AGENDA
A meeting of the Council of the Corporation
of the Town of Northeastern Manitoulin and the Islands
to be held on Tuesday, March 17, 2026
at 7:00pm

1. **Call to Order**

2. **Approval of Agenda**

3. **Disclosure of Pecuniary Interest & General Nature Thereof**

4. **Minutes of Previous Meeting**
   i. Confirming By-Law 2026-18

5. **Manager Reports**
   i. Fire Department – Fire Chief
   ii. Public Works – Manager
   iii. Community Services – Manager
   iv. Building Controls

6. **New Business**
   i. Motion for support – Surface treatment
   ii. Landfill Annual Report – Closed Green bay
   iii. Donation request – Little Current Yacht Club
   iv. Donation request – Manitoulin Fine Arts
   v. Donation request – Huron Bass Tour

7. **Correspondence**
   i. Thank you note – Little Current Lions

8. **Adjournment**

THE CORPORATION OF THE TOWN OF NORTHEASTERN MANITOULIN AND THE ISLANDS

BY-LAW NO. 2026-18

Being a by-law of the Corporation of the Town of Northeastern Manitoulin and the Islands to adopt the minutes of Council for the term commencing November 15, 2022 and authorizing the taking of any action authorized therein and thereby.

WHEREAS the Municipal Act, S.O. 2001, c. 25. s. 5 (3) requires a Municipal Council to exercise its powers by by-law, except where otherwise provided;

AND WHEREAS in many cases, action which is taken or authorized to be taken by a Council or a Committee of Council does not lend itself to an individual by-law;

NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE TOWN OF NORTHEASTERN MANITOULIN AND THE ISLANDS ENACTS AS FOLLOWS:

1. THAT the minutes of the meetings of the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands for the term commencing November 15, 2022

March 3, 2026
March 5, 2026

are hereby adopted.

2. THAT the taking of any action authorized in or by the minutes mentioned in Section 1 hereof and the exercise of any powers by the Council or Committees by the said minutes are hereby ratified, authorized and confirmed.

3. THAT, where no individual by-law has been or is passed with respect to the taking of any action authorized in or by the minutes mentioned in Section 1 hereof or with respect to the exercise of any powers by the Council or Committees in the above-mentioned minutes, then this by-law shall be deemed for all purposes to be the by-law required for approving and authorizing the taking of any action authorized therein or thereby or required for the exercise of any power therein by the Council or Committees.

4. THAT the Mayor and proper Officers of the Corporation of the Town of Northeastern Manitoulin and the Islands are hereby authorized and directed to do all things necessary to give effect to the recommendations, motions, resolutions, reports, action and other decisions of the Council or Committees as evidenced by the above-mentioned minutes in Section 1 and the Mayor and Clerk are hereby authorized and directed to execute all necessary documents in the name of the Corporation of the Town of Northeastern Manitoulin and the Islands and to affix the seal of the Corporation thereto.

READ A FIRST, SECOND AND THIRD TIME AND FINALLY PASSED THIS 17 th day of March 2026

Al MacNevin Mayor

Pam Myers Clerk

The Corporation of the Town of Northeastern Manitoulin and the Islands
Minutes of a meeting of Council held Thursday, March 5, 2026
at 7:00p.m.

PRESENT: Mayor Al MacNevin, Councillors: Patti Aelick, Al Boyd, Laurie Cook, Mike Erskine, and George Williamson, Dawn Orr, William Koehler

ABSENT: Councillor Bruce Wood

STAFF PRESENT: David Williamson, CAO
Pam Myers, Clerk
Sheryl Wilkin, Treasurer

Mayor MacNevin called the meeting to order at 7:00 p.m.

Resolution No. 67-03-2026
Moved by: M. Erskine
Seconded by: A. Boyd
RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands approves the agenda as presented.

Carried

Resolution No. 68-03-2026
Moved by: P. Aelick
Seconded by: D. Orr
RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands accepts the audited financial reports as presented.

Carried

Resolution No. 69-03-2026
Moved by: M. Erskine
Seconded by: A. Boyd
RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands accepts the financial reports as presented.

Carried

Resolution No. 70-03-2026
Moved by: M. Erskine
Seconded by: W. Koehler
RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands approves the site plan as presented for the new UCCM Police Department on condition that it is registered on title by the applicant and at the applicant's expense.

Carried

Resolution No. 71-03-2026
Moved by: G. Williamson
Seconded by: D. Orr
RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands approves the placement of Commemorative banners downtown in support of the Legions District Conference and FURTHER MORE asks the Manager of Public Works to work with the Legion on traffic blockages for the parade.

Carried

Resolution No. 72-03-2026
Moved by: D. Orr
Seconded by: G. Williamson
RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands does now adjourn at 7:51 pm.

Carried

Al MacNevin Mayor

Pam Myers Clerk

The Corporation of the Town of Northeastern Manitoulin and the Islands
Minutes of a meeting of Council held Tuesday, March 3, 2026
at 7:00p.m.

PRESENT: Mayor Al MacNevin, Councillors: Patti Aelick, Al Boyd, Laurie Cook, Mike Erskine, and George Williamson, Dawn Orr, William Koehler and Bruce Wood

STAFF PRESENT: David Williamson, CAO
Pam Myers, Clerk

Mayor MacNevin called the meeting to order at 7:00 p.m.

Resolution No. 49-03-2026
Moved by: W. Koehler
Seconded by: G. Williamson
RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands approves the agenda as presented.

Carried

Resolution No. 50-03-2026
Moved by: A. Boyd
Seconded by: B. Wood
RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands now reads a first, second and third time and finally passes by-law 2026-15 being a by-law to adopt the minutes of Council for the term commencing November 15th, 2022 and authorizing the taking of any action therein and thereby.

Carried

Resolution No. 51-03-2026
Moved by: M. Erskine
Seconded by: P. Aelick
RESOLVED THAT the Planning Authority of the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands conditionally approves the application for consent as applied for by Ten Mile Point Resort, File Number 2026-01, subject to the following conditions;

1. Easement and Easement agreement to be registered on all three single lots
2. The Easement road shall be a standard width of 30' wide
3. Transfer of land form prepared by a solicitor and a schedule to the transfer of land form on which is set out the entire legal description of the parcel,
4. The applicant must deposit a Reference Plan of Survey in the Land Registry Office clearly delineating the parcels of land approved by The Town of Northeastern Manitoulin and the Islands in this decision and provide the Town Office with a copy.
5. Prior to final approval by the Town of Northeastern Manitoulin and the Islands, the owner provide confirmation of payment of all outstanding taxes.
6. All outstanding fees associated with this application including a fee of $130 for each transfer of land and advertising cost.

Carried

Resolution No. 52-03-2026
Moved by: G. Williamson
Seconded by: W. Koehler
RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands now reads a first, second and third time and finally passes By-law 2026-16 being a by-law to amend by-law 2018-41 to Shoreline Residential from Commercial Tourism.

Carried

Resolution No. 53-03-2026
Moved by: D. Orr
Seconded by: B. Wood
RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands now reads a first, second and third time and finally passes By-law 2026-17 being a by-law to amend by-law 2018-41 to allow for set back reductions.

Carried

Resolution No. 54-03-2026
Moved by: M. Erskine
Seconded by: A. Boyd
RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands accepts the tender submitted by Central Square in the amount of $129 698.00 plus HST for the supply of Municipal Software.

Carried

Resolution No. 55-03-2026
Moved by: W. Koehler
Seconded by: P. Aelick
RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands accepts the tender submitted by JL Richards in the amount of $57 943.18 Plus HST for the services to update the Town's Official Plan.

Carried

Resolution No. 56-03-2026
Moved by: M. Erskine
Seconded by: A. Boyd
RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands accepts the tender submitted by exp in the amount of $166 415.00 for plus HST for engineering services for Blake Street Water Main Project.

Carried

Resolution No. 57-03-2026
Moved by: B. Wood
Seconded by: D. Orr
RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands accepts the 2025 Annual Report for the Sheguiandah Water Treatment Plant.

Carried

Resolution No. 58-03-2026
Moved by: A. Boyd
Seconded by: P. Aelick
RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands accepts the 2025 Annual Report for the Little Current Water Treatment Plant.

Carried

Resolution No. 59-03-2026
Moved by: B. Wood
Seconded by: P. Aelick
RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands accepts the Annual Monitoring Report for the Closed Little Current Landfill Site.

Carried

Resolution No. 60-03-2026
Moved by: M. Erskine
Seconded by: L. Cook
RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands donates $200 to Cambrian College for the Connect to Community event they have scheduled at the NEMI Recreation Center.

Carried

Resolution No. 61-03-2026
Moved by: M. Erskine
Seconded by: L. Cook
RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands encourages the efforts of Manitoulin Streams in the Highway 6 clean up and asks them to work with the Public Works Manage for assistance and
Further reminds Manitoulin Streams we can only accept waste from NEMI Township.

Carried

Resolution No. 62-03-2026
Moved by: W. Koehler
Seconded by: G. Williamson
RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands requests that the Province of Ontario provide targeted financial assistance to municipalities to offset any additional costs that are directly and demonstrably incurred as a result of compliance with Community Safety and Policing Act 2019 and not general increases to police budgets and Council urges the Province of Ontario to review and reform its current

police grant programs to ensure a more equitable distribution of funding to municipalities so that communities with growing populations and expanding service demands receive fair and sustainable funding to offset costs associated with the provisions of providing court security services.

Carried

Resolution No. 63-03-2026
Moved by: M. Erskine
Seconded by: G. Williamson
BE IT RESOLVED that the The Council of the Corporation of the Town of Northeastern Manitoulin and the Islands supports the Manitoulin-Sudbury DSB call upon the provincial government to further protect workers with limited incomes from the impact of U.S. Tariffs and economic uncertainty; these include increasing the earning exemption to better support those working toward leaving the Ontario Works (OW) program, implementing revisions to social assistance such as increasing rates to reflect the real costs of living, indexing the OW rate to inflation, and establishing a Social Assistance Research Commission to determine evidence-based social assistance rates in communities across the province based on local/regional costs of living, including the cost of food informed by Ontario Nutritious Food Basket (ONFB) data collected by PHUs; and
FURTHER THAT the Manitoulin-Sudbury DSB supports the call upon the federal government to recognize the urgency of transformative income solutions such as a national Basic Income Guarantee program and support Bill S-206 – An Act to develop a national framework for a guaranteed livable basic income; and
FURTHER THAT a copy of this resolution be sent to the Minster of Health, the Minister of Children, Community and Social Services, to local members of parliament, to Public Health Sudbury and Districts and to the Sudbury Espanola Manitoulin Elliot Lake Ontario Health Team; and
FURTHER THAT a copy of this resolution be sent to the Manitoulin-Sudbury DSB member municipalities for endorsement and support via Council resolutions.

Carried

Resolution No. 64-03-2026
Moved by: G. Williamson
Seconded by: M. Erskine
WHEREAS Life Labs has announced its intention to close its Greater Sudbury laboratory, and the transfer of medical specimen processing from Northern Ontario to laboratories in southern Ontario; and
WHEREAS the Greater Sudbury laboratory provides essential diagnostic services to communities across Northern Ontario, including urban, rural, and remote municipalities, and plays a critical role in ensuring timely and reliable medical testing for Northern residents; and
WHEREAS patients with chronic illness, newborns, long-term care residents, and individuals on time-sensitive medications depend on predictable laboratory turnaround times to support clinical decision-making; and
WHEREAS transporting medical specimens long distances to southern Ontario increases the risk of delays, specimen degradation, and retesting, particularly during frequent winter highway closures-potentially jeopardizing patient outcomes; and
WHEREAS Northern Ontario is already experiencing shortages of health-care professionals, and the closure of this laboratory further undermines regional workforce stability, training capacity, and recruitment and retention efforts;
THEREFORE BE IT RESOLVED that the Town of Northeastern Manitoulin and the Islands call on the Province of Ontario and the Ministry of Health to take immediate action to ensure that essential medical laboratory services remain accessible within Northern Ontario, including maintaining local laboratory processing capacity in Greater Sudbury; and
BE IT FURTHER RESOLVED that the Province be urged to ensure reliable, timely, and medically appropriate laboratory turnaround times for Northern Ontario patients, recognizing the unique geographic and climatic challenges of the region; and
BE IT FURTHER RESOLVED that the Province be requested to protect and support the Northern Ontario health-care workforce, including medical laboratory technologists, by preventing further service centralization that disproportionately impacts Northern communities; and
BE IT FURTHER RESOLVED that copies of this resolution be forwarded to the Minister of Health, local Members of Provincial Parliament, FONOM, AMO, and ROMA.

Carried

Resolution No. 65-03-2026
Moved by: G. Williamson
Seconded by: B. Wood
RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands proceeds In Camera in order to address a matter pertaining to litigation or potential litigation, including matters before administrative tribunals, affecting the municipality or local board.

Carried

Resolution No. 66-03-2026
Moved by: W. Koehler
Seconded by: B. Wood
RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands does now adjourn at 8:11 pm.

Carried

Al MacNevin Mayor

Pam Myers Clerk

NORTHEASTERN MANITOULIN & THE ISLANDS

Public Works Report

March 17th, 2026

Roads

Staff have been conducting daily road patrols

Plowing and sanding roads as required

Sidewalks are being sanded and salted daily as required

Snow removal from downtown core and parking lots as required

We were extremely busy cleaning out drainage ditches getting ready for the melt Everything melted so fast we had a lot of frozen culverts to steam

Landfill

All operations are going well

The little current Lions Club is at the landfill collecting beer cans wine bottles and liquor bottles it is going extremely well

Equipment

Ongoing maintenance is being performed daily

Repairs are being conducted as required

Report to Community Services/Public Works – March 17, 2026

Rec Centre

- Arena Ice
  - Ice is still being rented regularly with user groups and private rentals
  - Most weekday hours remain rented and some availability on weekends
  - Last day for Arena and Curling ice will be March 31st
  - Removal will begin once last rental is completed
- Meetings/Events/Programs/Classes
- Liam Poirier Started March 2nd

This Month

- Manitoulin Panthers – Continues to March 31
- Little Current Minor Hockey – Finished for the season
- Skate Canada – Continues to March 31
- Pickleball – Continues
- Island 3 on 3 Tournament – March 27th-29th
- March Break Skating – March 16-21st

Programs & Events

- Line Dancing – Continues
- Gentle Fitness – Continues
- After School Program - Continues
- Seniors Dance/Movement Class – Completed
- 72 Hour Emergency Preparedness Course
  - March 14th
  - 21 registered at time of this report
- Indoor Yard Sale @ Rec Centre Main Hall
  - March 21, 2026
- Easter @ the Museum
  - Saturday April 4th
- Cooking Classes starting in April
- Volunteer Appreciation
  - Wednesday April 22

Marine, Parks & Outdoor Buildings

- All buildings are being inspected and monitored on a regular basis
  - Seasonal slip Renewal Deadline was March 15th
- Seeing many transient bookings coming in for the summer
- Plans for Opening buildings will be made over the next month and executed as weather permits

NEMI
NORTHEASTERN MANITOULIN & THE ISLANDS

Building Control Report to March 16, 2026

There have been three permits issued, and two permit renewals this year.
The permits are categorized as follows.

	Permits	Total
Residential – New	2	$3,636.00
Residential – Additions & Renovations	0	$0.00
Multi Residential – New	0	$0.00
Seasonal Dwellings – New	1	$2544.00
Seasonal Dwellings – Additions & Renovations	0	$0.00
Detached Garages	0	$0.00
Accessory Buildings – New	0	$0.00
Decks – New & Alterations	0	$0.00
Commercial/Industrial New	0	$0.00
Commercial/Industrial – Additions & Renovations	0	$0.00
Institutional – Renovations	0	$0.00
Demolition/Moving	0	$0.00
Permit Renewals	2	$200.00
Inspection Request	0	$0.00
Total	5	$6,380.00

One new seasonal dwelling building permit has been issued since the last report. This report period has a construction value of **$212,000.00** and a permit value of **$2,544.00**. The total construction value to date is **$1,120,000.00** with a total building department revenue of **$6,380.00.**

THE CORPORATION OF THE TOWN OF
NORTHEASTERN MANITOULIN AND THE ISLANDS
MEETING OF COUNCIL

MOVED BY:_____ DATE:

SECONDED BY: _____ MOTION NO. _____

Whereas the Town of Northeastern Manitoulin and the Islands, like many municipalities, utilizes chip-and-tar surface treatment on a significant portion of its road network; and

Whereas the Town has observed a substantial decrease in the length of time these treated roads remain in acceptable condition; and

Whereas the quality and durability of the oil used in the surface treatment appears to be a contributing factor; and

Whereas the Ministry of the Environment amended its regulations several years ago, permitting only lighter-grade oils for environmental considerations; and

Whereas the reduced durability of the lighter-grade product has resulted in more frequent resurfacing cycles and has consequently led to increasing maintenance costs;

Now therefore be it resolved that the Town of Northeastern Manitoulin and the Islands respectfully requests that the Ministry of the Environment reconsider its decision regarding the approved grade of oil, taking into account the increased number of applications required, as well as the associated additional time, energy, and financial burden placed on municipalities.

And Further that this motion be forwarded to the Ministry of Environment, AMO, Good Roads, FONOM, MPP Bill Rosenburg, and all other northern municipalities.

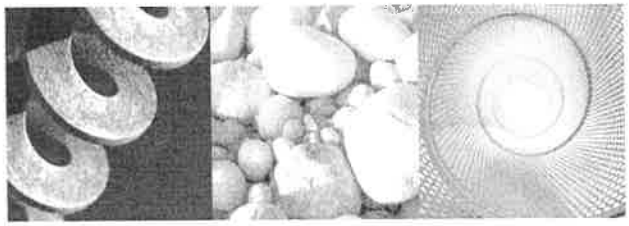
CARRIED ____ **DEFEATED** ____ **DEFERRED**
____

_____
MAYOR'S SIGNATURE

Division Vote

	For	Against		For	Against
Councillor Aelick	___	___			
Councillor Boyd	___	___	Councillor Orr	___	___
Councillor Cook	___	___	Councillor Wood	___	___
Councillor Erskine	___	___	Councillor Williamson		___ ___
Councillor Koehler	___	___	Mayor MacNevin	___	___

Disclosure of Pecuniary Interest



GEI Consultants

NEMI
NORTHEASTERN MANITOULIN & THE ISLANDS

Annual Monitoring Report (2025)

Town of Northeastern Manitoulin and The Islands – Howland/Green Bay Landfill Site

Manitoulin Island, Ontario

Submitted to:
Town of NEMI
14 Water Street East
P.O. Box 608
Little Current, Ontario P0P 1K0

Submitted by:
GEI Consultants Canada Ltd.
1260 2nd Avenue East, Unit #1
Owen Sound, ON N4K 2J3
519.376.1805
February 2026
Project No. 2402953

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Figure 2: Surrounding Properties
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Figure 5: Groundwater Flow Plan

Appendices

Appendix A Certificate of Approval No. A551003 & Amendments
Appendix B MECP Correspondence
Appendix C Borehole & Monitoring Well Logs
Appendix D Historical Groundwater Quality Analytical Results (Tables & Graphs)
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1. Introduction

The Howland landfill site, also known as the Green Bay landfill, is located off of Green Bay Road, approximately 7.5 kilometres (km) west of the Village of Sheguindah and Provincial Highway No. 6. It is situated on Lot 8, Concession 11 in the Town of Northeastern Manitoulin and the Islands, District of Manitoulin, as shown on Figure 1. The former Township of Howland operated the site until it amalgamated with the former Township of Little Current and the former unorganized Municipality of McGregor Bay to become the Town of Northeastern Manitoulin and the Islands (NEMI) (herein referred to as 'the Town') on January 1, 1998. Upon amalgamation, the Town assumed responsibility for the site.

Pre-closure operations at the site were conducted under the Ministry of the Environment (MECP) Provisional Certificate of Approval for a Waste Disposal Site (C of A) No. A551003 issued on March 17, 1980. The C of A was subsequently amended in March 2003 and October 2004 to include conditions for site closure and post closure care. A copy of the C of A (now referred to as an Environmental Compliance Approval {ECA}) for the site and the two amendments are provided in Appendix "A." Under the ECA, the MOE approved 2.8 hectares (7 acres) for the use and operation of a landfilling site.

Based on a review of previous annual monitoring reports, the site was developed on a former sand and gravel pit in the early 1950s and received domestic and commercial solid waste from the former Township of Howland and surrounding area from approximately 1952 to 2002. The area formerly serviced by the Howland landfill site is now serviced by the NEMI waste disposal site located on Highway 6, approximately 3 km south of the geographic town of Little Current.

Condition 7 of the C of A / ECA requires that an annual monitoring report be submitted by February 28th of each calendar year to summarize the previous year's monitoring results. Based on former MECP correspondence dated December 4th, 2013, annual monitoring reports have been approved to be submitted once every three (3) years and to cover the previous three years of monitoring. This monitoring report is submitted to meet the monitoring requirements specified under Condition 7 of the C of A / ECA and covers the monitoring results from the 2023, 2024, and 2025 monitoring programs.

2. Existing Site Conditions

According to MECP correspondence dated November 16, 2001, based on information presented in the Closure and Post Closure Care report (Burnside Environmental, June 2001) for the Howland landfill site, the site has a waste footprint of approximately 0.94 hectares (2.32 acres) within a 3.08 hectare (7.61 acre) site.

The perimeter of the site is currently lined with page and barbed wire fencing that has a single gated entrance point located on the south side of Green Bay Road.

The area of buried waste is located in the northern portion of the property, as shown in Figure 3. The upper portion of the property, closest to the road, is relatively flat. At approximately 35 metres south of the north property boundary, the property has a pronounced downward slope from north to south toward the shoreline of Pike Lake with the exception of an intermediate flat area, where the storm water management (SWM) pond is located.

An access road, containing a single switchback, extends from the site entrance to the SWM pond located in the lower (southern) portion of the property. Drainage ditches, lined with rip-rap, extend through the east and west portions of the property, which extend into the SWM pond and subsequently to a low-lying area at the base (south) of the property for infiltration.

Condition 7(d) of the C of A / ECA requires that the monitoring report include "inspection results and maintenance required for the final cover system". Inspection of the ground cover system involves a visual assessment of the cover for areas of ponding, eroding ground cover, and/or dead or dying ground cover, trees, and brush. The ground cover inspections are conducted intermittently by Town personnel and by GEI staff in conjunction with the groundwater/surface water monitoring. During the current reporting period, the ground cover system continued to be adequate with no evidence of signs of stress.

Condition 7(e) requires the inclusion of "*a copy of all complaints received during the reporting period, including the Town's response and mitigative actions taken to address these complaints*". It is reported that no complaints related to the Howland landfill site were received by the Town during the reporting period.

3. Summary of Site Setting

The geologic and hydrogeologic conditions at the Howland landfill site were presented in the Site Closure Plan prepared by Marshall Macklin Monaghan Limited (March 1989). Key findings, as provided in previously completed Annual Monitoring Reports and in the Closure and Post Closure Care report (completed by others) are summarized below with amended discussion. Geological properties of the site are presented in the borehole logs provided in Appendix "C".

3.1. Geological Conditions

The site is located in the physiographic region known as Manitoulin Island (Chapman and Putnam, 1984). The island is part of the Niagara escarpment, which is the rim of a thick saucer like layer of limestone/dolostone of the Lockport formation that forms the Michigan Basin. The Lockport formation covers the southern two-thirds of the island and gradually dips towards the southwest, forming tablelands. The northern edge of the formation terminates into steep cliffs that overlie the Ordovician shales and limestone of the north portion of the island.

The entire island exhibits many erosional features caused by glacial scouring and the wave action of the glacial lake Algonquin and Nipissing. Subsequently, only a small portion of the island is covered with overburden of any significance. The Howland landfill site is located in an area of moderate overburden. According to the borehole logs by Marshall Macklin Monaghan Limited (1988/1990), the overburden at the site generally consists of 6 to 11 metres of lacustrine deposits (sand and gravel, sand and silty sand) underlain by silty clay till.

Bedrock, along the ridge feature was encountered in MW-5 at a depth of 9.2 metres below ground surface (mbgs) (approx. 248 metres above sea level (masl)) and was described as grey limestone. At the location of MW-7B Old, which is situated at the bottom of the ridge, fissile weathered shale was encountered at 11.9 mbgs (199 masl).

In summary, the site area consists of a pronounced ridge that is comprised of coarser grained sand and gravel to silty sand that overlies a plain of lower permeability silt till. The tills are described to fine downwards to clayey soils and overlay the shale bedrock unit.

3.2. Hydrogeologic Conditions

The shallow groundwater system is monitored from a network of monitoring wells installed in the overburden to upper bedrock of the site to a minimum elevation of 199 masl. Shallow groundwater flow at the site is expected to be most prevalent in the coarser grained soils associated with the overburden deposits that form the steep ridge.

Beneath the landfill and in the plain at the base of the ridge, the soils consist primarily of relatively lower permeability sandy silts that fine downwards to clayey soils. These underlying silt tills overlie the relatively low permeability shale unit.

Review of historical and background groundwater quality indicates that the water quality in the upper unit is primarily influenced by surface water infiltration and local groundwater flow conditions. Of significance, the deeper unit, which consists of a lower permeability (or aquitard) system, appears to be more stagnant and influenced by the natural poor water quality associated with the shale unit throughout the Niagara Escarpment, and particularly Manitoulin Island.

3.3. Groundwater Flow Direction

Groundwater level measurements are collected in conjunction with the monitoring program. A summary of historical groundwater level measurements is provided in Table 1. A groundwater flow map, developed using the most current water level measurements, is provided in Figure 5. The water level measurements indicate that shallow groundwater flow at the site is in a south-easterly direction toward Pike Lake, which is located approximately 375 m southeast of the site. This is consistent with historical (including seasonal) water level data. The groundwater flow pattern, as confirmed by the water level data, is to be expected due to the significant topographic relief of the site.

4. Annual Monitoring Program

4.1. Sampling Requirements

4.1.1. Groundwater

The groundwater at the site is currently monitored by a system of 15 monitoring wells that are located within and around the site. The locations of all existing monitoring wells are presented on Figure 4. Prior to closure, the site was monitored by 11 groundwater monitoring wells (MW-1 through MW-7B Old), which were installed in 1988 and 1990 under supervision of Marshall Macklin Monaghan Limited. Condition 4a of the amended C of A / ECA (March, 2003) for the Howland landfill required the Town to install four additional groundwater monitoring wells in the locations specified in the Post Closure Care of the Howland Landfill Site report (Burnside Environmental, 2003) for the purpose of post-closure care and groundwater monitoring. In 2006, monitoring wells MW-6A and 6B "New", and MW-7A and 7B "New", were installed under supervision of Northland Engineering Limited to satisfy the requirements outlined in the C of A.

Two different hydraulic flow regimes are monitored, which include the shallow and deep overburden units. Groundwater of the shallow overburden hydraulic flow unit is monitored by well MW-4 and by all wells that are identified with an "A" (i.e., MW-3A). Groundwater of the deep overburden hydraulic flow unit is monitored by wells MW-2, MW-5, and by the wells that are identified with a "B" (i.e., MW-3B).

In 2010, the groundwater sampling program at the site was revised to better reflect the site conditions following MECP approval. A copy of the MECP correspondence approving the revised sampling program is provided in Appendix "B" of this report. The sampling frequency was reduced from three times annually to once annually and the sampling parameters were reduced to include the following:

> **Metals:** barium, boron, calcium, iron, manganese, magnesium, potassium, and sodium.
> **Non-metals:** alkalinity, ammonia, chloride, conductivity, dissolved organic carbon, hardness, nitrate, nitrite, pH, sulphate, and total dissolved solids.

A summary of the historical groundwater analytical results and trends for each well is provided in Appendix "D".

4.1.2. Surface Water

Surface water monitoring at the site consists of two sampling locations (SW-1 and SW-2). The surface water sampling frequency was previously reduced (with Ministry approval) to once annually from three times annually in conjunction with the groundwater sampling program. The surface water sampling locations, as shown on Figures 3, 4 and 5, are as follows:

SW-1: The SWM pond located near the central portion of the landfill site. This engineered pond is designed to collect surface water runoff from a series of ditches that originate in the upper portion (north) of the landfill. Once the pond reaches capacity, water discharges via a surface inlet into a drainage ditch that leads to a low-lying area at the base of the landfill. The SWM system was designed to prevent erosion and excessive surface water infiltration.

SW-2: Located adjacent to the southern property boundary in a swale type feature, downgradient of the SWM pond. Monitors surface water flowing off the site.

Revisions to the surface water sampling program were proposed in the 2008, 2009, 2010, 2011, 2012, 2016, 2019, and 2022 Annual Monitoring Reports. However, at the time of this report, no comment has been received from the Surface Water Technical Support Section of the Ministry of Environment, Conservation and Parks (MECP). The proposed surface water sampling parameters are provided in Section 7.0 of this report. The surface water parameters currently sampled for are provided below:

Metals: aluminium, arsenic, barium, beryllium, boron, cadmium, calcium, chromium, cobalt, copper, iron, lead, manganese, magnesium, molybdenum, nickel, potassium, selenium, silicon, silver, sodium, strontium, titanium, thallium, vanadium, zinc, and zirconium.

Non-metals: alkalinity, ammonia (un-ionized), biochemical oxygen demand, chloride, chemical oxygen demand, conductivity, dissolved organic carbon, fluoride, hardness, nitrate, nitrite, orthophosphate, pH, sulphate, total dissolved solids, and temperature (field).

A summary of the historical surface water analytical results and trends for each location is provided in Appendix "E".

4.2. Sampling Procedures

4.2.1. Groundwater

For the groundwater sampling, the static groundwater level and well depth are measured in each monitoring well. Each monitoring well is then purged of three casing volumes of groundwater or until dry, whichever is first. After purging, monitoring wells are allowed to recharge with fresh groundwater before sampling is completed. Groundwater purging and sampling is conducted using dedicated Waterra™ tubing and inertial foot valves.

4.2.2. Surface Water

Surface water samples are collected by submerging the appropriate sample container into the water body and removing the container when a sufficient volume of sample has been collected. During collection, contact with the benthic zone is avoided to prevent suspending sediment. When collecting surface water samples, a grab sample is completed with the sample bottle unless the bottle contains preservative. For those samples requiring preservative, a clean unpreserved bottle is used to obtain the sample. The sample is then transferred into the appropriate bottle containing preservative. Required field parameter measurements, such as temperature, are measured and recorded at the time of sampling.

Groundwater and surface water samples are kept chilled following completion of the sampling program and sent within 24 hours of the sampling event to Bureau Veritas Laboratories (BVL), formerly Maxxam Analytics, of Mississauga for analysis. The Laboratory Certificates of Analysis for the current reporting period are provided in Appendix "F".

4.3. Determination of Action Levels

MOE Guideline B-7 establishes the basis for determining what constitutes the reasonable use of groundwater on properties adjacent to landfill sites. By applying the Reasonable Use Concept (RUC), the potential use of groundwater for domestic consumption will usually provide the lowest allowable concentration limits. MOE Procedure B-7-1 provides technical details for the application of the reasonable use approach. A change in the quality of groundwater on an adjacent property, where the reasonable use is determined to be for drinking water, will be acceptable only where:

i) Quality is not degraded by more than 50% of the difference between background concentrations and the Ontario Drinking Water Standards (ODWS) for non-health related parameters, and,

ii) Quality is not degraded by more than 25% of the difference between background concentrations and the ODWS for health-related parameters.

Background concentrations at the site are considered to be the natural quality of the groundwater prior to any contamination from landfill activities.

4.3.1. Background Water Quality

The background water quality is determined using data from MW-5. MW-5 was selected as the background monitoring well based on groundwater elevation contours (i.e., MW-5 is hydraulically upgradient from the waste footprint and has the highest groundwater elevation). Historical data indicates that the groundwater chemistry at the location of MW-5 has remained un-impacted by landfill leachate or by road salting activities.

In general, the shallow background water chemistry for the upper ridge/slope area of the site can be described as being highly mineralized, having low levels of chloride (~3 mg/L), a slightly basic pH (~8), and conductivity in the range of 483 to 843 µS/cm. The average hardness and alkalinity are 393 mg/L and 329 mg/L, respectively, which is generally representative of a carbonate-rich groundwater system.

Based on a review of the historical analytical data, concentrations of hardness and TDS are generally elevated at each of the monitoring wells at the site. In particular, the hardness concentrations exceed the RUC in the majority of the monitoring wells and are above the ODWS at each monitoring well at the site. The ODWS for hardness in drinking water is 80 to 100 mg/L with levels as high as 200 mg/L being considered poor but tolerable. It should be noted that the ODWS criterion for hardness is an Operational Guideline (OG) that has been established specifically for distribution systems and not for consumption. Based on the groundwater chemistry at MW-5, the groundwater is considered to have high concentrations of hardness (around 400 mg/L), as noted above. Therefore, where similar levels of hardness concentrations are noted at other wells, they will be assumed to be representative of background conditions.

It should be noted that MW-5 is screened within coarser sandy soils that form the overburden ridge. Consequently, this background water quality is not consistent with, nor representative of that of the deeper shale unit, which is intersected at MW-7B Old.

4.3.2. Calculation of Objective Levels (RUC)

Table 2 identifies the concentrations of groundwater quality indicator parameters used for evaluating the acceptable level of contaminant concentrations at the site boundary. Background concentrations (Cb) are the site-specific values (discussed in the previous section). The Provincial maximum concentrations (Cr) are identified in the Ontario Drinking Water Standards, August 2000. Acceptable concentrations at the site boundary (Cm) are calculated from MOE Procedure B-7-1 using the following formula.

$$Cm = Cb + x(Cr - Cb)$$

Where:

Cm = Maximum concentration acceptable in groundwater beneath an adjacent property.

Cb = Background concentration.

Cr = Maximum concentration that should be present in groundwater for domestic consumption according to the Ontario Drinking Water Standards.

x = 0.5 for non-health related parameters (AO and OG) and 0.25 for health-related parameters (MAC and IMAC).

AO = Aesthetic Objective

OG = Operational Guideline

MAC = Maximum Acceptable Concentration, Parameters Related to Health

IMAC = Interim Maximum Acceptable Concentration, Parameters Related to Health

It should be noted that if background concentrations exceed the ODWS, the objective level is set at the average background concentration. A summary of the analytical results for the current reporting period compared to the RUC and ODWS is provided in Table 2.

To determine if leachate is impacting groundwater, the indicator parameters in question were evaluated in conjunction with other indicator parameters and concentration trends. Wells with elevated and stable concentrations of the identified naturally elevated parameters, that show no increases in other leachate indicator parameters, are deemed un-impacted by landfill leachate. Additionally, comparison of known leachate impacted groundwater is compared to the groundwater chemistry at locations with naturally elevated concentrations to determine if leachate contributes to the elevated concentrations measured.

4.4. Surface Water – Provincial Water Quality Objectives

The purpose of surface water quality management at the site is to achieve the requirements established in the Provincial Water Quality Objectives (PWQO) set out by the MECP for offsite water bodies. The criteria set out by the PWQO (summarized in Table 3) were established to ensure that surface waters are of a quality which is satisfactory for aquatic life and recreation. Areas that have water quality surpassing the PWQO requirements are to be maintained at or above the applicable objectives. Natural water bodies that have water quality that does not presently meet the PWQO are not to be degraded any further and are to be improved if practical.

5. Leachate Production

Leachate is produced when surface water percolates into the subsurface and down through refuse resulting in impacted water that has the potential to migrate along the surface or in the ground. Landfill derived leachate that enters into the surface water and/or groundwater is often attenuated by natural mechanisms along the water migration pathway. The attenuation of leachate can occur by dilution, biologic activity, and geochemical mechanisms.

As a result of the site closure in October 2002 and the subsequent placement of a low permeability final cover, it is anticipated that leachate production would decrease over time from when the site was open. Additionally, based on the relatively low waste placement rate when the site was open, leachate production is expected to occur at a relatively low rate. The low-permeability cover acts to limit the volume of surface water infiltration through the refuse, minimizing leachate production. Therefore, it is anticipated that concentrations of leachate parameters in groundwater downgradient of the waste footprint will decrease over time.

MW-3A is located in close proximity to, and directly downgradient of the waste footprint and does not represent the quality of groundwater leaving the site. Based on the location of MW-3A and since it is screened in the upper coarser soils, this monitoring location is considered to be most representative of groundwater impacted by leachate. This is consistent with the analytical results, as groundwater at this location consistently exhibits elevated concentrations of alkalinity, conductivity, DOC, hardness, sodium, nitrate, potassium, sulphate, and TDS. As this well is most influenced by leachate, it is used as the leachate characterization well. In comparison with the groundwater quality at other wells, key leachate indicator parameters appear to be alkalinity, conductivity, DOC, hardness, nitrate, potassium, sulphate, and TDS.

A review of historical trends at MW-3A indicates that concentrations of the primary leachate indicator parameters previously exhibited some variability since sampling began at this location but have displayed a relatively stable and consistent trend since about 2009, with a decreasing trend in leachate indicator parameters since that time. Of significance, chloride concentrations have remained consistently low and stable, decreasing toward background concentrations since about 2014. Based on these trends, the period of leachate generation at the landfill site appears to have passed and the measured concentrations in the leachate characterization well remain consistently low and stable.

6. Monitoring Results

To determine the presence of (or potential impacts from) leachate, several indicator parameters are monitored and a trend analysis is conducted to determine changes in water quality over time. The following sections discuss the potential impacts to groundwater and surface water, and compliance with the Reasonable Use Criteria (RUC) and PWQO. The groundwater and surface water quality results for the reporting period are summarized in Tables 2 and 3. Historical groundwater and surface water sampling results and graphical trends of indicator parameters are included in Appendices "D" and "E".

6.1. Northwest Boundary Groundwater Quality

(MW-4 & MW-5)

The north property boundary is situated hydraulically upgradient from the landfill footprint and is located approximately 10 metres from the existing landfill limit at its closest point. There are two monitoring wells situated upgradient from the landfill footprint which include MW-4 and MW-5. MW-5 is located on the north side of Green Bay Road, across the Right-Of-Way from the landfill property, approximately 35 m north of the landfill limit, and is used as the background monitoring well. Groundwater at MW-5 represents the background water chemistry at the site and is not influenced by landfill leachate. Groundwater quality at this location was previously discussed in detail in Section 4.3.1 of this report.

MW-4 is located in close proximity to the landfill footprint and is approximately 5 metres beyond the northwest limit of waste placement. Based on current and historical analytical data, the groundwater chemistry at MW-4 is generally analogous with MW-5. During the sampling programs completed during the current monitoring period, there were no exceedances of the RUC at the near-source monitoring well (MW-4).

6.2. Downgradient Groundwater Quality (Onsite)

(MW-1A/B, MW-3A/B & MW-6A/B New)

MW-1A/B are screened beneath the waste footprint and MW-3A/B and MW-6A/B are located approximately 35 m and 45 m downgradient of the waste footprint, respectively. Based on the locations of these wells, it is anticipated that leachate impacted groundwater would be evident at these locations.

MW-1A/B

During the 2023 to 2025 sampling interval, MW-1A (shallow) could not be sampled due to insufficient water at the time of the monitoring events. It should be noted that groundwater samples have only been collected at MW-1A twice (i.e., in 2014 and 2018) since 2007 due to insufficient water. The available groundwater quality results indicate that the concentrations of chloride, sulphate, TDS, nitrate, and hardness were consistently elevated in comparison to background conditions. A review of leachate indicator parameters indicates that alkalinity, chloride, and conductivity values have decreased from 1988 to 1997 and generally stabilized thereafter. The samples collected during previous monitoring events indicated periodic elevated concentrations of hardness and conductivity in MW-1A. Since this well was not sampled between 2007 and 2014 and consistently low volumes of water have historically been observed in the well, it is expected that the water in this well is stagnant and not representative of true groundwater conditions. Attempts will be made to collect representative groundwater samples from this well during future monitoring events to determine if the elevated concentrations display a notable trend for these parameters.

The groundwater chemistry for MW-1B (deep) follows a similar pattern to MW-1A, although concentrations of the various indicator parameters are typically lower and less variable than historical values from MW-1A. In general, groundwater quality displays minor influence from landfill leachate. Lower concentrations and less variability of indicator parameters may be the result of the depth of the well, being located within the relatively low permeability soils of the deeper unit. During the 2023 to 2025 monitoring interval, the analytical findings indicate RUC exceedances of hardness during all three sampling events, which is also elevated in the background groundwater quality. Generally, the reported parameter concentrations for the current and historical period are consistent with background conditions and the concentrations display stable and consistent long-term trends since the early 1990s.

MW-3A/B

Wells MW-3A/B are located approximately 35 m downgradient from MW-1A/B. MW-3A is screened in the upper overburden unit, which consists of fine to coarse grained sand. MW-3B has a longer screened interval (which overlaps with MW-3A) and is screened in the lower permeability deeper overburden units, which consist of sand and sandy silt with some clay. Historically, the highest concentrations of leachate indicator parameters for the site have been reported at MW-3A, which is to be expected based on its location. Concentrations of alkalinity, conductivity, chloride, sodium, nitrate, potassium, sulphate, and TDS are historically elevated in MW-3A compared to the background monitoring well. However, it is noted that the analytical data indicates a stable to decreasing trend since 2006/2007. Additionally, the chloride concentrations have decreased from a high of 127 mg/L in 1990 to <10mg/L in the May 2014 sample and each succeeding sample since that time. During the current monitoring period, RUC exceedances included alkalinity, hardness, sulphate, and TDS. As previously reported, the period of leachate generation at the landfill site appears to have passed and the measured concentrations in the leachate characterization well remain consistently low and stable (i.e., are approaching background conditions).

The groundwater quality in MW-3B appears to be only slightly influenced by leachate. During the current sampling period, concentrations of conductivity, hardness, potassium, sulphate, and TDS were noted to be marginally elevated relative to background groundwater quality with only slight RUC exceedances for alkalinity, hardness, and TDS. Since 2008, it is noted that concentrations of leachate indicator parameters have remained relatively stable to decreasing at MW-3B.

MW-6A/B New

Wells MW-6A/B New are located approximately 30 m southwest of MW-3A/B. Unlike MW-3A/B, the groundwater chemistry between the shallow well (MW-6A) and the deep well (MW-6B) are relatively similar to one another. Based on the reported analytical results, groundwater at these wells appears to be slightly influenced by leachate with concentrations of alkalinity, chloride, conductivity, hardness, manganese, sodium, sulphate, and TDS being slightly elevated relative to background conditions. During the current sampling interval, exceedances of the RUC included alkalinity, hardness, manganese, sulphate, and TDS.

A review of ongoing concentrations indicates that concentrations of certain parameters such as hardness, alkalinity, conductivity, sulphate, and TDS gradually increased when sampling initially began at this location but have displayed notably stable trends since about 2014. Other parameters such as chloride, sodium, potassium, and DOC have been relatively stable or have a notable decreasing trend over the same period. Typically, it would be expected that these parameters would exhibit similar trends in groundwater influenced by leachate from a municipal landfill. However, this variation may be related to a change in redox potential and concentration of the leachate at that location.

Overall, at this point, the leachate influence being exhibited at MW-6A/B New is considered to be relatively minor. However, it is recommended that concentrations of carbonate related parameters such as hardness (calcium and magnesium) and alkalinity continue to be reviewed in comparison to typical municipal waste derived leachate parameters such as ammonia, nitrate, chloride, and DOC.

6.3. Southwest Boundary Groundwater Quality (MW-2 & MW-6A/B Old)

MW-6A/B Old are located onsite within 15 m of the south property boundary and MW-2 is located offsite approximately 10 m south of the southern property boundary. These wells are considered to be hydraulically cross-gradient of the buried waste and are representative of the groundwater quality in proximity to the southwest property boundary.

MW-6A/B Old

Groundwater quality results indicate that groundwater quality at MW-6A Old and MW-6B Old are generally representative of background water quality. Since the inception of the monitoring program, leachate indicator parameters have remained relatively stable at MW-6B Old and MW-6A Old. During the current reporting period, RUC exceedances of boron were reported at MW-6B Old, with elevated concentrations of potassium when compared to the background.

A review of historical concentrations at MW-6B Old indicates consistently elevated concentrations of boron similar to that of the current monitoring period. Due to the absence of other elevated leachate indicator parameters, the elevated concentrations of boron noted at MW-6B Old are not attributed to landfill leachate. Based on the borehole logs, it is probable that the elevated boron levels are naturally occurring and are derived from the native clayey soils and shale at this location.

MW-2

MW-2 monitors compliance for the south property boundary. Groundwater quality at this location is similar to the background well. For the current reporting period, no RUC exceedances were reported. A review of the historical analytical data at MW-2 indicates that the leachate indicator parameters have historically been, and continue to be, stable at this location. The long-term analytical trends for MW-2 continue to indicate that there have been no leachate impacts and very stable trends since the inception of sampling in the 1990s.

6.4. Downgradient Groundwater Quality (Offsite)

(MW-7A/B Old & New)

These wells monitor the downgradient groundwater quality beyond the southeast property boundary. MW-7A/B Old are located approximately 60 m beyond the southeast property boundary and MW-7A/B New are located approximately 65 m further downgradient. These wells are located at the base of the ridge/slope in a relatively flat agricultural field which extends southerly to the Pike Lake shoreline. These wells are the only wells screened below the 205 masl elevation and are screened in the deeper silt till unit that underlies the clay plain at the base of the overburden ridge.

MW-7A/B Old

MW-7A Old is screened within the coarser shallow overburden soils. Groundwater at this location appears to be exhibiting minor influence from leachate. Relative to background conditions, the concentrations of chloride, conductivity, hardness, sodium, sulphate, and TDS are slightly elevated. During the current sampling period, exceedances of the RUC were reported for alkalinity, hardness, and TDS. A review of historical results indicates that the concentration of leachate indicator parameters have been relatively stable overall with minor seasonal fluctuations, and a notable decreasing trend for chloride since the mid 1990s.

MW-7B Old is screened in the lower permeability clay and shale bedrock at an elevation of approximately 200 masl. It is reasonable to expect that potential leachate impacts would be less likely at this location due to the preferential flow of groundwater in the shallower and relatively coarser overburden unit. However, concentrations of chloride, sodium, manganese, and TDS are typically elevated at this location relative to background conditions and chloride concentrations have historically been the highest at this location relative to all the other monitoring wells at the site. However, during the current monitoring period, the concentration of chloride was observed to be lower than average and with no RUC exceedances.

A RUC exceedance of sulphate was reported during the 2014 sampling event. This concentration was higher than any historically reported value and was only observed in 2014. Samples collected between 2015 and 2025 are reported to be generally consistent with historical concentrations and are below the RUC. The source of this anomalous sulphate concentration is unknown at this time and continued monitoring of leachate indicator parameters at this location will continue to evaluate the long-term trend.

A detailed review of the geochemistry suggests that the elevated indicator parameters observed at MW-7B Old are attributed to the naturally poor groundwater within the shale unit. Key leachate indicator parameters such as alkalinity, DOC, and nitrate at MW-7B Old are historically similar to that of the background well and are significantly lower than those reported at the leachate characterization well (MW-3A).

The well construction details also indicate that the primary influence on the groundwater chemistry would be from the shale unit due to the aquitard located just above the screened interval, as shown in the borehole log (Appendix "C"). It is also noted that the elevated chloride concentrations at this well are coincident with elevated water levels. The inverse of this is true for the shallower screened well MW-7A Old (which was installed in the same location) and the leachate well MW-3A. This would suggest that the groundwater in MW-7B Old is primarily influenced by groundwater from the deeper shale unit, which appears to be hydraulically separated from the shallow groundwater. The water levels measured from MW-7A Old and MW-7B Old show a hydraulic separation between the two wells, which also supports the discontinuity between the groundwater flow regimes and the difference in geochemical response to higher water levels.

In summary, the elevated leachate indicator parameters in the groundwater at MW-7B Old are attributed to the naturally poor groundwater quality of the shale unit where the well is screened. The data from MW-7B Old indicates that the groundwater in the upper shale unit has naturally elevated concentrations of chloride, sodium, sulphate, and TDS.

MW-7A/B New

MW-7A/B New are screened within the silt till and within the interval of approximately 200 to 206 masl. These wells are similar with respect to their groundwater chemistry. A review of the groundwater chemistry at MW-7A/B New indicates that leachate indicator parameters such as alkalinity, nitrate, and potassium are similar to background conditions while concentrations of conductivity, sodium, sulphate, and TDS are slightly elevated. Exceedances of the RUC during the current monitoring period include hardness and TDS at MW-7A/B New as well as alkalinity at MW-7A New. It appears that the exceedances noted, and the slightly elevated parameters listed above are likely attributable to the poor water quality associated with the lower silt till plain and the underlying shale. A review of the long-term analytical trends indicates that the concentrations of indicator parameters, particularly chloride, remain stable and are decreasing since about 2007.

6.5. Groundwater Quality Summary

Groundwater flow at the site is inferred to be in a southeasterly direction toward the shoreline of Pike Lake, which is approximately 375 m from the site boundary. Leachate impacted groundwater from the landfill footprint is expected to flow predominantly in the upper overburden units, which consists of relatively permeable soils consisting of sand and gravel or sand and silt according to the borehole logs. Underlying the coarser upper overburden units appears to be an aquitard of low permeable clay and silt underlain by shale bedrock.

The background water chemistry in the overburden of the ridge/slope, determined by water quality results from monitoring well MW-5, can be described as being highly mineralized with naturally elevated concentrations of hardness and TDS. Based on an assessment of the historical monitoring results from the leachate indicator wells (MW-1A/B and MW-3A/B) and comparison to background monitoring well MW-5, the most significant leachate indicator parameters are DOC, alkalinity, hardness, nitrate, potassium, and sulphate. Chloride is considered to provide a good indicator in the upper overburden within the landfill site but is not reliable in the underlying silt till plain and shale bedrock, where groundwater quality appears to be naturally elevated with chloride, sulphate and TDS.

An ongoing trend analysis and review of the leachate indicator monitoring well results indicates that the leachate production at the landfill is generally stable to decreasing. This is consistent with the nature of the relatively limited historical use of the landfill site (low fill rate) and its closure and capping in 2002.

A review of the groundwater quality at MW-6A/B, located approximately 45 m downgradient of the landfill, indicates that concentrations of certain parameters such as hardness, alkalinity, conductivity, sulphate and TDS were increasing up to about 2013/2014 and have displayed a notably stable trend since that time. Other parameters such as chloride, sodium, potassium, and DOC have been relatively stable or are decreasing over the same period. This inverse relationship may be related to a transition from reducing to oxidizing conditions. Overall, at this point, the leachate influence being exhibited at MW-6A/B New is considered to be relatively minor. However, it is recommended that concentrations of carbonate related parameters such as hardness (calcium and magnesium) and alkalinity continue to be reviewed in comparison to typical municipal waste derived leachate parameters such as ammonia, nitrate, chloride and DOC.

Downgradient of the landfill site, compliance with the RUC is monitored at MW-7A/B Old and MW-7A/B New. These monitoring wells are situated in the silt till plain overlying shale bedrock at the base of the coarser overburden ridge/slope where the landfill site is located. At these locations, hardness and TDS concentrations are consistently above the RUC and are likely a result of the natural dissolution of minerals from the soil and underlying bedrock.

At MW 7A Old, which is located 65 m downgradient of the landfill and is the closest well to the landfill footprint of the MW-7 series of wells, minor influence of landfill leachate is suspected due to the elevated concentrations of alkalinity, nitrate and sulphate relative to background conditions. At the same location, MW-7B Old, is screened in the deeper overburden unit and in contact with the shale bedrock. Groundwater quality at this location exhibits elevated concentrations of chloride, which are suspected to be attributed to the natural water quality associated with the shales.

Further downgradient at MW-7A/B New, which are located approximately 125 m beyond the southeast property boundary, the groundwater exceeds the RUC for alkalinity, hardness, TDS, manganese, and sulphate. However, these exceedances are attributed to the natural water quality in the silt till (as opposed to landfill leachate), as concentrations of other key leachate indicator parameters such as alkalinity, DOC and nitrate are similar to background conditions.

6.6. Surface Water Quality

The established surface water monitoring program at the site consists of sampling from two locations (SW-1 and SW-2). SW-1 is located in the SWM pond, which is situated at the end of the access road and at the base of the landfill. SW-2 is located in a densely vegetated, swale type feature at the southern property boundary, downgradient from the SWM pond. The surface water quality results for the current monitoring period are summarized in Table 3 and the historical results and graphical trends of leachate indicator parameters for surface water are included in Appendix "E".

During the current reporting period, no samples were collected from SW-1 and SW-2, as the sampling locations were notably dry at the time of the sampling events. It should be noted that within recent years, it has been common for the surface water features to be dry and for samples to have been unobtainable from both of the established locations.

It should be noted that when present, surface water quality data from SW-1 is representative of stagnant surface water specific to the engineered SWM pond, as there was no surface water inflow or discharge at the time of sampling. The site is currently closed, capped, and sufficiently seeded with vegetation and there is no exposed refuse. Therefore, the surface water entering the SWM pond is not suspected to have come into contact with the refuse or leachate and is considered to be representative of localized stagnant water quality in the SWM pond only. As a result, it is anticipated that meteorological conditions such as periods of high evaporation or high precipitation will have a greater influence on the quality of the water in the SWM pond.

The most recently completed sample from SW-2 was in 2019, after which this sampling location has been dry since its inclusion in the monitoring program in 2006, and therefore, the presence of water in 2019 is expected to have been an exception due to high levels of precipitation around the time of sampling.

6.7. Quality Assurance & Quality Control (QA/QC)

As part of the QA/QC program, surrogate recoveries, method blanks and laboratory duplicates were reviewed to ensure analytical validity. The results for surrogate recoveries and method blanks were all reported to be within the acceptable limits as presented in the laboratory reports.

For laboratory duplicates, the relative percent differences (RPDs) were calculated for the 2023, 2024 and 2025 sampling programs, which are presented in Table 4. A review of the duplicate analyses indicates that the RPDs were within the laboratory quality control limits which are indicative of good laboratory practices and analytical validity.

In addition, a review of the historical analytical data indicates that the analytical results are generally within historical norms or are consistent with historical trends. In summary, the QA/QC protocols indicate that the analytical results are valid.

7. Review of Monitoring Program

As noted in Section 4.1.1, the groundwater sampling program at the site was revised based on recommendations from the 2008 and 2009 Annual Monitoring Reports and MECP approval. The revised program was implemented in 2010 which included sampling in the spring only and a reduction of the sampling parameters. Revisions to the surface water sampling parameters were also proposed in the 2008, 2009, 2010, and 2011 Annual Monitoring Reports, but at the time of this report no comment had been received from the Surface Water Technical Support Section of the MECP. The proposed surface water sampling parameters are provided below:

Surface Water

Metals: barium, boron, calcium, iron, manganese, magnesium, and sodium.

Non-metals: alkalinity, ammonia (un-ionized), chloride, conductivity, dissolved organic carbon, hardness, nitrate, nitrite, pH, orthophosphate, sulphate, total dissolved solids, and temperature (field).

As previously reported, only one sample (i.e., in 2019) has been collected at the location of SW-2 due to absence of sufficient water since the inclusion of SW-2 in the established monitoring program. Although surface water may collect at this location temporarily during storm events or spring melts, it appears that the storm water is contained within the highly localized swale feature and infiltrates through the overburden and into the groundwater system. Shallow groundwater quality downgradient of this location is monitored at two locations (MW-7A Old and MW-7A New). **Therefore, pending acceptance by the MECP, the discontinuation of the surface water sampling program at the location of SW-2 is recommended**.

Additionally, the inclusion of the analysis of orthophosphate in the surface water sampling program is not compatible with the total phosphorus concentrations that are required for comparison to the PWQO in order to determine the applicable RUC criteria for the site. In the interest of consistency and the relevance of the analytical data, it is recommended that the analysis of orthophosphate be changed to a total phosphorus analysis for the surface water sampling program.

For reporting purposes of the monitoring data, the monitoring reports for the site will be submitted every three years as per email correspondence dated December 4, 2013 from the MECP (enclosed in Appendix "B"). Therefore, the next monitoring report covering the monitoring years 2026 through 2028 is scheduled for submission in 2029 prior to February 28th.

8. Conclusions

1. Based on the topography of the site and groundwater elevations, groundwater flow at the site is interpreted to be from the northwest to the southeast toward the shoreline of Pike Lake.

2. Landfill leachate impacts are most evident directly downgradient of the landfill in the upper overburden.

3. Groundwater quality data from monitoring well MW-5 indicates that the background groundwater in the upper overburden is naturally highly mineralized, with levels of TDS frequently exceeding the ODWS and hardness consistently exceeding the ODWS.

4. Based on a comparison of the monitoring results from wells MW-1A and MW-3A to the background wells, the most significant leachate indicator parameters appear to be alkalinity, nitrate, DOC, conductivity, hardness, potassium, sulphate, and TDS.

5. The historical groundwater monitoring results from the leachate indicator wells indicate that leachate production at the landfill appears to be generally stable to slightly decreasing. This is consistent with the nature of the relatively limited historical use of the landfill site and its closure and capping in 2002.

6. The groundwater quality associated with the silt till plain and underlying shale bedrock where MW-7A/B New and MW-7A/B Old are located, has elevated concentrations of chloride, hardness, sodium, and TDS, which appear to be naturally occurring.

7. Groundwater quality at monitoring well MW-2, located crossgradient and to the southwest of the property boundary are representative of background conditions and show negligible impacts from landfill leachate.

8. Groundwater at MW-6A/B New located approximately 35 m downgradient of the landfill appears to be slightly influenced by landfill leachate. A review of leachate indicator trends indicates that concentrations of certain parameters such as hardness, alkalinity, conductivity, sulphate and TDS were gradually increasing up to about 2013/2014 and have displayed a notably stable trend since that time. Other parameters such as chloride, sodium, potassium, and DOC have been stable or display a notable decreasing trend over the same period. It is suspected that this may be due to a change in redox potential.

9. Minor influence of landfill leachate is suspected at MW-7A Old due to the elevated concentrations of alkalinity, nitrate and sulphate relative to background conditions. During the current monitoring period, exceedances of the RUC included alkalinity, hardness, manganese and TDS. Historical leachate indicator parameter concentrations indicate a relatively stable trend with minor variations that correlate to water level elevations.

10. MW-7B Old is screened in the deeper overburden unit next to MW-7A Old and is in contact with the shale bedrock. Based on a detailed review of the geochemistry, the elevated indicator parameters observed at MW-7B Old appear to be attributed to the naturally poor groundwater associated with the shale unit. Key leachate indicator parameters such as alkalinity, DOC and nitrate at MW-7B Old are historically similar to that of the background well and are significantly lower than those reported at MW-3A. The groundwater chemistry at these wells exhibits some variability depending on the water level elevations.

11. Exceedances of the RUC at wells MW-7A/B New for the current monitoring period included alkalinity, hardness, and TDS. Exceedances of these parameters are consistent with historical analytical data and are attributed to the natural water quality in the silt till (as opposed to landfill leachate). A review of historical analytical data indicates that the water quality at these locations is generally considered to be stable.

9. Recommendations

1. It is recommended that the groundwater monitoring program be continued once annually, in the spring, and continue to include the following parameters:

   barium, boron, calcium, iron, manganese, magnesium, sodium, alkalinity, ammonia, chloride, conductivity, dissolved organic carbon, hardness, nitrate, nitrite, pH, potassium, sulphate, and total dissolved solids.

2. It is recommended that surface water be sampled once annually at the location of SW-1, in the spring, in conjunction with the spring groundwater sampling and that the sampling parameters be revised to include the following (upon MECP concurrence):

   barium, boron, calcium, iron, manganese, magnesium, sodium, alkalinity, ammonia (un-ionized), chloride, conductivity, dissolved organic carbon, hardness, nitrate, nitrite, pH, total phosphorus, sulphate, total dissolved solids, and temperature (field).

3. Since only one sample has been obtainable at the location of SW-2 from the time it was added to the surface water sampling program, it is recommended that SW-2 be removed from the annual monitoring program.

4. As per MECP correspondence, the next submitted Monitoring Report will cover monitoring years 2026 through 2028 and is scheduled for submission in 2029 prior to February 28th.

All of which is respectfully submitted,

GEI CONSULTANTS CANADA LTD.
Per:

Matthew Nelson M. Sc, P. Eng., P. Geo.

A.W. Bringleson, B.E.S, C.E.T

Dave Williamson

From: Bruce O'Hare <commodore@lcyc.ca>
Sent: March 10, 2026 6:34 PM
To: Dave Williamson; Mayor Al MacNevin
Cc: Roy Eaton; Oscar Rodgers; Alastair & Michele Stephen; Rob Norris; briandanieloneill@gmail.com
Subject: McLean's Mountain LLP funding request

Dear Dave and Al,

I am writing on behalf of the **Little Current Yacht Club** to request financial support for our **2026 Youth Sailing Program**.

This summer we will once again offer a **six-week sailing school program on Manitoulin Island**. The program will include **four weeks of instruction at Low Island in Little Current and two weeks in Gore Bay**. We are hoping to help out the Algoma Sailing Club in Sault Ste. Marie Ontario with a week of instruction additionally. We are also pleased to continue working with the **Wikwemikong First Nations community**, who will be bringing students to participate in two of the four weeks of instruction in Little Current.The Youth Sailing Program provides young people with an opportunity to develop **water safety skills, teamwork, confidence, and a lifelong appreciation for boating and the marine environment**. It also helps introduce youth from across Manitoulin Island to sailing while encouraging continued participation in local recreational activities connected to our waterfront and marine heritage.

The cost of the program for families is **$310 per student per week**, a price that has remained unchanged since 2023. In order to keep the program accessible for local families, we are requesting municipal support to **subsidize $70 per student per week**, allowing the **net out-of-pocket cost for parents to remain at $240 per student per week**. Our program accommodates **12 students per week**, and our request relates specifically to **two weeks of programming in Little Current**: We will be requesting funding from Gore Bay and Wikwemikong with the same goal of keeping the program affordable for parents.

$70 per student × 24 students = $1,680 is our request. This funding would provide a **direct subsidy to families within our community**

In reviewing previous correspondence, we note that council approvals for similar requests have typically occurred in **early April**, which aligns well with our planning timeline as we also expect to receive updates regarding our **Canada Summer Jobs application** around that time.

We are grateful for the support council has provided in past years and sincerely appreciate your continued consideration of this request. Please feel free to contact me directly if you have any questions or if additional information would be helpful.

Warm regards,

Bruce O'Hare

Manitoulin
Fine Arts Association

December 1, 2025

Dear Sir or Madam,

I am writing on behalf of the Manitoulin Fine Arts Association to request your support for the 30th Annual Manitoulin Art Tour, July 17, 18 and 19, 2026.

The Manitoulin Art Tour showcases the wide variety of art available in our local area and gives the public an opportunity to explore Manitoulin. Local and off-island visitors spend a weekend soaking in the beauty of the island as they travel between studios, galleries, and shops.

Your financial support would assist us in advertising, signage, and promotional materials for the art tour. Sponsors would receive recognition and thanks on our print brochure, online on our website, www.manitoulinart.com, and our Facebook pages. Municipalities may also support us by offering free rental of a municipal facility for participating artists.

Our new Bingo game which encourages our visitors to travel to more destinations is looking for sponsorship of $600.00 to cover prize money and printing. This donation will give the 1-2 sponsors ($300.00 ea) prime logo recognition on the bingo card as well as all the other advertising noted above.

The Manitoulin Fine Arts Association is a provincially registered non-profit organization (#1566382) and a receipt will be provided, deductible against business income, for your contribution. Please find attached a sponsorship form for your convenience.

Thank you for supporting the arts on Manitoulin and thank you for your consideration.

Yours truly,

Debbie Whatling
Manitoulin Art Tour 2026– Art tour Chairperson, VP MFAA
debwhatlingart@gmail.com 289-686-6410

Dave Williamson

From: HURON BASS TOUR <huronbasstour@gmail.com>
Sent: March 11, 2026 9:16 PM
To: Dave Williamson
Subject: Huron Bass Tour - Donation Request

Hello Mr Williamson,

Thank you again for meeting with us.

All is sorted out with the Lions Club and we believe this will be a great addition to the Haweater Festival.

As per the meeting please see this email as a formal request for a donation for the tournament. We are requesting a donation that can be applied to the rental of the 120ft of docking space from Friday afternoon July 31 till Monday Morning August 3rd.

Thank you again for your consideration

Best Regards,
Laszlo Feher
Huron Bass Tour
President

Phone: 705 920 2459
Website: https://huronbasstour.com/
Facebook: https://www.facebook.com/huronbasstour/
Instagram: https://www.instagram.com/huronbasstour/

LITTLE CURRENT LIONS CLUB
P.O. BOX 205
LITTLE CURRENT, ON
CANADA
P0P 1K0

Mayor, Council, CAO, and Public works
March 02, 2026

The Little Current Lions would like to express their sincere appreciation to the Mayor, Council, CAO, and Public works for their support in approving our new fundraiser. We're excited to share that our efforts to collect empties at the NEMI landfill have been met with overwhelming success, surpassing our initial expectations.

Little Current Lions members