-800-268-6060 |
| Environment Canada | Ministry of the Environment |
| Environmental Emergencies | Spills Action Centre |

## 3.4 GROUNDWATER AND SURFACE WATER PROTECTION

### 3.4.1 Key Features

The BNA reserve encompasses a variety of surface water features, including several creeks, wetlands, small lakes, and a portion of the Lake Nipigon shoreline in Pitijwabik Bay (Figure 1, Appendix A). Drinking water will be provided from aquifers, therefore groundwater source protection is essential.

A number of potential contaminating sources to groundwater and surface water supply have been identified, including the MNRF landfill to the north, wood waste from the Papasay sawmill, the planned waste transfer station, and the potential for improperly constructed or maintained septic tanks.

### 3.4.2 Potential environmental threats

Potential environmental threats associated with groundwater and surface water protection have been identified and summarized below:

- Lack of monitoring to establish baseline water quality and evaluate effects of development
- Runoff from the application of pesticides and herbicides infiltrating groundwater and surface water
- Potential contamination of waterbodies and source water from spills (i.e. fuel spills, chemical spills, etc.)
- Leachate and runoff from waste management areas, including the planned waste transfer station and wood waste from the sawmill, infiltrating groundwater and surface water bodies
- Contamination from nearby industry, including increased turbidity of surface waters
- Improperly constructed or poorly maintained septic tanks

### 3.4.3 Management goals

BNA will use the following best management practices and guidelines and collaborate with the Trilateral Steering Committee and the Indigenous Drinking Water Projects Office to provide regulatory, technical and engineering support for on-reserve drinking water systems.

- Ensure compliance with applicable legislation listed below

- Develop and implement policies to protect drinking water sources from current and future potential contaminating activities
- Monitor surface and groundwater quality to track long-term trends and to assess the effectiveness management initiatives
- Protect aquatic life, livestock and wildlife from water contamination

### 3.4.4 Management regime

**Relevant Legislation and Authorities**

**Federal**

- *Canadian Environmental Protection Act (1999)*
- *Fisheries Act* (1985)
- *Migratory Birds Convention Act (1994)*
- *Safe Drinking Water for First Nations Act (2013)*
- *Species at Risk Act (2002)*
    - Critical habitat is any habitat necessary for the survival or recovery of a listed wildlife species, including aquatic species. Thus, contamination or other changes to surface water could be considered destruction of critical habitat under section 58.
- *Protocol for Safe Drinking Water in First Nations Communities*
    - This protocol applies to drinking water systems that are funded in whole or in part by Indigenous Services Canada (ISC), and that serve five or more households, or are a public facility. While most households will be responsible for installing and maintaining their own well, public facilities including health clinics, band offices, schools, and Elders facilities must comply with the requirements of this protocol.

**Provincial**

- *Clean Water Act (2006)*
- *Environmental Protection Act (1990)*
- *Lakes and Rivers Improvement Act (1990)*
- *Nutrient Management Act (2002)*
- *Ontario Safe Drinking Water Act (2002)*
    - O. Reg. 169/03: Water Quality Standards
    - O. Reg. 170/03: Drinking Water Systems

- *Ontario Water Resources Act (1990)*
- *Public Lands Act (1990)*
- *Sustainable Water and Sewage Systems Act (2002)*
- *Environmental Assessment Act (1990)*
- *Environmental Bill of Rights (1993)*

**Policies**

Subject to funding and available resources, BNA will take the following actions and steps to improve quality to groundwater and surface water systems:

- Work in collaboration with Ontario First Nations Technical Services Corporation to provide training and leadership initiatives including:
  - Entry Level Course for Drinking Water Operators
  - Operator training plans
  - Continuing education training for operators
  - Training and tools for First Nation leaders and managers
- Facilitate regulations to prevent illegal dumping into surface water bodies
- Develop monitoring programs for drinking water quality and wildlife resources
- Protect surface waters from sedimentation and contamination from storm water run-off in areas of new construction by phasing development activities, minimizing disturbed areas, using silt fencing, slope stabilization measures, or other erosion control methods commonly employed in the construction industry.
- Prohibit groundwater and surface water pollution and permit penalties for polluters

**Guidelines and Best Management Practices**

BNA will consider the following guidelines and best management practices when drafting environmental law, enacting groundwater and surface water protection policies, and planning educational initiatives.

Several drinking water programs and best management practices can be found through:

- Health Canada
- Indigenous Services Canada (ISC)
- Environment and Climate Change Canada (ECCC)

- Government of Ontario
- Conservation Ontario
- Municipalities

The Guidelines for Canadian Drinking Water Quality (GCDWQ) have been developed by Health Canada, various provincial and territorial authorities as well as ECCC. The GCDWQ address contaminants and physical characteristics of water. Guidelines have been developed to aid in providing safe drinking water in areas of federal jurisdiction and how to implement the GCDWQ: https://www.canada.ca/en/health-canada/services/publications/healthy-living/guidance-providing-safe-drinking-water-areas-federal-jurisdiction-version-2.html

The province of Ontario has developed a comprehensive framework to protect drinking water, from source to tap. Many regions and areas utilize this approach through Source Protection Plans (SPP) which encompass guidelines and policies to protect drinking water from source, treatment and distribution, and management and monitoring. The Lakehead Source Water Protection Plan is the closest SPP in proximity to BNA lands. The Lakehead SPP contains a series of locally developed policies that protect current and future sources of municipal drinking water. Under the *Ontario Safe Drinking Water Act (2002)*, municipalities shall provide public annual reports for water quality.

http://www.sourceprotection.net/images/Approved%20SPP.pdf

ISC has developed the "On-Reserve Source Water Protection Guide and Template" to assist First Nations in addressing the issue of drinking water contamination.

https://www.aadnc-aandc.gc.ca/eng/1398369474357/1398369572276#chp1

The Canadian Council of Ministers of the Environment (CCME) has developed guidelines to protect drinking water using a multi-barrier approach covering protective measures from source to tap.

https://www.ccme.ca/en/resources/water/from_source_to_tap_the_multi_barrier_approach.html

Protective measures should also be considered for non-potable sources and surface water bodies that host aquatic life and/or that may be utilized for agricultural use, such as livestock water. The CCME has developed Canadian Water Quality Guidelines for the Protection of Aquatic Life and Protocols for Deriving Water Quality Guidelines for the Protection of Agricultural Water Uses.

http://ceqg-rcqe.ccme.ca/en/index.html#void

http://ceqg-rcqe.ccme.ca/download/en/131

The Ontario Ministry of Transportation's 2015 "Environmental Guide for Erosion and Sediment Control During Construction of Highway Projects" provides best management practices for protecting surface water from sediment-laden runoff from construction projects, including situations like snowmelt and significant rainfall events. This document can be found at the following address:

http://www.raqsb.mto.gov.on.ca/techpubs/eps.nsf/0/7ff7c9fa7def430f85257f5b00510665/$FILE/MTO%20Erosion%20and%20Sediment%20Control%20Guide%202015%20Final%20ACC.pdf

A number of best management practices regarding sedimentation and erosion control, as well as storm water runoff can be found through the United States Environmental Protection Agency (USEPA). Runoff and pollution from industry as well as stormwater runoff can contain particulate matter that may adversely affect water quality and clarity by increasing turbidity and compromising physical parameters. Water quality impacts due to sedimentation, erosion and runoff can be managed through implementation of policies and regulations. Information on managing discharges from construction, industrial and municipal sources can be found through the USEPA.

https://www.epa.gov/npdes/npdes-stormwater-program

## Education

Community involvement in groundwater and surface water protection initiatives requires members to understand what is required of them and why their participation is essential. To ensure strong participation from the community, BNA will enact the following educational measures:

- Erect signage near water bodies and in residential areas reminding members that all runoff from lawns and driveways makes its way into the streams and into Lake Nipigon, including pesticides from lawns and chemicals used to wash cars.
- Make information about septic tank maintenance readily available at the band office
- Inform community members about BNA's policies regarding groundwater and surface water protection, and advise members on ways they can mitigate personal impact

## Monitoring and Reporting

The following monitoring and reporting strategies will be implemented by the BNA to support groundwater and surface water resources:

- Identify and document valuable surface water inventory

- Develop baseline monitoring program to record water quality from valuable water resources, pending available funding, or work with a provincial or federal body (e.g. Health Canada) to collect or access this data
- Provide annual drinking water quality reports
- Provide a number to call to report illegal activities associated with contaminating water sources
- Provide basic "Toolkit" for drinking water issues on-reserve, including information on well types, well maintenance and inspection, bacteriological monitoring, and educational tools such as presentations and sample radio scripts. This can be found at the following address:

  https://www.canada.ca/en/indigenous-services-canada/services/first-nations-inuit-health/reports-publications/health-promotion/toolkit-individual-wells-first-nations-health-canada-2010.html

## 3.5 WILDLIFE AND HABITAT PROTECTION

### 3.5.1 Key Features

The BNA reserve encompasses a variety of natural heritage features, including woodlots, wetlands, several creeks and small lakes, a portion of the Lake Nipigon shoreline (Figure 1, Appendix A), as well as a variety of plants and wildlife, with potential for species at risk.

The protection of indigenous species and habitat, and the prevention/elimination of invasive species, are important to maintaining functional ecosystems, particularly when a community relies on harvesting wild foods and traditional medicines either for sustenance or to support cultural and spiritual identity.

### 3.5.2 Potential environmental threats

Potential environmental threats and concerns within the BNA community associated with wildlife and habitat management have been identified and are summarized below:

- No dedicated monitoring of local wildlife populations, particularly species that are of importance to community members, as these may differ from species of interest to provincial or federal bodies
- Lack of information about species at risk and invasive species (e.g. hogweed)
- Potential for future development to harm natural heritage features and negatively impact species and their habitats
- Lack of a system for incorporating traditional knowledge into wildlife management
- Declines in moose and blueberry abundances

- Herbicide use in forestry potentially affecting local wildlife and plant species

### 3.5.3 Management goals

Little information currently exists about the occurrence of valued species, wildlife and critical habitat, and species at risk within the BNA reserve and surrounding area. A desktop review indicated the potential occurrence of Lake Sturgeon (*Acipenser fulvescens*) and Deep Water Sculpin (*Myoxocephalus thompsonii*), in the waters surrounding the BNA reserve, but further investigations are needed in order to develop effective management strategies. The BNA First Nations community will initiate the following studies and action plans in order to achieve their wildlife management goals:

- Protect wildlife and habitats in and around the community, including wildlife corridors
- Protect local wild food sources and traditional resources, including blueberries, wild game, moose, etc.

### 3.5.4 Management regime

**Laws and Regulations**

BNA will not be developing their own laws for wildlife and habitat protection, however Federal laws affecting natural heritage features still apply, including:

**Federal**

- *Fisheries Act (1985)*
- *Species at Risk Act (2002)*
- *Migratory Bird Convention Act (1994)*
- *Canadian Environmental Assessment Act (2012)*

**BNA**

- Environmental Assessment Law (to be developed)
- Interim Environmental Assessment Process from the BNA Individual Agreement with Canada

**Policies**

In order to ensure that natural heritage features, including plants, wildlife and habitats, are protected within the reserve and surrounding area, BNA will enact the following:

- Develop a land use plan to protect the natural heritage features within the reserve. This plan will incorporate traditional knowledge and minimize negative impacts associated with future developments and other on-reserve activities by identifying sensitive or important areas and creating a buffer zone to protect them from the impacts of development

- Initiate an assessment of the use of herbicides on the reserve and surrounding land and characterize potential impacts with options for mitigation and/or potential alternative measures.
- Incorporate strategies into management plans to aid declining populations of values species (e.g. moose and blueberries).
- Require appropriate environmental assessments (EAs) be conducted in the planning stages of development projects, in order to guide development plans and associated mitigation measures to protect natural heritage features, ensuring they are consistent with federal legislation and BNA policies (including the Canadian Environmental Assessment Act; CEAA 2012).
- Work with provincial and local governments to develop a management strategy to effectively deal with and prevent the spread of invasive species.

## Guidelines and Best Management Practices

Until BNA establishes an Environmental Assessment Regime (see section 3.12), the community will follow the Interim EA process outlined in the BNA Individual Agreement with Canada. The EA process will ensure that development will not negatively impact sensitive ecosystems or threatened species.

- BNA will consider the following guidelines and best management practices when developing management strategies and planning educational initiatives:Guide to federally listed species at risk with links to descriptions of critical habitats, recovery strategies, management plans and action plans which can be found at the following address:

https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html

- Guide to Fisheries and Oceans Canada project review process to determine if projects in or near water may cause serious harm to fish and associated mitigation measures which can be found at the following address:

http://www.dfo-mpo.gc.ca/pnw-ppe/fpp-ppp/guide-eng.html

- Guidelines to reduce risk to migratory birds and the application of federal legislation which can be found at the following address:

https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/reduce-risk-migratory-birds.html

- Guide to invasive species in Ontario and best management practices which can be found at the following address:

https://www.ontario.ca/page/invasive-species-ontario

https://www.ontarioinvasiveplants.ca/resources/best-management-practices/

Guide to invasive species in Canada which can be found at the following address:

https://www.invasivespeciescentre.ca/

## Education

Various awareness programs can be initiated by BNA to help increase community understanding in protecting natural heritage features, preventing the spread of invasive species, and promoting Traditional Knowledge:

- Promote awareness of Traditional Knowledge, species at risk, and invasive species at community meetings and provide education and training events. Implement an educational program for the community about hunting and trapping wild game that includes traditional best practices.
- Develop reference brochures to be distributed to community members that describe wildlife, vegetation, and species at risk present within the reserve and surrounding area, and how to identify and protect them, including activities that may have a direct or indirect negative impact. Include reference material on the BNA website and post information boards at community buildings.
- Develop reference brochures to identify and prevent the spread of invasive species and distribute to the community. Post signage in the reserve that identifies areas with invasive species and how to prevent their spread. Include reference material on the BNA website and post information boards at community buildings.
- Require mandatory EAs and environmental protection training to companies and organizations directly working with natural heritage features, and ensure they are familiar with applicable legislation and BNA policies.
- Support training and involvement of community members to work on the environmental programs, natural heritage assessments, and development of management strategies.

## Monitoring and Reporting

The effectiveness of the management plans and strategies should be assessed and reported on a regular and ongoing basis, with scheduled follow up surveys to guide adaptive management as necessary:

- Species at risk monitoring and reporting
- Valued species monitoring and reporting
- Invasive species monitoring and reporting

Mitigation measures implemented as part of the environmental assessment process for land development projects should be monitored and their effectiveness evaluated, with adaptive management as necessary.

## 3.6 CULTURAL RESOURCES

### 3.6.1 Key Features

During the early twentieth century, a succession of hydroelectric generation facilities raised the water level of Lake Nipigon, flooding the community of BNA/Sand Point and causing severe damage to docks, cellars, gardens, and the cemetery. In the late 1950s, the remaining structures that made up the community of Sand Point were burned down when the Ontario Department of Lands and Forests cancelled the License of Occupation and turned the community's traditional territory into Blacksand Provincial Park. Individuals and families were forced to abandon their homes, and this displacement caused a significant loss of knowledge and damage to cultural traditions, particularly those with ties to specific places on the land. However, with the help of community Elders and knowledge keepers, BNA is in the process of identifying important cultural locations, including former cemeteries and other sacred grounds.

Some important cultural resources include the following:

- Two cemeteries, one on each side of the creek that splits the community's main beach
- Medicine garden
- Pow Wow grounds
- Remains of original community on the west side of the community's main beach

These physical resources, and any yet to be identified, are an important part of the community's history and contribute to a sense of belonging and pride, and must be protected from environmental degradation. Sites located close to the lake may be at risk of future flooding.

Many cultural practices, including gathering, hunting, and fishing, may be threatened by changes to the environment including climate change, degradation of surface water quality, land development, or environmental emergencies such as wildfire or fuel spills.

### 3.6.2 Potential environmental threats

- Damage to physical cultural resources from flooding, wildfire, or spills
- Damage to cultural traditions caused by changes in the environment
- Traditional knowledge threatened by colonialism
- No formal process for including traditional knowledge in environmental management decisions
- Conflict between federal/provincial laws and traditional culture

### 3.6.3 Management goals

- Formalize the involvement of traditional knowledge and culture in decision making processes
- Identify important cultural resources and develop a plan to protect them from potential threats

### 3.6.4 Management regime

**Laws and Regulations**

**Federal**

- *Canadian Environmental Assessment Act (2012)*
    - In Section 2(1), the potential environmental effects of a project are considered to include any effects on physical and cultural heritage
    - Parts of this act may be used to guide the EA law that BNA will develop

**Provincial**

- *Ontario Heritage Act (1990)*

**BNA**

- Environmental Assessment Law (to be developed)
- Interim Environmental Assessment process from BNA Individual Agreement with Canada

**Policies**

BNA will undertake a study to identify important cultural resources and create a map that identifies sensitive locations. This study may incorporate knowledge previously offered by Elders, historical records including air photos, archaeological assessments, or community meetings. BNA will enact a policy that establishes a protective buffer against development around identified cultural sites and incorporate these sites into the Land Use Plan.

BNA will adopt a formal process for incorporating traditional knowledge into community decision making (i.e. limits on resource harvesting based on traditional knowledge).

**Guidelines**

An example that may be used to develop a policy for protecting cultural heritage sites is the Forest Management Guide for Cultural Heritage Values provided by the Ontario government. It offers definitions, data sources, and specific guidelines for establishing protective reserves around different types of heritage sites.

https://www.ontario.ca/page/forest-management-cultural-heritage#section-5

**Education**

BNA will erect signage, where appropriate, to inform community members and visitors of the historical and contemporary significance of certain heritage sites.

BNA will encourage discussions that promote awareness of Traditional Knowledge and Land Use during community events and through Elder-Youth Workshops.

## 3.7 Soil Quality

### 3.7.1 Key Features

In the Phase I Property Transfer Assessment completed by KGS Group in December 2005, two potential environmental concerns were identified: fluorescent bulbs within the gatehouse, comfort station, and maintenance building that could potentially contain PCB ballasts; and an unauthorized waste disposal site on the pipeline access road south of Leonard Lake. MNRF staff removed the waste from this site, and clean granular fill was used to cover any remaining traces of debris in July 2007. A report was issued on April 4, 2008 detailing the clean-up activities. At the time of this report's completion, there are no known contaminated sites on the BNA reserve.

### 3.7.2 Potential environmental threats

Potential issues regarding land contamination include the following:

- Potential contamination from spills (i.e. fuel spills, chemical spills, etc.)
- No BNA policies to prevent importation of contaminated fill
- Limited oversight and/or monitoring of the land due to seasonal residence
- Potential for improper storage or disposal of hazardous waste until BNA implements SWMP

### 3.7.3 Management goals

- Confirm and qualify any suspected future contamination with Environmental Site Assessments
- Protect BNA from liability issues by establishing a law that will ensure that the "polluter pays" in the case of a spill or other contaminating activity
- Prevent future contamination through a combination of regulation, policies and educational initiatives

### 3.7.4 Management regime

**Laws and Regulations**

**Federal**

- *Canadian Environmental Protection Act (1999)*

- *CCME Canadian Soil Quality Guidelines for the Protection of Environment and Human Health*

**Provincial**

- *Environmental Protection Act (1990)*
    - O. Reg. 153/04: Records of Site Condition

**BNA**

BNA will adopt an environmental protection law that holds the "polluter" responsible for any action that causes soil on BNA lands to be contaminated, including intentional dumping or accidental spills. The law will include fewer consequences for those who report the contaminating activity immediately to encourage reporting and allow for faster containment measures.

This law will also prohibit the importation of soil or other fill material to the reserve that exceeds applicable standards contained in the Canadian Environmental Quality Guidelines put forth by the CCME as well as the "Soil, ground water and sediment standards for use under Part XV.1 of the Environmental Protection Act", as specified in the *Framework Agreement*. This law may include regulations requiring a permit before fill over a certain volume is deposited within a 12-month period.

## Policies

BNA will establish its own registry of contaminated sites to ensure that details of the contaminating activity and any remediation efforts are clear and up to date.

BNA will enlist a private firm to provide technical support in assessing fill materials and/or in training one or more BNA members to take on these duties.

## Guidelines and Best Management Practices

The Federal Contaminated Sites Inventory is a resource for identifying all known federal contaminated sites.

https://www.tbs-sct.gc.ca/fcsi-rscf/home-accueil-eng.aspx

The Federal Contaminated Sites Action Plan (FCSAP) provides funding for the remediation of federal contaminated sites that were contaminated through activities that occurred prior to April 1, 1998.

https://www.canada.ca/en/environment-climate-change/services/federal-contaminated-sites/decision-making-framework.html

**Education**

Laws and policies must be communicated to all those to whom they apply, including both contractors and community members. This can be achieved by including the requirement for obtaining a fill permit in all construction contracts, and by publishing a notice of the new law in the Band Office and on the community website.

BNA will establish a contact point (e.g. a phone number or email address) for individuals to report spills, illegal dumping, or other contaminating activities.

## 3.8 EMERGENCY RESPONSE PLANS

In small or remote communities, responding, managing and recovering from various types of emergencies can be challenging due to various circumstances, including but not limited to geographic location, frequency of occurrence, and socio-economic conditions. Canada's emergency management framework defines an emergency as "*a present or imminent event that requires prompt coordination of actions concerning persons or property to protect the health, safety or welfare of people, or to limit damage to property or the environment*" (An Emergency Management Framework for Canada, 2011).

### 3.8.1 Key Features

BNA does not currently have any emergency response plans for the community site. Preliminary plans, once they are created, will have to be adjusted as the number of permanent resident's increases and community infrastructure develops on the reserve. There is currently only one road that provides access to the community.

### 3.8.2 Potential environmental threats

- Flooding
- Wildfire
- Severe storms
- Fuel/chemical spills

### 3.8.3 Management goals

- Create a preliminary environmental emergency response plan by 2020
- Ensure that emergency response plans are reviewed frequently and updated when necessary

### 3.8.4 Management regime

**Legislation and Authorities**

**Federal**

- *Emergency Management Act (2007)*
    - Defines the role of federal government departments in emergency management

- ISC and Health Canada recognize emergency management on reserves as applicable to their departmental duty

- *First Nations Emergency Assistance Agreement*
  - The federal government has arranged for the province to provide assistance in emergency preparedness and response to First Nations, in response to requests from ISC or First Nations communities

## Policies

The following provides suggested policy objectives and framework to address BNA's Emergency Management requirements and was developed to dovetail with the requirements of applicable Ontario provincial legislation and regulations, not limited to include the Emergency Management and Civil Protection Act, R.S.O. 1990, c.E.9, and its associated Order in Council, O.C. 1492/2005 dated September 21, 2005.

Emergency Management must be developed through a risk management approach and include the following five key policy-based objectives:

***Prevention***

Prevention refers to elements and actions in the Emergency Management Plan that are implemented to prevent an emergency from taking place and/or reduce the extent of response and recovery activities. It may result in a long-term, cost-effective reduction of risk. Prevention measures include capital improvements, regulations, building codes and public education programs.

***Mitigation***

Mitigation refers to elements and actions in the Emergency Management Plan that are implemented to reduce or eliminate the negative impacts of an emergency. These elements and actions can also reduce the extent of response and recovery activities required. Mitigation measures typically include capital improvements, regulations, building codes and public education programs.

***Preparedness***

Preparedness refers to elements and actions in the Emergency Management Plan that are implemented to the emergency or disaster to ensure an effective response. Preparedness measures include plans, training, exercises, public education, alerting and notification systems, procedures, organization, infrastructure protection, and standards.

***Response***

Response refers to elements and actions in the Emergency Management Plan that are implemented to respond to the emergency. The objective of these actions is to

ensure that the response is controlled, coordinated, and effective so that it minimizes impacts to public safety, and to property. When an emergency occurs, the initial response needs to focus on meeting the needs of people, life safety, and protecting property and the environment. This effort may last from a few hours to several days, depending on the nature of the emergency. As response activities start to diminish, the operational focus should shift from response to recovery as smoothly and as seamlessly as possible.

***Recovery***

Recovery refers to elements and actions in the Emergency Management Plan that are implemented to recover from the emergency. The objective of these measures is to assist individuals, businesses and communities to return to a state of normalcy. Recovery activities typically include environmental remediation, return of evacuees to their homes, emergency financial assistance, and critical incident stress counseling. Recovery activities usually begin as soon as the response begins and continue after the response activities cease.

BNA will seek out funding to assist in the preparation of emergency response plans and initiatives.

The federal government provides funding for emergency management activities (prevention, preparedness, response and recovery) for First Nations communities on reserves through INAC's Emergency Management Assistance Program, (An Emergency Management Framework for Canada, 2011).

On April 1, 2014, INAC became the sole department responsible for reimbursing eligible costs for all emergency management activities on First Nations reserves (Emergency Management Act, 2007).

Under the Emergency Management Assistance Program, reimbursement for emergency management activities on reserves is dispersed directly to provinces, territories, third parties, non-governmental organizations, or First Nations governments, depending on who is providing the services (Emergency Management Act, 2007). During an emergency, eligible response costs might include equipment used during the emergency response, rental of special equipment, and accommodations for contractors or consultants.

According to INAC, First Nations, third parties, or other levels of government must apply and prepare a proposal for the project in order to be reimbursed for costs associated with mitigation and emergency preparedness (Emergency Management Act, 2007).

## 3.9 SUSTAINABLE RESOURCE MANAGEMENT AND DEVELOPMENT

### 3.9.1 Key Features

BNA is one of four First Nations that own Lake Nipigon Forest Management Inc (LNFMI), the only First Nation-run Sustainable Forestry License (SFL) in Ontario. LNFMI manages nearly one million hectares in the Lake Nipigon forest region in a culturally sensitive manner, following the values and teachings of community Elders.

In 2018, BNA's Chief Joe Ladouceur joined four other Chiefs of Lake Nipigon First Nations to pursue greater First Nations involvement in the management of Lake Nipigon and its natural resources. The goals of this initiative include pushing the provincial government to recognize legal obligations to consult, accommodate, and gain consent from affected First Nations, and to develop a Memorandum of Understanding that establishes regulatory and operational protocols.

### 3.9.2 Potential environmental threats

The *Framework Agreement* allows BNA to directly manage its reserve lands, totaling approximately 985 hectares. Resource development projects involving Lake Nipigon or the lands surrounding the reserve may have a significant impact on the community through the degradation or loss of resources traditionally used by members, or through environmental changes that impact reserve lands. It is therefore imperative that BNA and other local First Nations are able to participate in regional resource management activities. The following are potential threats and/or challenges related to resource management and development, both regionally and on-reserve:

- Limited participation in regional resource management and energy projects
- Resource development can affect wildlife through habitat degradation and fragmentation, water quality degradation, noise, light or vibrations
- Development can affect water, air, and soil quality and stability

### 3.9.3 Management goals

- Increase participation in regional resource management through collaboration with other governments, including local First Nations and municipal and provincial governments
- Seek out partnerships with local industry members (e.g. Greenstone Gold Mines)
- Ensure all resource management activities on BNA lands adhere to applicable legislation
- Formalize the inclusion of traditional knowledge in management decisions for on-reserve and, where possible, regional resource development

### 3.9.4 Management regime

**Laws and Regulations**

**Federal**

- *Canadian Environmental Protection Act (1999)*

- *Canadian Environmental Assessment Act (2012)*
- *Species at Risk Act (2002)*
- *Migratory Birds Convention Act (1994)*
- *Fisheries Act (1985)*
- *Pest Control Products Act (2002)*

**Provincial**

- *Endangered Species Act (2007)*
- *Ontario Water Resources Act (1990)*
- *Lakes and Rivers Improvement Act (1990)*
- *Public Lands Act (1990)*
- *Environmental Bill of Rights (1993)*

**BNA Laws**

- BNA does not currently have any environmental laws in place.
- Zoning laws should be established to support the Land Use Plan to ensure that resource development occurs in appropriate areas, where impacts to the community and the environment are minimized. The BNA Environmental Assessment law should be adhered to once it is developed.

## Guidelines and Best Management Practices

**Forest Management Guides**

A series of guides on the following topics are made available by the Ontario government for forest managers developing plans for sustainable forests:

- Landscape (Boreal and Great Lakes-St. Lawrence)
- Stand and Site
- Silvicultural
- Tourism
- Cultural Heritage
- Technical References

https://www.ontario.ca/page/forest-management-guides

**Available Funding, Programs and Partnerships**

- New Relationship Fund
  - Core Consultation Capacity: $90 000/year per community
  - Enhanced Capacity Building: $50 000 per project year
- Aboriginal Energy Partnerships Program
  - Supports First Nation communities in their efforts to develop renewable energy
- The Feed-in-Tariff program
  - Guarantees price structure for renewable energy producers in Ontario
  - Includes a price-adder for energy produced by projects with an Indigenous partner
- Aboriginal Loan Guarantee program
  - Supports Indigenous participation in new transmission and renewable energy generation projects

## 3.10 COMMUNITY HEALTH

### 3.10.1 Key Features

Community health is related to a variety of environmental factors, including quality of drinking water, availability and quality of traditional foods, food security, and air quality. Drinking water source protection is addressed in Section 3.1, while protection of traditional food sources is addressed in Section 3.5

Community design is important in promoting community cohesion and individuals' physical wellbeing and can include features such as walkable neighbourhoods that reduce automobile dependency, community gathering spaces, and greenhouses or gardens.

### 3.10.2 Potential environmental threats

Potential issues regarding community health include the following:

- Drinking water quality (protection of source water, adequate treatment)
- Quality of traditional foods
- Food security concerns
- Indoor/outdoor air quality (mould, smoke from burning waste)
- Exposure to contaminated water or soil

### 3.10.3 Management goals

- Ensure that community members understand the quality of wild foods and harvested medicines by testing of fish, wild game, and traditionally harvested plants to ensure that contaminants (including pesticides and heavy metals) are below recommended concentrations
- Ensure air quality is maintained by prohibiting open-burning of waste (see Section 3.1)

### 3.10.4 Management regime

**Laws and Regulations**

See Sections 3.4 and 3.5 for relevant legislation regarding drinking water and the protection of wildlife and habitat protection.

**Policies**

BNA will establish a monitoring program to track water quality (see Section 3.4)

BNA will establish a voluntary fish and wild game reporting system to track abundance and quality of traditional foods over time across BNA's traditional territories.

BNA will establish a law prohibiting open-burning of waste on the reserve (see Section 3.1) in order to protect air quality.

BNA will establish environmental protection laws to prevent soil contamination (see Section 3.7) and reduce the health risks associated with exposure to contaminated soil.

BNA will maintain the existing walking/hiking trails that remain on the reserve that were established as part of Blacksand Provincial Park. Including these features in the Land Use Plan ensures that they remain as part of a walkable, complete community.

**Guidelines and Best Management Practices**

**Guidance for Evaluating Human Health Impacts in Environmental Assessment: Country Foods (2018)**

This document was created to support the Environmental Assessment process by presenting the principles that Health Canada looks for when reviewing environmental impact statements and similar reports. Appendix D of the report below lists related documents that can be useful in evaluating the quality of traditional foods.

https://www.canada.ca/en/health-canada/services/publications/healthy-living/guidance-evaluating-human-health-impacts-country-foods.html

**Nokiiwin Tribal Council Country Foods Study (2016)**

This document represents an in-depth study, funded through the National First Nations Contaminants Program, of the quantities and types of traditional foods consumed by members of four participating First Nations, including BNA. Samples

of water and traditional foods were collected from areas near the communities as well as traditional hunting and gathering areas, and analyzed for various chemicals including metals such as mercury, lead and cadmium. The study provides consumption guidelines for common traditional foods.

**First Nations Food, Nutrition and Environment Study Regional Report for Ontario 2011-2012 (2014)**

This research study, funded by Health Canada, looked at topics such as health and lifestyle practices, traditional food use and gardening, nutrient intake, food security, tap water quality, pharmaceuticals in surface water, mercury in human hair, and food contaminants that affected 18 First Nations in Ontario.

http://www.fnfnes.ca/download

## Education

BNA will present the results of its water monitoring program and voluntary, self-reported traditional food surveys to the community each year at a community meeting and will make the results available for review either online or at the Band Office.

# 4 ENVIRONMENTAL ASSESSMENT

Under sections 23.2 and 23.4 of the Framework Agreement, an Environmental Assessment regime is required after a Land Code is adopted. An Environmental Assessment (EA) is an analysis to determine if there may be potential impacts (biological, cultural, physical and socioeconomic) caused by a proposed development project and where mitigation efforts may be applied. An EA will be required for developmental projects or land-disturbing activities on BNA lands.

At minimum, an EA report should describe the project and the environmental setting, identify the potential environmental effects associated with the project, and establish effective mitigation measures to eliminate or reduce the severity of the impacts. BNA's EA law will provide the community with the power to practice environment due diligence prior to developmental projects and provide feedback to improve project design and construction on the community's own terms.

### 4.1.1 Interim Environmental Assessment Regime

The BNA Individual Agreement with Canada requires that BNA implement an Interim EA process until the community can develop and implement its own EA law. The *Canadian Environmental Assessment Act (2012)* (CEAA 2012) has been selected as an appropriate EA regime for BNA to adopt. However, at the time of this document's completion, Bill C-69 has received Royal Assent, and will repeal CEAA 2012 and replace it with the *Impact Assessment Act* (IAA). BNA may consider the IAA as an alternative EA regime in the future, in order to harmonize the community's environmental protection regimes with those of the province of Ontario.

### 4.1.2 Criteria for an Environmental Assessment Law

BNA will develop its own EA law to meet the following criteria:

- An EA should be triggered for any project that can influence biological, cultural, physical and socioeconomic conditions on BNA lands
- The EA will identify potential environmental impacts that may result from future development or land-disturbing activities, and communicate those effects to the community
- The EA process should engage community members and other affected parties, and provide technical or financial support to community members when needed to achieve meaningful consultation
- The EA report should consider improvements and mitigation measures in response to possible threats associated with proposed projects
- The process should avoid redundancy in order to remain effective and cost-efficient
- The process should require project-specific goals and deadlines

# 5 PLAN IMPLEMENTATION

## 5.1 EMP IMPLEMENTATION PARTICIPANTS

The following is a list of the participants involved in the implementation of the EMP and a description of their responsibilities:

**BNA Chief and Council:** authorize and participate in law development, officially adopt EMP, approve budgets and hiring decisions, manage financial aspects of EMP-related initiatives

**Infrastructure Development Coordinator:** administers EMP, completes funding applications for projects and additional staff, oversees staff working on EMP-related tasks

**Lands and Environmental Staff**: BNA plans to hire new staff members to oversee lands and environmental management, including the implementation of the EMP.

**Lands Committee**: reviews proposed Land Laws, advises Council and BNA staff on matters related to BNA Land, holds regular meetings to discuss Land-related issues

**BNA community members:** participate in educational initiatives, comply with laws and policies enacted under the EMP

**Technical consultants:** provide support and potentially training to BNA members to conduct monitoring programs, and conduct environmental studies and conduct EAs and other technical work as needed

**Legal counsel:** draft environmental laws as specified by Chief and Council to meet the needs outlined in the EMP, and support enforcement and adjudication actions if required

**Federal agencies:** enforce federal laws and regulations, provide funding through ISC and CIRNAC

**Provincial agencies:** enforce provincial laws and regulations on provincial lands outside the reserve, respond to environmental emergencies on-reserve

**Local government:** the Municipality of Greenstone and neighbouring First Nations, including those situated around Lake Nipigon, may collaborate to conduct wider-scale environmental monitoring projects, deliver services, and respond to regional environmental issues

## 5.2 IMPLEMENTATION CHALLENGES

At the time of writing, BNA does not have a dedicated Lands or Environmental department who will be responsible for overseeing the implementation of the EMP. Implementing the EMP will allocate additional responsibility to the Infrastructure Development Coordinator at a time when significant infrastructure is under development on BNA lands.

Additional staffing resources will be necessary to ensure that the additional workload is manageable. Potential positions, full- or part-time, include:

- Environment Officer

- Environmental Technician
- Enforcement Officer

The implementation of the EMP will require familiarity of a variety of federal and provincial legislation and will involve a strong understanding of how different types of legislation interact. A lack of experienced, trained staff could result in delays to the implementation of the EMP, errors, or oversights.

### 5.2.1 Increasing Staff Capacity

BNA will enact the following measures to increase the environmental capacity of its staff:

- Identify specific positions, develop job descriptions, and outline hiring practices to ensure BNA staff are prepared to fulfill EMP implementation
- Identify suitable candidates to take part in training programs for positions such as "Environmental Officer" and "Environmental Technician"
- Allocate funding to train community members
- Establish job shadowing opportunities for youth in environmental fieldwork

### 5.2.2 Available funding

**Lands and Economic Development Services Program**

Funding is available through First Nations Land Management for ongoing operations including land, environment, and natural resource management, including training and professional development programs. Initiatives covered by the program include:

- Land management
- Development of environmental laws
- Staffing requirements and training

https://www.aadnc-aandc.gc.ca/eng/1327090675492/1327090738973

**Nation Rebuilding Program**

Funding is available through Crown-Indigenous Relations and Northern Affairs Canada to assist Indigenous communities in reconstituting their nations. Funding is provided annually for up to five years, and can support a variety of projects including training and capacity building, community consultation, engagement and information processes, and cultural reclamation activities.

https://www.rcaanc-cirnac.gc.ca/eng/1549285351251/1549285397263

## 5.3 Drafting Environmental Laws

Section 27 of the BNA Land Code calls for the existence of a Lands Committee, comprised of five members, which will be responsible for enacting Land Laws to address environmental protection and environmental

assessment, land use planning and zoning, and matrimonial property laws, as well as any other matter referred to the committee by Council (BNA Land Code, 2014). While federal environmental protection laws continue to apply on First Nation land, under the Framework Agreement and the First Nations Land Management Act (FNLMA) BNA is able to enact environmental protection laws that close any gaps between the federal regulations that apply on BNA lands and the provincial laws that apply to the lands surrounding BNA. BNA recognizes that collaboration with local and/or provincial governments may provide additional resources or opportunities for a cohesive environmental protection regime.

The procedure for creating Land Laws is described in Section 7 of the BNA Land Code. A law may be proposed by the Chief, a Councillor, or by any eligible voting member of BNA. Regarding the laws proposed in the EMP, the Lands Committee will draft these laws with the support of legal counsel and introduce them at a Council meeting according to the schedule outlined in Section 5.5 below.

## 5.4 Capacity building and staff training

Implementing the EMP will require additional resources and technical skills beyond that available to BNA's current staff. BNA will develop an outline for writing Requests for Proposals and a consultant selection process that will ensure that the appropriate technical specialists are retained to assist with various activities. Support in this action will be provided by LABRC.

Over time, BNA will develop a list of qualified consultants to assist with the implementation of the EMP. BNA will specify that job shadowing opportunities be offered for BNA members whenever possible to eventually allow BNA staff to take on a greater role in the technical aspects of implementation such as water quality monitoring programs and the design of EAs.

BNA will seek funding from the sources outlined in Section 3.10 to provide additional training for current staff and deliver educational opportunities to members who are interested in participating in environmental monitoring.

## 5.5 Implementation schedule

A detailed implementation schedule will be determined within 6 months of the EMP's enactment.

The following tasks are presented in order

- Chief and Council adopt the EMP
- Review EMP with Chief, Council, and Lands Committee, and determine which actions, policies, and laws are of the highest priority
- Determine the type of resources required (additional staff, technical assistance, new funding) to implement each section of the EMP
- If possible assign sections of the EMP to existing staff as appropriate. Use the remaining sections to determine what new roles will need to be filled and to write the job descriptions for these new positions
- Seek out and secure funding to create new positions and hire staff

- Engage legal counsel to prepare environmental protection laws in the order determined by Chief and Council
- BNA staff prepare policies, guidelines, best management practices, and educational materials
- Begin to distribute educational materials to the community, erect educational signage, initiate outreach programs
- Staff member responsible for coordinating the EMP's implementation conducts 3-year review and prepares report on progress and proposed changes to the EMP

# 6 CLOSING

This EMP is designed to provide a starting point for BNA leadership and staff as the community takes on the responsibility of governing its lands under the Framework Agreement. As the community grows and develops and members begin to live on BNA lands year-round, this document may need to be revisited and adapted to reflect changing conditions.

The EMP should be treated as a working document to be updated as goals and objectives are achieved, and the management capacity of the community develops. It is recommended that the EMP be reviewed after three years to reflect progress made and to assess the effectiveness of the management regimes. Individual sections may be reviewed more or less frequently based on changes to the reserve, changes in government policy, or progress towards developing BNA's Environmental Protection Laws.

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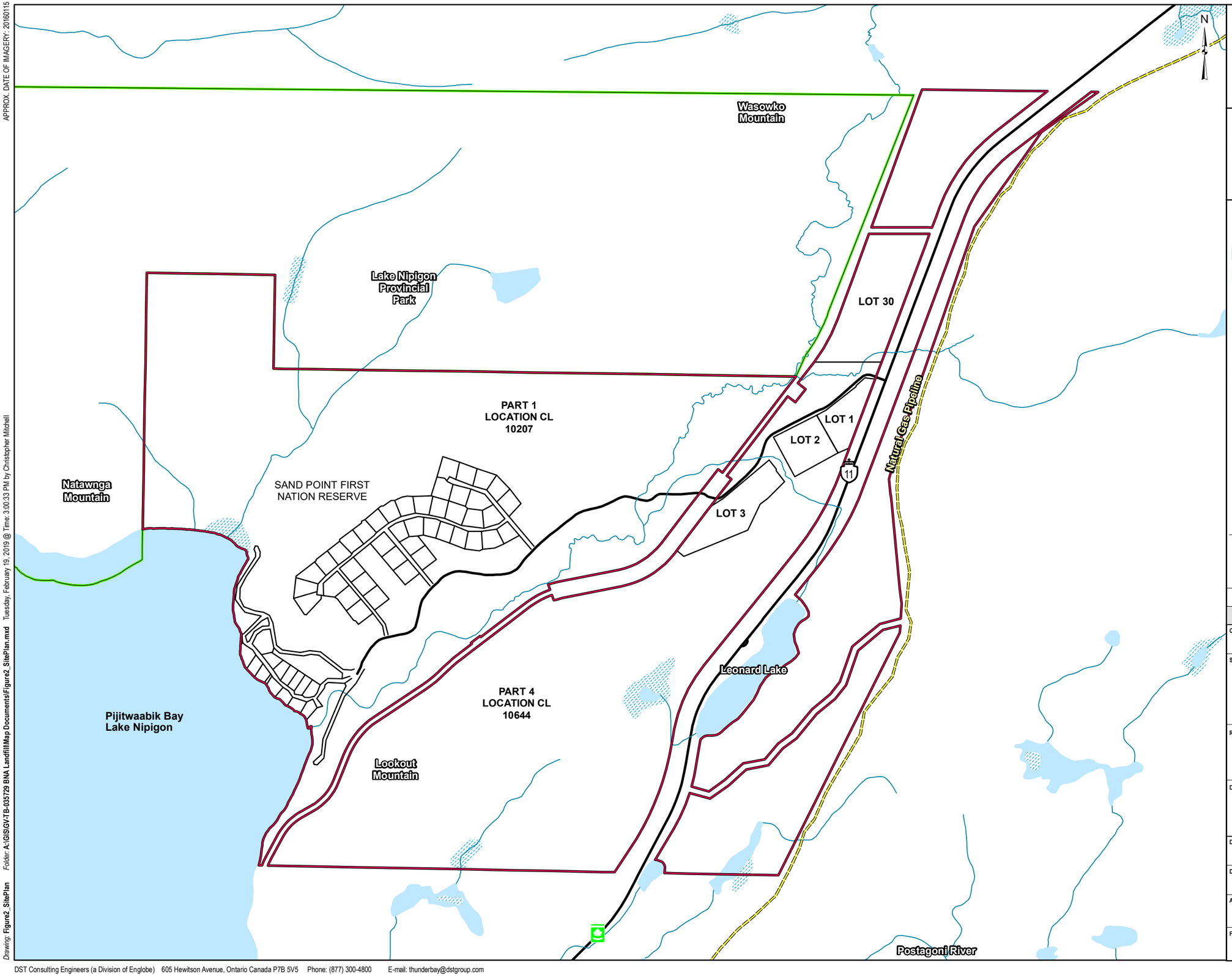
# APPENDIX A

## Figures

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**Notes**

1. This drawing shall be read in conjunction with the associated technical report.
2. Background image credits located in bottom right of map
3. Coordinate System: NAD 1983 UTM Zone 16N
Projection: Transverse Mercator
Datum: North American 1983

## Legend

- Reserve Boundary
- Provincial Park
- Natural Gas Pipeline
- Proposed Lots/Roads
- Watercourse
- Existing Road/Trail
- Wetland
- Waterbody

1:20,000
0 200 400 600 800 1,000
Meters
1:1
Scale accurate when printed at 100% using paper size ANSI full bleed b (17.0 x 11.0 Inches)

| Revision | Date | Issue | GIS # |
|---|---|---|---|
| A | 2019-02-19 | DRAFT | 00627 |

Client
**BINGWI NEYAASHI ANISHINAABEK**

Site
**BINGWI NEYAASHI ANISHINAABEK FIRST NATION RESERVE ONTARIO**

Report Title
**ENVIRONMENTAL MANAGEMENT PLAN**

Drawing Title
**SITE PLAN**

| Designed By | Scale |
|---|---|
| S.M. | 1:20,000 |
| **Drawn By** | **Date** |
| C.M. | May, 2019 |
| **Approved By** | **Project No.** |
| | GV-TB-036044 |

Figure No.
**1**

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