

AGENDA - AMENDED
A meeting of the Council of the Corporation
of the Town of Northeastern Manitoulin and the Islands
to be held on Tuesday, March 2, 2021
Electronic Format at 7:00 p.m.

- 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 2021-14
- 5. Planning Reports**
 - i. Minor amendment request, Application for Consent – Cyndy Ramage
- 6. New Business**
 - i. Water and Sewer Budget
 - ii. Annual Sheguiandah Water Treatment Plant Report
 - iii. Annual Little Current Water Treatment Plant Report
 - iv. Annual Landfill Monitoring Report 2020
 - v. Let's Remember Adam campaign
 - vi. Manitoulin Snowdusters – Request for permission
 - vii. Closure of Espanola District Credit Union
- 7. Correspondence**
 - i. Canadian Heritage – Funding approval
 - ii. Angela and Carmen Argmann – Information Center
 - iii. Request to rescind the Predator Control by-law
- 8. Minutes and Other Reports**
 - i. Manor Fundraising Report
 - ii. DSSAB Fourth Quarter Activity Report
 - iii. OGRA Conference
 - iv. Mayors Update
- 9. In Camera**
 - i. A proposed or pending disposition or acquisition of land for municipal or local board purposes.
- 10. Adjournment**

**THE CORPORATION OF THE TOWN OF
NORTHEASTERN MANITOULIN AND THE ISLANDS**

BY-LAW NO. 2021-14

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 December 4, 2018 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 December 4th, 2018 and held on:

February 23, 2021

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
2nd day of March 2021.

Al MacNevin

Mayor

Pam Cress

Clerk

The Corporation of the Town of Northeastern Manitoulin and the Islands
Minutes of a Regular Council meeting held Tuesday, February 23, 2021
via Zoom at 7:00p.m.

PRESENT: Mayor Al MacNevin, Councillors: Barb Baker, Al Boyd, Laurie Cook, Mike Erskine, Jim Ferguson, William Koehler, Dawn Orr, and Bruce Wood.

STAFF PRESENT: David Williamson, CAO
Pam Cress, Clerk

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

Resolution No. 49-02-2021

Moved by: M. Erskine

Seconded by: D. Orr

RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands approves the agenda, as amended, with the removal of the Application for Consent as applied for by Bruce O'Hare.

Carried

Resolution No. 50-02-2021

Moved by: B. Wood

Seconded by: J. Ferguson

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 No 2021-12 to adopt the minutes of Council for the term commencing December 4, 2018 and authorizing the taking of any action authorized therein and thereby.

Carried

Mayor MacNevin introduced the zoning application as applied for by Wanda McCulligh through agent Jordan Stephens. There were no comments received in writing or made in person for or against the application.

Resolution No. 51-02-2021

Moved by: M. Erskine

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 No. 2021-13, being a by-law to amend by site specific zoning amendment to allow for a multi-residential unit on property zoned residential, located at 34 Vankoughnet Street west.

Carried

Mayor MacNevin introduced the application for consent as applied for by Carrie McCulloch, Casson Eadie and Don Eadie Estate. There were no comments received in writing or made in person for or against this application.

Resolution No. 52-02-2021

Moved by: D. Orr

Seconded by: A. Boyd

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 Carrie McCulloch, Casson Eadie and Don Eadie Estate, File Number Con 2021-01, subject to the following conditions;

1. 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,
2. General – 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.
3. Taxes – Prior to final approval by the Town of Northeastern Manitoulin and the Islands, the owner provide confirmation of payment of all outstanding taxes.
4. All outstanding fees associated with this application including a fee of \$100 for each transfer of land and advertising cost.

Resolution No. 53-02-2021

Moved by: W. Koehler

Seconded by: D. Orr

RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands donates \$200 to the Little current & District Fish & Game Club in support of their fishing rod campaign.

Carried

**The Corporation of the Town of Northeastern Manitoulin and the Islands
Minutes of Council**

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Resolution No. 54-02-2021

Moved by: M. Erskine

Seconded by: L. Cook

RESOLVED THAT the Council of the Corporation of the Town of Northeastern Manitoulin and the Islands agrees to participate in the Manitoulin La-Cloche Tourism Adaptation Strategy Partnership.

Carried

Resolution No. 55-02-2021

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 8:08 pm.

Carried

Al MacNevin Mayor

Pam Cress Clerk

February 24, 2021

Pam Cress
Municipal Clerk -Planning Authority
Town of NEMI

Dear Pam

I am writing to you with respect to my application File #Con 2020-04; to sever lots on Howland Concession 6, Lot 19. I have employed Tulloch to prepare survey for the proposed severance. In order to incorporate an existing driveway; the frontage of the lots have changed slightly.

Proposed Lot 1 will now be 102 meters of frontage or 334.65 feet; I originally requested 350 feet of frontage.

Proposed Lot 2 will now be 76 meters of frontage or 249.34 feet; I originally requested 200 feet of frontage.

I am requesting that the Planning Board will consider these changes.

Respectfully

A handwritten signature in black ink, appearing to read 'Cyndy Ramage', with a long, sweeping horizontal line extending to the right.

Cyndy Ramage



Box 608
Little Current, ON
P0P 1K0
705-368-3500

September 4, 2020

NOTICE OF DECISION
(Section 53 of the Planning Act)

Subject: Application for Consent
File #: Con 2020-04
Owner: Cynthia Ramage
Location:
Legal: Howland Concession 6, Lot 19

Dear Sir

Pursuant to section 53 to the Planning Act, a provisional consent has been granted on the above application

The last date for appeal is September 25, 2020. If by this date, no notice of appeal is received, the decision of the Corporation of the Town of Northeastern Manitoulin and the Islands planning authority is final and binding.

The Corporation of the Town of Northeastern Manitoulin and the Islands planning authority may, prior to the lapsing date, change a condition(s) of consents. You will be entitled to receive notice of any changes to the conditions of the provisional consent if you have made a written request to be notified of changes to the conditions of the provisional consent. The process of changing a condition will involve another twenty day appeal period, unless the Corporation of the Town of Northeastern Manitoulin and the Islands planning authority considers the change to be minor.

Any person or public body may appeal to the Local Planning Authority Tribunal against the decision of the Corporation of the Town of Northeastern Manitoulin and the Islands planning authority, or any conditions imposed by the Corporation of the Town of Northeastern Manitoulin and the Islands planning authority, by sending a letter outlining the reasons for the appeal to the Municipal Clerk, accompanied by a filing fee of \$300.00 as required by the Local Planning Authority Tribunal. The fee must be paid by certified cheque or money order, in Canadian funds, payable to the Minister of Finance.

The application and associated files are available for public viewing Monday to Friday 8:30am to 4:30 pm at the Municipal Office, 14 Water Street, Little Current, On

Sincerely,

Pam Cress, Municipal Clerk

Attachment A

Resolution No. 235-08-2020

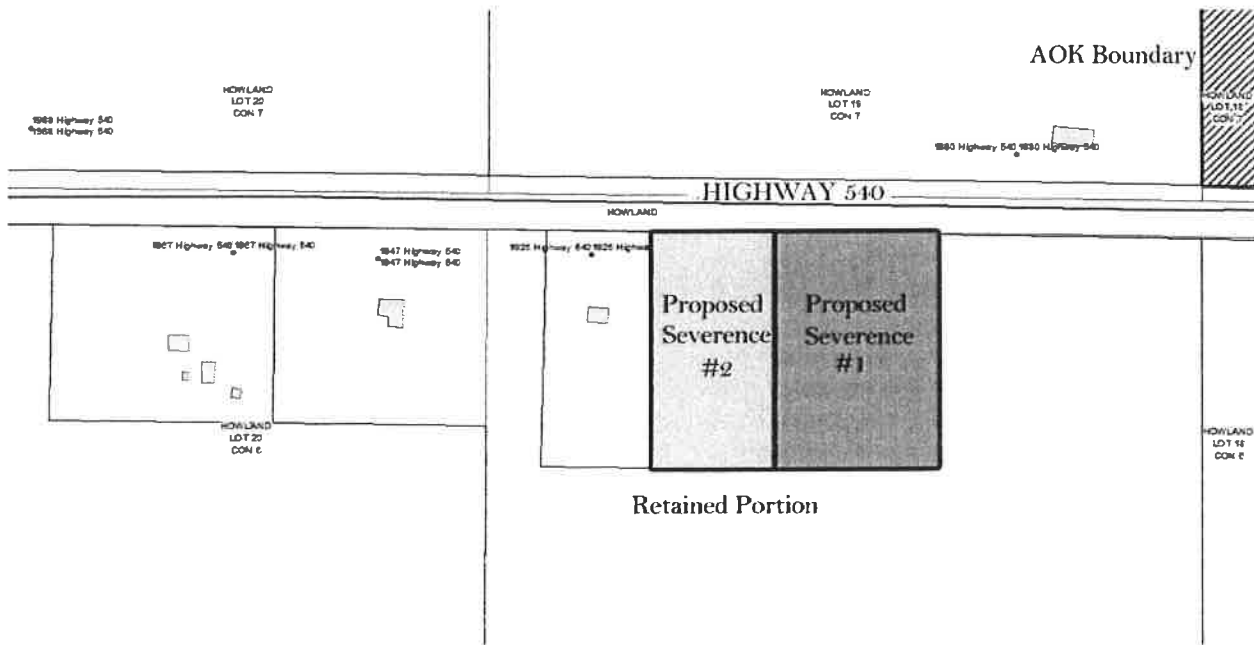
Moved by: M. Erskine

Seconded by: A. Boyd

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 Cynthia Ramage, File Number Con 2020-04 , subject to the following conditions;

1. 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,
2. Proof of MTO entrance permit provided to the Town office
3. General – 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.
4. Taxes – Prior to final approval by the Town of Northeastern Manitoulin and the Islands, the owner provide confirmation of payment of all outstanding taxes.

All outstanding fees associated with this application including a fee of \$100 for each transfer of land and advertising cost.





Box 608, Little Current, Ontario, P0P 1K0
705-368-3500

August 11, 2020

Subject: Application for Consent
File #: Con 2020-04
Owner: Cynthia Ramage
Legal: Howland, Concession 6, Lot 19

Purpose of the Application

The application proposes to sever 2 lots, one +/- 3.5 acre parcel with 350 feet of frontage on Highway 540 and another +/- 2 acre parcel with 200 feet of frontage on Highway 540 while retaining the remaining 42.5+/- acres. The conveyed parcel will be utilized as a residential lot by a family member with the other remaining vacant at this time.

The Provincial Policy has been taken into consideration and has been adhered to.

Conformity with the Official Plan

Designation – Rural

▪ **Rural Residential Uses**

1. Recreational dwellings and limited low density residential development is permitted in the Rural Area and shall generally be single detached dwellings. The conversion of existing single detached dwellings into semi-detached or duplex dwellings may be permitted in accordance with the provisions of the Zoning By-law.
2. New lot creation in proximity to existing agricultural operations will comply with the Provincial MDS Formulae as amended from time to time.
3. Rural residential development shall not require additional municipal water or sewer services, including the creation of new partial services. The lot must also have the capability to provide an individual an appropriate sewage disposal system and water supply with both quantity and quality suitable for domestic uses.
4. Mobile home parks are not permitted in accordance with the policies of this Plan.

F.4.2 Consents

A consent shall only be considered where a plan of subdivision is deemed to be unnecessary, where the application conforms with the policies of this Plan, is consistent with the Provincial Policy Statement, and the consent will generally not result in the creation of more than five new lots on a lot that existed prior to the date of adoption of this Plan, and it does not necessitate the creation of a new municipal road, or the extension of municipal services.

Council shall provide input on municipal conditions of approval for consents.

The proposed lot and retained lot shall have frontage and access on to an opened and maintained public road or have private road or water access in compliance with the policies of this Plan.

Lots will not be created which would create a traffic hazard due to limited sight lines on curves or grades.

The lot area and frontage of both the lot to be retained and the lot to be severed will be adequate for existing and proposed uses and will allow for the development of a use which is compatible with adjacent uses by providing for sufficient setbacks from neighbouring uses and, where required, the provision of appropriate buffering.

The proposed lot(s) will not restrict the development of other parcels of land, particularly the provision of access to allow the development of remnant parcels in the interior of a block of land.

The proposed development will be serviced in accordance with the policies of Section E.

The parkland dedication policies of Section F.4.3 will apply.

Zoning

Designation – Rural

a) Rural (RU) Zone

i. Permitted Uses

No person within any Rural (RU) Zone shall use any lot, or erect, alter or use any building or structure for any purpose except one or more of the following uses:

a) Rural Uses

- a farm
- any other agricultural use
- a home industry
- the parking and servicing of school buses, including a commercial garage.
- a wayside or borrow pit

Rural Residential Uses

- a single detached dwelling
- a duplex
- a semi detached dwelling
- a garden suite
- a secondary unit
- a home occupation use

Institutional Uses

- a cemetery
- a place of worship
- a school
- a community centre

Recreational Uses

- a golf course
- a public park
- a playground
- a hunt camp
- a cross country ski area

Other Uses

- a bed and breakfast establishment
- a public utility

ii. Zone Requirements

No person within any Rural (RU) Zone shall use any lot, or erect, alter or use any building or structure for any purpose except in accordance with the applicable provisions of Section 6 - General Provisions and the following.

A rural use or lot:

a)	Minimum lot frontage	134 m
b)	Minimum lot area	10.0 ha
c)	Maximum lot coverage	none
d)	Minimum front yard	15.0 m
e)	Minimum rear yard	15.0 m
f)	Minimum interior side yard	15.0 m
g)	Minimum exterior side yard	15.0 m

A rural residential use, as permitted in section 7.4.1.2 and institutional and public uses:

a)	Minimum lot frontage	45.5 m
b)	Minimum lot area	0.4 ha
c)	Maximum lot coverage	20 %
d)	Minimum front yard	6.0 m
e)	Minimum rear yard	7.5 m
f)	Minimum interior side yard	3.0 m
g)	Minimum exterior side yard	6.0 m
h)	Maximum building height	9.0 m
i)	Minimum distance to a lot line for an accessory building	3.0 m
j)	Maximum building height for an accessory building	5.0 m
k)	Maximum building floor area for an accessory building	89 sqm

Agency Comments: None

Residents Comments: None
Staff Comments: None

All new utilities will be required, these services will be at the expense of the new land owner.

Any new entrances will require permits from the MTO and proof of these permits will be required prior to final registration.

Taxes – Prior to final approval by the Town of Northeastern Manitoulin and the Islands, the owner provide confirmation of payment of all outstanding taxes.

All outstanding fees must be paid in full

Recommendations –

After considering all information including in this package and from other sources of information if the Planning Authority of the Town of Northeastern Manitoulin and the Island is satisfied that all requirements are met a favorable decision could be made.

TOWN OF NORTHEASTERN MANITOULIN THE ISLANDS
PROPOSED 2021
Water Rates

Sheg Increase - 4.00 %

SHEG WATER

	Approved Budget 2020	Pre-audit Actual 2020	Proposed Budget 2021
Operating Cost	\$122,738.00	\$74,034.68	\$125,480.00
Revenue for consumption	\$130,536.24	\$129,304.28	\$135,757.69
Other Revenue	<u>\$2,000.00</u>	<u>\$5,334.41</u>	<u>\$3,000.00</u>
Net Operations	\$9,798.24	\$60,604.01	\$13,277.69
Capital Expenditures	\$31,300.00	\$20,760.96	\$28,241.00
Revenue for Capital	\$31,300.00	\$20,760.96	\$28,241.00
Contribution to Reserve	<u>\$9,798.24</u>	<u>\$60,604.01</u>	<u>-\$14,963.31</u>
	<u><u>\$0.00</u></u>	<u><u>\$0.00</u></u>	<u><u>\$0.00</u></u>

SHEG

Number of Users		87	
Annual Rate (Base)	2020	\$1,371.77	
Recommended 2021 Water Rate		<u>\$1,426.64</u>	4.00%
Annual Increase		<u><u>\$54.87</u></u>	
Quarterly Rate	2020	\$342.93	
Recommended 2021 Water Rate		<u>\$356.65</u>	
Quarterly Increase		<u><u>\$13.72</u></u>	
Rate per cm ³	2020	\$3.88	
Recommended 2021 Water Rate		<u>\$4.04</u>	
Per cm ³ Increase		<u><u>\$0.16</u></u>	

TOWN OF NORTHEASTERN MANITOULIN THE ISLANDS

January 28, 2020

Version 1

2021
PROPOSED SHEG WATER BUDGET

			APPROVED BUDGET 2020	ACTUAL 2020	PROPOSED BUDGET 2021
Account	Description	Pre-Audit			
Sheg Water - Operating			31-Dec-20		
1	00-04-125-024-4378	Transf Fr Rsrves - Sheg Water System		0.00	
2	00-04-125-029-6729	Sheg Wtr System Rpr Trnsf to Reserve		0.00	
3	00-04-125-220-6110	Sheg Water Mains Wages	3,000.00	0.00	3,000.00
4	00-04-125-220-6161	Sheg Water Mains MERC	360.00	0.00	360.00
5	00-04-125-220-6165	Sheg Water Mains Grp Life	360.00	0.00	360.00
6	00-04-125-220-6168	Sheg Water Mains OMERS	300.00	0.00	360.00
7	00-04-125-220-6349	Sheg Water Mains Contracted Services		0.00	
8	00-04-125-220-6370	Sheg Water Depreciation Expense		0.00	
9	00-04-125-220-6411	Sheg Water Mains Insurance	550.00	609.10	650.00
10	00-04-125-220-6429	Sheg Water Mains Material	1,500.00	627.26	1,500.00
11	00-04-125-221-6110	Sheg WTP Wages		0.00	
12	00-04-125-221-6161	Sheg WTP MERC		86.91	100.00
13	00-04-125-221-6165	Sheg WTP Grp Life		71.05	100.00
14	00-04-125-221-6168	Sheg WTP OMERS		0.00	
15	00-04-125-221-6303	Sheg WTP Advertising	150.00	0.00	150.00
16	00-04-125-221-6349	Sheg WTP Contracted Services	56,000.00	46,325.38	56,000.00
17	00-04-125-221-6351	Sheg WTP Other Services	10,000.00	0.00	10,000.00
18	00-04-125-221-6360	Sheg WTP Dyed Diesel		0.00	
19	00-04-125-221-6405	Sheg WTP Hydro	17,500.00	11,694.10	17,500.00
20	00-04-125-221-6407	Sheg WTP Telephone	2,500.00	2,087.06	2,500.00
21	00-04-125-221-6411	Sheg WTP Insurance	6,200.00	6,277.93	6,500.00
22	00-04-125-221-6418	Sheg WTP Chemicals		0.00	
23	00-04-125-221-6426	Sheg WTP Permits, Licensing & Fees	2,000.00	264.40	2,000.00
24	00-04-125-221-6429	Sheg WTP Material	10,000.00	225.00	7,000.00
25	00-04-125-221-6459	Sheg WTP Courier Charges	100.00	0.00	100.00
26	00-04-125-221-6468	Sheg WTP Grant In Lieu	4,800.00	4,284.47	4,800.00
27	00-04-125-221-6474	Sheg WTP Bldg Mtce	3,000.00	291.30	5,000.00
28	00-04-125-221-6475	Sheg WTP Grounds Mtce Materials	100.00	0.00	100.00
29	00-04-125-221-6479	Sheg WTP Safety Wear		0.00	
30	00-04-125-221-6516	Sheg WTP Travel		0.00	
31	00-04-125-221-6998	Sheg WTP Payroll Burden Clearing		0.00	
32	00-04-125-225-6110	Sheg Hydrants Mtce Wages		0.00	
33	00-04-125-225-6429	Sheg Hydrants Mtce Materials	1,500.00	0.00	4,500.00
34	00-04-125-226-6995	Sheg Water Util Billing Collecting	450.00	450.00	450.00
35	00-04-125-227-6110	Sheg Water Meter Mtce Wages	200.00	0.00	200.00
36	00-04-125-227-6161	Sheg Water Meter Mtce MERC	24.00	0.00	50.00
37	00-04-125-227-6165	Sheg Water Meter Mtce Grp Life	24.00	0.00	50.00
38	00-04-125-227-6168	Sheg Water Meter Mtce OMERS	20.00	0.00	50.00
39	00-04-125-227-6429	Sheg Water Meter Mtce Materials	500.00	0.00	500.00
40	00-04-125-228-6110	Sheg Water Meter Reading Wages	1,000.00	740.72	1,000.00
41	00-04-125-228-6161	Sheg Water Meter Reading MERC		0.00	
42	00-04-125-228-6165	Sheg Water Meter Reading Grp Life		0.00	
43	00-04-125-228-6168	Sheg Water Meter Reading OMERS		0.00	
44	00-04-125-228-6429	Sheg Water Meter Reading -Materials	600.00	0.00	600.00
45	00-04-125-429-4292	Sheg Water Metered	-130,536.24	-129,304.28	-135,757.69
46	00-04-125-429-4304	Sheg Water - Other Revenue	-2,000.00	-5,334.41	-3,000.00
47	00-04-125-429-4279	Sheg Water - OSWAP Assistance		0.00	
48	00-04-125-432-4278	NOHFC Sheg WTP Funding		0.00	
49	00-04-125-435-4309	Water Users Meters Prepayment		0.00	
50	00-04-125-435-4310	Water Meter System LT Financing		0.00	
51	00-04-125-429-6415	internal Interest - Sheg Water		0.00	
TOTAL OPERATIONS			9,798.24	60,604.01	13,277.69

F:\TREASURY\2021 Budget\WATER SEWER 2021\2021 BUDGET WATER AND SEWER DRAFT at Feb 13., 2021 (Autosaved).xlsx\2021 BUDGET WATER AND SEWER DRAFT at Feb 13., 2021 (Autosaved).xlsx

Version 1

January 28, 2020

Last Updated 02/14/2021 11:56 AM

Printed 02/14/20

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TOWN OF NORTHEASTERN MANITOULIN THE ISLANDS

January 28, 2020

Version 1

2021 PROPOSED SHEG WATER BUDGET

			APPROVED BUDGET 2020	ACTUAL 2020	PROPOSED BUDGET 2021	
	Account	Description	Pre-Audit			
	Sheg Water - Capital					
52	00-24-125-024-4378	Trnsf frm Rsrves for Sheg Water Capital Proj	-31,300.00	-20,760.96	-28,241.00	
53	00-24-125-029-6729	Tmsf to Rsrves from Capital - Sheg Water	0.00	0.00		
54	00-24-125-221-6429	Sheg Bldg Capital - Load test generator		0.00	1,100.00	
55	00-24-125-222-6429	Sheg low lift pump	3,800.00	0.00	3,800.00	
56	00-24-125-260-6429	Sheg Capital Replace alarm dialer	4,000.00	0.00		
57	00-24-125-263-6429	Sheg Water Meters - Materials upgrade meter reader software		0.00	941.00	
58	00-24-125-264-6110	Sheg WTP Upgrade Wages OSTAR		0.00		
59	00-24-125-264-6300	Sheg Water - Reduction in Capital Rec'ble		0.00		
60	00-24-125-264-6429	Sheg WTP SCADA programming		0.00	2,100.00	
61	00-24-125-267-6429	Sheg Capital Raw water quality analysis	4,500.00	0.00	1,800.00	
62	00-24-125-221-6429	Sheg Capital - Highlift pump / Swab distribution	15,000.00	0.00		
63	00-24-125-270-6429	Sheg Capital- Intake Inspection		20,760.96		
64	00-24-125-268-6429	Sheg Capital - Swab lines		0.00	15,000.00	
65	00-24-125-271-6429	Sheg Capital - PH Meter / Asset registry prep	4,000.00	0.00		
66	00-24-125-268-4278	SHEG WATER - Federatl Funding		0.00		
67	00-24-125-268-4279	SHEG WATER - Provincial Funding		0.00		
68	00-24-125-268-6429	Sheg Water Capital Chlorine analyzer probe		0.00	3,500.00	
69	00-24-125-269-4279	OSTAR - Sheg WTP Upgrade		0.00		
70	00-24-125-435-4307	Sheg WTP Upgrade - User Charges		0.00		
		TOTAL CAPITAL	0.00	0.00	0.00	
NET OPER & CAP SHEG WATER (Surplus / - Deficit)			\$9,798.24	\$60,604.01	\$13,277.69	

SHEG WATER - 2021 CAPITAL PROJECTS

	Project	Amount
1.	Low lift pump	\$3,800
2.	SCADA programming	2,100
3.	Upgrade water meter reading software	941
4.	Chlorine analyzer probe	3,500
5.	Load test generator	1,100
6	Raw water quality analysis	1,800
7	Swab lines	15,000
8		
9		
10		
		<hr/>
		\$28,241
		<hr/>

TOWN OF NORTHEASTERN MANITOULIN and the ISLANDS

PROPOSED 2021 Water Rates

<i>LC Increase - 4.00%</i>	Approved Budget 2020	Pre-audit Actual 2020	Proposed Budget 2021
<u>LC WATER</u>			
Operating Cost	\$368,140.00	\$239,465.58	\$370,140.00
Revenue for consumption	\$496,133.88	\$437,983.71	\$515,979.24
Other Revenue	<u>\$2,500.00</u>	<u>\$27,871.37</u>	<u>\$2,500.00</u>
Net Operations	\$130,493.88	\$226,389.50	\$148,339.24
Capital Expenditures	\$32,300.00	\$228,925.28	\$613,714.00
Revenue for Capital	\$32,300.00	\$228,925.28	\$613,714.00
Contribution to Reserve	<u>\$98,193.88</u>	<u>-\$2,535.78</u>	<u>-\$465,374.76</u>
	<u><u>\$0.00</u></u>	<u><u>\$0.00</u></u>	<u><u>\$0.00</u></u>

		<u>LC</u>	
Number of Users		700	
Annual Rate (Base) 2020		\$463.37	
Recommended 2021 Water Rate		<u>\$481.90</u>	4.00%
Annual Increase		<u><u>\$18.53</u></u>	
Quarterly Rate 2020		\$115.85	
Recommended 2021 Water Rate		<u>\$120.48</u>	
Quarterly Increase		<u><u>\$4.63</u></u>	
Rate per cm ³ 2020		\$1.40	
Recommended 2021 Water Rate		<u>\$1.46</u>	
Per cm ³ Increase		<u><u>\$0.06</u></u>	

TOWN OF NORTHEASTERN MANITOULIN THE ISLANDS

January 28, 2020
Version 1

2021 LC WATER PROPOSED BUDGET

APPROVED
BUDGET
2020

ACTUAL
2020

PROPOSED
BUDGET
2021

Account		Description	Pre-Audit			
LC Water - Operating			31-Dec-20			
1	00-04-125-024-4376	Transf Fr Rsrves - L C Water			0.00	
2	00-04-125-024-4379	Transf Fr Rsrves - Hwy 540 Water			0.00	
3	00-04-125-024-4380	Transf Fr Rsrves - Hwy 6 Water			0.00	
4	00-04-125-029-6728	LC Wtr System Rpr Tansf to Reserve			0.00	
5	00-04-125-029-6730	Hwy 6 Wtr System Rpr Transf to Reserve			0.00	
6	00-04-125-029-6731	Hwy 540 Wtr System Rpr Transf to Reserve			0.00	
7	00-04-125-212-6110	LC Water Mains Wages	10,000.00		0.00	10,000.00
8	00-04-125-212-6161	LC Water Mains MERC	1,200.00		0.00	1,200.00
9	00-04-125-212-6165	LC Water Mains Group Life	1,200.00		0.00	1,200.00
10	00-04-125-212-6168	LC Water Mains OMERS	1,000.00		0.00	1,000.00
11	00-04-125-212-6320	LC Water Mains Bad Debts written off			0.00	
12	00-04-125-212-6349	LC Water Mains - Contracted Services	13,500.00		1,510.64	13,500.00
13	00-04-125-212-6351	LC Water Mains - Other Services	12,000.00		0.00	12,000.00
14	00-04-125-212-6411	LC Water Mains Insurance	3,500.00		3,460.92	3,500.00
15	00-04-125-212-6418	LC Water Mains Lab/Testing Fees			0.00	
16	00-04-125-212-6429	LC Water Mains Material Parts	10,000.00		10,016.04	12,000.00
17	00-04-125-213-6110	LC WTP Wages			0.00	
18	00-04-125-213-6161	LC WTP MERC			0.00	
19	00-04-125-213-6165	LC WTP Grp Life			0.00	
20	00-4-125-213-6168	LC WTP OMERS			0.00	
21	00-04-125-213-6303	LC WTP Advertising	300.00		0.00	300.00
22	00-04-125-213-6336	LC WTP Chemicals			0.00	
23	00-04-125-213-6349	LC WTP Contracted Services	135,000.00		127,622.44	135,000.00
24	00-04-125-213-6351	LC WTP Other Services	15,000.00		305.28	15,000.00
25	00-04-125-213-6360	LC WTP Dyed Diesel			0.00	
26	00-04-125-213-6405	LC WTP Utilities	75,000.00		52,015.59	75,000.00
27	00-04-125-213-6407	LC WTP Telephone	4,500.00		3,621.20	4,500.00
28	00-04-125-213-6411	LC WTP Insurance	6,100.00		3,393.57	6,100.00
29	00-04-125-213-6418	LC WTP Lab Testing Fees	4,500.00		0.00	4,500.00
30	00-04-125-213-6426	LC WTP Permits, Licensing & Fees	2,000.00		396.75	2,000.00
31	00-04-125-213-6429	LC WTP Materials	20,000.00		4,964.56	20,000.00
32	00-04-125-213-6459	LC WTP Courier Charges			0.00	
33	00-04-125-213-6468	LC WTP Grant In Lieu	20,000.00		16,857.31	20,000.00
34	00-04-125-213-6474	LC WTP Building Maintenance & Repairs	10,000.00		5,529.44	10,000.00
35	00-04-125-213-6479	LC WTP Safety Wear			0.00	
36	00-04-125-213-6516	LC WTP Travel			0.00	
37	00-04-125-214-6995	LC Water Util Billing & Collecting	4,600.00		3,600.00	4,600.00
38	00-04-125-215-6110	LC Hydrants Mtce Wages	3,000.00		0.00	3,000.00
39	00-04-125-215-6161	LC Hydrants Mtce MERC	360.00		0.00	360.00
40	00-04-125-215-6165	LC Hydrants Mtce Group Life	360.00		0.00	360.00
41	00-04-125-215-6166	LC Hydrants Mtce RRSP			0.00	
42	00-04-125-215-6168	LC Hydrants Mtce OMERS			0.00	
43	00-04-125-215-6429	LC Hydrants Mtce Parts	4,500.00		1,297.44	4,500.00

TOWN OF NORTHEASTERN MANITOULIN THE ISLANDS

January 28, 2020

Version 1

2021 LC WATER PROPOSED BUDGET

			APPROVED BUDGET 2020	ACTUAL 2020	PROPOSED BUDGET 2021
Account	Description	Pre-Audit			
44	00-04-125-217-6110	LC Water Meters Mtce - Wages		0.00	
45	00-04-125-217-6161	LC Water Meters Mtce MERC		0.00	
46	00-04-125-217-6165	LC Water Meters Group Life		0.00	
47	00-04-125-215-6168	LC Water Meters OMERS		0.00	
48	00-04-125-217-6429	LC Water Meters Mtce - Materials	4,000.00	1,978.83	4,000.00
49	00-04-125-218-6110	LC Water Meter Reading - Wages	3,000.00	1,744.24	3,000.00
50	00-04-125-218-6161	LC Water Meter Reading - MERC	360.00	204.81	360.00
51	00-04-125-218-6165	LC Water Meter Reading - Group Life	360.00	167.85	360.00
52	00-04-125-218-6168	LC Water Meter Reading - OMERS	300.00	149.89	300.00
53	00-04-125-218-6429	LC Water Meter Reading - Materials	2,500.00	628.78	2,500.00
54	00-04-125-428-4270	LC Water Interest on Connection Charges		0.00	
55	00-04-125-428-4279	LC Water - OSWAP Assistance		0.00	
56	00-04-125-428-4292	LC Water - Metered	-496,133.88	-437,983.71	-515,979.24
57	00-04-125-428-4304	LC Water - Other Revenue		-23,527.77	
58	00-04-125-428-4307	LC Water User Charges		0.00	
59	00-04-125-428-4328	LC Water Other Water Syst Revenue	-1,500.00	-100.00	-1,500.00
60	00-04-125-428-4341	LC Water - External Sales	-1,000.00	-4,243.60	-1,000.00
61	00-04-125-428-6415	Internal Interest - LC Water		0.00	
		TOTAL OPERATIONS SURPLUS	130,493.88	226,389.50	148,339.24
	LC Water - Capital				
62	00-24-125-024-4376	Trnsf frm LC Wtr Rsrves for Capital Projects	-32,300.00	-228,925.28	-613,714.00
63	00-24-125-024-4377	Trnsf frm Rsrves for Water Quality Stud		0.00	
64	00-24-125-029-6728	Trnsf to Rsrves from Capital - LC Water		0.00	
65	00-24-125-029-6729	Trnsf to Rsrves from Capital - Sheg Water		0.00	
66	00-24-125-212-4279	Water Main Replacement Funding		0.00	
67	00-24-125-212-4310	Water Main Replacement - Loan Proceeds		0.00	
68	00-24-125-212-6429	LC Watermain Capital		200,257.03	
69	00-24-125-218-6429	Replace filters	4,500.00	0.00	550,000.00
70	00-24-125-219-6429	Generator transfer switch	4,000.00	0.00	12,445.00
71	00-24-125-214-6429	Intake Inspection		0.00	5,400.00
72	00-24-125-215-6429	Swab lines Distribution system	12,000.00	12,000.00	12,000.00
73	00-24-125-220-6429	Replace electrical actuator process on valves	5,250.00	0.00	9,750.00
74	00-24-125-211-6429	Highlift pump / Zebra Mussel feed pump	2,750.00	0.00	2,750.00
75	00-24-125-213-6429	Chlorine analyzer probe		0.00	6,800.00
76	00-24-125-216-6429	Load test generator		0.00	1,100.00
77	00-24-125-217-6429	Upgrade water meter reader software	300.00	0.00	8,469.00
78	00-24-125-260-6429	Raw water quality analysis	3,500.00	0.00	1,800.00
79	00-24-125-261-4278	LC Water - Federal Funding		0.00	
80	00-24-125-261-4279	OSTAR - LC Distribution Upgrade		0.00	
81	00-24-125-261-4307	LC Water Users Capital Funding		0.00	
82	00-24-125-261-6429	LC WATER SCADA Upgrade		0.00	2,100.00
83	00-24-125-262-4279	LC WATER - Ontario Funding		0.00	
84	00-24-125-262-6429	LC WATER Sump Pumps		16,668.25	
85	00-24-125-265-6429	LC WATER DWQUIS Audit		0.00	1,100.00
		TOTAL CAPITAL EXPENSES	0.00	0.00	0.00

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Version 1

January 28, 2020

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TOWN OF NORTHEASTERN MANITOULIN THE ISLANDS

January 28, 2020
Version 1

2021 LC WATER PROPOSED BUDGET

		APPROVED BUDGET 2020	ACTUAL 2020	PROPOSED BUDGET 2021
Account	Description	Pre-Audit		
NET OPER & CAP LC WATER	(Surplus / - Deficit)	\$130,493.88	\$226,389.50	\$148,339.24

Notes:

LC WATER - 2021 CAPITAL PROJECTS

	Project	Amount
1.	Swab lines	\$12,000
2.	Replace filters	550,000
3.	Upgrade meter reading software	8,469
4.	Raw water quality analysis	1,800
5.	Zebra mussel feed pump	2,750
6.	Replace electrical actuator process on \	9,750
7.	Generator transfer switch	12,445
8	SCADA	2,100
9	DWQUIS	1,100
10	Intake inspection	5,400
11	Chlorine analyzer probe	6,800
12	Load test generator	<u>1,100.00</u>
		<u>\$613,714</u>

TOWN OF NORTHEASTERN MANITOULIN and the ISLANDS
2021 Sewer Rates

	Approved Budget 2020	Pre-audit Actual 2020	Proposed Budget 2021
<u>LC SANITARY SEWERS</u>			
Operating Cost	\$291,767.48	\$217,498.32	\$392,068.00
Revenue	372,100.41	306,559.81	515,979.24
Other Revenue	<u>2,000.00</u>	<u>0.00</u>	<u>2,000.00</u>
Net Operations	\$82,332.93	\$89,061.49	\$125,911.24
Capital Expenditures	138,100.00	2,188,017.77	135,000.00
Reserve withdrawal for Capital	138,100.00	684,249.75	135,000.00
Capital Funding Received		950,690.08	
Loan		553,077.94	
Contribution to Reserve from Oper	<u>82,332.93</u>	<u>89,061.49</u>	<u>125,911.24</u>
	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>

TOWN OF NORTHEASTERN MANITOULIN THE

January 28, 2020

Version 1

2021 LC SEWER PROPOSED BUDGET

		APPROVED BUDGET 2020	ACTUAL 2020	PROPOSED BUDGET 2021
Account	Description	Pre-Audit		
LC Sewer - Operating		31-Dec-20		
1	00-04-115-001-6370 Sanitary Services Depreciation Expense		0.00	
2	00-04-115-029-6727 LC Swr System Rpr Trnsf to Reserve		0.00	
3	00-04-115-202-6110 Sanitary Sewers Wages	10,000.00	598.33	10,000.00
4	00-04-115-202-6161 Sanitary Sewers MERC	800.00	74.01	800.00
5	00-04-115-202-6165 Sanitary Sewers Group Life	800.00	53.88	800.00
6	00-04-115-202-6168 Sanitary Sewers OMERS	650.00	59.47	650.00
7	00-04-115-202-6210 Sanitary Sewers - Principal Loan Payment	53,083.03	53,083.03	126,447.53
8	00-04-115-202-6211 Sanitary Sewers - Loan Int Payment	32,284.45	32,284.45	37,720.47
9	00-04-115-202-6349 Sanitary Sewers Contr Services	45,000.00	25,563.64	57,000.00
10	00-04-115-202-6351 Sanitary Sewers Other Services	10,000.00	10,730.40	11,000.00
11	00-04-115-202-6360 Sanitary Sewers Dyed Diesel	650.00	264.50	650.00
12	00-04-115-202-6405 Sanitary Sewers Utilities	38,000.00	28,340.74	38,000.00
13	00-04-115-202-6411 Sanitary Sewers Insurance	8,000.00	8,499.66	8,500.00
14	00-04-115-202-6429 Sanitary Sewers Material	30,000.00	1,773.34	32,000.00
15	00-04-115-202-6468 Sanitary Sewers Grant in Lieu		0.00	
16	00-04-115-202-6474 Sanitary Sewers Bldgs - Maintenance & Repairs	10,000.00	2,379.04	10,000.00
17	00-04-115-209-6110 Lagoon Operation Wages		0.00	
18	00-04-115-209-6349 Lagoon Operation Contracted Svcs	15,000.00	49,356.60	21,000.00
19	00-04-115-209-6418 Lagoon Operation Lab Testing Fees		0.00	
20	00-04-115-209-6429 Lagoon Operation Material	30,000.00	0.00	30,000.00
21	00-04-115-209-6468 Lagoon Operation Grant In Lieu	7,500.00	4,437.23	7,500.00
22	00-04-115-427-4292 LC Sewer Billing Metered	-372,100.41	-306,559.81	-515,979.24
23	00-04-115-427-4328 LC Sewers Other Charges	-2,000.00	0.00	-2,000.00
24	00-04-115-427-6415 Internal Interest - L C Sewers		0.00	
	TOTAL OPERATIONS	82,332.93	89,061.49	125,911.24
LC Sewer - Capital				
25	00-24-115-024-4375 Trnsf frm LC Swr Rsrve for Capital Projects	-\$138,100.00	-684,249.75	-\$135,000.00
26	00-24-115-202-4307 LC Sewer - User Charges		0.00	
27	00-24-115-202-4310 LC Sewer - Loan Proceeds		0.00	
28	00-24-115-202-6110 Sewer Repairs CL/Forcemain Wages		0.00	
29	00-24-115-202-6161 Sewer Repairs CL/Forcemain MERC		0.00	
30	00-24-115-202-6165 Sewer Repairs CL/Forcemain Group Life		0.00	
31	00-24-115-202-6166 Sewer Repairs CL/Forcemain RRSP		0.00	
32	00-24-115-202-6429 Sewer Repairs CL/Forcemain Materials		177,323.26	
33	00-24-115-207-6429 Chemical for treatment / Lagoon treatment	20,000.00	38,151.51	
34	00-24-115-204-6429 Complete engineering design on main lift station (SPS Sewage pumping site)	4,500.00	0.00	75,000.00
35	00-24-115-206-6429 Clean Wetwell / Replace Campbell St SPS generator	45,000.00	71,441.14	
36	00-24-115-202-6419 Flush Sanitary Sewers / Flush system	3,600.00	2,200.05	
37	00-24-115-208-6429 Campbell generator/transfer switch and fuel tank		0.00	45,000.00
38	00-24-115-205-6429 Rebuild Campbell St electrical controls	65,000.00	0.00	15,000.00
39	00-24-115-209-6110 Lagoon Capital Wages		2,972.76	
40	00-24-115-209-6161 Lagoon Capital MERC		327.30	
41	00-24-115-209-6165 Lagoon Capital Group Life		211.11	
42	00-24-115-209-6166 Lagoon Capital RRSP		0.00	
43	00-24-115-209-6168 Lagoon Capital OMERS		241.93	
44	00-24-115-209-6429 Lagoon Capital Materials		1,895,148.71	
45	00-24-115-209-4278 Lagoon Capital Funding - Federal		-950,690.08	

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TOWN OF NORTHEASTERN MANITOULIN THE

January 28, 2020

Version 1

2021 LC SEWER PROPOSED BUDGET

			APPROVED BUDGET 2020	ACTUAL 2020	PROPOSED BUDGET 2021
Account	Description	Pre-Audit			
46	00-24-115-209-4279	Lagoon Capital Funding - Provincial		0.00	
47	00-24-115-209-4310	Lagoon Capital - Loan Proceeds		-553,077.94	
48	00-24-115-202-4278	LC Sewers - Federal Funding		0.00	
49	00-24-115-202-4279	LC Sewers - Provincial Funding		0.00	
50	00-24-130-251-4304	Environmental Funding - Other		0.00	
		TOTAL CAPITAL	0.00	0.00	0.00
NET OPER & CAP LC SEWER (Surplus / - Deficit)			\$82,332.93	\$89,061.49	\$125,911.24

Notes:

LC SEWER - 2021 CAPITAL PROJECTS

	Project	Amount
1.	Campbell generator/transfer switch and fuel tank	\$45,000
2.	Rebuild Campbell St electrical controls	15,000
3.	Complete engineering design on main lift station (SPS Sewage pumping site)	75,000
4.		
5.		
		<u>\$135,000</u>

Water & Sewer Reserve Estimated Balances

Reserves	Opening Bal Jan 2020	Estimate Used in 2020	Estimate Surp to Reserve(PreAudit)	Est Bal at 12/31/20	Budgeted frm/to Reserve '21	Est Ending Bal
31-Dec-20						
LC Water	\$1,435,511	-228,925	226,390	\$1,432,975	-465,375	\$967,600
LC Sewer	\$229,376	-289,116	89,062	\$29,322	-9,087	\$20,235
Shег Water	\$241,472	-20,761	60,604	\$281,315	-14,963	\$266,352
	\$1,906,359	-\$538,802	\$376,055	\$1,743,612	-\$489,425	\$1,254,187

Sheguiandah Water Treatment

Small Municipal Residential Drinking Water System

January 1, 2020 – December 31, 2020

O.Reg 170/03 Schedule 22 Summary Report

O.Reg 170/03 Section 11 Annual Report

&

O.Reg 387/04 Annual Record of Water Taking

Prepared by the Ontario Clean Water Agency
For The Corporation of the Town of Northeastern Manitoulin and the Islands



Ontario Clean Water Agency
Agence Ontarienne Des Eaux



Drinking-Water System Number: 220009112

Drinking-Water System Name: Sheguiandah Drinking Water System

Drinking-Water System Owner: The Corporation of the Town of Northeastern Manitoulin and the Islands

Drinking-Water System Category: Small Municipal Residential

SECTION 1: INTRODUCTION

This document is prepared in accordance with Section 11 and Schedule 22 of O.Reg.170/03 under the Safe Drinking Water Act and with Section 9 of O.Reg.387/04 under the Ontario Water Resources Act. The reports are prepared by the Ontario Clean Water Agency. Acronyms and definitions can be found at the end of the report.

A copy of the Summary Report must be provided to the members of the municipal council by March 31, 2021.

SECTION 2: REQUIREMENTS OF THE REPORTS

Schedule 22 Report

The report must list the requirements of the Act, the regulations, the system's approval and any order that the system **failed to meet** at any time during the period covered by the report. It must also specify the duration of the failure, and for each failure referred to, describe the measures that were taken to correct the failure.

For the purpose of enabling the owner of the system to assess the rated capability of their system to meet existing and future planned water uses, the following information is required to be included in this report:

- A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows.
- A comparison of the summary to the rated capacity and flow rates approved in the systems approval.

Section 11 Report

The annual report must contain the following:

- A brief description of the drinking water system and a list of chemicals used by the system.
- A description of any major expenses incurred during the period covered by the report to install, repair or replace required equipment.
- A summary of all adverse water quality incidents (AWQI) reported to the Ministry
- A summary of corrective actions taken in response all AWQIs
- A summary of all test results required under the regulation, under an approval, municipal drinking water licence or order, including an OWRA order.
- A statement of where a Schedule 22 report will be available for inspection.

The report must be prepared not later than February 28 of the following year.

Regulation 387 Report

On or before March 31 in every year, every holder of a permit to take water (PTTW) shall submit to a Director the data collected and recorded for the previous year.

A record of annual water taking can be found in Appendix A.



SECTION 3: SCHEDULE 22 REPORT

Flows - Treated

In accordance with the Municipal Drinking Water License (MDWL), the Sheguiandah WTP shall not be operated to exceed a maximum flow of 546 m³/d to the distribution system.

The daily treated water maximum flow was 151.8 m³ and represents 27.8% of capacity. In 2020, the total volume of water sent to the distribution system was 20,609.6m³

The quantity of treated water supplied during the reporting period **did not** exceed the rated maximum capacity.

Flows – Raw

Daily raw maximum instantaneous flow is stated in the PTTW at a maximum rate of flow of 7.6 L/s and a maximum daily volume of 654.624 m³/d.

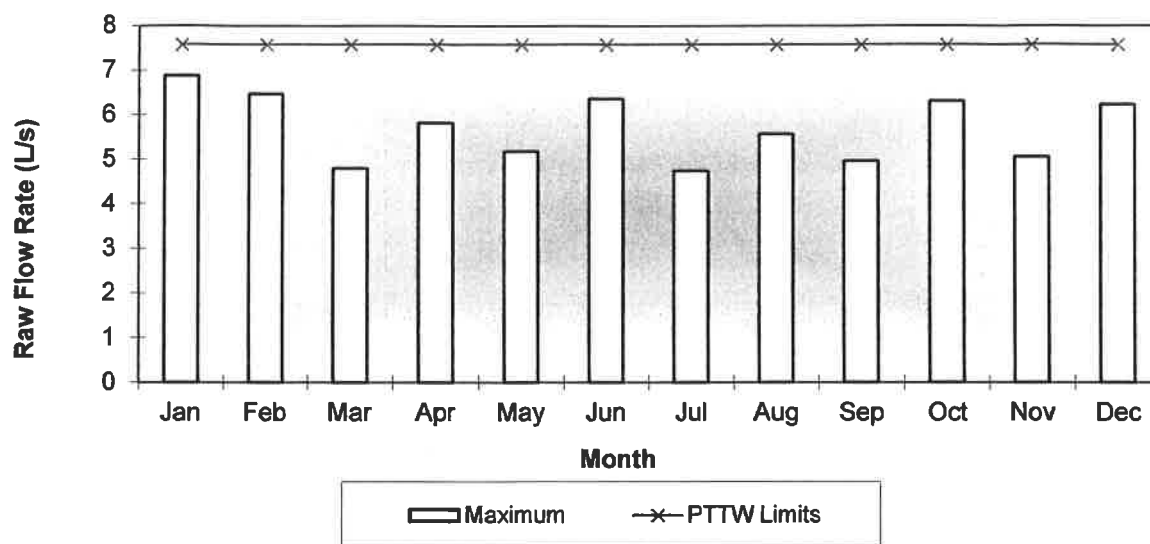
The average monthly raw water flow for this reporting period was 95.95 m³/d. The maximum daily flow was 321.3 m³/d representing 49% of water taking limits. In 2020, the total volume of water sent to the distribution system was 35,116.5 m³

The quantity of raw water taken **did not** exceed limits stipulated within the PTTW.

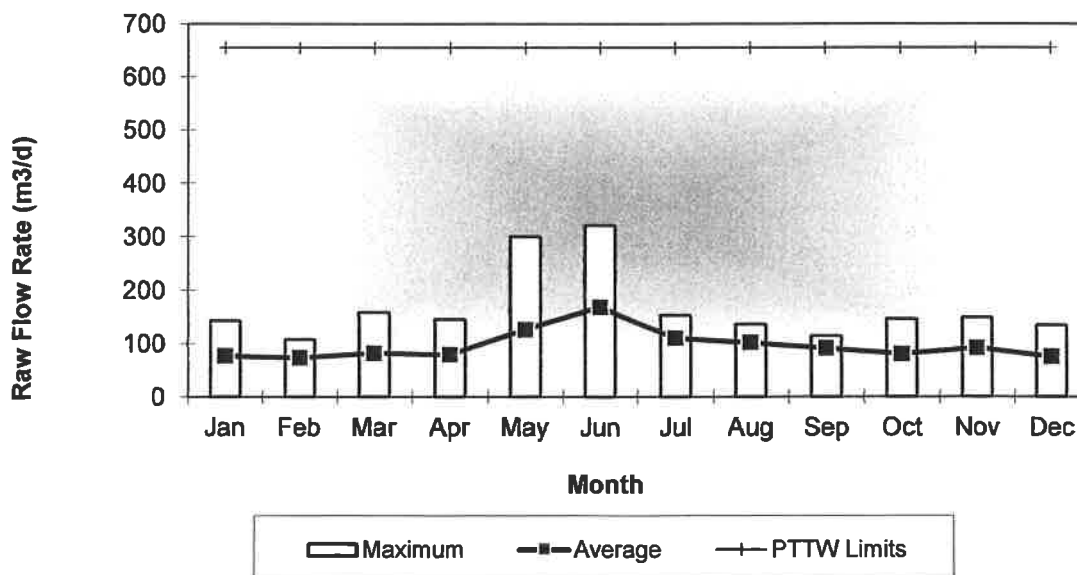
RAW WATER FLOW DATA - TOTAL ALL SOURCES						
Month	Total Monthly Flow (m³)	Average Flow (m³/d)	Maximum Flow (m³/d)	Maximum Flow Rate (L/s)	Limits	
					L/s (PTTW)	m³/d (PTTW)
January	2,372.8	76.54	142.4	6.88	7.58	654.6
February	2,109.8	72.75	107.2	6.47	7.58	654.6
March	2,526.8	81.51	158.2	4.8	7.58	654.6
April	2,369.4	78.98	145	5.82	7.58	654.6
May	3,900.4	125.82	300.3	5.18	7.58	654.6
June	5,033.2	167.77	321.3	6.36	7.58	654.6
July	3,389.5	109.34	152.9	4.74	7.58	654.6
August	3,141.4	101.34	135.5	5.57	7.58	654.6
September	2,734.2	91.14	113.9	4.97	7.58	654.6
October	2,468.8	79.64	145.3	6.31	7.58	654.6
November	2,738.8	91.28	148.4	5.06	7.58	654.6
December	2,331.8	75.22	134.1	6.23	7.58	654.6
Total	35,116.5					
Average		95.95				
Maximum			321.3	6.36	7.58	654.6



Sheguiandah WTP Raw Flow Rates



Sheguiandah WTP Raw Flow Data





Annual Raw Water Review

Raw Water Taking	Total Taking m3/d	Average Day m3/d	Max Day m3/d	Max Day % of PTTW allowable 654.624 m3/d
2020	35,116.5	95.95	321.3	49%
2019	30,977	84.87	238.8	36.5%
2018	40,487.3	110.92	312.6	47.8%
2017	28,233.9	77.35	314	47.9%
2016	24,403.6	67	339	51.8%

System Failures and Corrective Actions

The latest inspection of the drinking water facility took place on July 28, 2020. The facility scored 0/513 providing a rating of 100%.

The following incident occurred in 2020.

A loss of data occurred on June 20th, 2020 while switching to the generator and back. This was due to a damaged PLC back rack and analog input card. Once the damaged PLC was repaired, trending was restored. This was reported as an AWQI (#150319) however, there were no concerns with the quality of water. The incident was a non-compliance in relation to data collection.

AWQIs reported to the Ministry

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
n/a	n/a	n/a	n/a	n/a	n/a

SECTION 4: SECTION 11 REPORT

Information to be provided

Population Served 353	
Does your Drinking-Water System serve more than 10,000 people? No	
Is your annual report available to the public at no charge on a web site on the Internet? Yes	
Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.	Town of Little Current, Municipal Office 14 Water St E Little Current, Ontario P0P 1K0
Number of Designated Facilities served: 0	
Did you provide a copy of your annual report to all Designated Facilities you serve? NA	
Number of Interested Authorities you report to: 0	



Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?	NA
List all Drinking-Water Systems (if any), and their DWS Number which receive all of their drinking water from your system:	N/A
Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?	N/A
Indicate how you notified system users that your annual report is available, and is free of charge.	Public access/notice via the web & via Government Office
Indicate if you notified system users that your annual report is available and is free of charge using an alternate method	YES

Facility Description

The Sheguiandah plant consists of a raw water pumping station equipped with a sodium hypochlorite injection system for the control of zebra mussels. The zebra mussel control system is operated seasonally from May to November inclusive when the raw temperature is above 8 Celsius. The building houses three low lift vertical turbine pumps.

The treatment consists of a direct filtration chemically assisted plant with a rated capacity of 6.3 L/s. There are two multimedia filters after the flocculator. Each filter contains anthracite, sand and gravel. There are two backwash pumps, to provide filter backwashing as required. The plant has two clearwells, with a capacity of 142 m³ and 176 m³, respectively. Following the clear well there is a high lift pump well with a volume of 119.7 m³. There are three vertical turbine high lift pumps, two located in clearwell two and one located in the high lift pump well. Each pump has a rated capacity of 9.9 L/s at a TDH of 86.75 m. Also included in the highlift well is a fire pump rated at 23L/sec which can be activated from the Sheguiandah Fire Hall. There are two hydro pneumatic tanks which provide system pressure when the high lift pumps are off.

Primary disinfection is achieved by ultraviolet disinfection and sodium hypochlorite. The process wastewater supernatant is returned back to Sheguiandah Bay. The settled solids are hauled from the plant for disposal in the municipal lagoon.

Chemicals Used

Sodium Hypochlorite 12%	- Disinfection
Aluminum Sulphate (Dry)	- Coagulant

Significant Expenses

Significant expenses incurred to

- ☐ Install required equipment
- ☒ Repair required equipment
- ☒ Replace required equipment

Work Order	Completion Date	Comment
1791686	15-Jun-20	Purchased fan and filters for UV#2
1835857		Purchased media for filter media replacement
1835849		Purchased replacement backwash filter actuators and valves



Adverse Water Quality Incidents

Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
n/a	n/a	n/a	n/a	n/a	n/a

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03.

	No. of Samples Collected	Range of E.Coli		Range of Total Coliform Results		Number of HPC Samples	Range of HPC Results	
		Min #	Max #	Min #	Max #		Min #	Max #
Raw Water	0							
Treated Water	1	0	0	0	0	0		
Distribution	26	0	0	0	0	26	0	2

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03

	No. of Samples Collected	Range of Results		Units of Measure
		Minimum	Maximum	
Turbidity, On-Line - Filter 1	8760	0	0.23	(NTU)
Turbidity, On-Line - Filter 2	8760	0	0.65	(NTU)
Free Chlorine Residual, Treated	8760	0.65	4.65	(mg/L)
Free Chlorine Residual, Distribution Location 1	102	0.54	1.89	(mg/L)

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

Date of legal instrument issued	Parameter and limits	Month Sampled	Day Sampled	Result	Unit of Measure
MDWL 197-101 March 11, 2011 Renewed on March 8, 2016	Backwash (BW) Total Suspended Solids (TSS)	Jan	13	2	mg/L
		Feb			mg/L
		Mar			mg/L
	Quarterly sampling 25 mg/L annual average	Apr	21	<2	mg/L
		May			mg/L
		Jun			mg/L
		Jul	13	12	mg/L
		Aug			mg/L
		Sep			mg/L
		Oct	13	8	mg/L
		Nov			mg/L
		Dec			mg/L
		Annual Average		6	mg/L



Summary of Inorganic parameters tested during this reporting period or the most recent sample results

TREATED WATER	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
Antimony: Sb (ug/L) - TW	2020/01/13	0.14	6.0	No	No
Arsenic: As (ug/L) - TW	2020/01/13	<MDL 0.2	25.0	No	No
Barium: Ba (ug/L) - TW	2020/01/13	12.2	1000.0	No	No
Boron: B (ug/L) - TW	2020/01/13	12.0	5000.0	No	No
Cadmium: Cd (ug/L) - TW	2020/01/13	0.003	5.0	No	No
Chromium: Cr (ug/L) - TW	2020/01/13	0.19	50.0	No	No
Mercury: Hg (ug/L) - TW	2020/01/13	<MDL 0.01	1.0	No	No
Selenium: Se (ug/L) - TW	2020/01/13	0.08	10.0	No	No
Uranium: U (ug/L) - TW	2020/01/13	0.01	20.0	No	No
TREATED WATER	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
Fluoride (mg/L) - TW	2020/01/13	<MDL 0.06	1.5	No	No
Nitrite (mg/L) - TW	2020/01/13	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2020/04/15	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2020/07/13	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2020/10/13	<MDL 0.003	1.0	No	No
Nitrate (mg/L) - TW	2020/01/13	0.188	10.0	No	No
Nitrate (mg/L) - TW	2020/04/15	0.159	10.0	No	No
Nitrate (mg/L) - TW	2020/07/13	0.114	10.0	No	No
Nitrate (mg/L) - TW	2020/10/13	0.135	10.0	No	No
Sodium: Na (mg/L) - TW	2020/01/13	9.13	20*	No	No

*There is no "MAC" for Sodium. The aesthetic objective for sodium in drinking water is 200 mg/L. The local Medical Officer of Health should be notified when the sodium concentration exceeds 20 mg/L so that this information may be communicated to local physicians for their use with patients on sodium restricted diets.

Summary of Lead testing under Schedule 15.1 during this reporting period

Location Type	No. of Samples	Range of Results		MAC (ug/L)	Number of Exceedances
		Minimum	Maximum		
Distribution - Lead Results (ug/L)	n/a	n/a	n/a	10	0
Distribution - Alkalinity (mg/L)	2	66	75	n/a	n/a
Distribution - pH In-House	2	8.19	8.21	n/a	n/a

Summary of Organic parameters sampled during this reporting period or the most recent results

TREATED WATER	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Alachlor (ug/L) - TW	2020/01/13	<MDL 0.02	5.0	No	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	2020/01/13	<MDL 0.01	5.0	No	No
Azinphos-methyl (ug/L) - TW	2020/01/13	<MDL 0.05	20.0	No	No
Benzene (ug/L) - TW	2020/01/13	<MDL 0.32	1.0	No	No
Benzo(a)pyrene (ug/L) - TW	2020/01/13	<MDL 0.004	0.01	No	No
Bromoxynil (ug/L) - TW	2020/01/13	<MDL 0.33	5.0	No	No
Carbaryl (ug/L) - TW	2020/01/13	<MDL 0.05	90.0	No	No



2020 Annual Report
Sheguiandah Water Treatment

Carbofuran (ug/L) - TW	2020/01/13	<MDL 0.01	90.0	No	No
Carbon Tetrachloride (ug/L) - TW	2020/01/13	<MDL 0.17	2.0	No	No
Chlorpyrifos (ug/L) - TW	2020/01/13	<MDL 0.02	90.0	No	No
Diazinon (ug/L) - TW	2020/01/13	<MDL 0.02	20.0	No	No
Dicamba (ug/L) - TW	2020/01/13	<MDL 0.2	120.0	No	No
1,2-Dichlorobenzene (ug/L) - TW	2020/01/13	<MDL 0.41	200.0	No	No
1,4-Dichlorobenzene (ug/L) - TW	2020/01/13	<MDL 0.36	5.0	No	No
1,2-Dichloroethane (ug/L) - TW	2020/01/13	<MDL 0.35	5.0	No	No
1,1-Dichloroethylene (ug/L) - TW	2020/01/13	<MDL 0.33	14.0	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW	2020/01/13	<MDL 0.35	50.0	No	No
2,4-Dichlorophenol (ug/L) - TW	2020/01/13	<MDL 0.15	900.0	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	2020/01/13	<MDL 0.19	100.0	No	No
Diclofop-methyl (ug/L) - TW	2020/01/13	<MDL 0.4	9.0	No	No
Dimethoate (ug/L) - TW	2020/01/13	<MDL 0.06	20.0	No	No
Diquat (ug/L) - TW	2020/01/13	<MDL 1.0	70.0	No	No
Diuron (ug/L) - TW	2020/01/13	<MDL 0.03	150.0	No	No
Glyphosate (ug/L) - TW	2020/01/13	<MDL 1.0	280.0	No	No
Malathion (ug/L) - TW	2020/01/13	<MDL 0.02	190.0	No	No
Metolachlor (ug/L) - TW	2020/01/13	<MDL 0.01	50.0	No	No
Metribuzin (ug/L) - TW	2020/01/13	<MDL 0.02	80.0	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW	2020/01/13	<MDL 0.3	80.0	No	No
Paraquat (ug/L) - TW	2020/01/13	<MDL 1.0	10.0	No	No
PCB (ug/L) - TW	2020/01/13	<MDL 0.04	3.0	No	No
Pentachlorophenol (ug/L) - TW	2020/01/13	<MDL 0.15	60.0	No	No
Phorate (ug/L) - TW	2020/01/13	<MDL 0.01	2.0	No	No
Picloram (ug/L) - TW	2020/01/13	<MDL 1.0	190.0	No	No
Prometryne (ug/L) - TW	2020/01/13	<MDL 0.03	1.0	No	No
Simazine (ug/L) - TW	2020/01/13	<MDL 0.01	10.0	N/A	N/A
Terbufos (ug/L) - TW	2020/01/13	<MDL 0.01	1.0	No	No
Tetrachloroethylene (ug/L) - TW	2020/01/13	<MDL 0.35	10.0	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	2020/01/13	<MDL 0.2	100.0	No	No
Triallate (ug/L) - TW	2020/01/13	<MDL 0.01	230.0	No	No
Trichloroethylene (ug/L) - TW	2020/01/13	<MDL 0.44	5.0	No	No
2,4,6-Trichlorophenol (ug/L) - TW	2020/01/13	<MDL 0.25	5.0	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (ug/L) - TW	2020/01/13	<MDL 0.12	100.0	No	No
Trifluralin (ug/L) - TW	2020/01/13	<MDL 0.02	45.0	No	No
Vinyl Chloride (ug/L) - TW	2020/01/13	<MDL 0.17	1.0	No	No
DISTRIBUTION WATER					
Trihalomethane: Total (ug/L) Annual Average - DW	2020/12/31	41.67	100.00	No	No
HAA Total (ug/L) Annual Average - DW	2020/12/31	34.17	80.0	No	No



SECTION 5: RAW WATER SUBMISSIONS

Raw water flows were submitted to the MOECC on February 17, 2021.



Location: WTRS / WT DATA / Input WT Record

WTPS-WT-002

Water Taking Data submitted successfully.

Confirmation:

Thank you for submitting your water taking data online.

Permit Number: 0233-A38PD5

Permit Holder: THE CORPORATION OF THE TOWN OF NORTHEASTERN MANITOULIN AND THE ISLANDS.

Received on: Feb 17, 2021 8:40 AM

This confirmation indicates that your data has been received by the Ministry, but should not be construed as acceptance of this data if it differs from that specified on the Permit Number, assigned to the Permit Holder stated above.

[Return to Main Page](#)

SECTION 6: CONCLUSION

The Sheguiandah WTP delivers water that, in all its treated and distribution samples, indicates the water to be free of bacteriological contamination.

Based on information available for the 2020 operating year, the Sheguiandah WTP was able to meet the demand of water use without exceeding the PTTW or the MDWL.



List of Acronyms and Definitions

Alkalinity	The capacity of water for neutralizing an acid solution
AWQI	Adverse Water Quality Incident- when a water sample test result exceeds the Ontario Drinking Water Quality Standards
Backwash	Water pumped backwards to clean filters
BWA	Boil Water Advisory; Issued when risk of contamination is possible in drinking water
CFU	Colony Forming Units
Chlorine Residual	A low level of chlorine remaining in water after disinfection occurs
DW	Distribution Water
DWA	Drinking Water Advisory; Issued when water cannot be consumed by any means
DWWP	Drinking Water Works Permit - provides a description of the overall system
E.Coli	Bacteria used as indicators to measure the degree of pollution and sanitary quality of water
GUDI 170/03	Groundwater Under Direct Influence – Considered to be surface water under O.Reg
HPC	Heterotrophic Plant Count
L/s	Litres per Second
m3/d	Cubic Metres per Day
MAC	Maximum Acceptable Concentration
MDL	Minimum Detection Level
MDWL requirements	Municipal Drinking Water Licence - relates to the operation and performance
mg/L	Miligrams per Litre
Ministry	Ministry of the Environment and Climate Change
MOECC	Ministry of the Environment and Climate Change
O.Reg	Ontario Regulation
PTTW water	Permit to Take Water – Permit which allows water taking from groundwater or surface
RW	Raw Water
TC	Total Coliforms
TSS	Total Suspended Solids
Turbidity	Cloudiness or haziness of water
TW	Treated Water

Little Current Water Treatment

Large Municipal Residential Drinking Water System

January 1, 2020 – December 31, 2020

O.Reg 170/03 Schedule 22 Summary Report

O.Reg 170/03 Section 11 Annual Report

&

O.Reg 387/04 Annual Record of Water Taking

Prepared by the Ontario Clean Water Agency
For The Corporation of the Town of Northeastern Manitoulin and the Islands



Ontario Clean Water Agency
Agence Ontarienne Des Eaux



Drinking-Water System Number: 220002191
Drinking-Water System Name: LITTLE CURRENT DRINKING WATER SYSTEM
Drinking-Water System Owner: The Corporation of the Town of Northeastern Manitoulin and the Islands
Drinking-Water System Category: Large Municipal Residential

SECTION 1: INTRODUCTION

This document is prepared in accordance with Section 11 and Schedule 22 of O.Reg.170/03 under the Safe Drinking Water Act and with Section 9 of O.Reg.387/04 under the Ontario Water Resources Act. The reports are prepared by the Ontario Clean Water Agency. Acronyms and definitions can be found at the end of the report.

A copy of the Summary Report must be provided to the members of the municipal council by March 31, 2021.

SECTION 2: REQUIREMENTS OF THE REPORTS

Schedule 22 Report

The report must list the requirements of the Act, the regulations, the system's approval and any order that the system **failed to meet** at any time during the period covered by the report. It must also specify the duration of the failure, and for each failure referred to, describe the measures that were taken to correct the failure. For the purpose of enabling the owner of the system to assess the rated capability of their system to meet existing and future planned water uses, the following information is required to be included in this report:

- A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows.
- A comparison of the summary to the rated capacity and flow rates approved in the systems approval.

Section 11 Report

The annual report must contain the following:

- A brief description of the drinking water system and a list of chemicals used by the system.
- A description of any major expenses incurred during the period covered by the report to install, repair or replace required equipment.
- A summary of all adverse water quality incidents (AWQI) reported to the Ministry
- A summary of corrective actions taken in response all AWQIs
- A summary of all test results required under the regulation, under an approval, municipal drinking water licence or order, including an OWRA order.
- A statement of where a Schedule 22 report will be available for inspection.

The report must be prepared not later than February 28 of the following year.

Regulation 387 Report

On or before March 31 in every year, every holder of a permit to take water (PTTW) shall submit to a Director the data collected and recorded for the previous year.

A record of annual water taking can be found in Appendix A.



SECTION 3: SCHEDULE 22 REPORT

Flows - Treated

In accordance with the Municipal Drinking Water License (MDWL), the Little Current WTP shall not be operated to exceed a maximum daily volume of 3100 m³/d to the distribution system.

The daily treated water maximum flow was 1,386 m³ in October and represents 45% of capacity. In 2020, the total volume of water sent to the distribution system was 301,695.5 m³

The quantity of treated water supplied during the reporting period **did not** exceed the rated maximum capacity.

Flows - Raw

Daily raw maximum instantaneous flow is stated in the PTTW at a maximum rate of flow of 68.1 L/s and a maximum daily volume of 3400 m³/d.

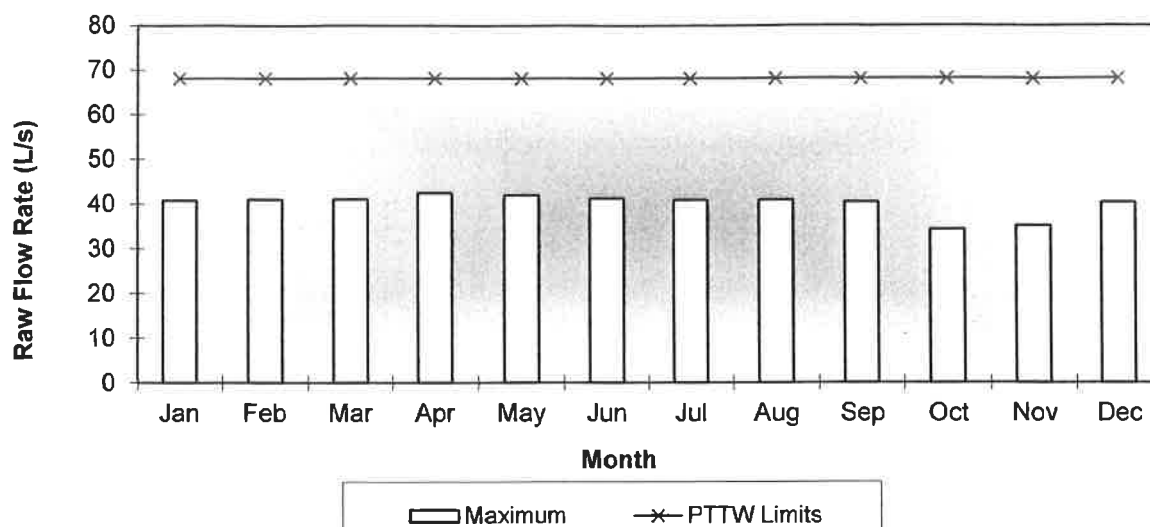
The average monthly raw water flow for this reporting period was 1,338.12m³/d. The maximum daily flow was 3,242.8 m³/d representing 95% of water taking limits. In 2020, the total volume of water taken from the environment was 489,750.1 m³

The quantity of raw water taken **did not** exceed the limits stipulated within the PTTW.

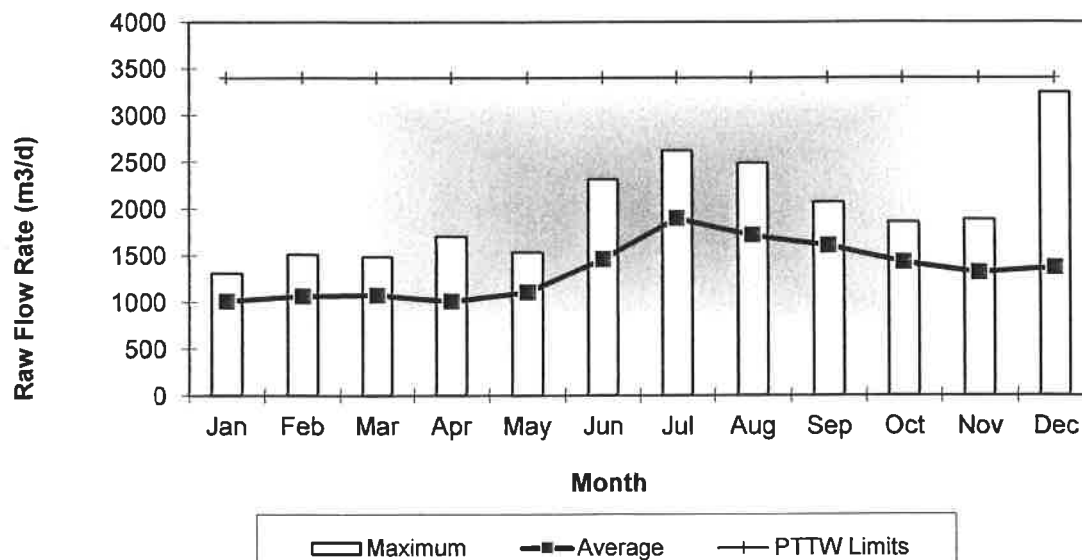
<i>RAW WATER FLOW DATA - TOTAL ALL SOURCES</i>						
Month	Total Monthly Flow (m ³)	Average Flow (m ³ /d)	Maximum Flow (m ³ /d)	Maximum Flow Rate (L/s)	Limits	
					L/s (PTTW)	m ³ /d (PTTW)
January	31,299.3	1,009.65	1,308.6	40.76	68.1	3400
February	30,839.6	1,063.43	1,507.6	41.01	68.1	3400
March	33,335.1	1,075.33	1,483.4	41.06	68.1	3400
April	30,201.1	1,006.7	1,702.8	42.52	68.1	3400
May	34,209.4	1,103.53	1,534.2	41.96	68.1	3400
June	43,736	1,457.87	2,313.5	41.24	68.1	3400
July	58,797.5	1,896.69	2,621.4	40.9	68.1	3400
August	53,157.7	1,714.76	2,486	40.94	68.1	3400
September	48,129.5	1,604.32	2,167	40.37	68.1	3400
October	44,201.7	1,425.86	1,853	34.29	68.1	3400
November	39,456.8	1,315.23	1,881	35.19	68.1	3400
December	42,386.4	1,367.3	3,242.8	40.35	68.1	3400
Total	489,750.1					
Average		1,338.12				
Maximum			3,242.8	42.52	68.1	3400



Little Current WTP Raw Flow Rates



Little Current WTP Raw Flow Data





Annual Raw Water Review

Raw Water Taking	Total Taking m3/d	Average Day m3/d	Max Day m3/d	Max Day % of PTTW allowable 3400 m3/d
2020	489,750.1	1,338.12	3,242.8	95%
2019	650,562.5	1,782.36	3,118.2	91.7%
2018	805,980.2	2,208.16	4,032.1	118.6 %
2017	754,481	2,067.07	4,551.5	133.9 %
2016	592,593	1,619.1	3125	91.1 %
2015	702,275	1,924.04	3213	94.5 %

System Failures and Corrective Actions

The following sampling error occurred during 2020.

The December total suspended solids sampling of the membrane reject water was not conducted.

The latest inspection of the drinking water facility took place on October 2, 2019. The inspection report has not been received. The facility scored 16/502 providing a rating of 96.81%.

AWQIs reported to the Ministry

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
06-May-20	TC	1	cfu/100ml	AWQI#149955 for TC count of 1 on a treated water sample. Two sets of three bacti samples were collected and all results were non-detect.	11-May-20
04-Dec-20	Pressure	0	psi	AWQI#153178 for loss of pressure to repair a water main break. After repair was completed the system was flushed and two sets of bacti samples were collected 24hrs apart.	06-Dec-20

SECTION 4: SECTION 11 REPORT

Information to be provided

Population Served	1700
Does your Drinking-Water System serve more than 10,000 people?	No
Is your annual report available to the public at no charge on a web site on the Internet?	Yes
Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.	Town of Little Current, Municipal



2020 Annual Report
Little Current Water Treatment

<i>Office</i> <i>14 Water Street E</i> <i>Little Current, Ontario P0P 1K0</i>	
Number of Designated Facilities served: <i>0</i>	
Did you provide a copy of your annual report to all Designated Facilities you serve? <i>NA</i>	
Number of Interested Authorities you report to: <i>0</i>	
Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? <i>NA</i>	
List all Drinking-Water Systems (if any), and their DWS Number which receive all of their drinking water from your system: <i>N/A</i>	
Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water? <i>N/A</i>	
Indicate how you notified system users that your annual report is available, and is free of charge. <i>Public access/notice via the web - & via Government Office</i>	
Indicate if you notified system users that your annual report is available and is free of charge using an alternate method <i>Yes</i>	

Facility Description

The Little Current Water treatment facility consists of a low lift pumping station with three submersible pumps. The low lift pumping station includes a zebra mussel control system utilizing sodium hypochlorite.

Treatment consists of membrane filtration which is comprised of two concrete tanks, each tank with six ultrafiltration units. The rated capacity is 35.9 L/s into the treatment system. Each unit contains 12 modules each module has a filtering area of 23.23 m². There are three permeate pumps used to push the water to the chlorine contact chamber. The contact chamber maintains a constant volume of 162 m³. Following the chlorine contact chamber there are two clear wells, each having a storage volume of 749.8 m³. The high lift pumping consists of four centrifugal high lift pumps, with two pumps having a capacity of 57.87 L/s and two pumps having a capacity of 28.94 L/s. The process back pulse & reject water from the plant is de-chlorinated and discharged back to the North Channel.

Wastewater from membrane cleaning is neutralized and discharged to the sanitary sewer system.

Chemicals Used

Sodium Hypochlorite 12%	Disinfection
Calcium Thiosulphate	Dechlorination of reject water & wastewater
Caustic Soda	Neutralizing membrane wastewater
Citric Acid	Membrane cleaning

Significant Expenses

Significant expenses incurred to

- ☒ Install required equipment
- ☐ Repair required equipment
- ☐ Replace required equipment



Work Order	Completion Date	Comment
1664584	20-Aug-20	Purchased and installed air release valve on permeate line.

Adverse Water Quality Incidents

Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

Incident Date	Parameter	Result	Unit of Measure	Comment / Corrective Action	Corrective Action Date
06-May-20	TC	1	cfu/100 ml	AWQI#149955 for TC count of 1 on a treated water sample. Two sets of three bacti samples were collected and all results were non-detect.	11-May-20
04-Dec-20	Pressure	0	psi	AWQI#153178 for loss of pressure to repair a water main break. After repair was completed the system was flushed and two sets of bacti samples were collected 24hrs apart.	06-Dec-20

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03.

	No. of Samples Collected	Range of E.Coli		Range of Total Coliform Results		Number of HPC Samples	Range of HPC Results	
		Min #	Max #	Min #	Max #		Collected	Min #
Raw Water	53	0	5	0	21	n/a	n/a	n/a
Treated Water	53	0	0	0	1	53	0	14
Distribution	164	0	0	0	0	53	0	109

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03

	No. of Samples Collected	Range of Results		Units of Measure
		Minimum	Maximum	
Turbidity – Filter 1	8760	0.029	0.433	(NTU)
Turbidity – Filter 2	8760	0.032	0.9	(NTU)
Free Chlorine Residual – TW	8760	0.488	4.55	(mg/L)
Free Chlorine Residual, Distribution Location 1	104	0.59	1.89	(mg/L)
Free Chlorine Residual, Distribution Location 2	104	0.68	1.90	(mg/L)
Free Chlorine Residual, Distribution Location 3	104	0.75	1.78	(mg/L)
Free Chlorine Residual, Distribution Location 4	52	0.64	1.48	(mg/L)



Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

Date of legal instrument issued	Parameter and limits	Month Sampled	Day Sampled	Result	Unit of Measure
197-101 March 11, 2011 Renewed on March 8, 2016	Membrane Reject Water Total Suspended Solids 25 mg/L	Jan	27	<2	mg/L
		Feb	24	<2	mg/L
		Mar	23	<2	mg/L
		Apr	27	<2	mg/L
		May	25	<2	mg/L
		Jun	22	<2	mg/L
		Jul	27	2	mg/L
		Aug	25	2	mg/L
		Sep	28	<2	mg/L
		Oct	26	<2	mg/L
		Nov	23	2	mg/L
		Dec	N/A	N/A	mg/L
		Annual Average		2	mg/L

Summary of Inorganic parameters tested during this reporting period or the most recent sample results

TREATED WATER	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
Antimony: Sb (ug/L) - TW	2020/01/20	0.14	6.0	No	No
Arsenic: As (ug/L) - TW	2020/01/20	0.3	25.0	No	No
Barium: Ba (ug/L) - TW	2020/01/20	10.8	1000.0	No	No
Boron: B (ug/L) - TW	2020/01/20	9.0	5000.0	No	No
Cadmium: Cd (ug/L) - TW	2020/01/20	<MDL 0.003	5.0	No	No
Chromium: Cr (ug/L) - TW	2020/01/20	0.14	50.0	No	No
Mercury: Hg (ug/L) - TW	2020/01/20	<MDL 0.01	1.0	No	No
Selenium: Se (ug/L) - TW	2020/01/20	0.08	10.0	No	No
Uranium: U (ug/L) - TW	2020/01/20	0.155	20.0	No	No

TREATED WATER	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
Fluoride (mg/L) - TW	2017/01/26	0.08	1.5	No	No
Nitrite (mg/L) - TW	2020/01/20	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2020/04/20	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2020/07/20	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2020/10/19	<MDL 0.003	1.0	No	No
Nitrate (mg/L) - TW	2020/01/20	0.199	10.0	No	No
Nitrate (mg/L) - TW	2020/04/20	0.194	10.0	No	No
Nitrate (mg/L) - TW	2020/07/20	0.16	10.0	No	No
Nitrate (mg/L) - TW	2020/10/19	0.155	10.0	No	No
Sodium: Na (mg/L) - TW	2017/01/26	6.59	20*	No	No



Summary of Lead testing under Schedule 15.1 during this reporting period

Location Type	No. of Samples	Range of Results		MAC (ug/L)	Number of Exceedances
		Minimum	Maximum		
Distribution - Lead Results (ug/L)	2	0.1	0.1	10	0
Distribution - Alkalinity (mg/L)	4	66	70	N/A	N/A
Distribution - pH In-House	4	8.19	8.32	N/A	N/A

Summary of Organic parameters sampled during this reporting period or the most recent results

TREATED WATER	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Alachlor (ug/L) - TW	2020/01/20	<MDL 0.02	5.0	No	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	2020/01/20	0.01	5.0	No	No
Azinphos-methyl (ug/L) - TW	2020/01/20	<MDL 0.05	20.0	No	No
Benzene (ug/L) - TW	2020/01/20	<MDL 0.32	1.0	No	No
Benzo(a)pyrene (ug/L) - TW	2020/01/20	<MDL 0.004	0.01	No	No
Bromoxynil (ug/L) - TW	2020/01/20	<MDL 0.33	5.0	No	No
Carbaryl (ug/L) - TW	2020/01/20	<MDL 0.05	90.0	No	No
Carbofuran (ug/L) - TW	2020/01/20	<MDL 0.01	90.0	No	No
Carbon Tetrachloride (ug/L) - TW	2020/01/20	<MDL 0.17	2.0	No	No
Chlorpyrifos (ug/L) - TW	2020/01/20	<MDL 0.02	90.0	No	No
Diazinon (ug/L) - TW	2020/01/20	<MDL 0.02	20.0	No	No
Dicamba (ug/L) - TW	2020/01/20	<MDL 0.2	120.0	No	No
1,2-Dichlorobenzene (ug/L) - TW	2020/01/20	<MDL 0.41	200.0	No	No
1,4-Dichlorobenzene (ug/L) - TW	2020/01/20	<MDL 0.36	5.0	No	No
1,2-Dichloroethane (ug/L) - TW	2020/01/20	<MDL 0.35	5.0	No	No
1,1-Dichloroethylene (ug/L) - TW	2020/01/20	<MDL 0.33	14.0	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW	2020/01/20	<MDL 0.35	50.0	No	No
2,4-Dichlorophenol (ug/L) - TW	2020/01/20	<MDL 0.15	900.0	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	2020/01/20	<MDL 0.19	100.0	No	No
Diclofop-methyl (ug/L) - TW	2020/01/20	<MDL 0.4	9.0	No	No
Dimethoate (ug/L) - TW	2020/01/20	<MDL 0.06	20.0	No	No
Diquat (ug/L) - TW	2020/01/20	<MDL 1.0	70.0	No	No
Diuron (ug/L) - TW	2020/01/20	<MDL 0.03	150.0	No	No
Glyphosate (ug/L) - TW	2020/01/20	<MDL 1.0	280.0	No	No
Malathion (ug/L) - TW	2020/01/20	<MDL 0.02	190.0	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (mg/L) - TW	2020/01/20	<MDL 0.01	50.0	N/A	N/A
Metolachlor (ug/L) - TW	2020/01/20	<MDL 0.02	80.0	No	No
Metribuzin (ug/L) - TW	2020/01/20	<MDL 0.3	80.0	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW	2020/01/20	<MDL 1.0	10.0	No	No
Paraquat (ug/L) - TW	2020/01/20	<MDL 0.04	3.0	No	No
PCB (ug/L) - TW	2020/01/20	<MDL 0.15	60.0	No	No
Pentachlorophenol (ug/L) - TW	2020/01/20	<MDL 0.01	2.0	No	No
Phorate (ug/L) - TW	2020/01/20	<MDL 1.0	190.0	No	No



2020 Annual Report Little Current Water Treatment

Picloram (ug/L) - TW	2020/01/20	<MDL 0.03	1.0	No	No
Prometryne (ug/L) - TW	2020/01/20	<MDL 0.01	10.0	No	No
Simazine (ug/L) - TW	2020/01/20	<MDL 0.01	1.0	No	No
Terbufos (ug/L) - TW	2020/01/20	<MDL 0.35	10.0	No	No
Tetrachloroethylene (ug/L) - TW	2020/01/20	<MDL 0.2	100.0	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	2020/01/20	<MDL 0.01	230.0	No	No
Triallate (ug/L) - TW	2020/01/20	<MDL 0.44	5.0	No	No
Trichloroethylene (ug/L) - TW	2020/01/20	<MDL 0.25	5.0	No	No
2,4,6-Trichlorophenol (ug/L) - TW	2020/01/20	<MDL 0.12	100.0	No	No
Trifluralin (ug/L) - TW	2020/01/20	<MDL 0.02	45.0	No	No
Vinyl Chloride (ug/L) - TW	2020/01/20	<MDL 0.17	1.0	No	No
DISTRIBUTION WATER					
Trihalomethane: Total (ug/L) Annual Average - DW	2020/12/31	65.75	100.00	No	Yes
HAA Total (ug/L) Annual Average - DW	2020/12/31	47.45	80.0	No	Yes

SECTION 5: RAW WATER SUBMISSIONS

Raw water flows were submitted to the Ministry on February 17, 2021.



Location: WTRS / WT DATA / Input WT Record

WTRS-WT-D08

Water Taking Data submitted successfully.

Confirmation:

Thank you for submitting your water taking data online.

Permit Number: 4270-BALKYE
 Permit Holder: THE CORPORATION OF THE TOWN OF NORTHEASTERN MANITOULIN AND THE ISLANDS.
 Received on: Feb 17, 2021 8:43 AM

This confirmation indicates that your data has been received by the Ministry, but should not be construed as acceptance of this data if it differs from that specified on the Permit Number, assigned to the Permit Holder stated above.

[Return to Main Page](#)

SECTION 6: CONCLUSION

The Little Current WTP delivers water that, in all its treated and distribution samples, indicates the water to be free of bacteriological contamination.

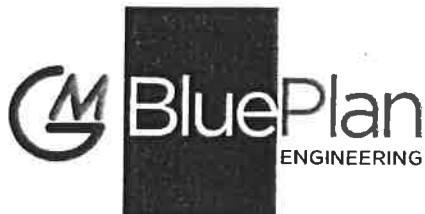
Based on information available for the 2020 operating year, the Little Current was able to meet the demand of water use without exceeding the PTTW or the MDWL.



List of Acronyms and Definitions

Alkalinity	The capacity of water for neutralizing an acid solution
AWQI	Adverse Water Quality Incident- when a water sample test result exceeds the Ontario Drinking Water Quality Standards
Backwash	Water pumped backwards to clean filters
BWA	Boil Water Advisory; Issued when risk of contamination is possible in drinking water
CFU	Colony Forming Units
Chlorine Residual	A low level of chlorine remaining in water after disinfection occurs
DW	Distribution Water
DWA	Drinking Water Advisory; Issued when water cannot be consumed by any means
DWWP	Drinking Water Works Permit - provides a description of the overall system
E.Coli	Bacteria used as indicators to measure the degree of pollution and sanitary quality of water
GUDI 170/03	Groundwater Under Direct Influence – Considered to be surface water under O.Reg
HPC	Heterotrophic Plant Count
L/s	Litres per Second
m3/d	Cubic Metres per Day
MAC	Maximum Acceptable Concentration
MDL	Minimum Detection Level
MDWL requirements	Municipal Drinking Water Licence - relates to the operation and performance
mg/L	Miligrams per Litre
Ministry	Ministry of the Environment and Climate Change
MOECC	Ministry of the Environment and Climate Change
O.Reg	Ontario Regulation
PTTW water	Permit to Take Water – Permit which allows water taking from groundwater or surface
RW	Raw Water
TC	Total Coliforms
TSS	Total Suspended Solids
Turbidity	Cloudiness or haziness of water
TW	Treated Water

Prepared By:



Annual Monitoring Report (2020)

Little Current Landfill Site
Town of Northeastern Manitoulin and the Islands (NEMI)
MECP Environmental Compliance Approval No. A551002

GMBP File: M-1593

February 2021

NEMI



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LITTLE CURRENT LANDFILL SITE**ANNUAL MONITORING REPORT (2020)****TOWN OF NORTHEASTERN MANITOULIN AND THE ISLANDS (NEMI)****FEBRUARY 2021****GMBP FILE: M-1593**

1. INTRODUCTION

The closed Little Current landfill property is located approximately one kilometer southwest of Little Current on the north side of Highway 540 (Figure 1). The Site is situated on Part of Lots 4 and 5, Concession 8 and Part of Lot 5, Concession 9, in the former Township of Howland, District of Manitoulin. The Town of Little Current operated the site until it amalgamated with the Township of Howland and the unorganized Municipality of McGregor Bay to become the Town of Northeastern Manitoulin and the Islands (NEMI), District of Manitoulin (herein referred to as 'the Town') on January 1, 1998. Following amalgamation, NEMI assumed responsibility for the Site.

Operations at the site were conducted under the Ministry of the Environment, Conservation and Parks (MECP) Provisional Certificate of Approval for a Waste Disposal Site No. A551002 (now referred to as an Environmental Compliance Approval or ECA), which was originally issued on March 19, 1980, and was replaced with the ECA dated September 9, 1986. The ECA was further amended in March 2003, October 2004 and June 2005. Copies of the Approval for the site, as amended, are provided in Appendix A.

The MECP approved a useable area of approximately 1.6 hectares (4 acres) for landfilling within the 3.69 ha (9.1 acre) waste disposal site. A Site Plan is provided as Figure 2. Landfilling of domestic and commercial wastes at the site reportedly began before 1942 and was suspended in October of 2002. The site was formally closed and capped at that time. Waste generated in Little Current and the surrounding area has since been redirected to the NEMI Landfill Site, located at 9571 Highway 6, located approximately two kilometres south of the community of Little Current.

Condition 16 of the ECA requires that an annual monitoring report be submitted by February 28th of each year to summarize the previous year's monitoring results. This monitoring report is submitted to meet the monitoring requirements specified under Condition 16 of the ECA.

2. GENERAL SITE OPERATIONS

The Little Current Landfill Site closed in October 2002, at which time the site operations ceased. Site access is restricted by a locking gate at the entrance and the perimeter of the site is fenced with post and wire fencing. Condition 16(e) of the 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 twice annually in conjunction with the annual sampling programs. Based on the most recent inspections, the ground cover system continued to be adequate with no areas showing signs of apparent stress or deficiencies. Condition 16(f) 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"*.

The Town reports that no complaints related to the Little Current Landfill site were received during the reporting period.

3. SUMMARY OF SITE SETTING

A detailed description of the geologic and hydrogeologic conditions at the Little Current landfill site were presented in the previous hydrogeologic study for the site prepared by Proctor and Redfern Limited (August 1992). Key findings, as provided in previous annual reports and the report outlining the Closure and Post-Closure Care of the Little Current Landfill Site (prepared by Burnside Environmental, May 2001) are summarized below. A summary of the monitoring locations and borehole details is provided in Table 1. Geological properties are summarized in the borehole logs provided in Appendix C.

3.1 Geologic Conditions

Manitoulin Island is part of the Niagara Escarpment and forms a flat tableland area, which is characterized by shallow soil cover overlying flat-lying limestone, dolostone and shale. The overburden on the tablelands consists of lacustrine silty clay to fine sandy silt deposits from glacial Lake Algonquin. The Ontario Geological Survey (OGS) (Map P2670, 1985) describes the bedrock beneath the site as a sequence of shales, limestones and dolostones belonging to the Middle to Upper Ordovician Lindsay Formation. Adjacent and south of the landfill is a contact between the Lindsay Formation and the blue-grey shale of the more recently deposited Upper Ordovician Blue Mountain Formation.

As defined by Russell and Telford (1983), and summarized in the Hydrogeologic Study for the Site (Proctor and Redfern Limited, August 1992), the Lindsay Formation has two members. The Lower Member consists of 15.25 meters of thick grey to grey-brown, finely crystalline to sub-lithographic limestone and dolostone. This member has moderate amounts of interbedded shale and has a characteristic "mottling" or nodular appearance. The Upper, or Collingwood Member, is a black calcareous, petroliferous shale that measures approximately 7.5 meters in thickness.

Based on the borehole and test hole logs, the overburden to the south of the landfill, as noted in BH1, consists of approximately 2 meters of unsaturated sand (with gravel interbeds) underlain by approximately 5 meters of silt till. To the north and east of the landfill footprint, the overburden consists of 2 to 3 meters of clay underlain by 0.3 to 0.6 meters of silt till. To the north of the landfill footprint, the silt till unit grades into a coarser grained till with fine sand and gravel, as observed in BH3 and BH5. It is noted that the boreholes identified in the appended borehole logs were completed with monitoring wells as presented on the attached figures (i.e., BH3 is representative of MW-3).

The bedrock encountered at the site consists of the black shale of the Upper Member and the underlying limestone/dolostone of the Lower Member of the Lindsay Formation. As indicated by the borehole logs, the black petroliferous shale appears to be thickest to the south of the landfill in the vicinity of BH1 and gradually thins to the north towards BH3, BH4 and BH5. The limestone/dolostone of the Lower Member was encountered north of the landfill, in boreholes BH3, BH4 and BH5, and at the locations of the more recent monitoring well-couplets MW-6A/B, MW-7A/B and MW-8A/B installed by GM BluePlan Engineering (GMBP, formerly Gamsby and Mannerow). As part of the subsurface investigations, the thinly laminated fossiliferous shale was reported to have a petroliferous or sulphurous odour when split. Further, thin zones of pyrite mineralization were visible on parting planes. Some interbedding of the shale with thin layers of the limestone/dolostone was also evident in the borehole core samples.

3.2 Hydrogeologic Conditions

The information presented herein summarizes information provided within the Hydrogeologic Study for the Little Current Landfill prepared by Proctor and Redfern Limited (August 1992). According to the borehole logs for BH3, BH4, and BH5, and based on the 2011 drilling investigation, a relatively significant water bearing fracture zone appears to exist at the interface between the shale and limestone/dolostone units. These fractures were typically found to be weathered and infilled with silt and clay.

The water quality in the area is typically considered to be poor. Poor water quality has been attributed to the brines associated within the upper bedrock unit (i.e. derived from the black petroliferous shale unit). According to the Hydrogeological Study (1992), naturally elevated concentrations of sodium, calcium, magnesium, sulphate, chloride and TDS are typical for groundwater derived from petroliferous shales. Background water quality in the upper four meters of the bedrock around the landfill (i.e., lower shale and upper dolostone units) has been found to be very saline and alkaline, with elevated concentrations of chloride, sodium, boron, strontium and TDS.

3.3 Groundwater Flow Direction

Groundwater level measurements are collected bi-annually in conjunction with the monitoring program. A summary of historical groundwater level measurements is provided in Table 2. A groundwater flow map, developed using the Fall 2020 water level measurements from wells screened within the overburden and/or shallow bedrock, is provided in Figure 3. Based on the available measurements, groundwater generally flows in a north to northwesterly direction. The groundwater flow pattern is consistent with those historically presented.

Consistent with past measurements, the groundwater levels at monitoring well MW-1 were not used as the water levels were significantly lower than those measured in well MW-6B (i.e. greater than 8 meters), which is located approximately 15 m to the southwest. This difference in water levels is inferred to be a lack of recharge due to the location of the well screen in MW-1 within a low permeability unit of bedrock that may potentially have a lack of 'active' fractures (i.e. fractures that are interconnected). Therefore, it appears that MW-1 is screened within a zone of the Upper Member that is not hydraulically active, as supported anecdotally by a lack of observed recharge during purging. Based on the lack of recharge experienced at this monitoring location and the installation of a replacement well couplet (i.e. MW-6A/6B), it is recommended that this well be decommissioned in accordance with O.Reg.903.

Groundwater levels measured at well couplets MW-6A/6B, located upgradient of the landfill, and MW-7A/B, located to the northwest of the closed landfill, suggest that while a downwards gradient exists to the south of the landfill, groundwater level measurements obtained from MW-7A/B indicate that downgradient of the landfill vertical gradients vary between slightly upwards and downwards between the overburden and shallow bedrock unit. Further evidence of upwards gradients between the overburden/shallow bedrock in the area is provided by water levels from bedrock well MW-2 in which water levels are, at times, reported to be measured within less than 0.1 meters of the top of pipe (i.e. above ground surface).

4. MONITORING

4.1 Monitoring Locations

4.1.1 Groundwater

The Little Current landfill site is currently monitored through the collection of samples at a network of nine (9) groundwater monitoring wells installed throughout the landfill site and the adjacent property to the east, where shown on Figure 2.

Monitoring wells MW-1 through MW-5 (previously referred to as BH1 through BH5) were installed by Proctor and Redfern Limited in September 1991. Due to the reported observation of stained oily soil around MW-4 by a representative of Burnside Environmental in 1998, soil clean-up and monitoring well decommissioning was reportedly recommended and completed in 1998. Further, as previously discussed, as MW-1 has little to no yield, it is no longer considered to be part of the monitoring program.

Condition 12 of the amended ECA (March 2003) for the Little Current landfill required that the Town install, for the purpose of post-closure care and groundwater monitoring, several wells in addition to the initial five monitoring wells that were installed in 1991. These wells were to aid in the assessment of site compliance and to assist in the evaluation of the potential need to acquire downgradient lands for registration as a contaminant attenuation zone (CAZ). To satisfy the requirements of the ECA, Northland Engineering recommended the installation of six additional monitoring wells and one gas monitor. In January 2006, Northland Engineering installed two of the planned monitoring wells and MW-9, which is situated in the unsaturated zone within the refuse and is used as a gas monitor. The four remaining recommended monitoring locations were installed in July of 2011 by GM BluePlan Engineering Ltd.

The additional recommended monitoring wells were installed at three different locations surrounding the closed landfill and included a new upgradient background monitoring well couplet (i.e. MW-6A/B), intended to replace MW-1 and to better characterize the background water quality associated with the overburden and bedrock unit; and two overburden/shallow bedrock well couplets situated downgradient of the landfill to aid in the assessment of site compliance (i.e. MW-7A/B and MW-8A/B).

4.1.2 Surface Water

Currently, surface water quality monitoring is completed twice annually at two (2) locations to support the requirements of the Approval. The surface water sampling locations, as shown on Figure 2, include the following:

SW-1: Located within a seasonal highly localized ponded area located to the north of the landfill footprint.

SW-2: Engineered surface water collection pond located centrally and to the north of the landfill footprint. This engineered stormwater management system was designed to collect non-contact surface water originating from the closed and capped landfill pile.

4.1.3 Methane Monitoring

Methane monitoring is completed to satisfy Condition 16(b) of the ECA, which states that '*monitoring results and details of maintenance required for the landfill gas venting*' be provided in the annual report. The ECA requires that measurements of the lower explosive limit (LEL) be obtained once annually. The landfill gas vents on the top of the refuse pile are inspected annually and gas measurements are collected using a gas detector calibrated to methane. Historical gas monitoring results are summarized in Table 3.

4.2 Monitoring Program

Based on MECP concurrence with recommendations provided by GMBP in the 2008 Annual Report, as outlined in correspondence dated February 11, 2010 (Appendix B), the annual monitoring program for the Site, as amended, is as follows:

SAMPLING LOCATIONS		ANALYTICAL PARAMETERS
GROUNDWATER (Summer and Fall)		
Overburden	MW-6B MW-7A MW-8A	Conductivity, Total Dissolved Solids (TDS), pH, Alkalinity, Hardness, Ammonia, DOC Bromide, Chloride and Sulphate Metals: arsenic, barium, boron, chromium, cobalt, copper, selenium, strontium, calcium, magnesium, manganese, iron, potassium and sodium
Bedrock	MW-2 MW-3 MW-5 MW-6A MW-7B MW-8B	
SURFACE WATER (Summer and Fall)		
SW-1 SW-2		Conductivity, Total Dissolved Solids (TDS), pH, Alkalinity, Hardness, Ammonia, DOC, BOD, COD Bromide, Chloride and Sulphate Metals: arsenic, barium, boron, chromium, cobalt, copper, selenium, strontium, calcium, magnesium, manganese, iron, potassium and sodium Field Parameters: Temperature and water level

Summaries of the historical groundwater quality analytical results and surface water quality results are provided in Appendix D and Appendix E, respectively.

4.3 Sampling Procedures

For the groundwater sampling, the static groundwater level and well depth are measured in each monitoring well prior to purging three casing volumes of stagnant water from each well. GMBP personnel also check to ensure that all monitoring wells are properly secured and in compliance with Ontario Regulation 903. After purging, monitoring wells are allowed to recharge with fresh groundwater before sampling occurs. Groundwater purging and sampling is conducted using dedicated Waterra™ tubing and inertial-type pumps. Samples are collected in laboratory supplied containers. Under the site-specific program, samples collected for the indicator metals are placed in unpreserved containers and are filtered and preserved by Maxxam Analytics (an accredited laboratory) in accordance with the applicable protocols. The laboratory analytical reports for the current monitoring period are included in Appendix F.

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 bottom sediment is avoided to prevent stirring-up sediment. When collecting surface water samples, direct dipping of the sample bottle is acceptable unless the bottle contains preservative. For those samples requiring preservative, a clean unpreserved bottle is used to obtain the sample, which is then transferred into the appropriate preserved bottle. The surface water temperature is measured and recorded at the time of sampling.

The groundwater and surface water samples are kept chilled following completion of the sampling program and sent within 24 hours of the sampling event to an accredited laboratory for analysis. Copies of the laboratory analytical reports for the current monitoring period are provided in Appendix F.

5. DETERMINATION OF REASONABLE USE CRITERIA FOR THE SITE

5.1 Determination of Action Levels

MECP Guideline B-7 establishes the basis for determining what constitutes the reasonable use of groundwater on properties adjacent to landfill sites. This approach uses both the provincial maximum concentrations identified in the Ontario Drinking Water Standards (ODWS), revised June 2006, and the site-specific background values, to calculate acceptable concentrations at the Site boundary. By applying the RUC, the potential use of groundwater for domestic consumption will almost always provide the lowest allowable concentration limits, referred to as the objective levels. MECP 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 for non-health related parameters, and
- ii) Quality is not degraded by more than 25% of the difference between background concentrations and the Ontario Drinking Water Standards for health-related parameters.

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

5.2 Background Water Quality

Background concentrations are the site-specific values that represent the quality of groundwater prior to any contamination from landfill activities. As previously discussed, historically water quality results obtained from well MW-1 were used to determine the background water quality. However, due to the lack of recharge into this well and the identified differing water quality characteristics associated with the overburden and bedrock units, it was recommended to replace MW-1 with an overburden/bedrock well couplet MW-6A/B.

The background water quality was determined using data from overburden monitoring well MW-6B, installed in 2006, and bedrock well MW-6A which was installed in 2011. This monitoring well couplet is located upgradient from the landfill where shown on Figure 3. All available groundwater quality, up to and including October 2020, were used to calculate the average and 95th-percentile background concentrations for each indicator parameter to aid in the determination of RUC values for groundwater in the shallow overburden and the bedrock. The 95th-percentile concentration was used to reflect the RUC background concentrations for parameters with background concentrations that exceed the ODWS. The background concentration ranges, averages, and resulting RUC values (i.e. objective levels) for the indicator parameters monitored at the Site are summarized in Table 4A (overburden) and Table 4B (bedrock).

Overburden monitoring well MW-6B was installed to a depth of approximately 8.5 meters and is screened within the silt till unit overlying the bedrock and MW-6A is screened at an interval that straddles the lower shale and the upper dolostone units, which is geologically consistent with the screened intervals in the downgradient bedrock monitoring wells MW-3, MW-5, MW-7B, and MW-8B. Downward gradients are consistently noted at this well nest.

It is evident that the groundwater quality within each of the units, including the overburden, petroliferous black shale and the underlying limestone/dolostone varies significantly. This variation is likely due to the different geochemical characteristics and groundwater sources associated with each unit (i.e., shallow groundwater is more likely influenced by the infiltration of precipitation versus the brines associated with the low conductivity shale unit). Consequently, background groundwater quality within each unit is evaluated separately.

Overburden

Based on the analytical data for well MW-6B, the shallow background groundwater chemistry for the Site can generally be described as having chloride concentrations in the general range of 30-50 mg/L, a slightly basic pH of approximately 8.0, and an average conductivity in the range 675 μ S/cm. The average hardness and alkalinity concentrations are approximately 340 mg/L and 250 mg/L, respectively, which is representative of a carbonate-rich groundwater system. Further, as demonstrated by the historical water quality results and trends noted at well MW-6B, the background groundwater quality shows naturally elevated, and highly variable concentrations of sulphate, iron, and manganese.

It is noted that during the fall 2020 monitoring event, anomalously elevated concentrations of manganese, strontium, calcium, sulphate, hardness, alkalinity, TDS, and conductivity were reported in MW-6B. The cause of the elevated concentrations is currently unknown. Although the elevated parameter concentrations are not expected to be associated with landfill leachate due to their location adjacent to the hydraulically upgradient property boundary and are more likely associated with a degree of influence from groundwater from the underlying shale bedrock unit. An assessment of the long-term trends in MW-6B will be conducted following the scheduled summer and fall 2021 monitoring programs.

Bedrock

Groundwater quality in the bedrock unit is generally poor, showing the natural occurrence of several parameters typically relied upon to characterize and identify landfill leachate impacts. Relative to the overburden groundwater quality, the bedrock unit is characterized by elevated concentrations of boron and strontium. In addition, average background concentrations of sodium and chloride are generally in the range of five to ten times those measured in the overburden and the TDS is, on average, approximately two times greater in the bedrock. The average hardness and alkalinity concentrations are approximately 460 mg/L and 270 mg/L, respectively. As previously discussed, the elevated parameter concentrations in the bedrock wells are expected to be caused by the natural petroliferous-rich brines associated with the shale bedrock. Further, as noted by the reported spikes in concentrations in the Fall of 2012 and 2017, concentrations can vary significantly depending on the level of influence from the upper shale bedrock unit.

In general, when compared to the overburden groundwater quality, the groundwater quality within the bedrock unit is characterized by elevated concentrations of boron, strontium, sodium, chloride, conductivity, total dissolved solids (TDS) and, to a lesser degree, hardness and potassium.

5.3 Calculation of Objective Levels (RUC)

Table 4A and Table 4B identify the concentrations of groundwater quality indicator parameters in overburden and bedrock, respectively, 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 Technical Support Document for Ontario Drinking Water Standards Objectives and Guidelines (June 2006), referred to herein as the ODWS. Acceptable concentrations at the site boundary (Cm) (herein referred to as the Reasonable Use Criteria (RUC)), are calculated from MECP Procedure B-7-1 using the following formula:

$$C_m = C_b + x(C_r - C_b)$$

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 ODWS.
- 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 to be set at the background concentration, as outlined by Procedure B-7-1. A summary of the analytical results from the current monitoring period, compared to the RUC and ODWS, is provided in Tables 5A (overburden) and 5B (bedrock).

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

5.4 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. The PWQO 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. Areas that have water quality that does not presently meet the PWQO are not to be degraded any further and are to be upgraded if practical. Although the surface water locations were both either dry or too stagnant to sample during the summer and fall 2020 monitoring programs, the most recent surface water results compared to the PWQO are presented in Table 6.

Although surface water sampling is completed at the Site as part of the annual monitoring program, the surface water features at the site are either man-made or do not have an outflow and are representative of surface water that is designed to infiltrate. Surface water sampling location SW-1 is located within a seasonal, stagnant, organic-rich ponded area that has consistently been dry in recent years. SW-2 is located within an engineered surface water collection pond that was designed to collect non-contact surface water drainage from the closed and capped landfill pile. In essence, water quality data represents surface water that either evaporates or infiltrates via the engineered pond rather than information pertaining to surface water flowing offsite.

As such, due to the nearby monitoring wells (i.e. MW-8A and MW-3) used to monitor the shallow groundwater quality downgradient of the landfill mound, the low occurrence of sufficient volumes of water being present in these features, and the lack of water flowing offsite from the landfill property, **it is recommended that the surface water locations SW-1 and SW-2 be removed from the summer and fall monitoring programs.**

6. GROUNDWATER MONITORING RESULTS AND DISCUSSION

6.1 Leachate Generation

Leachate is produced when surface water percolates 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, biological activity, and geochemical mechanisms. 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.

Upon closure, landfill sites are generally considered to have a 25-year 'contaminating' lifespan during which time leachate production peaks, and then reduces. The cover material acts to limit the volume of surface water percolating down through the refuse, thereby limiting leachate production through surface water infiltration. At the Little Current landfill site, consideration should be given to the small fill area of 1.6 ha, the placement of waste above the pre-landfill development ground surface (i.e. providing for a separation distance between the bottom of waste and the water table), and the closure of the landfill site in 2002.

6.2 Leachate Characterization

Leachate generation is typically greatest directly beneath the landfill and at the perimeter of the landfilled area. Based on our assessment, monitoring well MW-8A is considered to be the well closest to providing the characteristics of leachate-impacted groundwater. It is an overburden monitoring well situated within approximately 25 meters hydraulically downgradient of the landfill footprint.

Further, it is important to recognize that the hydraulic gradients have been measured to transition from downwards gradients to the south of the landfill (i.e., background well MW-6A/B) to gradients varying between slightly upwards to slightly downwards in the area to the north of the landfill. Therefore, while potential leachate impacted groundwater downgradient of the landfill footprint is generally expected to flow horizontally, primarily through the relatively thin layer (i.e., up to ± 3.5 meters) of overburden soils and the shallow bedrock, it is also anticipated that some interaction between the overburden and the shallow bedrock groundwater flow systems will occur.

As would be expected due to the close proximity of well MW-8A to the closed fill area, concentrations of primary leachate indicator parameters for alkalinity, hardness, chloride, sodium, sulphate, and TDS, which typically exceed the RUC, coupled with decreasing concentration trends, specifically for chloride, sodium, TDS, and conductivity, indicates that the groundwater quality at well MW-8A was impacted by landfill leachate. However, the elevated and stable concentrations of boron and strontium, relative to that reported in the background overburden well, suggest that influence from the underlying shallow bedrock unit is also contributing to the degraded groundwater quality at this location, causing the RUC exceedances. It is noted that the RUC for overburden were established using the background concentrations derived from overburden well MW-6B, where downward hydraulic gradients are evident. This suggests that there is negligible influence on the overburden groundwater from the underlying petroliferous shale at MW-6B.

6.3 Groundwater Quality Assessment: Influencing Factors

The flow of groundwater influenced by the petroliferous shale into the overburden unit complicates the assessment of leachate impacts due to the natural occurrence of several parameters that are typically relied upon to identify leachate impacts, such as chloride, sodium and hardness. As a result, a detailed review and assessment of the groundwater quality results was completed, and an approach to assist in distinguishing the various influencing factors on groundwater quality is outlined below.

Based on a detailed assessment and comparison of the groundwater quality in the monitoring wells throughout the Site, the following observations were drawn and are considered to be useful tools in the assessment of the relative influence of groundwater flow from the shallow bedrock into the overburden versus the potential leachate impacts to groundwater at a given location.

- The presence of boron, strontium and, to a lesser degree potassium, can be used to distinguish the relative magnitude of influence of the petroliferous shale unit on the groundwater quality. When increased concentrations of boron and strontium are reported at a given monitoring location, relative to other locations, similarly increased concentrations of chloride, sodium, hardness and TDS are realized.
- Alkalinity concentrations are similar in background groundwater associated with the overburden and bedrock unit, consistently remaining below 400 mg/L in well couplet MW-6A/B. Alkalinity is commonly considered to be a good indicator of leachate impacts. Therefore, alkalinity concentrations that are notably elevated are indicative of potential leachate influence.
- While background sulphate concentrations are highly variable in the overburden background well (i.e. MW-6B), sulphate concentrations typically remain below 50 mg/L. Monitoring locations that consistently report elevated concentrations of sulphate, in conjunction with other indicators of leachate impacts (i.e. alkalinity), are considered to be influenced, to some degree, by landfill-derived leachate.
- Although it is evident that hardness is influenced by the bedrock unit (i.e. increased boron and strontium concentrations are correlated to increased hardness), landfill-leachate derived impacts also appear to affect a notable increase in this parameter.

Due to the relative concentrations of sodium and chloride in groundwater influenced by the petroliferous shale unit, which can be up to an order of magnitude greater than that anticipated from landfill leachate, contributions of increased chloride and sodium, that can be directly attributed to landfill leachate impacts, are difficult to quantify at the majority of the monitoring locations downgradient of the landfill. However, it is noted that based on the decreasing concentration trends noted at well MW-8A, it appears that landfill-leachate impacted groundwater contributed to elevated chloride concentrations in the range of 150 to 200 mg/L and sodium concentration of up to 100 mg/L.

Therefore, when assessing the potential for leachate impacts, the relative influence of impacts from the bedrock aquifer should be considered. At locations where boron and strontium concentrations are significantly higher relative to other locations, a similar increase in chloride, sodium, TDS and hardness is expected. As a result, the initial assessment for leachate impacts should consider alkalinity as the primary indicator of leachate, which should be evaluated in conjunction with other indicator parameters and concentration trends, such as hardness, sulphate and, to a lesser degree, sodium, chloride and TDS.

In addition, due to the elevated concentrations of various metals measured in the background wells which are reported to be greater than concentrations that would typically be expected from landfill leachate, and in consideration of the anticipated interaction between the overburden and bedrock units downgradient of the landfill, it is thought that while the concentrations of metals can be effectively used to evaluate potential influence of bedrock groundwater on the overburden groundwater quality, specifically boron and strontium, metals alone are generally not considered to be a useful indicator of leachate influence at the Little Current landfill site.

The following sections evaluate the potential impacts on-site and the potential for off-site impacts to the area surrounding the closed Little Current Landfill Site using the historical and recent water quality data available. The groundwater quality results for the monitoring period, compared to the RUC and ODWS, are summarized in Tables 5A and 5B. As previously noted, hardness consistently exceeds the ODWS operational guidelines, which is consistent with groundwater flowing through carbonate-rich soils. Further, when RUC exceedances are reported for overburden monitoring locations situated downgradient of the landfill, the influence of groundwater flow from the underlying bedrock unit should be considered (i.e. boron and strontium). Historical groundwater sampling results and graphical trends of indicator parameters, which include summaries of the average, maximum, minimum and 95th percentile concentrations for each parameter, are included in Appendix D.

6.4 Boundary Conditions

6.4.1 South Boundary Condition

The southern property boundary is inferred to be hydraulically upgradient of the landfill footprint and is situated adjacent to Highway 540. The approximate limit of the existing landfill is approximately 35 m from the property boundary at its closest point. Due to the northerly to north-westerly groundwater flow direction, the southern side of the landfill is considered low risk for leachate impact. Monitoring well couplet MW-6A/6B is situated to the south and upgradient of the landfill footprint and is considered background groundwater quality in the overburden and shallow bedrock units. Groundwater quality at these locations was discussed in detail in Section 5.2 of this report.

6.4.2 East Boundary Condition

The eastern property boundary is located hydraulically cross-gradient from the landfill footprint, which is situated approximately 35 meters from the property boundary at its closest point. There are no monitoring wells situated between the landfill footprint and the property line. However, the area to the east of the landfill is considered low risk for leachate impact due to the north to north-westerly groundwater flow direction.

Monitoring well MW-2 is located approximately 105 meters east of the landfill footprint, at its closest point, and is separated from the landfill property by a low-lying swampy area. The swampy area appears to have been created by the damming of a small creek which resulted in minor flooding of a vegetated, treed area. Similar to MW-6A, well MW-2 is screened within the shallow bedrock. Based on the separation distance between MW-2 and the landfill, its cross-gradient location, and the historical analytical results, no impacts related to landfill leachate are evident at this location. Therefore, this monitoring location can also be considered to reflect background conditions.

Historical groundwater quality suggests that the groundwater quality is geochemically similar to that reported for background bedrock well MW-6A, although concentrations are typically greater. The reported concentrations from the most recently collected samples are consistent with previous monitoring years and with the geochemical signature at other bedrock monitoring locations.

The groundwater quality at MW-2 is characterized by elevated concentrations of boron, strontium, hardness, chloride, conductivity and TDS. While several exceedances of the ODWS are noted, only an RUC exceedance for boron was reported in the current monitoring period.

Based on the location of MW-2 (cross-gradient and outside of the area of potential influence from landfilling), the elevated concentrations of boron, relative to background, coupled with the typically elevated concentrations of chloride and hardness, in the groundwater appears to be influenced by the petroliferous shale. Further, the significantly higher concentrations of parameters identified that signify greater influence from the petroliferous shale unit, along with the concentration spikes in the background well, support the concept that concentrations in groundwater derived from the shale unit can be highly variable.

6.4.3 North Boundary Condition

The northern property boundary is considered to be hydraulically downgradient of the landfill and is situated approximately 25 to 40 meters from the existing landfill limit. The groundwater monitoring network includes six monitoring wells situated at four different locations downgradient from the landfill including overburden monitoring wells MW-7A and MW-8A, and bedrock wells MW-3, MW-5, MW-7B and MW-8B. These wells, which are located approximately 5 to 10 meters from the northern property boundary, are used to monitor groundwater quality and Site compliance.

As previously noted, several parameter concentrations within the bedrock wells appear to be naturally elevated and, in contrast to the downwards vertical gradients noted to the south of the landfill (i.e., background wells MW-6A/B), the vertical gradients to the north of the landfill footprint appear to fluctuate over time between slightly upwards to slightly downwards. Therefore, the vertical gradients noted to the north suggest that there is the potential for interaction between the overburden and bedrock groundwater flow systems. Consequently, it is somewhat difficult to differentiate the relative influence from landfill leachate and the influence from the petroliferous shale bedrock unit and associated brines. The ensuing discussion provides an assessment of the groundwater quality results and trends for the monitoring wells located at, or near, the north property boundary and presents an interpretation of the findings.

Overburden Groundwater Quality

Monitoring well MW-8A is considered the most likely location to be influenced by landfill leachate due to its downgradient location within the shallow overburden. As previously discussed, MW-8A has been used to characterize leachate impacts associated with the Little Current landfill (refer to Section 6.2). The presence of leachate impacts from the closed landfill at this location is primarily supported by the generally decreasing concentration trends for sodium and chloride that have been observed coupled with the elevated concentrations of sulphate and alkalinity.

However, the presence of higher concentrations of boron and strontium, relative to the background overburden well MW-6B, suggest that groundwater quality at this location is also influenced by the interactions between the overburden and bedrock groundwater flow systems.

Monitoring well MW-7A is situated in the northwest corner of the site. Groundwater quality at this monitoring location has shown stable concentration trends since the inception of monitoring in 2011 with decreasing analytical trends since 2015. RUC exceedances for hardness, alkalinity, manganese, and TDS are typically reported at MW-7A, however concentrations of other leachate indicator parameters as well as parameters that are indicative of influence from the underlying bedrock unit, such as boron and strontium, are consistently similar to background (overburden). Based on the overall groundwater quality characteristics and trends, and the location of this monitoring well generally cross-gradient to groundwater flow from the landfill, landfill-leachate derived impacts are considered to be negligible at this location. Elevated alkalinity and hardness may be due to the natural mineralization of groundwater within the shallow overburden at this monitoring location.

Bedrock Groundwater Quality

Bedrock groundwater quality in proximity to the north property boundary is monitored (from east to west) at monitoring locations MW-5, MW-8B, MW-3 and MW-7B. The bedrock groundwater quality is discussed in detail below.

Monitoring Well MW-8B

Leachate impacts were identified in overburden monitoring well MW-8A, consequently landfill-leachate derived impacts, if present, would likely be noted in the corresponding bedrock well MW-8B. MW-8B was installed in 2011 to satisfy previous MECP recommendations for an additional bedrock monitoring well located directly north and hydraulically downgradient of the landfill footprint. The monitoring well was installed with a screened interval that straddles the lower portion of the shale unit and the upper portion of the underlying dolostone bedrock. During advancement of the borehole and installation of this monitoring well, a strong petroliferous odour was detected throughout the fractured black shale bedrock, and the drill fluid was observed to become black in colour with evidence of naturally occurring petroleum product. After installing and developing the monitoring well, the dedicated Waterra sample tubing was observed to be coated with globules of dark brown/black bitumen. Based on the subsurface conditions and the occurrence of naturally occurring petroleum product and natural gas within the black petroliferous shale identified at MW-8B, it is reasonable to expect that the groundwater quality at this location would be significantly degraded.

It is noted that the occurrence of black shale and the associated sulfurous odour was also documented by others at the location of former shallow bedrock well MW-4, formerly situated ± 100 meters north of MW-8A/B, where shown on Figure 3. However, based on a review of the previous Closure Report and the 2007 Annual Monitoring Report completed by others, it appears that these conditions were attributed to an oil spill or fuel release to the ground surface. Consequently, MW-4 was subsequently decommissioned and soil "clean-up" efforts were completed by others.

According to the GIS mapping provided by the Ontario Oil, Gas, and Salt Resource Library, there are numerous oil and gas producing test/exploration wells in the vicinity of the landfill property, in the general vicinity of Little Current, and throughout Manitoulin Island. Therefore, the occurrence of petroleum product and natural gas at MW-8B appears to be related to the subsurface geology and is considered to be naturally occurring. The conditions identified at MW-8B, and those historically noted at MW-4, are due to the local geologic conditions and are not considered to be associated with a spill or release.

One groundwater quality sample was collected from this monitoring location in October 2011 and the analytical results are included in Appendix D. However, due to the presence of naturally occurring petroleum product, monitoring well MW-8B has not been included in the monitoring program since that time. While the concentrations of the primary leachate indicators including alkalinity and sulphate were reported to be lower in the bedrock as compared to the overburden (i.e., MW-8A), groundwater quality results from this monitoring location included an alkalinity concentration of 615 mg/L and sulphate concentration of 340 mg/L, both in exceedance of the RUC and indicating the potential for influence from landfill leachate at this location. However, based on the significantly elevated concentrations of boron and strontium, relative to background, and the corresponding concentrations of sodium, chloride, hardness and TDS, which were also reported to exceed the RUC, and in consideration of the observed variability in groundwater quality within the shallow bedrock in the area around the site, it is apparent that the groundwater quality is also influenced by the petroliferous shale unit. Therefore, it appears that the RUC exceedances at well MW-8B are predominantly naturally occurring.

Based on the requirements of the Ontario Water Resources Act (Ontario Regulation 903/90), as amended, a monitoring well where natural gas is encountered, and where it is deemed to pose a potential hazard, is to be decommissioned as per the requirements of the Regulation. Additionally, it is anticipated that the groundwater at this location is sufficiently 'degraded' as a result of the natural geologic conditions and would not be considered potable.

Therefore, future monitoring at this location is not expected to provide significant additional information pertaining to the Site's compliance with the Reasonable Use Policy.

Due to the geologic conditions encountered during drilling and the potential hazard related to the natural occurrence of bitumen and gas, the decommissioning of well MW-8B is recommended as per the requirements of Ontario Regulation 903/00.

Monitoring Wells MW-3 and MW-7B

Monitoring wells MW-3 and MW-7B monitor groundwater quality in the bedrock in the northwest portion of the property. The reported concentrations for several of the parameters are elevated above background conditions, with RUC exceedances reported for boron, hardness, alkalinity, sodium, chloride and TDS. The analytical results from the current monitoring period are consistent with historical results which display average strontium and boron concentrations at these two monitoring locations (combined) in the range of 15,000 µg/L and 6,700 µg/L, respectively, as compared to concentrations of typically less than 1000 µg/L in the background bedrock well MW-6A (refer to Appendix D). Coupled with the significantly greater boron and strontium concentrations, average concentrations of chloride and sodium are typically greater than 10X those reported in the background well, the conductivity and TDS are in the range of 5X to 10X higher, and hardness concentrations are notably elevated (i.e., typically greater than 1,400 mg/L). Based on the alkalinity concentrations which remain in the range of approximately 300 to 400 mg/L, and the geochemical signature which suggests significant influence from the petroliferous shale unit, landfill leachate derived impacts to groundwater are considered to be negligible at these monitoring locations.

Monitoring Well MW-5 (Bedrock)

Monitoring well MW-5 is situated in the northeast portion of the Site. Relative to background well MW-6A, the average concentrations of boron and strontium suggest that there is a greater degree of influence from the petroliferous shale unit at this monitoring location. However, the magnitude of this influence is less than that interpreted for other bedrock monitoring locations situated downgradient of the landfill.

Groundwater quality trends at MW-5 indicate that while the concentrations of strontium and boron have remained relatively stable, the concentrations of some other leachate indicator parameters appear to have increased slightly in the early 2000's and have remained stable since that time. In general, concentrations of sodium, chloride and TDS remain similar to background, however alkalinity, sulphate, and hardness are higher indicating the potential for minor influence from landfill leachate at this location. RUC exceedances in the current monitoring period are noted for boron and alkalinity. With the exception of alkalinity, which is reported to be only 10 µg/L over the existing RUC for the Site, the exceedances can generally be attributed to natural background conditions.

6.4.4 West Boundary Condition

The western limit of the approved landfill footprint is located approximately 30 meters from, and cross-gradient to, the west property boundary at its closest point (Figure 3). Based on the groundwater flow direction and the distance between the westerly limit of the landfill footprint and the compliance limit to the west, the buffer area appears to be sufficient. Offsite impacts are generally not anticipated along the majority of the western property line, however, if present, are considered to most likely be proximal to the northern property boundary. Consequently, monitoring well couplet MW-7A/B was installed in July of 2011. As discussed above, landfill leachate derived impacts at this monitoring location are not apparent.

6.5 Groundwater Quality Summary

Groundwater quality within each of the geologic units, including the overburden and shallow bedrock, varies significantly. Due to the downwards hydraulic gradients consistently noted at the background monitoring well couplet MW-6A/6B, the water quality in each of these units could be effectively characterized. In addition, monitoring results from bedrock well MW-2, which is located greater than 100 meters to the east of the landfill footprint, could be used to verify the bedrock groundwater quality and demonstrate that a level of variability can be expected depending on the magnitude of influence from the petroliferous shale unit.

Based on a review of the water quality data, boron and strontium were identified as key indicators that could be used to measure the relative influence of the petroliferous shale unit on the water quality at a given location, including overburden monitoring locations where upwards gradients could allow for the flow of groundwater from the bedrock into the overburden. The elevated concentrations appear to be associated with the natural occurrence of petroliferous-rich salt brines within the upper shale unit. In general, increased concentrations of sodium, chloride, conductivity, TDS and, to a lesser degree, hardness and potassium, are expected in conjunction with increased boron and strontium concentrations.

Within the bedrock groundwater, several of the parameters typically relied upon to characterize leachate are present at concentrations that would typically 'mask' potential impacts from landfill leachate, particularly from a small, closed landfill site. However, based on concentrations of alkalinity that were reported to be in the range of 300 mg/L in both the background overburden and bedrock groundwater, alkalinity was identified as a primary indicator of leachate, which should then be evaluated in conjunction with other indicator parameters and concentration trends, such as hardness, sulphate and, to a lesser degree, sodium, chloride and TDS.

Downgradient of the landfill, the presence of leachate impacts from the closed landfill at overburden well MW-8A is indicated by the generally decreasing concentration trends for sodium and chloride that have been observed coupled with the elevated concentrations of sulphate and alkalinity. However, the presence of higher concentrations of boron and strontium, relative to the background overburden well MW-6B, suggest that groundwater quality at this location is also influenced by the interactions between the overburden and bedrock groundwater flow systems. In the northeast portion of the Site, in the vicinity of bedrock well MW-5, the relatively stable concentrations of boron and strontium, coupled with slightly increased concentrations for some leachate indicator parameters (i.e., chloride and sodium in the early 2000's) and the continued elevated concentrations of alkalinity, sulphate and hardness is indicative of minor influence from landfill leachate. In the northwest portion of the Site, in the vicinity of well couplet MW-7A/B and bedrock well MW-3, landfill-leachate derived impacts are not evident. The long-term trend analysis for parameter concentrations reported in the monitoring wells to the north of the landfill footprint indicates a stable to slightly decreasing trend for the target analytical parameters.

Due to the north to north-westerly groundwater flow direction, and the buffer of greater than 30 meters between the landfill footprint and the compliance limits to the east, south and west of the landfill footprint, leachate impacts are not anticipated in the areas situated up-gradient to cross-gradient of the Little Current landfill site.

In summary, since the concentrations of several indicator parameters in the bedrock groundwater are elevated beyond that of typical landfill-derived leachate, even a minor influence from the bedrock unit is likely to be greater than potential impacts from the closed landfill site. As a result, the magnitude of impacts from landfill leachate and compliance with the RUC along the north property boundary is difficult to discern. However, at this time it appears that the groundwater quality downgradient of the landfill is more significantly influenced by the native petroliferous shales than by the closed landfill site.

As discussed in Section 5.2, it is noted that during the fall 2020 monitoring event, anomalously elevated concentrations of manganese, strontium, calcium, sulphate, hardness, alkalinity, TDS, and conductivity were reported at the location of MW-6B. The cause of the anomalous concentrations is currently unknown, although the elevated parameter concentrations are not expected to be associated with landfill leachate and are more likely associated with a degree of influence from groundwater originating within the underlying shale bedrock unit. Ongoing monitoring of this occurrence at MW-6B will be conducted in future monitoring programs to assess if a discernable trend becomes apparent at this location.

7. SURFACE WATER QUALITY RESULTS AND DISCUSSION

Surface water quality monitoring at the site consists of water quality monitoring from two locations (i.e., SW-1 and SW-2) located to the north of the landfill footprint and includes the measurement of water levels, when possible. Surface water sampling location SW-1 is located within a seasonal, localized ponded area that has primarily been dry in recent years due to the small size (i.e. approximately 2m in diameter) and the highly localized nature of this stagnant feature. SW-2 is located within an engineered surface water collection pond that was designed to collect surface water drainage from the closed and capped landfill. Based on our observations and the groundwater elevation noted in overburden well MW-8A, SW-1 and SW-2 may be partially groundwater fed in addition to serving as a collection system for surface water flow in the highly vegetated area to the north of the closed and capped refuse pile. It is noted that these features do not provide information pertaining to surface water flowing offsite and represent surface water that either evaporates or infiltrates.

Surface water quality results are compared to the allowable concentrations specified within the PWQO. This comparison is considered to be conservative as the two sampling locations are representative of highly localized features that have no outlets or connection to other surface water bodies (e.g. streams or rivers) and do not represent surface water flowing offsite. In the current monitoring period, the surface water sampling locations were noted to be dry during both monitoring events. However, the surface water quality results for 2013 to 2017, compared to the PWQO, are summarized in Table 6 and a summary of the historical surface water quality results is included in Appendix E.

Historical analytical results often report PWQO exceedances for boron, and periodically iron and cobalt (Table 6). Similar to overburden well MW-8A, boron and strontium concentrations are reported to be greater in the surface water than in the background overburden (i.e. MW-6B). In addition, the concentrations for various indicator parameters are noted to be variable, particularly at SW-2, however generally follow a similar trend to that observed for boron and strontium, suggesting that the surface water quality is predominantly influenced by the bedrock flow system. However, based on the location of these features directly downgradient of the closed landfill, there is potential for landfill leachate derived impacts. Similar to the groundwater quality assessment, the magnitude of impacts from leachate is difficult to discern due to the natural occurrence of several indicator parameters in groundwater derived from the petroliferous shale unit.

In order to further assess whether PWQO exceedances at SW-1 and SW-2 are groundwater derived, two samples (labelled SW-3) were previously collected (in 2009) from the upper surface water pond that was designed to provide catchment for the surface water/overburden flow originating from the closed refuse pile. The analytical results from this sample are considered to be representative of the surface water flowing off the closed landfill. Based on the analytical results for SW-3, it appears that the elevated concentrations of parameters identified in all surface water features (i.e. aluminum, boron, chloride, sodium etc.) are more related to the local surficial soils at the site. The overburden at the site consists primarily of clayey soils derived from the underlying shales. These soils are known to produce elevated levels of the above mentioned parameters. Additionally, the water quality observed at SW-1 and SW-2 is generally consistent with the water quality observed in overburden monitoring well MW-8A.

As such, due to the nearby monitoring wells (i.e. MW-8A and MW-3) used to monitor the shallow groundwater quality downgradient of the landfill mound, the expected nature and chemistry of the ponded water in these locations, the low occurrence of sufficient volumes of water being present in these features, and the lack of water flowing offsite from the landfill property, **it is recommended that the surface water locations SW-1 and SW-2 be removed from the summer and fall monitoring programs.**

8. QUALITY ASSURANCE AND 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 difference (RPD) was calculated and is presented in Table 7. 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 data from the current monitoring period are within historical norms or are consistent with historic trends. In summary, the QA/QC protocols indicate that the analytical results are valid.

9. METHANE GAS MONITORING RESULTS

Methane is a colourless and odourless gas formed by the decomposition of organic matter under oxygen poor (anaerobic) conditions and is commonly associated with landfills. It is produced by anaerobic bacteria, which become active only when the oxygen in the landfill has been completely consumed. The primary concern related to this parameter is that, under certain conditions, the mixture of methane in air can be explosive within a confined area. Methane gas is measured relative to the lower explosive limit (LEL) which corresponds to 5% of the concentration of methane in air.

There is currently a total of six landfill gas vents in the vicinity of MW-9, which are situated at the top of the refuse pile. According to the Municipal information provided, the vents were installed in November of 2004. The gas vents are generally described as areas measuring 3.5 m² excavated through the low permeability cover and 0.5 m into the waste. According to the Closure and Post Closure Care Report, the entire area is lined by a non-woven geotextile and filled with clear stone to promote the venting of landfill gases.

Historically, LEL measurements from the monitoring locations, with the exception of MW-9, have typically produced readings of zero (Table 3). Landfill gas measurements at MW-9 fluctuate significantly and have historically ranged between 9.8% and 100%. Although landfill gases are being produced within the landfill, the landfill gas vents were designed to prevent the off-site migration of these gases. In addition, methane gas has not been historically detected at any other monitoring locations surrounding the landfill mound, indicating that methane gas is not migrating laterally off the property. It is noted that the closest structures where the accumulation of methane may potentially occur are greater than one hundred meters from the landfill.

10. REVIEW OF MONITORING PROGRAM

Condition 13 of the revised ECA (March 2003) states that the frequency of sampling and the list of parameters shall be reviewed after two years of sampling have been completed. As per the ECA, a detailed assessment of the monitoring results was completed by GMBP in the 2008 Annual Monitoring Report. Based on this review, GMBP proposed that the previously established monitoring program be revised to better reflect the conditions of the site. The proposed revisions included reducing the sampling frequency from three times annually to twice annually and that the analytical parameters be reduced to a list that is specifically intended to provide further information regarding the Site's compliance with the Reasonable Use Criteria.

Based on MECP concurrence with recommendations provided in the 2008 Annual Report, as outlined in correspondence dated February 11, 2010 (Appendix B), the annual monitoring program for the Site, as amended, is as follows:

SAMPLING LOCATIONS		ANALYTICAL PARAMETERS
GROUNDWATER (Summer and Fall)		
Overburden	MW-6B MW-7A MW-8A	Conductivity, Total Dissolved Solids (TDS), pH, Alkalinity, Hardness, Ammonia, DOC Bromide, Chloride and Sulphate
Bedrock	MW-2 MW-3 MW-5 MW-6A MW-7B MW-8B	Metals: arsenic, barium, boron, chromium, cobalt, copper, selenium, strontium, calcium, magnesium, manganese, iron, potassium and sodium
SURFACE WATER (Summer and Fall)		
SW-1 SW-2		Conductivity, Total Dissolved Solids (TDS), pH, Alkalinity, Hardness, Ammonia, DOC, BOD, COD Bromide, Chloride and Sulphate Metals: arsenic, barium, boron, chromium, cobalt, copper, selenium, strontium, calcium, magnesium, manganese, iron, potassium and sodium Field Parameters: Temperature and water level

Since the Landfill has been closed and capped for a period of almost 20 years (i.e., since 2002), it is reasonable to expect that the primary period of leachate generation has passed. Through the past sampling program, it has been established that there are no significant seasonal fluctuations in groundwater flow direction and that the site conditions are stable (i.e., it is closed). In addition, the groundwater quality measured in the last several years of monitoring has been relatively consistent with the exception of the decreasing concentration trends for sodium and chloride observed at monitoring location MW-8A. This decreasing concentration trend is interpreted to reflect decreasing influence from landfill-leachate derived impacts at this downgradient overburden monitoring location.

Previous recommendations have been made to consider a further reduction in the sampling frequency once stabilized concentration trends were evident at the location of MW-8A over a five-year period. Therefore, **based on the generally stable concentration trends in the groundwater at MW-8A since 2016 (i.e., a period of 5 years), it is recommended that the sampling frequency be revised to once per year during the fall season.**

Due to the geologic conditions encountered during drilling and the potential hazard related to the occurrence of naturally occurring bitumen and gas, **the removal from the monitoring program and decommissioning of MW-8B is recommended as per the requirements of Ontario Regulation 903/00.**

11. CONCLUSIONS

1. As a result of the site closure in October 2002 and the subsequent placement of a low permeability cover, it is anticipated that leachate production at the site will continue to decrease over time. Therefore, it is reasonable to expect that groundwater concentrations of leachate indicator parameters will remain stable or continue to decrease.
2. To satisfy Condition 12 of the ECA, four additional monitoring wells (MW-6A, MW-7A, MW-7B, and MW-8B) were previously installed at the Site in 2011. No further monitoring well installations are required under this condition.
3. The groundwater flow direction at the site is consistently in a north to north-westerly direction. Leachate impacts are most likely to occur to the north of the landfill and along the northerly compliance limit. Further, landfill-leachate derived impacts cross-gradient to the landfill (i.e. to the east and west) are not anticipated.
4. Groundwater quality within each of the geologic units, including the overburden and shallow bedrock, varies significantly. Based on a review of the water quality data, boron and strontium were identified as key indicators that can be used to measure the relative influence of the petroliferous shale unit on the water quality at a given location, including overburden monitoring locations where upwards gradients could allow for the flow of groundwater from the bedrock into the overburden. The elevated concentrations appear to be associated with the natural occurrence of petroliferous-rich salt brines within the upper shale unit. In general, increased concentrations of sodium, chloride, conductivity, TDS and, to a lesser degree, hardness and potassium, are expected in conjunction with increased boron and strontium concentrations.
5. Downgradient of the landfill, the presence of leachate impacts from the closed landfill at overburden well MW-8A is indicated by the generally decreasing concentration trends for sodium and chloride coupled with elevated concentrations of sulphate and alkalinity. However, groundwater quality at this location is also influenced by the interactions between the overburden and bedrock groundwater flow systems. In the northeast portion of the Site, in the vicinity of bedrock well MW-5, groundwater quality results suggest minor influence from landfill leachate. In the northwest portion of the Site, in the vicinity of well couplet MW-7A/B and bedrock well MW-3, landfill-leachate derived impacts are not evident.
6. A typical leachate plume from a small Municipal Landfill has lower concentrations of characteristic indicator parameters than seen in the shallow bedrock unit. Given that the purpose of the RUC is to not permit further degradation of the groundwater on adjacent properties, a significant leachate plume would be required to further degrade the groundwater quality within the bedrock unit at the Site. Consequently, even a minor influence from the underlying shale unit on groundwater quality in the overburden effectively influences groundwater chemistry beyond that expected from landfill leachate.
7. Based on the natural occurrence of significantly elevated concentrations of various parameters typically relied upon to assess landfill leachate derived impacts, compliance with the RUC downgradient of the landfill and along the north property boundary is difficult to discern. However, at this time it appears that the groundwater quality downgradient of the landfill is more significantly influenced by the native petroliferous shales than by the closed landfill site.

8. The designed pond/wetland type features from which the surface water samples are collected are intended to promote the infiltration of surface water. Therefore, SW-1 and SW-2 are representative of localized features that have no outlets or connection to other surface water bodies (e.g. streams or rivers). Based on the groundwater elevations, the locations of the surface water features, and the similarity between the surface water quality and the groundwater quality reported in MW-8A, it appears that the seasonal localized ponded area (i.e. SW-1) and lower overflow pond (i.e. SW-2) may be influenced somewhat by groundwater discharge. At the surface water sampling locations, no exceedances of the PWQO, related directly to stormwater run-off from the landfill, are noted. As discussed, there is a low occurrence of sufficient volumes of water being present in these features.

12. RECOMMENDATIONS

1. Pending MECP review and approval of a revised monitoring program, it is recommended to continue the existing approved twice annual sampling program in the summer and fall as outlined in the Summary Table provided in Section 10 of this report. However, it was previously recommended that once the Site's compliance with the RUC is more clearly established, or establishment of stabilized concentration trends over a five-year period is evident at the location of MW-8A, that additional review of the sampling frequency take place in order to determine the applicability of further reduction to the monitoring program. Based on the generally stable to decreasing concentration trends at MW-8A since 2015/2016 (i.e., a period of 5 years), it is recommended that the annual sampling frequency be revised to once per year in the fall.
2. Considering the lack of sufficient groundwater in MW-1 for sampling and analysis, the inconsistency in the water level in this well with surrounding water level measurements, and the replacement of MW-1 with MW-6A as a background bedrock monitoring well, it is recommended that MW-1 be removed from the sampling program and decommissioned as per the requirements of Ontario Regulation 903/00.
3. Due to the geologic conditions encountered during drilling and the potential hazard related to the occurrence of naturally occurring bitumen and gas, the decommissioning of MW-8B is recommended as per the requirements of Ontario Regulation 903/00.
4. As per the recommendations outlined in the MECP correspondence dated June 27, 2016, it is recommended that monitoring well MW-2 be removed from the monitoring program and decommissioned in accordance with O.Reg.903.
5. Continued review of the analytical results and trends should be used to assist in the determination of compliance with the RUC along the northerly property boundary.
6. It is recommended that the surface water locations SW-1 and SW-2 be removed from the summer and fall monitoring programs due to the expected nature and chemistry of the ponded water in these locations (as discussed in Section 7), the low occurrence of sufficient volumes of water being present in these features for sampling, the lack of water flowing offsite from the landfill property, and the nearby monitoring wells (i.e. MW-8A and MW-3) used to monitor the shallow groundwater quality downgradient of the landfill mound.

7. Although the addition of downgradient buffer lands or a contaminant attenuation zone (CAZ) is considered to be advantageous to reducing the potential for offsite impacts, it appears that degradation of the water quality beyond the property boundary due to the landfill is not evident or discernible at this time due to the occurrence of several parameters that are naturally encountered in the petroliferous black shale /dolostone bedrock observed directly downgradient of the landfill, both on-site (i.e. MW-8B) and off-site (i.e. MW-4). The natural occurrence of significantly elevated concentrations of several parameters that are typically relied upon in the assessment of landfill leachate-derived impacts makes it difficult to discern the relative influence of groundwater derived from the shallow bedrock and potential impacts from landfill leachate.

All of which is respectfully submitted,

GM BLUEPLAN ENGINEERING LIMITED

Per:

A handwritten signature in black ink, appearing to read 'C.J. Sweet'.

C.J. Sweet, P.Geo.

Per:

A handwritten signature in black ink, appearing to read 'A.W. Bringleston'.

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

Per:

A handwritten signature in black ink, appearing to read 'M.D. Nelson'.

M.D. Nelson, P.Eng., P.Geo.

Heidi Ferguson

From: Dave Williamson
Sent: February 19, 2021 10:40 AM
To: Pam Cress; Heidi Ferguson
Subject: Fwd: Let's Remember Adam Campaign

For next agenda

Sent from my Bell Samsung device over Canada's largest network.

From: Dave Williamson
Sent: Thursday, February 18, 2021 11:35:51 AM
To: sue mackenzie <suemackenzie@bellnet.ca>
Cc: Dave Williamson (DWilliamson@townofnemi.on.ca) <dwilliamson@townofnemi.on.ca>
Subject: RE: Let's Remember Adam Campaign

Hi Sue,

Council has not discussed this issue and has not received any requests re: implementation of the program. Would you like me to forward your email to Council to see if they have any interest in exploring this program further?

Dave

David Williamson, CAO
Town of Northeastern Manitoulin
and the Islands
705-368-3500 ext 224

From: sue mackenzie [mailto:suemackenzie@bellnet.ca]
Sent: February 17, 2021 12:10 PM
To: Dave Williamson
Subject: Fw: Let's Remember Adam Campaign

From: sue mackenzie
Sent: Wednesday, February 17, 2021 11:13 AM
To: info@henleyboats.com
Subject: Let's Remember Adam Campaign

From: sue mackenzie
Sent: Wednesday, February 17, 2021 8:28 AM

Good Morning

I am forwarding this information to see if your municipality has followed this story and to inquire if you have

had any discussions on the interest in the municipality to look into this program

All school buses in Mattawa, Ont., are now equipped with smart cameras to record when motorists pass while the bus is stopped with its lights flashing and stop arm extended.

All school buses in Mattawa, Ont., have been equipped with smart cameras to ticket motorists who pass a school bus when it is stopped and has its lights flashing and stop arm extended.

The cameras were installed due to the efforts of the Let's Remember Adam Campaign.

Five-year old Adam Ranger was killed 21 years ago when a truck struck him as he was getting off his school bus, in front of his home in the town.

Ranger hopes other municipalities will adopt the smart camera technology.

No cost for stop-arm cameras

Ranger's hometown of Mattawa is soon going to be the first jurisdiction in Ontario to implement the stop-arm camera technology on all its school buses. And it's going to cost them absolutely nothing.

A Virginia-based company called BusPatrol is providing the equipment. Jean Souliere is the company's chief executive officer.

"So we go in and we pay for all of the installation, we pay for the equipment that we manufacture and then it is the ticket revenues that ultimately pay for the operating of the program," he explained.

"When we did our pilot in 2016 our Sudbury buses were capturing one violation per bus per day at a \$400 fine," said Souliere.

Thank you

Susan

A. J. Bus Lines

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From: suemackenzie@bellnet.ca

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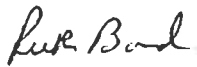
MANITOULIN SNOWDUSTERS

February 24, 2021

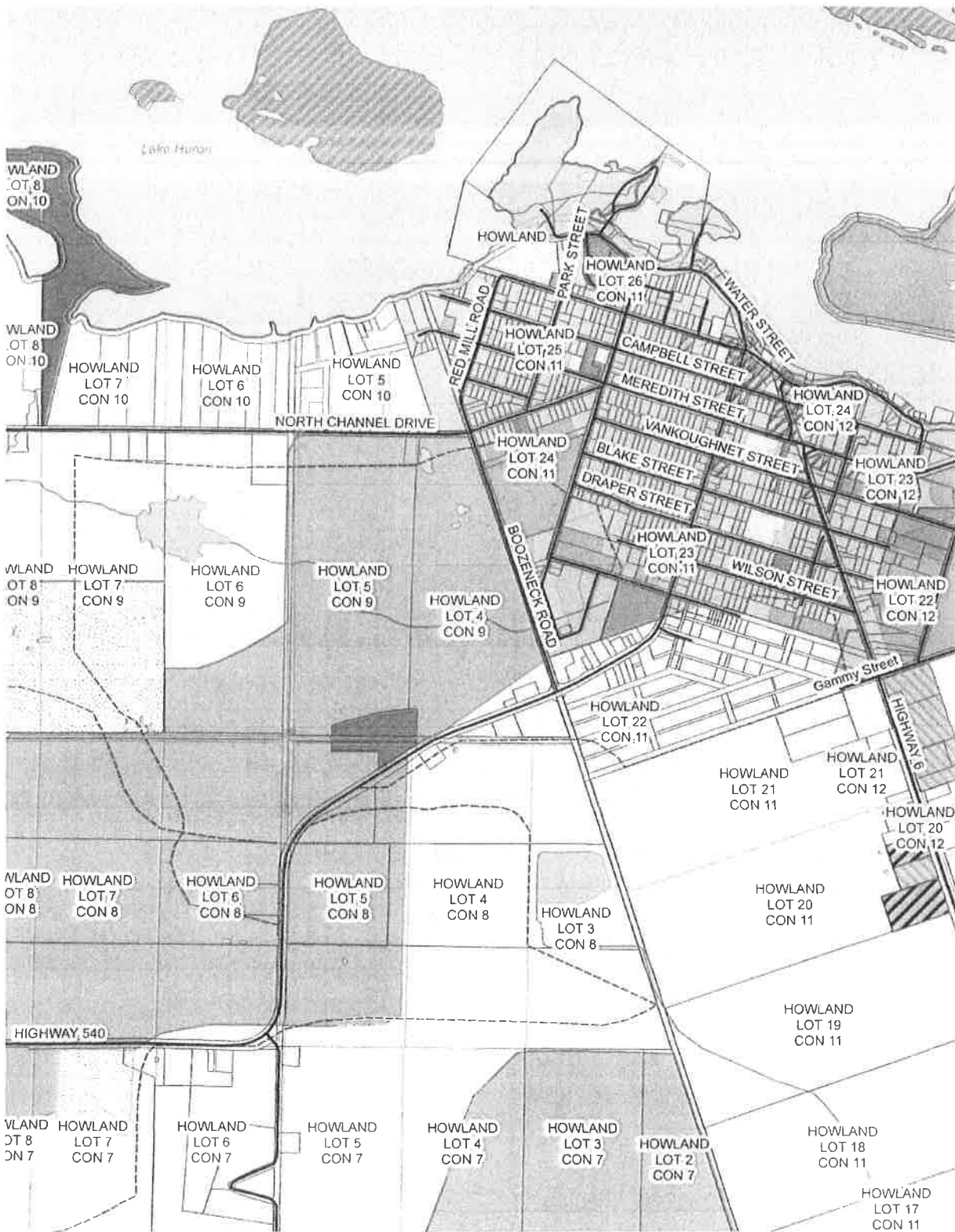
Mayor and Council
Town of Northeastern Manitoulin
and the Islands

Manitoulin Snowdusters is seeking permission for the use of the road allowance between Lots 5 & 6 Con 9 Howland for the use of a snowmobile trail to get away from Boozenek Road for safety concerns.

Thank you

A handwritten signature in cursive script, appearing to read "Rick Bond".

Rick Bond
President



Morphet's Corner North to North Channel
Drive



Canadian
Heritage

Patrimoine
canadien

February 15, 2021

Heidi Ferguson
Economic Development Officer
THE CORPORATION OF THE TOWN OF NORTHEASTERN MANITOULIN AND THE
ISLANDS
14 Water Street East
Post Office Box 608
Little Current, ON
P0P 1K0

Subject: Celebrate Canada Funding Application

Dear Heidi Ferguson:

On behalf of the Minister of Canadian Heritage, it is my pleasure to inform you that your application for funding has been approved.

A grant in the amount of \$4,000 will be awarded to help your organization carry out its activities, under the Celebration and Commemoration Program, Celebrate Canada Component. This funding will be allocated over one government fiscal year 2021-2022 and will be subject to certain terms and conditions, the appropriation of funds by Parliament, and the budget levels of the Program.

One of our program representatives may be in contact with you in the near future to review the terms and conditions related to this funding. As you may already know, the Government of Canada is committed to promoting workplaces free from harassment, abuse and discrimination. I would like to seize this opportunity to remind you of your responsibility to provide a work environment where harassment, abuse and discrimination are not tolerated.

In closing, I would like to take this opportunity to wish you and the members of your organization the greatest success in your endeavours.

Sincerely,

David R. Burton
Regional Director General
Canadian Heritage



The Shaftesbury Inn
P. O. Box 655,
19 Robinson Street,
Little Current, Ontario.
Manitoulin Island, Canada
POP 1K0

FEB 17 2021

NEMI Township

Mayor and Council

Feb 14 2021

Ref: Tourist Information Center

Dear Mayor and Council,

The vacating of the information centre by the Manitoulin Tourist association left a very big vacuum in the Manitoulin tourist industry. I am certain it is felt all across of Manitoulin. Several of our customers noticed and expressed their views. This is the most vital point of entry and for tourists to pick up information.

I would like to recommend that the town of Little Current approach again all the affected Manitoulin townships to sign up and contribute, so they can represent their communities and businesses.

The building today is as important and impressive as when it first opened. It just needs to be properly set up and operated again. With the input of all interested groups that should be quite possible. This is a showcase building for all of Manitoulin to benefit and first impressions count.

I definitely will recommend our township of Central Manitoulin to sign up and use some of our tax money for that worthwhile cause.

Sincerely

Angela and Carmen Argmann Rockgarden Terrace Resort / Shaftesbury Inn

Cc : Central Manitoulin Township

Dear Town of NEMI,

Please stop the coyote bounty. Every coyote killed leaves room for more to move in. Every trap kills and injures many non target animals. Dogs and wolves often get shot as well. And having a bounty leads people to kill animals via all sorts of means.

Furthermore, it is illegal in Ontario to kill animals for gain.

Please instead work with www.coyotewatchcanada.com. They work very successfully with many rural communities. This would save your taxpayers money.

Sincerely,

Nicole Corrado

Total Control Panel

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To: info@townofnemi.on.ca
From: ntcorrado@rogers.com

Message Score: 15
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High (60): Pass
Medium (75): Pass
Low (90): Pass

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This message was delivered because the content filter score did not exceed your filter level.

2020 Year End Fundraising Report

Submitted by Wendy Gauthier

The fundraising account contains Tree of Lights fundraiser money and the 2020 mutual funds transfer.

The total in the fundraising account is \$86,048.81.
Of that, \$21,901.07 was the mutual funds deposit.

The remaining \$60,581.53 was raised by the annual Tree of Lights fundraiser.

This year the Christmas campaign for the Tree of Lights raised \$43,581.53 far above the \$25,000 goal. This money was donated for our Courtyard Reno project and will be used for that purpose. The remaining \$17,000 may be used for other projects as designated by the board.

Just a few items of interest regarding the success of this year's Tree of Lights fundraiser.

It is being used year round by individuals wishing to support the Manor.

The Christmas drive which begins October 1 and ends December 31 saw a significant increase in new donors and an increase in the amount of the average amount donated. Business sponsorships were down, as might be expected with the effect of COVID.

COVID caused a number of changes in how I got the word out and how we received donations. Use of a mailed out flyer and an insert in the Expositor helped reach donors as businesses / libraries / municipal offices which served as locations where people could pick up forms had their access restricted.

In the past 6 years there have been a number of fundraisers. It is worth noting that the Christmas campaigns of just this fundraiser, the Tree of Lights, have raised just over \$162,000 in 6 years.

This year there was an increase in office time (an extra day per week) to help with the book work required for the Tree of Lights....we had hundreds of donations to process...was invaluable both for Peggy and for me as each donation gets a receipt and a thank you card and we were busy! A happy busy!!! I recommend that next year the same time be allowed for Peggy in November and December.

I say this every year, but I am truly amazed by the generosity of our Island community ... even in tough times they see the need and answer the call!



2020 Fourth Quarter Activity Report February 25, 2021

The following is the most recent consolidated Quarterly Report that the DSB will be sending to member municipalities and posting on the public website. Expect Quarterly Reports in February, May, September, and November of each year.

The program statistics are provided separately and updated monthly. They are available on the website by clicking the following link: [Monthly Program Statistics](#)

CAO Overview

The DSB 2020 Fourth Quarter (Unaudited) Financial Report was presented to the Board and projects a year-end municipal **surplus of \$342,293**. Children's Services is forecasted to be on budget. This surplus includes Ontario Works forecasted to be on over budget by \$250,909. Community Housing is forecasted to be under budget by \$347,373. Paramedic Services is forecasted to be under budget by \$224,120. Interest revenue on non-reserve accounts is forecasted to be \$21,709 more than budgeted.

The DSB quarterly financial reports are available on the DSB website by clicking the following link: [Quarterly Financial Reports](#)

Paramedic Services

COVID-19 Pandemic Response

Paramedics continue to play an integral role in COVID-19 across our service area. The service was successful in securing one time funding to assist with High Intensity Supports at Home Program by Ontario Health. Our proposed model's overarching purpose fosters in home assessments, future influenza/COVID-19 vaccinations and on-going care for our marginalized and vulnerable populations. The goal is to avoid Emergency Department overcrowding and Hospital admissions by bringing health care to those who otherwise cannot have reasonable access or who are vulnerable to community spread infections. This goal can be achieved through dedicated resources and collaborative defined coordinated care plans with community stakeholders and Primary Health Care Providers.

Education & Training

This fall marked the return of face-to-face education sessions for all of our active Paramedics. This was a needed event as the spring sessions were cancelled due to the pandemic and the service needed to complete mandatory regulatory compliance training such as N95 fit testing and CPR re-certifications. Overall, there were 10 total face to face training sessions attended by 135 Paramedics over the span of 2 weeks.

Recruitment

Paramedics Services held a fall recruitment process and successfully onboarded 6 Primary Care Paramedics. These 6 new recruits are a welcome addition as we had experienced some unanticipated departures as well as staffing pressures for the COVID-19 Paramedic Response Team. Paramedic Services also put an internal posting out for Relief Superintendents which closed on the second week of December.

Community Naloxone Program

Paramedic Services have now received approval from the Government of Ontario to participate in the Harm Reduction – Naloxone program. Work on logistics, referrals, education and dispensing are on going and we are anticipating a full roll out of the program commencing in second quarter of 2021.

Children's Services

Licensed Child Care Data Profiles

On October 2, 2020 MEDU released the 2020 Annual Report and Licensed Child Care Data. The annual report is a snapshot of the childcare and early years sector and is based on reports submitted to MEDU directly from providers. The data specific to Manitoulin-Sudbury DSB may be accessed here.

Most of the data presented in these reports was collected between March 2019-March 2020. The numbers reflect the period immediately prior to the emergency closure of child care due to Covid-19. Prior to the Covid-19 outbreak, Ontario's early years and child care system continued to grow. The Covid-19 pandemic resulted in temporary closures of child care across the province.

As of September 30, 2020, 93% of the child care centres reopened in Ontario. 100% of centres have reopened in Manitoulin-Sudbury district, while 50% of homes have reopened, the other 50% have elected to close their home.

In the Manitoulin-Sudbury district, the number of spaces has increased by 52% since 2010-11, the number of centres has increased by 33%, all of which are not for profit.

Child Care and Early Years Act, 2014 (CCEYA) Review

The CCEYA came into effect on August 31, 2015. The CCEYA requires a review of the legislation within five years of its coming into effect and a public report on the outcome of the review. The Ministry of Education confirmed the review of the act by memo on October 1, 2020. The proposed regulatory amendments were posted on the Ontario Regulatory Registry for public consultation until November 20, 2020.

Child Care Screening

Staff received a communication on October 2, 2020 regarding the development of a new Covid-19 screening tool for children attending school and child care. Children must be screened daily either virtually or in person.

Child Care Worker Appreciation Day

October 22nd, 2020 marked the 20th annual *Child Care Worker & Early Childhood Educator Appreciation Day*. The sector is facing an unprecedented challenge as a result of the Covid-19 pandemic. At the October Board meeting, the Manitoulin-Sudbury DSB recognized October 22, 2020 as the 20th annual "Child Care Worker & Early Childhood Educator Appreciation Day" in recognition of the education, dedication and commitment of child care workers to children, their families and quality of life of the community.

Operational Guidance Updates

Throughout the fall both child care and EarlyON Operational Guidance documents were updated by MEDU to support the safe reopening of child care and EarlyON.

MEDU Funding Approach 2021

Staff received confirmation that funding approach for Child Care and EarlyON for 2021 would align with the 2020 funding approach communicated in the fall of 2019. This is welcome news and will support continued planning in our community.

Targeted Emergency Child Care

On December 21st, the Premier of Ontario announced Safer at Home Restrictions to help curb the spread of COVID-19. Students enrolled in publicly funded schools moved to virtual learning for the week of January 4 to January 8. As a result of this announcement, staff worked quickly with providers and school board partners to open targeted emergency child care programs for eligible school age children impacted by the order. Programs were opened throughout the Manitoulin-Sudbury DSB to provide service to eligible workers. Operational guidance was developed by MEDU to support programs.

Ontario Works

Ontario Works Caseload

In the fourth quarter of 2020, the Ontario Works/Temporary Care caseload average is 510. Compared to last year at this time, the percentage of caseload remained the same.

Building a Strong Foundation for Success

The Ministry of Children, Community and Social Services announced the release of Building a Strong Foundation for Success: Reducing Poverty in Ontario (2020-2025). In this new five year strategy, a vision for Ontario where everyone can participate in their communities and achieve greater independence, stability and long-term job success to support themselves and their families.

The Key principles of the strategy include:

- Person-centred: help individuals overcome barriers
- Outcomes-focused: measure and report on progress and focus investments on achieving outcomes
- Partnership-driven: work collaboratively and share responsibility
- Integrated: take a whole of government and cross-sectoral approach to create a better coordinated and digitally enabled service system
- Place-based: focus on locally designed and community-led solutions

Accessibility for Ontarians with Disabilities Act (AODA)

As you know, organizations across Ontario are required to comply with accessibility standards under the Accessibility for Ontarians with Disabilities Act and its Integrated Accessibility Standards Regulation.

The DSB staff received a memo on October 5, 2020 containing important information about filing our accessibility compliance report to self-certify and verify that we are in compliance with accessibility standards.

Websites must be compliant by January 1, 2021. The DSB did add a AODA compatibility tool, however, this only made the 80% compliant and the cost to convert our website would be too expensive. In order to keep our conversion costs down, the DSB has created a new website with current year and additional year history. A quote to convert the entire website to French is also being explored.

Employment Ontario

We continue to work hard in promoting Employment Services, Youth Job Connect and Youth Job Connect Summer programs. This year was more challenging due to COVID.

The Ministry of Labour, Training and Skills Development has taken first steps to Redesign the Second Career Program. The design will:

- Prioritize and give faster access to Second Career for laid-off workers from low-skill occupations in sectors most impacted by COVID-19 in 2020;

- Focus on short-duration training up to 52 weeks, including micro-credentials that lead to in-demand jobs in order to be more responsive to labour market conditions;
- Help clients to train in occupations that are in demand within local communities and in priority sectors;
- Begin to digitize the application process in a more user-centred and efficient way.

The ministry will continue to review the program to make sure it is providing the right supports and will plan to make further improvements to modernize the program in Spring 2021.

Food Banks Statistics across the District

On April 1, 2020, as a result of COVID-19, the Manitoulin-Sudbury DSB received Social Services Relief Funding (Phase 1), totalling \$938,400. A portion of this allocation was used to support existing Food Banks across the District as well as create 2 additional ones. A total of 9,196 families were served in 2020 through the Food Banks which is an additional 19% more than the number of families served in 2019.

Community Housing

Waiting list (Applicants)

As of December 31, 2020, the number of waiting applicants decreased by 1%. The applicant breakdown is as follows: Total applications to end of quarter is 514.

1 Bedroom	410	(-11)	2 Bedroom	48	(-2)
3 Bedroom	35	(0)	4 bedroom	21	(-1)

Direct Shelter Subsidy (DSS)

Staff continue to identify and complete the application process with eligible applicants for the DSS program. All applicants receiving the benefit are deemed housed. As of the end of this quarter there were 222 active DSS recipients.

Income Mixing

Per DSB Policy, every effort is being made where the waitlist allows, to mix the Community Housing Buildings with RGI, Affordable and Market Rent Tenants. At the end of the Quarter in 2019, we had secured 10 full market rent tenants and 38 affordable rent tenants throughout the portfolio. As of the end of this quarter we have successfully secured 10 market rent tenants and 63 affordable rent tenants.

Smoke Free Housing – Unit Count-down

As of the end of the 4th quarter of 2020, 172/275 of the portfolio's units are designated as Smoke-free. This represents **63%** of the full portfolio currently. Units are designated as turn-over occurs.

Bill 204 - Helping Tenants and Small Businesses Act, 2020

On October 1, 2020, Bill 204 received Royal Assent, to freeze rent at 2020 levels. The Act amends the Residential Tenancies Act, 2006 (RTA) to freeze residential rent increases in 2021. This means that rents will not increase in 2021 for the vast majority of rented units covered under the *Residential Tenancies Act*.

- The 2021 rent increase guideline, as determined through legislation, was previously set at 1.5% for increases in rent-controlled units between January 1 and December 31, 2021. This was published in the Ontario Gazette on August 29, 2020.

Bill 204 freezes increases that would have happened in the 2021 calendar year. While the rent freeze will end on December 31, 2021, landlords can give 90 days' notice in 2021, for a rent increase that takes effect in 2022.

The actual financial impact of this RGI change is difficult to predict, as the RGI calculation is based on the tenant's income. In any year, there would normally be tenants whose income increases, resulting in an increase in rent paid by them for the year. This is somewhat offset by tenants whose income decreases, resulting in a lower rent paid by them for the coming year. The number of rents impacted by this change has been decreased because of Income-Mixing-by-Building. The compared results from 2019 to 2020 are indicative that the ongoing impacts of the decrease in rental revenue loss due to the rent freeze are offset as a result of the increase in Affordable units.

Social Services Relief Fund (SSRF) – Phase 2

The DSB received additional funds in the SSRF Phase 2 in the amount of \$897,838. SSRF Phase 2 funding will allow the Manitoulin Family Resources agency to expand their current Violence Against Women's shelter, and to build a new food bank/thrift store as their client needs have expanded a great deal. The funding would also include the purchase of a cargo van which would allow for the expanded delivery of needed household good, clothing and food into the communities throughout our service region, to access points such as already existing Food Banks throughout the district.

The Ministry has now completed its review of our business case, has confirmed that they have approved our plan with follow up direction in accordance with a total planning allocation of \$897,838 for the fiscal year 2020-21.

On December 15, 2020, the Board chair received a letter from the Minister of Municipal Affairs and Housing advising that the Manitoulin-Sudbury DSB was approved additional SSRF hold back funding in the amount of **\$176,100**. The DSB submitted an investment plan that indicated the intention to use the additional \$176,100 to fund part of the \$290,650 shortfall for the Manitoulin Family Resources new build which was approved by the Board in the September 2020 Issue Report. This would leave a shortfall of \$114,550 for the new build which Manitoulin Family Resources will be responsible to cover and/or reduce the scope of work.

Canada Ontario Housing Benefit

On December 23, 2020, the Ministry of Municipal Affairs sent a letter to Service Managers. At this time, the Ministry is forecasting the COHB program funding for 2020-21 to be fully committed. Accordingly, no new application to household will be distributed. Applicants will be able to re-apply when new annual planning allocations become available in April 2021.

Infrastructure and Asset Management

COVID-19

During this period staff were busy trying to continue with catch up of outstanding work orders as a result of the first lockdown, but much progress was made in this regard. We continued with daily disinfection of common areas throughout the district and Custodian Staff also assist with Administration Office daily disinfection.

Work Orders

During the quarter (October - December 2020) a total of 251 Work Orders were generated: 183 for Community Housing; 16 for Administration Offices, and 52 for Paramedic Services. There was a total of 169 Work Orders closed during that time.

Building Condition Assessments - Full Portfolio

The Building Condition Assessments (BCAs) Issue Report was presented to the Board at the October 2020 meeting from the completed reports procured from Housing Services Corporation (HSC). The report highlights the critical items for immediate consideration and estimated costs. Additionally, the report breaks down a recommended schedule of required capital work over the next 10-years. The DSB has entered into Contract with HSC to assist with the rollout of the 2021 Capital Recommendations using capital budget and reserves as necessary to complete projects.

Canada-Ontario Community Housing Initiative (COCHI) and Ontario Priorities Housing Initiative (OPHI)

On November 13, staff received a letter from the Assistant Deputy Minister, Josh Paul advising that our business case request to SWAP our Year 2 OPHI monies to Year 3 was approved. With all 3 years now swapped to year 3, there is \$656,700 of OPHI funding. With the net proceeds of our property sales, the DSB will have over \$1.2M to reinvest into affordable housing in the District. Staff are actively reviewing an appropriate site location to build, that satisfies the demand indicated on the housing waiting list.

Summary

The DSB had a very busy quarter. If municipal Councils have any questions or would like DSB staff to attend a municipal Council meeting, please feel free to contact me at the address below.

Fern Dominelli

Chief Administrative Officer

Manitoulin-Sudbury District Services Board

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Variance Analysis December 30, 2020		
Actual to Budget	NET Municipal Variance	Explanation of Unaudited Municipal Share
Ontario Works	\$ 250,909	Municipal share of administration expenses are over budget by \$250,909, the majority due to COVID costs.
Child Care	\$ -	Municipal share of Child Care expenses is estimated to be on budget.
Community Housing	\$ (347,373)	<p>(\$103,180) + (\$139,395) + (\$104,798) = (\$347,373) surplus</p> <p>Federal Funding is (\$103,180) more than budgeted.</p> <p>Direct operated rev & exp and program support allocation is (\$139,395) under budget</p> <ul style="list-style-type: none"> - Rental Revenues are (\$48,306) more than budgeted. - Direct operating expenses are under budget due to: <ul style="list-style-type: none"> utilities (\$17,962) under budget, salaries & benefits for custodians \$3990 over budget, maintenance expenses over budget \$33,003, administration wages & benefits are (\$55,109) under budget due to a vacant position - Administration expenses are over budget \$12,139 - Program Support Allocation is (\$67,150) under budget. <p>Non-Profit, Rent Supp, and Urban Native expenses are (\$104,798) under budget due prior year reconciliations.</p>
Paramedic Services	\$ (224,120)	<p>Paramedic Services is (\$408,552) + \$184,432 = (\$224,120) under budget.</p> <p>The MOHLTC funding is more than budgeted by \$408,552 surplus.</p> <p>Total expenses are under budget by \$184,432</p> <p>Staffing is over budget due to:</p> <ul style="list-style-type: none"> - Regular Wages are over budget by \$199,611; - Other Wages and Severance are over budget by \$113,554; - Benefits are under budget due to WSIB premium rate reduction of \$1.87 per \$100 resulting in (\$149,744); NEER is under budget by (\$331,780); Other Benefits are over budget by \$123,753 - Non Wages are forecasted to be under budget due to: - Program Support is \$23,859 over budget - Trans, Vehicles, Repairs & Supplies is \$205,178 over budget
Interest Revenue	\$ (21,709)	Interest Revenue is (\$21,709) more than budgeted which results in a municipal surplus.
	\$ (342,293)	