CORPORATION OF THE
TOWNSHIP OF BILLINGS

AGENDA

January 17th, 2022 7:30 p.m. **Electronic**

1. OPEN

2. APPROVAL OF AGENDA

3. DISCLOSURE OF PECUNIARY INTEREST

4. ADOPTION OF MINUTES

   a) December 20th, 2021 Regular Council Minutes
   b) January 11th, 2022 Special Council Minutes

5. DELEGATIONS

6. COMMITTEE REPORTS

   a) Library Committee Report – Dec 21, 2021
   b) Medical Centre Ad Hoc Committee Report

7. OLD BUSINESS

8. NEW BUSINESS

   a) Kagawong Drinking Water Inspection Report for 2021
   b) Manitoulin Health Centre (MHC) Donation Surplus
   c) Generator Purchase for the Old Mill Building
   d) Oakville Energy Corporation Lease

9. CORRESPONDENCE

10. INFORMATION

    a) Health and Safety Report December 2021
    b) Annual Report on Drinking Water 2021 and

2020-21 Chief Drinking Water Inspector Annual Report

c) Stantec Heritage Impact Assessment – Little Current Swing Bridge
d) Reuse of Excess Soil at Pits and Quarries in Ontario
e) Ontario Clean Water Agency COVID-19 Update for Clients

11. ACCOUNTS FOR PAYMENT

12. CLOSED SESSION

a) Information Supplied in Confidence to the Municipality

13. CONFIRMING BY-LAW

14. ADJOURNMENT

Memorandum

To: Mayor, Council
cc: Staff, Public
From: Staff
Date: January 13, 2022

RE: January 17, 2022 Council Meeting

4. Minutes

a) December 20th, 2021 Regular Council Minutes

Please review the minutes for approval.

b) January 11th, 2022 Special Council Minutes

Please review the minutes for approval

5. Delegations

None.

6. Committee Reports

a) Library Committee Report – Dec 21, 2021

Councillor Michael Hunt to give report to Council.

b) Medical Centre Ad Hoc Committee Report

Councillor Sharon Jackson to give report to Council.

7. Old Business

None.

8. New Business

a) Kagawong Drinking Water Inspection Report for 2021

Recommendation:
That Council acknowledges receipt of the 2021 Kagawong Drinking Water System Inspect Report.

b) Manitoulin Health Centre (MHC) Donation Surplus

Recommendation:
That Council directs staff to respond to Tim Vine, Manitoulin Health Centre, that the Township of Billings would like the excess donation funds redirected to support MHC's other capital needs.

As detailed in the attached letter received from Tim Vine of Manitoulin Health Centre (MHC), the funds received for the four new ventilators on Manitoulin Island exceeded their goal of $80,000 and

there is now a surplus of funds. Council needs to decide if they want to redirect the donation towards MHC's other capital needs or have the surplus funds sent back to the township.

c) Generator Purchase for the Municipal Office

Recommendation:
That Council directs staff to purchase a new generator for the Municipal Office from Henderson Electric.

The generator at the Municipal Office is no longer working and needs to be replaced as the Municipal Office is the Control Centre in the case of an Emergency. Staff have received quotes and timelines on the availability of a new generator. Terry Addison Electric would be able to purchase a generator for the township but it would not be available for months, a detailed quote was not received. Henderson Electric has submitted and the detailed quote is included in the agenda package.

d) Oakville Energy Corporation Lease

Recommendation:
That Council accepts the ten-year extension to the current lease with Oakville Energy Corporation (OEC) for the operations at the Kagawong Power Generating Station and that Council directs staff to send this lease to the township lawyer, all fees which are to be paid by OEC, for review and updating to ensure the extension is current, understandable and protects the township.

The question on the table is whether Council wants to extend the current lease, as requested by OEC, for an additional 10 years. We are suggesting that the township lawyer review the current lease and update it to make sure it is current, understandable and that most importantly, that it protects the township. All lawyer fees should be paid for by OEC.

9. Correspondence

None.

10. Information

There are a number of items attached for Council's information. Council may move any of these items to new business during the agenda approval for discussion at this meeting, or request that an item(s) be included on a future agenda for discussion.

a) Health and Safety Report December 2021
b) Annual Report on Drinking Water 2021 and 2020-21 Chief Drinking Water Inspector Annual Report
c) Stantec Heritage Impact Assessment – Little Current Swing Bridge
d) Reuse of Excess Soil at Pits and Quarries in Ontario
e) Ontario Clean Water Agency COVID-19 Update for Clients

12. Closed Session

a) There will be a closed session to discuss a matte of information supplied in confidence to the municipality.

The Corporation of the
Township of Billings
Regular Meeting

December 20th, 2021 7:30 p.m. Electronically

Present: Mayor Ian Anderson, Deputy Mayor Bryan Barker, Councillors Sharon Alkenbrack, Michael Hunt and Sharon Jackson
Staff: Kathy McDonald, CAO/Clerk; Tiana Mills, Deputy Clerk; Arthur Moran, By Law Enforcement Officer; Todd Gordon, Economic Development Officer; Cheryl McCulligh, Treasurer; Martin Connell, Fire Chief
Media: Tom Sasvari
Members of the General Public

1. **OPEN**
   2021-419 Hunt - Jackson
   BE IT RESOLVED that this regular meeting of Council be opened with a quorum present at 7:30 p.m. with Mayor Anderson presiding.
   Carried

2. **APPROVAL OF AGENDA**
   2021-420 Alkenbrack - Hunt
   BE IT RESOLVED that the agenda for the December 20th, 2021 regular meeting of Council be accepted as presented.
   Carried

3. **DISCLOSURE OF PECUNIARY INTEREST**

4. **ADOPTION OF MINUTES**
   a) **December 7th, 2021**
      2021-421 Alkenbrack - Barker
      BE IT RESOLVED that the minutes for the December 7th, 2021 regular meeting of Council be accepted as presented.
      Carried

5. **DELEGATIONS**

6. **COMMITTEE REPORTS**
   a) **Climate Action Committee Report – November 24, 2021**
      Council received report.

   b) **Lake Kagawong Resource Committee Report – November 25th, 2021**
      Council received report.

7. **OLD BUSINESS**

8. **NEW BUSINESS**
   a) **2021-59 Employee Salary Grid**

2021-422Alkenbrack - Barker
BE IT RESOLVED that Council accept By-Law 2021-59, being a By-Law to Update Employee Salary Ranges, as presented.

Carried

b) Fire Hall Scoping Plan Review
2021-423 Barker - Jackson
BE IT RESOLVED that Council discuss the options presented by Tulloch Engineering, in the Fire Hall Scoping Report, and Staff, as detailed in the memo, and schedule a dedicated meeting in early 2022 for next steps.

Carried

9. CORRESPONDENCE

10. INFORMATION

a) Building Broadband Faster with Guideline
Council received report.

b) H&M COFI Broadband Project Update
Council received report.

c) Municipal Financial Profile & Financial Indicator Review
Council received report.

d) Township of Scugog Resolution: Dead End Roads
Council received report.

11. ACCOUNTS FOR PAYMENT

2021-424 Hunt - Alkenbrack
BE IT RESOLVED that Council authorizes the following accounts for payment:

General Accounts $204,243.03

and that cheques numbered 7052 to 7083 be authorized for signing as described in the attached register.

Carried

12. CLOSED SESSION

13. CONFIRMING BY-LAW

2021-425 Jackson - Barker
BE IT RESOLVED that By-law 2021-58, being a by-law to confirm the proceedings of Council be given first, second, third reading and enacted.

Carried

14. ADJOURNMENT

2021-426 Barker - Hunt
BE IT RESOLVED that this regular meeting of Council be adjourned at 8:18 p.m.

Carried

_____	_____
Ian Anderson, Mayor	Kathy McDonald, CAO/Clerk

The Corporation of the
Township of Billings
Special Council Meeting

January 11th, 2022 7:00 p.m. Electronic Meeting

Present: Mayor Anderson, Councillors Sharon Alkenbrack, Bryan Barker, Michael Hunt and Sharon Jackson
Staff: Kathy McDonald, CAO/Clerk; Tiana Mills, Deputy Clerk; Todd Gordon, MPM; Arthur Moran, By Law Officer
Media: Tom Sasvari, Lori Thompson
Members of the General Public

1. OPEN

2022-01 Hunt - Alkenbrack
BE IT RESOLVED that this special meeting of Council be opened with a quorum present at 7:03 p.m. with Mayor Anderson presiding.

Carried

2. APPROVAL OF AGENDA

2022-02 Alkenbrack - Barker
BE IT RESOLVED that the agenda for the January 11th, 2022 special meeting of Council be accepted as presented.

Carried

3. DISCLOSURE OF PECUNIARY INTEREST

None.

4. ADOPTION OF MINUTES

None.

5. DELEGATIONS

None

6. COMMITTEE REPORTS

None.

7. OLD BUSINESS

None.

8. NEW BUSINESS

a) Oakville Energy Corporation Lease Negotiation Discussion
Mayor Anderson presented the memo to Council.

Mayor Anderson and Council discussed the lease negotiations proposed by Oakville Energy Corporation (OEC) for the Kagawong Power Generating Station.

9. CORRESPONDENCE
None.

10. INFORMATION
None.

11. ACCOUNTS FOR PAYMENT
None.

12. CLOSED SESSION
None.

13. CONFIRMING BY-LAW
2022-03 Alkenbrack - Barker
BE IT RESOLVED that By-law 2022-01, being a by-law to confirm the proceedings of Council be given first, second, third reading and enacted.

Carried

14. ADJOURNMENT
2022-04 Barker - Hunt
BE IT RESOLVED that this special meeting of Council be adjourned at 7:40 p.m.

Carried

_____ _____

Ian Anderson, Mayor Kathy McDonald, CAO/Clerk

Township of Billings

Council Committee Report

Report To:

Date of Meeting: Dec 21/2021

Report By: Michael Hurst

Committee: Library Board

Highlights/Matters of Interest:

Patron Count for Nov was	88	
Computer Internet use	8	
Overdrive (visits)	94	
Circulation	136	
Renewals	6	
Inter Library Loans	17	
Overdrive (items)	156	
Total Circulation	315	
Desk Cash Photo Copies		$13.00
Donations		$75.00
How it All Began Book sales		$180.00
Out of town Patron fee		$25.00
Total		$293.00

New Laptop up and Running at Library it was bought from Best By and is much faster.

Silent Auction a Great Success.

Thanks to (FOBL) Friends of Billings Library

In Summer it is hoped Mark Demomme will read his books to the library Children, or Record it.

TOWNSHIP OF BILLINGS
Council Committee Report

Report to:	Council, Staff	Date:	2021 in review
Report by:	Sharon Jackson	Committee:	Medical Centre Improvement

The Committee has held a total of six meetings since its inception in April 2021. I would like to take this opportunity to provide an update on what this Committee has accomplished in 2021.

Highlights/Matters of Interest:
Funds on hand for improvements: $150,000

In June a survey was circulated for users of the medical centre to provide input that would be used to assist in decision making for any renovations and infrastructure changes.

They were asked the following questions: are you a user of the facility, how often do you use the centre in a normal non-pandemic year and to rate the importance of various building improvements including the entrance/front door, waiting room, washroom access, lower level access and parking.

83 people took part in the survey. Frequency of use in a year ranged from 1 to 30. The results showed priorities were: entrance/front door, lower level access followed by waiting room and washroom access (almost tied) and lastly parking.

A motion was made at the Committee's September 2, 2021 meeting, moved by Dr Hamilton, seconded by Marian Hester: THAT the Ad Hoc Medical Centre Improvement Committee recommends to (Town of Gore Bay) Council, that the town focus on renovating the ingress and egress of the Medical Centre building, including the front, back and ambulance areas, a reception area that overlooks the wait room and the wait room suite. Carried.

The Town of Gore Bay passed a motion at its September 13, 2021 meeting that reads as follows: Moved by Jack Clark, seconded by Kevin Woestenenk: THAT Gore Bay Council advise the Ad Hoc Medical Centre Committee that we support their recommendations of renovating the ingress and egress of the Medical Centre building, including the front, back and ambulance areas, a reception area that overlooks the wait room and wait room suite. FURTHER that the Ad Hoc Medical Centre Committee continue with recommending a design, costing and fundraising to Gore Bay Council. Carried.

I was unable to attend the most recent meeting held November 15 as I was here with all of you. The minutes were circulated with the following update regarding tender for architectural drawings: Several architectural firms were contacted with all five responding with interest. A tender form was sent out with a closing date of December 13, 2021 AT 3:00 pm. Scope of the project includes: update/modernize the current space, improve access/egress to accommodate barrier free accessibility, improve existing ramp access to basement, reconfigure waiting room/admin area, renovate the washrooms, review and potentially updated building mechanical systems for increased energy efficiency, and review options for improved air filtration.

The building currently offers services of doctors, vacant dentist office, community mental health worker, massage therapist and audiologist.

A donation of $27,500 was given to the Gore Bay Medical Centre towards future renovations to the facility by the Gore Bay Masonic Lodge #472 as reported in the October 27, 2021 edition of the Manitoulin Expositor.

-30-

Ministry of the Environment, Conservation and Parks

Drinking Water and Environmental Compliance Division, Northern Region
Sudbury District, Sudbury Office
199 Larch Street
Suite 1201
Sudbury ON P3E 5P9
Tel.: 705 564-3237
Toll Free: 1-800-890-8516
Fax: 705 564-4180

Ministère de l'Environnement, de la Protection de la nature et des Parcs

Division de la conformité en matière d'eau potable et d'environnement, Direction régionale du Nord
District de Sudbury, bureau de Sudbury
199, rue Larch
Bureau 1201
Sudbury ON P3E 5P9
Tél. : 705 564-3237
Numéro sans frais: 1-800-890-8516
Téléc. : 705 564-4180

December 24, 2021

Ms. Kathy McDonald
Clerk, Township of Billings
P.O. Box 34
Kagawong, Ontario
P0P 1J0

Dear Ms. McDonald:

Attached is the annual inspection report for the Kagawong Drinking Water System.

A new report format is in use for MECP inspections which may cause some confusion. Please note the following:

- Three non-compliance situations are outlined on Pages 3 through 5. The operating authority is aware of these situations.

- "Best Practice" recommendations are outlined in Appendix F. This Summary is included not as a regulatory review but to encourage greater effectiveness in drinking water system operations.

- A description of the components of the drinking water system can be found in Appendix E.

- Of note is the Inspection Rating Record (normally attached) which will be sent under separate cover within one month.

Section 19 of the Safe Drinking Water Act (Standard of Care) creates obligations for individuals who exercise decision-making authority over municipal drinking water systems. Please be aware the Ministry has encouraged such individuals, particularly municipal councillors, to take steps to be better informed about drinking water systems over which they have decision-making authority. These steps could include asking for a copy of this inspection report and a review of its findings. Further information about Section 19 can be found in *"Taking Care of Your Drinking Water: A guide for members*

of municipal council" found under "Resources" on the Drinking Water Ontario website at www.ontario.ca/drinkingwater."

Your staff's cooperation during the inspection was appreciated. Please feel free to contact me at 705 929-7029, should you have questions.

Sincerely,

M. Spinney

Maureen Spinney
Water Inspector
Sudbury District Office

cc. Ms. Sarah Beaulieu, OCWA
Mr. Burgess Hawkins, PHSD

KAGAWONG DRINKING WATER SYSTEM
75 BEACH ST, BILLINGS, ON, P0P 1J0

Inspection Report

System Number:	210003084
Inspection Start Date:	08/19/2021
Inspection End Date:	12/23/2021
Inspected By:	Maureen Spinney
Badge #:	467
Inspected By:	Marnie Managhan
Badge #:	718

M.Spinney

Digitally signed by M.Spinney
DN: cn=M.Spinney, o, ou, email=maureen.spinney@ontario.ca, c=CA
Date: 2021.12.23 20:34:06 -05'00'

(signature)

NON-COMPLIANCE/NON-CONFORMANCE ITEMS

The following item(s) have been identified as non-compliance/non-conformance, based on a "No" response captured for a legislative or best management practice (BMP) question (s), respectively.

Question Group: Certification and Training

Question ID	MRDW1075000	
Question	**Question Type**	**Legislative Requirement**
Do all operators possess the required certification?	Legislative	SDWA | O. Reg. 128/04 | 22
Observation/Corrective Action(s)		
All operators did not possess the required certification. DWI notes: An operator attending the site and acting as OIC on August 2nd, 2021, and, acting as ORO on August 3rd and 4th, 2021, did not have the required licence. The operating authority notified the Ministry of this situation on August 6, 2021, indicating that operator's licence had expired on July 31, 2021, and though operator had made attempts the renewal did not occur until August 6, 2021. This situation may well have been the result of the pandemic. OCWA indicates new procedures are in place. As of August 2021, training and licencing will be a regular topic at all cluster meetings and training reports are being prepared and presented quarterly to management detailing staff's current licencing and training needs. In addition, OCWA has begun providing monthly updates to Management and Compliance based on OWWCO's valid licenced operator reports. Furthermore, management will take a more direct approach when dealing with operators who have let their licences lapse. Direction will be given to staff detailing their responsibilities while an operator awaits renewal of their licence.		

Question Group: Other Inspection Findings

Question ID	MRDW1115000	
Question	**Question Type**	**Legislative Requirement**
In the event that an issue of non-compliance outside the scope of this inspection protocol is identified, a "No" response may be used if further actions are deemed necessary (and approved by the DW Supervisor) to facilitate compliance.	Legislative	Not Applicable
Observation/Corrective Action(s)		
The following instance(s) of non-compliance were also noted during the inspection: DWI notes:		

Regarding the Lead sampling program: This system qualifies for the exempt stage of Lead sampling, thus every third year a minimum of one Lead sample is required in the winter and the summer - to be taken in the distribution system. Also every year, pH and alkalinity sampling are required in the distribution system.

During review period:
February 9, 2021, Lead in distribution sample result 0.03ug/l, with pH and alkalinity.

July 12, 2021, Lead in distribution sample result 0.59ug/l with alkalinity but no pH results.

Operating authority is aware of this oversight.

Question ID	MRDW1116000	
Question	**Question Type**	**Legislative Requirement**
Were the inspection questions sufficient to address other identified best practice issues?	BMP	Not Applicable

Observation/Corrective Action(s)

The following issues were also noted during the inspection:

DWI notes:
Basement ceiling coating is decaying in large strips at a location underneath the first floor chemical overflow holding area. Operating authority must investigate and examine integrity of structure.

Basement wall is the outer wall of clearwell. Cracks are apparent and have been filled years ago. Operator will mark walls so as to track any progression. A clearwell inspection occurred in 2015. Coatings and cracks were examined with recommendations for inspections every three years and further examination by OCWA engineers. These activities should be scheduled to avoid further complications.

The sulphuric acid (pH) system is in place (tank and 2 prominent metering pumps) - either maintain system or remove it.

The lowlift building at the lakeshore requires some maintenance as rainwater seeps in under the main door. Also the wetwell and screens require periodic inspection and cleaning. These activities should be scheduled to avoid problems.

Question Group: Water Quality Monitoring

Question ID	MRDW1088000	
Question	**Question Type**	**Legislative Requirement**
Are all nitrate/nitrite water quality monitoring requirements prescribed by legislation conducted within	Legislative	SDWA | O. Reg. 170/03 | 13-7

the required frequency for the DWS?		

Observation/Corrective Action(s)

All nitrate/nitrite water quality monitoring requirements prescribed by legislation were not conducted within the required frequency for the DWS.

DWI notes: The operating authority pursues sampling a minimum of once every 3 months however the October 5th, 2020, sample was missed.

The operating authority is aware of this oversight.

INSPECTION DETAILS

This section includes all questions that were assessed during the inspection.

Ministry Program: Regulated Activity: DRINKING WATER : DW Municipal Residential

Question ID	MRDW1001000	
Question	**Question Type**	**Legislative Requirement**
What was the scope of this inspection?	Information	Not Applicable
Observation		
The primary focus of this inspection is to confirm compliance with Ministry of the Environment, Conservation and Parks (MECP) legislation as well as evaluating conformance with ministry drinking water policies and guidelines during the inspection period. The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment, and distribution components as well as management practices. This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O.Reg. 170/03). This inspection has been conducted pursuant to Section 81 of the SDWA. This inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements. Drinking Water Inspector (DWI) notes the review period for this inspection is October 1, 2020 to August 31, 2021.		

Question ID	MRDW1000000	
Question	**Question Type**	**Legislative Requirement**
Does this drinking water system provide primary disinfection?	Information	Not Applicable
Observation		
This Drinking Water System provides for both primary and secondary disinfection and distribution of water.		

Question ID	MRDW1011000	
Question	**Question Type**	**Legislative Requirement**
Does the owner have a harmful algal bloom monitoring plan in place?	BMP	Not Applicable
Observation		

The owner had a harmful algal bloom monitoring plan in place.

DWI notes: Operator checks weekly for blue green algae at the raw water pump house. Nothing has been noted to date.

Question ID	MRDW1014000	
Question	**Question Type**	**Legislative Requirement**
Is there sufficient monitoring of flow as required by the MDWL or DWWP issued under Part V of the SDWA?	Legislative	SDWA | 31 | (1)

Observation

There was sufficient monitoring of flow as required by the Municipal Drinking Water Licence or Drinking Water Works Permit issued under Part V of the SDWA.

DWI notes: Schedule C of the Drinking Water Works Permit requires the use, and calibration of flow meters at the following locations:
Treated water flowing to the distribution system. Calibration date is February 14, 2020 and January 22, 2021.
Flow rate and daily volumes of water flowing into the treatment system. Calibration date is February 14, 2020 and January 22, 2021.

Question ID	MRDW1016000	
Question	**Question Type**	**Legislative Requirement**
Is the owner in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the MDWL issued under Part V of the SDWA?	Legislative	SDWA | 31 | (1)

Observation

The owner was in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the Municipal Drinking Water Licence issued under Part V of the SDWA.

DWI notes: The MDWL, Schedule C, specifies a rated capacity for the Kagawong water treatment plant of 900m3/day per membrane train. However the lowlift pump capacity of 11.6 L/second is the limiting factor resulting in a total maximum rated capacity of 1002m³/day. Operator indicates membrane trains have functioned well all year. The dataset provided for the review period, indicates a maximum treated water daily flow of 666.1m³/day in January 2021.

Question ID	MRDW1030000	
Question	**Question Type**	**Legislative Requirement**
Is primary disinfection chlorine monitoring being conducted at a location approved by MDWL and/or DWWP issued under Part V of the SDWA, or at/near a location where the intended CT has just been achieved?	Legislative	SDWA | O. Reg. 170/03 | 7-2 | (1), SDWA | O. Reg. 170/03 | 7-2 | (2)

Observation
Primary disinfection chlorine monitoring was conducted at a location approved by Municipal Drinking Water Licence and/or Drinking Water Works Permit issued under Part V of the SDWA, or at/near a location where the intended CT has just been achieved. DWI notes: Primary disinfection monitoring is accomplished by drawing a sample from a location after the contact tank. Note that the tower does not form part of disinfection calculations. Operator indicates bypassing contact tank is not possible.

Question ID	MRDW1032000		
Question		**Question Type**	**Legislative Requirement**
If the drinking water system obtains water from a surface water source and provides filtration, is continuous monitoring of each filter effluent line being performed for turbidity?		Legislative	SDWA | O. Reg. 170/03 | 7-3 | (2)
Observation			
Continuous monitoring of each filter effluent line was being performed for turbidity.			

Question ID	MRDW1033000		
Question		**Question Type**	**Legislative Requirement**
Is the secondary disinfectant residual measured as required for the large municipal residential distribution system?		Legislative	SDWA | O. Reg. 170/03 | 7-2 | (3), SDWA | O. Reg. 170/03 | 7-2 | (4)
Observation			
The secondary disinfectant residual was measured as required for the distribution system. DWI notes: Sampling in the distribution system is required daily OR four times at four different locations on one day and, at least 48 hours later, three times at three different locations.			

Question ID	MRDW1037000		
Question		**Question Type**	**Legislative Requirement**
Are all continuous monitoring equipment utilized for sampling and testing required by O. Reg.170/03, or MDWL or DWWP or order, equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 6?		Legislative	SDWA | O. Reg. 170/03 | 6-5 | (1) 1-4,SDWA | O. Reg. 170/03 | 6-5 | (1)5-10,SDWA | O. Reg. 170/03 | 6-5 | (1.1)
Observation			
All continuous monitoring equipment utilized for sampling and testing required by O. Reg.170/03,			

or Municipal Drinking Water Licence or Drinking Water Works Permit or order, were equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 6.

Question ID	MRDW1038000		
Question		**Question Type**	**Legislative Requirement**
Is continuous monitoring equipment that is being utilized to fulfill O. Reg. 170/03 requirements performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and recording data with the prescribed format?		Legislative	SDWA | O. Reg. 170/03 | 6-5 | (1) 1-4
Observation			
Continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements was performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and recording data with the prescribed format.			

Question ID	MRDW1035000		
Question		**Question Type**	**Legislative Requirement**
Are operators examining continuous monitoring test results and are they examining the results within 72 hours of the test?		Legislative	SDWA | O. Reg. 170/03 | 6-5 | (1) 1-4,SDWA | O. Reg. 170/03 | 6-5 | (1)5-10
Observation			
Operators were examining continuous monitoring test results and they were examining the results within 72 hours of the test.			

Question ID	MRDW1040000		
Question		**Question Type**	**Legislative Requirement**
Are all continuous analysers calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation?		Legislative	SDWA | O. Reg. 170/03 | 6-5 | (1) 1-4,SDWA | O. Reg. 170/03 | 6-5 | (1)5-10
Observation			
All continuous analysers were calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation. DWI notes: Schedule 6, Regulation 170 requires a check and calibration of continuous analyzers (chlorine and turbidity) as often as necessary, if manufacturer does not specify, to ensure the following margins of error: Free chlorine residual +/- 0.05mg/l at concentrations of up to 1.0mg/l and proportionately higher			

with increased concentrations. OCWA indicates work is completed once per month. Turbidity +/- 0.1NTU. OCWA indicates work is completed once every month.

Question ID	MRDW1108000		
Question		**Question Type**	**Legislative Requirement**
Where continuous monitoring equipment used for the monitoring of free chlorine residual, total chlorine residual, combined chlorine residual or turbidity, required by Regulation 170, an Order, MDWL, or DWWP issued under Part V, SDWA, has triggered an alarm or an automatic shut-off, did a qualified person respond in a timely manner and take appropriate actions?		Legislative	SDWA | O. Reg. 170/03 | 6-5 | (1) 1-4,SDWA | O. Reg. 170/03 | 6-5 | (1)5-10,SDWA | O. Reg. 170/03 | 6-5 | (1.1)
Observation			
Where required continuous monitoring equipment used for the monitoring of chlorine residual and/or turbidity triggered an alarm or an automatic shut-off, a qualified person responded in a timely manner and took appropriate actions.			

Question ID	MRDW1018000		
Question		**Question Type**	**Legislative Requirement**
Has the owner ensured that all equipment is installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit?		Legislative	SDWA | 31 | (1)
Observation			
The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit. DWI notes: During the inspection the following information was noted: The last inspection report recommended checking the functionality of the zebra mussel control system based on results of a 2011 Watech report. In May 2019 divers returned and inspected the intake lines. Though unable to access the zebra mussel control system, divers did find the intake structure to be in generally good condition. Recommendations included cleaning intake screen at least every two years and examining and repairing as necessary straps holding down the chlorine carrier pipe. In 2011, divers noted 60% zebra mussel coverage, which increased to 100% in 2019. -The frazzle ice backwash system in the lowlift building, utilizes dechlorinated, treated water which flows from the plant back down to the lowlift building. It was not in use over the past year. -Currently (see Schedule E) the plant is attributed with 2 log removal credits for Crypto and 3 log removal credits for Giardia, however Schedule A of the DWWP establishes that up to 4 log removal for Crypto and Giardia may be awarded provided that direct integrity testing is performed daily and other requirements (as per the Procedures for Disinfection) are fulfilled. Though the operator indicates that a warning alarm on integrity testing is in place, prior to the use of elevated log removal credits, an SOP needs to be developed which will provide guidance if not a checklist			

for operators. Again this year, the operating authority indicates they will not use the elevated log removal credits available under Schedule A , but will adhere to Schedule E.

-The operator indicates cracks in wall of the clearwell as seen in the basement of the water plant have not progressed, and that he will continue to monitor any progression. Note that a May 22, 2015, inspection of the clearwell by PW Makar Coatings Inspection Ltd. occurred. Recommendations included continuing with inspections every 3 years and a suggestion that OCWA engineers appraise concrete cracking.

-The sulphuric acid system (a standby pH control system) needs to be maintained or removed from the site (tank and 2 metering pumps). An unsigned Form 2 has been prepared for the removal of these items.

-The "post-chlorination" system at the plant is in place (currently unplugged with 2 metering pumps being used for parts) to provide trim chlorine if required. There is no separate day tank. This trim system would use the storage tank associated with "pre-chlorination" system. Though unused, the trim system needs to be maintained.

Question ID	MRDW1021000	
Question	**Question Type**	**Legislative Requirement**
Is the owner/operating authority able to demonstrate that, when required during the inspection period, Form 2 documents were prepared in accordance with their Drinking Water Works Permit?	Legislative	SDWA | 31 | (1)

Observation

The owner/operating authority was in compliance with the requirement to prepare Form 2 documents as required by their Drinking Water Works Permit during the inspection period.

DWI notes:
In 2020 a Form 2 was written to address modifications to the emergency propane generator located at the lowlift building.
The frazzle ice backwash system utilizes dechlorinated, treated water which flows from the plant back down to the lowlift building. Water from this line also cools the radiator in the propane powered emergency generator. In January of 2018, this line froze at the lowlift building causing the operator to shut down the generator till June when the rad was replaced and no longer linked to a treated water line.

A Form 2 was written for the expected removal of the pH system.

Question ID	MRDW1023000	
Question	**Question Type**	**Legislative Requirement**
Do records indicate that the treatment equipment was operated in a manner that achieved the design capabilities	Legislative	SDWA | O. Reg. 170/03 | 1-2 | (2)

required under Ontario Regulation 170/03 or a DWWP and/or MDWL issued under Part V of the SDWA at all times that water was being supplied to consumers?		

Observation

Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a Drinking Water Works Permit and/or Municipal Drinking Water Licence issued under Part V of the SDWA at all times that water was being supplied to consumers.

DWI notes: The Kagawong water treatment process includes ultrafiltration membranes followed by chemical disinfection with sodium hypochlorite to achieve the required log removal/inactivation credits.

Please see Appendices specifically Schedule E of the MDWL for a summary of the plant processes and their respective log removal credits.

MEMBRANE FILTRATION:
In order to achieve the above noted log removal credits for the filtration portion of the treatment, the following criteria (as outlined in Schedule E of the MDWL), must be met:
1. Effective backwash procedures shall be maintained including filter-to-waste or an equivalent procedure to ensure that the effluent turbidity requirements are met at all times. Plant operator and data provided indicate effective backwash procedures are in place with an automated backwash occurring, though operator can change frequency as needed.
2. Membrane integrity shall be monitored by continuous particle counting or by an equivalently effective means such as intermittent pressure decay measurements. Operator indicates daily pressure decay testing system is alarmed.
3. Filtrate turbidity shall be continuously monitored. Data was reviewed. The operator is monitoring, reconciling and making comments on turbidity data.
4. Performance criterion for filtered water turbidity of less than or equal to 0.1 NTU in 99% of the measurements each month shall be met for each filter train. Submitted filter efficiency reports indicate efficiency greater than 99% each month, for each train. Filter efficiency calculator does not include backwash data.
Operator should be completing manual filter efficiency calculations at month end when filtrate turbidity dataset includes false data such as air entrainment.
Operating authority should examine programming for efficiency calculations to ensure accuracy of filter #2 monthly levels given that dataset shows static efficiency even when turbidity is present.

CHLORINATION:
As itemized in Schedule E of the MDWL, credit assignment criteria includes the following items:
1. Continuous chlorine residual monitoring at a location where intended contact time has just been completed. Sample is drawn just past the contact tank.
2. CT provided shall be greater than or equal to CT required. This plant does not have a CT calculator online but instead uses a worst case chlorine residual level (0.70mg/l) as a trigger for operator to examine conditions and calculate CT. This is recorded in logbook. Data was reviewed.

Question ID	MRDW1024000

Question	Question Type	Legislative Requirement
Do records confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined?	Legislative	SDWA | O. Reg. 170/03 | 1-2 | (2)
Observation		
Records confirmed that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined.		

Question ID	MRDW1025000		
Question		**Question Type**	**Legislative Requirement**
Were all parts of the drinking water system that came in contact with drinking water (added, modified, replaced or extended) disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit?		Legislative	SDWA | 31 | (1)
Observation			
All parts of the drinking water system were disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit.			

Question ID	MRDW1062000		
Question		**Question Type**	**Legislative Requirement**
Do records or other record keeping mechanisms confirm that operational testing not performed by continuous monitoring equipment is being done by a certified operator, water quality analyst, or person who meets the requirements of O. Reg. 170/03 7-5?		Legislative	SDWA | O. Reg. 170/03 | 7-5
Observation			
Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was being done by a certified operator, water quality analyst, or person who suffices the requirements of O. Reg. 170/03 7-5.			

Question ID	MRDW1060000		
Question		**Question Type**	**Legislative Requirement**
Do the operations and maintenance manuals meet the requirements of the DWWP and MDWL issued under Part V of the SDWA?		Legislative	SDWA | 31 | (1)
Observation			

The operations and maintenance manuals met the requirements of the Drinking Water Works Permit and Municipal Drinking Water Licence issued under Part V of the SDWA.

Question ID	MRDW1071000		
Question		**Question Type**	**Legislative Requirement**
Has the owner provided security measures to protect components of the drinking water system?		BMP	Not Applicable
Observation			
The owner had provided security measures to protect components of the drinking water system.			

Question ID	MRDW1073000		
Question		**Question Type**	**Legislative Requirement**
Has the overall responsible operator been designated for all subsystems which comprise the drinking water system?		Legislative	SDWA | O. Reg. 128/04 | 23 | (1)
Observation			
The overall responsible operator has been designated for each subsystem.			

Question ID	MRDW1074000		
Question		**Question Type**	**Legislative Requirement**
Have operators in charge been designated for all subsystems for which comprise the drinking water system?		Legislative	SDWA | O. Reg. 128/04 | 25 | (1)
Observation			
Operators-in-charge had been designated for all subsystems which comprised the drinking water system.			

Question ID	MRDW1075000		
Question		**Question Type**	**Legislative Requirement**
Do all operators possess the required certification?		Legislative	SDWA | O. Reg. 128/04 | 22
Observation			
All operators did not possess the required certification. DWI notes: An operator attending the site and acting as OIC on August 2nd, 2021, and, acting as ORO on August 3rd and 4th, 2021, did not have the required licence. The operating authority notified the Ministry of this situation on August 6, 2021, indicating that operator's licence had expired on July 31, 2021, and though operator had made attempts the renewal did not occur until August 6, 2021. This situation may well have been the result of the			

pandemic.

OCWA indicates new procedures are in place. As of August 2021, training and licencing will be a regular topic at all cluster meetings and training reports are being prepared and presented quarterly to management detailing staff's current licencing and training needs. In addition, OCWA has begun providing monthly updates to Management and Compliance based on OWWCO's valid licenced operator reports. Furthermore, management will take a more direct approach when dealing with operators who have let their licences lapse. Direction will be given to staff detailing their responsibilities while an operator awaits renewal of their licence.

Question ID	MRDW1076000	
Question	**Question Type**	**Legislative Requirement**
Do only certified operators make adjustments to the treatment equipment?	Legislative	SDWA | O. Reg. 170/03 | 1-2 | (2)
Observation		
Only certified operators made adjustments to the treatment equipment. DWI notes: Though the licencing renewal process deadlines were not followed by one operator, a renewed licenced was obtained 5 days late.		

Question ID	MRDW1099000	
Question	**Question Type**	**Legislative Requirement**
Do records show that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O. Reg.. 169/03)?	Information	Not Applicable
Observation		
Records showed that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O.Reg. 169/03).		

Question ID	MRDW1094000	
Question	**Question Type**	**Legislative Requirement**
Are all water quality monitoring requirements imposed by the MDWL and DWWP being met?	Legislative	SDWA | 31 | (1)
Observation		
All water quality monitoring requirements imposed by the MDWL or DWWP issued under Part V of the SDWA were being met. DWI notes: Schedule C of the MDWL requires monthly testing of total suspended solids with a maximum annual average concentration of 25mg/l in backwash water flowing to ditch.		

Question ID	MRDW1096000		
Question		**Question Type**	**Legislative Requirement**
Do records confirm that chlorine residual tests are being conducted at the same time and at the same location that microbiological samples are obtained?		Legislative	SDWA | O. Reg. 170/03 | 6-3 | (1)
Observation			
Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained. DWI notes: In all lab reports provided, only one report did not include a free chlorine residual value. Lab report number CA16519-JUN21 (sample date of June 7, 2021) does not include a chlorine residual value for the treated water sample. In accordance with Schedule 6-3 of Regulation 170, the operating authority is required to provide written assurances that all necessary efforts are taken to remind operators of this requirement. It is noted that the plant records are available and indicate that chlorine levels were acceptable.			

Question ID	MRDW1081000		
Question		**Question Type**	**Legislative Requirement**
Are all microbiological water quality monitoring requirements for distribution samples being met?		Legislative	SDWA | O. Reg. 170/03 | 10-2 | (1),SDWA | O. Reg. 170/03 | 10-2 | (2),SDWA | O. Reg. 170/03 | 10-2 | (3)
Observation			
All microbiological water quality monitoring requirements for distribution samples were being met. DWI notes: The following microbiological tests were performed on distribution system samples: Minimum eight samples per month plus one per thousand residents (population is 150), for a minimum of 8 samples per month which were tested/analyzed for Ecoli, Total Coliforms and a minimum of 25% of samples (2) tested/analyzed for general bacteria population.			

Question ID	MRDW1083000		
Question		**Question Type**	**Legislative Requirement**
Are all microbiological water quality monitoring		Legislative	SDWA | O. Reg.

requirements for treated samples being met?		170/03 | 10-3
Observation		
All microbiological water quality monitoring requirements for treated samples were being met. DWI notes: The following microbiological tests were performed on treated water: Minimum one sample per week with testing for E. Coli, Total Coliforms and general bacteria population expressed as Heterotrophic Plate Count.		

Question ID	MRDW1084000	
Question	**Question Type**	**Legislative Requirement**
Are all inorganic water quality monitoring requirements prescribed by legislation conducted within the required frequency?	Legislative	SDWA | O. Reg. 170/03 | 13-2
Observation		
All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency. DWI notes: The owner of a large municipal residential system is required to take a sample every 12 months and test and analyze for inorganic parameters specified in Schedule 23 of Regulation 170. Accomplished on January 6, 2020, and January 18, 2021.		

Question ID	MRDW1085000	
Question	**Question Type**	**Legislative Requirement**
Are all organic water quality monitoring requirements prescribed by legislation conducted within the required frequency?	Legislative	SDWA | O. Reg. 170/03 | 13-4 | (1),SDWA | O. Reg. 170/03 | 13-4 | (2),SDWA | O. Reg. 170/03 | 13-4 | (3)
Observation		
All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency. DWI notes: The owner of a large municipal residential system is required to take a sample every 12 months and test and analyze for organic parameters specified in Schedule 24 of Regulation 170. Accomplished on January 6, 2020, and January 18, 2021.		

Question ID	MRDW1086000	
Question	**Question Type**	**Legislative Requirement**
Are all haloacetic acid water quality monitoring	Legislative	SDWA | O. Reg.

requirements prescribed by legislation conducted within the required frequency and at the required location?		170/03 | 13-6.1 | (1),SDWA | O. Reg. 170/03 | 13-6.1 | (2),SDWA | O. Reg. 170/03 | 13-6.1 | (3), SDWA | O. Reg. 170/03 | 13-6.1 | (4),SDWA | O. Reg. 170/03 | 13-6.1 | (5),SDWA | O. Reg. 170/03 | 13-6.1 | (6)

Observation

All haloacetic acid water quality monitoring requirements prescribed by legislation are being conducted within the required frequency and at the required location.

DWI notes:
The operating authority pursues sampling a minimum of once every 3 months as follows:
January 2, 2019@ 27.9ug/l
April 8, 2019@ 34.5ug/l
July 2, 2019 @ 44.8ug/l
October 8, 2019 @ 57.7ug/l
January 6, 2020 @ 38.6ug/l
April 1, 2020 @ 30.2ug/l
July 2, 2020 @ 35.5ug/l

October 5, 2020 @ 44.6ug/l
January 18, 2021 @ 33.7ug/l
April 7, 2021 @ 36.1ug/l
July 12, 2021 @ 34.5ug/l

RAA = 37.3ug/l. Note that the location for sampling is required to be at a location most likely to have potential for formation. Samples are taken at the Public Works garage.

Question ID	MRDW1087000	
Question	**Question Type**	**Legislative Requirement**
Have all trihalomethane water quality monitoring requirements prescribed by legislation been conducted within the required frequency and at the required location?	Legislative	SDWA | O. Reg. 170/03 | 13-6 | (1)

Observation

All trihalomethane water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.

DWI notes:

The operating authority pursues sampling a minimum of once every 3 months as follows:
January 2, 2019@ 42ug/l
April 8, 2019@ 53ug/l
July 2, 2019 @ 63ug/l
October 8, 2019 @ 100ug/l
January 6, 2020 @ 48ug/l
April 1, 2020 @ 58ug/l
July 2, 2020 @ 75ug/l

October 5, 2020 @ 47ug/l
January 18, 2021 @ 51ug/l
April 7, 2021 @ 42ug/l
July 12, 2021 @ 71ug/l

RAA = 53ug/l. Note that the location for sampling is required to be at a location most likely to have potential for formation. Samples are taken at the Old Mill site.

Question ID	MRDW1088000	
Question	**Question Type**	**Legislative Requirement**
Are all nitrate/nitrite water quality monitoring requirements prescribed by legislation conducted within the required frequency for the DWS?	Legislative	SDWA | O. Reg. 170/03 | 13-7

Observation

All nitrate/nitrite water quality monitoring requirements prescribed by legislation were not conducted within the required frequency for the DWS.

DWI notes: The operating authority pursues sampling a minimum of once every 3 months however the October 5th, 2020, sample was missed.

The operating authority is aware of this oversight.

Question ID	MRDW1089000	
Question	**Question Type**	**Legislative Requirement**
Are all sodium water quality monitoring requirements prescribed by legislation conducted within the required frequency?	Legislative	SDWA | O. Reg. 170/03 | 13-8

Observation

All sodium water quality monitoring requirements prescribed by legislation were conducted within the required frequency.

DWI notes: The operating authority pursues sampling a minimum of once every 60 months. Last sample occurred on January 18, 2021 with results of 5.84mg/l.

Question ID	MRDW1090000		
Question		**Question Type**	**Legislative Requirement**
Where fluoridation is not practiced, are all fluoride water quality monitoring requirements prescribed by legislation conducted within the required frequency?		Legislative	SDWA | O. Reg. 170/03 | 13-9
Observation			
All fluoride water quality monitoring requirements prescribed by legislation were conducted within the required frequency. DWI: The operating authority pursues sampling a minimum of once every 60 months. Last sample occurred on January 18, 2021, with results of 0.1mg/l.			

Question ID	MRDW1100000		
Question		**Question Type**	**Legislative Requirement**
Did any reportable adverse/exceedance conditions occur during the inspection period?		Information	Not Applicable
Observation			
There were reportable adverse/exceedances during the inpsection period. DWI notes: AWQI # 154069 was issued proactively for hydrant relocation.			

Question ID	MRDW1102000		
Question		**Question Type**	**Legislative Requirement**
Have corrective actions (as per Schedule 18) been taken to address adverse conditions, including any other steps as directed by the Medical Officer of Health?		Legislative	SDWA | O. Reg. 170/03 | 18-10 | (1),SDWA | O. Reg. 170/03 | 18-11,SDWA | O. Reg. 170/03 | 18-12,SDWA | O. Reg. 170/03 | 18-13,SDWA | O. Reg. 170/03 | 18-14,SDWA | O. Reg. 170/03 | 18-2,SDWA | O. Reg. 170/03 | 18-3,SDWA | O. Reg. 170/03 | 18-4,SDWA | O. Reg. 170/03 | 18-

		5,SDWA | O. Reg. 170/03 | 18-6,SDWA | O. Reg. 170/03 | 18-9

Observation

Corrective actions (as per Schedule 18) had been taken to address adverse conditions, including any other steps that were directed by the Medical Officer of Health.

Question ID	MRDW1115000	
Question	**Question Type**	**Legislative Requirement**
In the event that an issue of non-compliance outside the scope of this inspection protocol is identified, a "No" response may be used if further actions are deemed necessary (and approved by the DW Supervisor) to facilitate compliance.	Legislative	Not Applicable

Observation

The following instance(s) of non-compliance were also noted during the inspection:

DWI notes:
Regarding the Lead sampling program: This system qualifies for the exempt stage of Lead sampling, thus every third year a minimum of one Lead sample is required in the winter and the summer - to be taken in the distribution system. Also every year, pH and alkalinity sampling are required in the distribution system.

During review period:
February 9, 2021, Lead in distribution sample result 0.03ug/l, with pH and alkalinity.

July 12, 2021, Lead in distribution sample result 0.59ug/l with alkalinity but no pH results.

Operating authority is aware of this oversight.

Question ID	MRDW1116000	
Question	**Question Type**	**Legislative Requirement**
Were the inspection questions sufficient to address other identified best practice issues?	BMP	Not Applicable

Observation

The following issues were also noted during the inspection:

DWI notes:
Basement ceiling coating is decaying in large strips at a location underneath the first floor chemical overflow holding area. Operating authority must investigate and examine integrity of structure.

Basement wall is the outer wall of clearwell. Cracks are apparent and have been filled years ago. Operator will mark walls so as to track any progression. A clearwell inspection occurred in 2015. Coatings and cracks were examined with recommendations for inspections every three years and further examination by OCWA engineers. These activities should be scheduled to avoid further complications.

The sulphuric acid (pH) system is in place (tank and 2 prominent metering pumps) - either maintain system or remove it.

The lowlift building at the lakeshore requires some maintenance as rainwater seeps in under the main door. Also the wetwell and screens require periodic inspection and cleaning. These activities should be scheduled to avoid problems.

Question ID	MRDW1117000	
Question	**Question Type**	**Legislative Requirement**
Are there any other DWS related items that should be recognized in this report?	Information	Not Applicable

Observation

The following items are noted as being relevant to the Drinking Water System:

Operator notes:
-A new chlorine board is expected to be installed soon.

-The field bed was pumped two years ago.

-No problems with the emergency generator and associated propane supply in the past year.

Question ID	MRDW1059000	
Question	**Question Type**	**Legislative Requirement**
Do the operations and maintenance manuals contain plans, drawings and process descriptions sufficient for the safe and efficient operation of the system?	Legislative	SDWA | O. Reg. 128/04 | 28

Observation

The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.

Question ID	MRDW1061000	
Question	**Question Type**	**Legislative Requirement**
Are logbooks properly maintained and contain the required information?	Legislative	SDWA | O. Reg. 128/04 | 27 | (1),

		SDWA | O. Reg. 128/04 | 27 | (2), SDWA | O. Reg. 128/04 | 27 | (3), SDWA | O. Reg. 128/04 | 27 | (4), SDWA | O. Reg. 128/04 | 27 | (5), SDWA | O. Reg. 128/04 | 27 | (6), SDWA | O. Reg. 128/04 | 27 | (7)

Observation

Logbooks were properly maintained and contained the required information.

DWI notes: Electronic logbooks are used. Operators are reminded to enter start date and end date of equipment out of service.

Appendix A

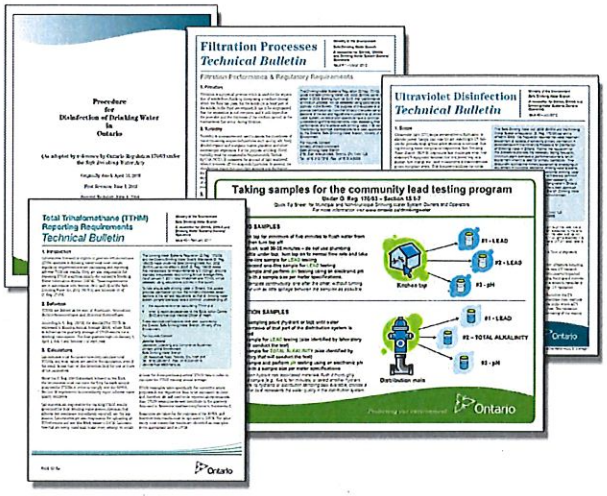
March 2015

Key Reference and Guidance Material for Municipal Residential Drinking Water Systems

Many useful materials are available to help you operate your drinking water system. Below is a list of key materials owners and operators of municipal residential drinking water systems frequently use.

To access these materials online click on their titles in the table below or use your web browser to search for their titles. Contact the Public Information Centre if you need assistance or have questions at 1-800-565-4923/416-325-4000 or **picemail.moe@ontario.ca**.

For more information on Ontario's drinking water visit **www.ontario.ca/drinkingwater** and email **drinking.water@ontario.ca** to subscribe to drinking water news.



PUBLICATION TITLE	PUBLICATION NUMBER
Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils	7889e01
FORMS: Drinking Water System Profile Information, Laboratory Services Notification, Adverse Test Result Notification Form	7419e, 5387e, 4444e
Procedure for Disinfection of Drinking Water in Ontario	4448e01
Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids	7152e
Total Trihalomethane (TTHM) Reporting Requirements Technical Bulletin (February 2011)	8215e
Filtration Processes Technical Bulletin	7467
Ultraviolet Disinfection Technical Bulletin	7685
Guide for Applying for Drinking Water Works Permit Amendments, Licence Amendments, Licence Renewals and New System Applications	7014e01
Certification Guide for Operators and Water Quality Analysts	
Guide to Drinking Water Operator Training Requirements	9802e
Taking Samples for the Community Lead Testing Program	6560e01
Community Sampling and Testing for Lead: Standard and Reduced Sampling and Eligibility for Exemption	7423e
Guide: Requesting Regulatory Relief from Lead Sampling Requirements	6610
Drinking Water System Contact List	7128e
Technical Support Document for Ontario Drinking Water Quality Standards	4449e01

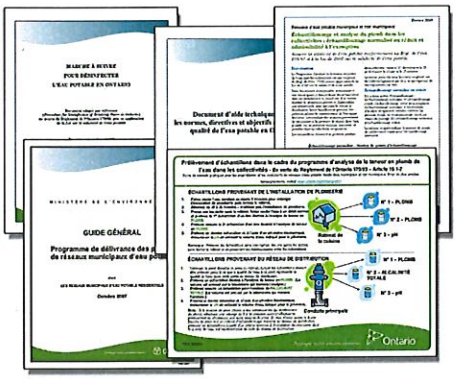
PIBS 8990b01

Ontario

Principaux guides et documents de référence sur les réseaux résidentiels municipaux d'eau potable

De nombreux documents utiles peuvent vous aider à exploiter votre réseau d'eau potable. Vous trouverez ci-après une liste de documents que les propriétaires et exploitants de réseaux résidentiels municipaux d'eau potable utilisent fréquemment.

Pour accéder à ces documents en ligne, cliquez sur leur titre dans le tableau ci-dessous ou faites une recherche à l'aide de votre navigateur Web. Communiquez avec le Centre d'information au public au 1 800 565-4923 ou au 416 325-4000, ou encore à **picemail.moe@ontario.ca** si vous avez des questions ou besoin d'aide.



Pour plus de renseignements sur l'eau potable en Ontario, consultez le site **www.ontario.ca/eaupotable** ou envoyez un courriel à **drinking.water@ontario.ca** pour suivre l'information sur l'eau potable.

TITRE DE LA PUBLICATION	NUMÉRO DE PUBLICATION
Prendre soin de votre eau potable – Un guide destiné aux membres des conseils municipaux	7889f01
Renseignements sur le profil du réseau d'eau potable, Avis de demande de services de laboratoire, Formulaire de communication de résultats d'analyse insatisfaisants et du règlement des problèmes	7419f, 5387f, 4444f
Marche à suivre pour désinfecter l'eau potable en Ontario	4448f01
Strategies for Minimizing the Disinfection Products Thrihalomethanes and Haloacetic Acids (en anglais seulement)	7152e
Total Trihalomethane (TTHM) Reporting Requirements: Technical Bulletin (février 2011) (en anglais seulement)	8215e
Filtration Processes Technical Bulletin (en anglais seulement)	7467
Ultraviolet Disinfection Technical Bulletin (en anglais seulement)	7685
Guide de présentation d'une demande de modification du permis d'aménagement de station de production d'eau potable, de modification du permis de réseau municipal d'eau potable, de renouvellement du permis de réseau municipal d'eau potable et de permis pour un nouveau réseau	7014f01
Guide sur l'accréditation des exploitants de réseaux d'eau potable et des analystes de la qualité de l'eau de réseaux d'eau potable	
Guide sur les exigences relatives à la formation des exploitants de réseaux d'eau potable	9802f
Prélèvement d'échantillons dans le cadre du programme d'analyse de la teneur en plomb de l'eau dans les collectivités	6560f01
Échantillonnage et analyse du plomb dans les collectivités : échantillonnage normalisé ou réduit et admissibilité à l'exemption	7423f
Guide: Requesting Regulatory Relief from Lead Sampling Requirements (en anglais seulement)	6610
Liste des personnes-ressources du réseau d'eau potable	7128f
Document d'aide technique pour les normes, directives et objectifs associés à la qualité de l'eau potable en Ontario	4449f01

PIBS 8990b01

Ontario

Appendix B

Ontario

MUNICIPAL DRINKING WATER LICENCE

Licence Number: 255-101
Issue Number: 3

Pursuant to the *Safe Drinking Water Act*, 2002, S.O. 2002, c. 32, and the regulations made thereunder and subject to the limitations thereof, this municipal drinking water licence is issued under Part V of the *Safe Drinking Water Act*, 2002, S.O. 2002, c. 32 to:

The Corporation of the Township of Billings

15 Old Mill Road
Kagawong, ON
P0P 1J0

For the following municipal residential drinking water system:

Kagawong Drinking Water System

This municipal drinking water licence includes the following:

Schedule	Description
Schedule A	Drinking Water System Information
Schedule B	General Conditions
Schedule C	System-Specific Conditions
Schedule D	Conditions for Relief from Regulatory Requirements
Schedule E	Pathogen Log Removal/Inactivation Credits

DATED at TORONTO this 23rd day of April, 2021

Signature

A. Ahmed

Aziz Ahmed, P.Eng.
Director
Part V, *Safe Drinking Water Act*, 2002

Schedule A: Drinking Water System Information

System Owner	**The Corporation of the Township of Billings**
Licence Number	**255-101**
Drinking Water System Name	**Kagawong Drinking Water System**
Schedule A Issue Date	**April 23, 2021**

The following information is applicable to the above drinking water system and forms part of this licence:

Licence

Licence Issue Date	April 23, 2021
Licence Expiry Date	November 30, 2021
Application for Licence Renewal Date	September 30, 2021

Drinking Water Works Permit

Drinking Water System Name	Permit Number	Issue Date
Kagawong Drinking Water System	255-201	May 20, 2016

Permits to Take Water

Water Taking Location	Permit Number	Issue Date
Lake Huron (North Channel, Mudge Bay)	7363-7SXNEP	June 12, 2009

Financial Plans

The Financial Plan Number for the Financial Plan required to be developed for this drinking water system in accordance with O. Reg. 453/07 shall be:	255-301
Alternately, if one Financial Plan is developed for all drinking water systems owned by the owner, the Financial Plan Number shall be:	255-301A

Accredited Operating Authority

Drinking Water System or Operational Subsystems	Accredited Operating Authority	Operational Plan No.	Operating Authority No.
Kagawong Drinking Water System	Ontario Clean Water Agency	255-401	255-OA1

Schedule B: General Conditions

System Owner	**The Corporation of the Township of Billings**
Licence Number	**255-101**
Drinking Water System Name	**Kagawong Drinking Water System**
Schedule B Issue Date	**April 23, 2021**

1.0 Definitions

1.1 Words and phrases not defined in this licence and the associated drinking water works permit shall be given the same meaning as those set out in the SDWA and any regulations made in accordance with that act, unless the context requires otherwise.

1.2 In this licence and the associated drinking water works permit:

"**adverse effect**", "**contaminant**" and "**natural environment**" shall have the same meanings as in the EPA;

"**alteration**" may include the following in respect of this drinking water system:

(a) An addition to the system,
(b) A modification of the system,
(c) A replacement of part of the system, and
(d) An extension of the system;

"**compound of concern**" means a contaminant that, based on generally available information, may be emitted from a component of the drinking water system to the atmosphere in a quantity that is significant either in comparison to the relevant point of impingement limit or if a point of impingement limit is not available for the compound, then based on generally available toxicological information, the compound has the potential to cause an adverse effect as defined by the EPA at a point of impingement;

"**Director**" means a Director appointed pursuant to section 6 of the SDWA for the purposes of Part V of the SDWA;

"**drinking water works permit**" means the drinking water works permit for the drinking water system, as identified in Schedule A of this licence and as amended from time to time;

"emission summary table" means the table that was prepared by a Professional Engineer in accordance with O. Reg. 419/05 and the procedure document listing the appropriate point of impingement concentrations of each compound of concern emitted from a component of the drinking water system and providing comparison to the corresponding point of impingement limit;

"EPA" means the *Environmental Protection Act*, R.S.O. 1990, c. E.19;

"**financial plan**" means the financial plan required by O. Reg. 453/07;

"**licence**" means this municipal drinking water licence for the municipal drinking water system identified in Schedule A of this licence;

"**operational plan**" means an operational plan developed in accordance with the Director's Directions – Minimum Requirements for Operational Plans made under the authority of subsection 15(1) of the SDWA;

"**owner**" means the owner of the drinking water system as identified in Schedule A of this licence;

"**permit to take water**" means the permit to take water that is associated with the taking of water for purposes of the operation of the drinking water system, as identified in Schedule A of this licence and as amended from time to time;

"**point of impingement**" means any point in the natural environment that is not on the same property as the source of the contaminant and as defined by section 2 of O. Reg. 419/05;

"**point of impingement limit**" means the appropriate standard from Schedule 1, 2 or 3 of O. Reg. 419/05 and if a standard is not provided for a compound of concern, the appropriate criteria listed in the Ministry of the Environment and Climate Change publication titled "Summary of Standards and Guidelines to support Ontario Regulation 419: Air Pollution – Local Air Quality (including Schedule 6 of O. Reg. 419 on Upper Risk Thresholds)", dated February 2008, as amended;

"**procedure document**" means the Ministry of the Environment and Climate Change procedure titled "Procedure for Preparing an Emission Summary and Dispersion Modelling Report" dated July 2005, as amended;

"**Professional Engineer**" means a Professional Engineer who has been licenced to practice in the Province of Ontario;

"**provincial officer**" means a provincial officer appointed pursuant to section 8 of the SDWA;

"**publication NPC-300**" means the Ministry of the Environment and Climate Change publication titled "Environmental Noise Guideline: Stationary and Transportation Sources – Approval and Planning" dated August 2013, as amended;

"**SDWA**" means the *Safe Drinking Water* Act, 2002, S.O. 2002, c. 32;

"**sensitive populations**" means any one or a combination of the following locations where the health effects of nitrogen oxides emissions from emergency generators shall be considered using the point of impingement limit instead of the Ministry of the Environment and Climate Change screening level for emergency generators:

(a) health care units (e.g., hospitals and nursing homes),
(b) primary/junior public schools,
(c) day-care facilities, and
(d) playgrounds;

"**subsystem**" has the same meaning as in Ontario Regulation 128/04 (Certification of Drinking Water System Operators and Water Quality Analysts);

"**surface water**" means water bodies (lakes, wetlands, ponds - including dug-outs), water courses (rivers, streams, water-filled drainage ditches), infiltration trenches, and areas of seasonal wetlands;

2.0 Applicability

2.1 In addition to any other requirements, the drinking water system identified above shall be established, altered and operated in accordance with the conditions of the drinking water works permit and this licence.

3.0 Licence Expiry

3.1 This licence expires on the date identified as the licence expiry date in Schedule A of this licence.

4.0 Licence Renewal

4.1 Any application to renew this licence shall be made on or before the date identified as the application for licence renewal date set out in Schedule A of this licence.

5.0 Compliance

5.1 The owner and operating authority shall ensure that any person authorized to carry out work on or to operate any aspect of the drinking water system has been informed of the SDWA, all applicable regulations made in accordance with that act, the drinking water works permit and this licence and shall take all reasonable measures to ensure any such person complies with the same.

6.0 Licence and Drinking Water Works Permit Availability

6.1 At least one copy of this licence and the drinking water works permit shall be stored in such a manner that they are readily viewable by all persons involved in the operation of the drinking water system.

7.0 Permit to Take Water and Drinking Water Works Permit

7.1 A permit to take water identified in Schedule A of this licence is the applicable permit on the date identified as the Schedule A Issue Date.

7.2 A drinking water works permit identified in Schedule A of this licence is the applicable permit on the date identified as the Schedule A Issue Date.

8.0 Financial Plan

8.1 For every financial plan prepared in accordance with subsections 2(1) and 3(1) of O. Reg. 453/07, the owner of the drinking water system shall:

8.1.1 Ensure that the financial plan contains on the front page of the financial plan, the appropriate financial plan number as set out in Schedule A of this licence; and

8.1.2 Submit a copy of the financial plan to the Ministry of Municipal Affairs and Housing within three (3) months of receiving approval by a resolution of municipal council or the governing body of the owner.

9.0 Interpretation

9.1 Where there is a conflict between the provisions of this licence and any other document, the following hierarchy shall be used to determine the provision that takes precedence:

9.1.1 The SDWA*;*

9.1.2 A condition imposed in this licence that explicitly overrides a prescribed regulatory requirement;

9.1.3 A condition imposed in the drinking water works permit that explicitly overrides a prescribed regulatory requirement;

9.1.4 Any regulation made under the SDWA;

9.1.5 Any provision of this licence that does not explicitly override a prescribed regulatory requirement;

9.1.6 Any provision of the drinking water works permit that does not explicitly override a prescribed regulatory requirement;

9.1.7 Any application documents listed in this licence, or the drinking water works permit from the most recent to the earliest; and

9.1.8 All other documents listed in this licence, or the drinking water works permit from the most recent to the earliest.

9.2 If any requirement of this licence or the drinking water works permit is found to be invalid by a court of competent jurisdiction, the remaining requirements of this licence and the drinking water works permit shall continue to apply.

9.3 The issuance of and compliance with the conditions of this licence and the drinking water works permit does not:

9.3.1 Relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement, including the *Environmental Assessment Act*, R.S.O. 1990, c. E.18; and

9.3.2 Limit in any way the authority of the appointed Directors and provincial officers of the Ministry of the Environment and Climate Change to require certain steps be taken or to require the owner to furnish any further information related to compliance with the conditions of this licence or the drinking water works permit.

9.4 For greater certainty, nothing in this licence or the drinking water works permit shall be read to provide relief from regulatory requirements in accordance with section 46 of the SDWA, except as expressly provided in the licence or the drinking water works permit.

10.0 Adverse Effects

10.1 Nothing in this licence or the drinking water works permit shall be read as to permit:

10.1.1 The discharge of a contaminant into the natural environment that causes or is likely to cause an adverse effect; or

10.1.2 The discharge of any material of any kind into or in any waters or on any shore or bank thereof or into or in any place that may impair the quality of the water of any waters.

10.2 All reasonable steps shall be taken to minimize and ameliorate any adverse effect on the natural environment or impairment of the quality of water of any waters resulting from the operation of the drinking water system including such accelerated or additional monitoring as may be necessary to determine the nature and extent of the effect or impairment.

10.3 Fulfillment of one or more conditions imposed by this licence or the drinking water works permit does not eliminate the requirement to fulfill any other condition of this licence or the drinking water works permit.

11.0 Change of Owner or Operating Authority

11.1 This licence is not transferable without the prior written consent of the Director.

11.2 The owner shall notify the Director in writing at least 30 days prior to a change of any operating authority identified in Schedule A of this licence.

11.2.1 Where the change of operating authority is the result of an emergency situation, the owner shall notify the Director in writing of the change as soon as practicable.

12.0 Information to be Provided

12.1 Any information requested by a Director or a provincial officer concerning the drinking water system and its operation, including but not limited to any records required to be kept by this licence or the drinking water works permit, shall be provided upon request.

13.0 Records Retention

13.1 Except as otherwise required in this licence or the drinking water works permit, any records required by or created in accordance with this licence or the drinking water works permit, other than the records specifically referenced in section 12 of O. Reg. 170/03, shall be retained for at least 5 years and made available for inspection by a provincial officer, upon request.

14.0 Chemicals and Materials

14.1 All chemicals and materials used in the alteration or operation of the drinking water system that come into contact with water within the system shall meet all applicable standards set by both the American Water Works Association ("AWWA") and the American National Standards Institute ("ANSI") safety criteria standards NSF/60, NSF/61 and NSF/372.

14.1.1 In the event that the standards are updated, the owner may request authorization from the Director to use any on hand chemicals and materials that previously met the applicable standards.

14.1.2 The requirement for the owner to comply with NSF/372 shall come into force no later than May 19, 2018.

14.2 The most current chemical and material product registration documentation from a testing institution accredited by either the Standards Council of Canada or by the American National Standards Institution ("ANSI") shall be available at all times for each chemical and material used in the operation of the drinking water system that comes into contact with water within the system.

14.3 Conditions 14.1 and 14.2 do not apply in the case of the following:

14.3.1 Water pipe and pipe fittings meeting AWWA specifications made from ductile iron, cast iron, PVC, fibre and/or steel wire reinforced cement pipe or high density polyethylene (HDPE);

14.3.2 Articles made from stainless steel, glass, HDPE or Teflon®;

14.3.3 Cement mortar for watermain lining and for water contacting surfaces of concrete structures made from washed aggregates and Portland cement;

14.3.4 Gaskets that are made from NSF approved materials;

14.3.5 Food grade oils and lubricants, food grade anti-freeze, and other food grade chemicals and materials that are compatible for drinking water use; or

14.3.6 Any particular chemical or material where the owner has written documentation signed by the Director that indicates that the Ministry of the Environment and Climate Change is satisfied that the chemical or material is acceptable for use within the drinking water system and the chemical or material is only used as permitted by the documentation.

15.0 Drawings

15.1 All drawings and diagrams in the possession of the owner that show any treatment subsystem as constructed shall be retained by the owner unless the drawings and diagrams are replaced by a revised or updated version showing the subsystem as constructed subsequent to the alteration.

15.2 Any alteration to any treatment subsystem shall be incorporated into process flow diagrams, process and instrumentation diagrams, and record drawings and diagrams within one year of the substantial completion of the alteration.

15.3 Process flow diagrams and process and instrumentation diagrams for any treatment subsystem shall be kept in a place, or made available in such a manner, that they may be readily viewed by all persons responsible for all or part of the operation of the drinking water system.

16.0 Operations and Maintenance Manual

16.1 An up-to-date operations and maintenance manual or manuals shall be maintained and applicable parts of the manual or manuals shall be made available for reference by all persons responsible for all or part of the operation or maintenance of the drinking water system.

16.2 The operations and maintenance manual or manuals, shall include at a minimum:

16.2.1 The requirements of this licence and associated procedures;

16.2.2 The requirements of the drinking water works permit for the drinking water system;

16.2.3 A description of the processes used to achieve primary and secondary disinfection within the drinking water system, including where applicable:

a) A copy of the CT calculations that were used as the basis for primary disinfection under worst case operating conditions; and

b) The validated operating conditions for UV disinfection equipment, including a copy of the validation certificate;

16.2.4 Procedures for monitoring and recording the in-process parameters necessary for the control of any treatment subsystem and for assessing the performance of the drinking water system;

16.2.5 Procedures for the operation and maintenance of monitoring equipment;

16.2.6 Contingency plans and procedures for the provision of adequate equipment and material to deal with emergencies, upset conditions and equipment breakdown;

16.2.7 Procedures for dealing with complaints related to the drinking water system, including the recording of the nature of the complaint and any investigation and corrective action taken in respect of the complaint;

16.3 Procedures necessary for the operation and maintenance of any alterations to the drinking water system shall be incorporated into the operations and maintenance manual or manuals prior to those alterations coming into operation.

16.4 The requirement for the owner to comply with condition 16.2.3 shall come into force on November 19, 2016.

Schedule C: System-Specific Conditions

System Owner	**The Corporation of the Township of Billings**
Licence Number	**255-101**
Drinking Water System Name	**Kagawong Drinking Water System**
Schedule C Issue Date	**April 23, 2021**

1.0 System Performance

Rated Capacity

1.1 For each treatment subsystem listed in column 1 of Table 1, the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system shall not exceed the value identified as the rated capacity in column 2 of the same row.

Table 1: Rated Capacity

Column 1 Treatment Subsystem Name	Column 2 Rated Capacity (m^3/day)
Kagawong Water Treatment Plant	1,002

Maximum Flow Rates

1.2 For each treatment subsystem listed in column 1 of Table 2, the maximum flow rate of water that flows into a treatment subsystem component listed in column 2 shall not exceed the value listed in column 3 of the same row.

Table 2: Maximum Flow Rates

Column 1 Treatment Subsystem Name	Column 2 Treatment Subsystem Component	Column 3 Maximum Flow Rate (L/s)
Not Applicable	Not Applicable	Not Applicable

1.3 Despite conditions 1.1 and 1.2, a treatment subsystem may be operated temporarily at a maximum daily volume and/or a maximum flow rate above the values set out in column 2 of Table 1 and column 3 of Table 2 respectively for the purposes of fighting a large fire or for the maintenance of the drinking water system.

1.4 Condition 1.3 does not authorize the discharge into the distribution system of any water that does not meet all of the requirements of this licence and all other regulatory requirements, including compliance with the Ontario Drinking Water Quality Standards.

Residue Management

1.5 In respect of an effluent discharged into the natural environment from a treatment subsystem or treatment subsystem component listed in column 1 of Table 3:

1.5.1 The annual average concentration of a test parameter identified in column 2 shall not exceed the value in column 3 of the same row; and

1.5.2 The maximum concentration of a test parameter identified in column 2 shall not exceed the value in column 4 of the same row.

Table 3: Residue Management

Column 1 Treatment Subsystem or Treatment Subsystem Component Name	Column 2 Test Parameter	Column 3 Annual Average Concentration (mg/L)	Column 4 Maximum Concentration (mg/L)
Kagawong Water Treatment Plant	Total Suspended Solids	25	Not Applicable

UV Disinfection Equipment Performance

1.6 For each treatment subsystem or treatment subsystem component listed in column 1 of Table 4, and while directing water to the distribution system:

1.6.1 The UV disinfection equipment shall be operated such that a continuous pass-through UV dose is maintained throughout the life time of the UV lamp(s) that is at least the minimum continuous pass-through UV dose set out in column 2 of the same row at the maximum design flow rate for the equipment;

1.6.2 In addition to any other sampling, analysis and recording that may be required, the ultraviolet light disinfection equipment shall test for the test parameters set out in column 4 of the same row at a testing frequency of once every five (5) minutes or less and record the test data at a recording frequency of once every four (4) hours or less;

1.6.3 If there is a UV disinfection equipment alarm, the test parameters set out in column 4 of the same row shall be recorded at a recording frequency of once every five minutes or less until the alarm condition has been corrected;

1.6.4 A monthly summary report shall be prepared at the end of each calendar month which sets out the time, date and duration of each UV equipment alarm, the volume of water treated during each alarm period and the actions taken by the operating authority to correct the alarm situation;

Table 4: UV Disinfection Equipment			
Column 1 Treatment Subsystem or Treatment Subsystem Component Name	**Column 2 Minimum Continuous Pass-Through UV Dose (mJ/cm^2)**	**Column 3 Control Strategy**	**Column 4 Test Parameter**
Not Applicable	Not Applicable	Not Applicable	Not Applicable

2.0 Flow Measurement and Recording Requirements

2.1 For each treatment subsystem identified in column 1 of Table 1 and in addition to any other flow measurement and recording that may be required, continuous flow measurement and recording shall be undertaken for:

2.1.1 The flow rate and daily volume of treated water that flows from the treatment subsystem to the distribution system.

2.1.2 The flow rate and daily volume of water that flows into the treatment subsystem.

2.2 For each treatment subsystem component identified in column 2 of Table 2 and in addition to any other flow measurement and recording that may be required, continuous flow measurement and recording shall be undertaken for the flow rate and daily volume of water that flows into the treatment subsystem component.

2.3 Where a rated capacity from Table 1 or a maximum flow rate from Table 2 is exceeded, the following shall be recorded:

2.3.1 The difference between the measured amount and the applicable rated capacity or maximum flow rate specified in Table 1 or Table 2;

2.3.2 The time and date of the measurement;

2.3.3 The reason for the exceedance; and

2.3.4 The duration of time that lapses between the applicable rated capacity or maximum flow rate first being exceeded and the next measurement where the applicable rated capacity or maximum flow rate is no longer exceeded.

3.0 Calibration of Flow Measuring Devices

3.1 All flow measuring devices that are required by regulation, by a condition in the Drinking Water Works Permit, or by a condition otherwise imposed by the Ministry of the Environment and Climate Change, shall be checked and calibrated in accordance with the manufacturer's instructions.

3.2 If the manufacturer's instructions do not indicate how often to check and calibrate a flow measuring device, the equipment shall be checked and calibrated at least once every 12 months during which the drinking water system is in operation.

3.2.1 For greater certainty, if condition 3.2 applies, the equipment shall be checked and calibrated not more than 30 days after the first anniversary of the day the equipment was checked and calibrated in the previous 12-month period.

4.0 Additional Sampling, Testing and Monitoring

Drinking Water Health and Non-Health Related Parameters

4.1 For each treatment subsystem or treatment subsystem component identified in column 1 of Tables 5 and 6 and in addition to any other sampling, testing and monitoring that may be required, sampling, testing and monitoring shall be undertaken for a test parameter listed in column 2 at the sampling frequency listed in column 3 and at the monitoring location listed in column 4 of the same row.

Table 5: Drinking Water Health Related Parameters

Column 1 Treatment Subsystem or Treatment Subsystem Component Name	Column 2 Test Parameter	Column 3 Sampling Frequency	Column 4 Monitoring Location
Not Applicable	Not Applicable	Not Applicable	Not Applicable

Table 6: Drinking Water Non-Health Related Parameters

Column 1 Treatment Subsystem or Treatment Subsystem Component Name	Column 2 Test Parameter	Column 3 Sampling Frequency	Column 4 Monitoring Location
Not Applicable	Not Applicable	Not Applicable	Not Applicable

Environmental Discharge Parameters

4.2 For each treatment subsystem or treatment subsystem component identified in column 1 of Table 7 and in addition to any other sampling, testing and monitoring that may be required, sampling, testing and monitoring shall be undertaken for a test parameter listed in column 2 using the sample type identified in column 3 at the sampling frequency listed in column 4 and at the monitoring location listed in column 5 of the same row.

4.3 For the purposes of Table 7:

4.3.1 Manual Composite means the mean of at least three grab samples taken during a discharge event, with one sample being taken immediately following the commencement of the discharge event, one sample being taken approximately at the mid-point of the discharge event and one sample being taken immediately before the end of the discharge event; and

4.3.2 Automated Composite means samples must be taken during a discharge event by an automated sampler at a minimum sampling frequency of once per hour.

4.4 Any sampling, testing and monitoring for the test parameter Total Suspended Solids shall be performed in accordance with the requirements set out in the publication "Standard Methods for the Examination of Water and Wastewater", 21st Edition, 2005, or as amended from time to time by more recently published editions.

Table 7: Environmental Discharge Parameters

Column 1 Treatment Subsystem or Treatment Subsystem Component Name	Column 2 Test Parameter	Column 3 Sample Type	Column 4 Sampling Frequency	Column 5 Monitoring Location
Kagawong Water Treatment Plant	Total Suspended Solids	Composite	Monthly	Point of discharge from the backwash reservoir

4.5 Pursuant to Condition 10 of Schedule B of this licence, the owner may undertake the following environmental discharges associated with the maintenance and/or repair of the drinking water system:

4.5.1 The discharge of potable water from a watermain to a road or storm sewer;

4.5.2 The discharge of potable water from a water storage facility or pumping station:

4.5.2.1 To a road or storm sewer; or

4.5.2.2 To a watercourse where the discharge has been dechlorinated and if necessary, sediment and erosion control measures have been implemented.

4.5.3 The discharge of dechlorinated non-potable water from a watermain, water storage facility or pumping station to a road or storm sewer;

4.5.4 The discharge of raw water from a groundwater well to the environment where if necessary, sediment and erosion control measures have been implemented; and

4.5.5 The discharge of raw water, potable water or non-potable water from a treatment subsystem to the environment where if necessary, the discharge has been dechlorinated and sediment and erosion control measures have been implemented.

5.0 Studies Required

5.1 Not Applicable

6.0 Source Protection

6.1 Not Applicable

Schedule D: Conditions for Relief from Regulatory Requirements

System Owner	**The Corporation of the Township of Billings**
Licence Number	**255-101**
Drinking Water System Name	**Kagawong Drinking Water System**
Schedule D Issue Date	**April 23, 2021**

1.0 Lead Regulatory Relief

1.1 Any relief from regulatory requirements previously authorized by the Director in respect of the drinking water system under section 38 of the SDWA in relation to the sampling, testing or monitoring requirements contained in Schedule 15.1 of O. Reg. 170/03 shall remain in force until such time as Schedule 15.1 of O. Reg. 170/03 is amended after June 1, 2009.

2.0 Other Regulatory Relief

2.1 Not Applicable

Schedule E: Pathogen Log Removal/Inactivation Credits

System Owner	**The Corporation of the Township of Billings**
Licence Number	**255-101**
Drinking Water System Name	**Kagawong Drinking Water System**
Schedule E Issue Date	**April 23, 2021**

1.0 Primary Disinfection Pathogen Log Removal/Inactivation Credits

Kagawong Water Treatment Plant

Lake Huron (North Channel, Mudge Bay) [SURFACE WATER]

Minimum Log Removal/ Inactivation Required	Cryptosporidium Oocysts	Giardia Cysts [a]	Viruses [b]
Kagawong Water Treatment Plant	2	3	4

[a] At least 0.5 log inactivation of Giardia shall be achieved by the disinfection portion of the overall water treatment process.
[b] At least 2 log inactivation of viruses shall be achieved by disinfection.

Log Removal/Inactivation Credits Assigned [c]	Cryptosporidium Oocysts	Giardia Cysts	Viruses
Ultra Filtration	2	3	0
Chlorination [CT: Contact Tank]	-	0.5	4+

[c] Log removal/inactivation credit assignment is based on each treatment process being fully operational and the applicable log removal/inactivation credit assignment criteria being met.

Treatment Component	Log Removal/Inactivation Credit Assignment Criteria
Ultra Filtration	1. Effective backwash procedures shall be maintained including filter-to-waste or an equivalent procedure to ensure that the effluent turbidity requirements are met at all times; 2. Membrane integrity shall be monitored by continuous particle counting or by an equivalently effective means such as intermittent pressure decay measurements; 3. Filtrate turbidity shall be continuously monitored; 4. Performance criterion for filtered water turbidity of less than or equal to 0.1 NTU in 99% of the measurements each month shall be met for each filter train; and 5. Membrane filtration process shall be specifically tested and confirmed by an independent testing agency or the approving Director for 2-log removal or inactivation of Cryptosporidium oocysts or removal of surrogate particles.
Chlorination	1. Sampling and testing for free chlorine residual shall be carried out by continuous monitoring equipment in the treatment process at or near a location where the intended contact time has just been completed in accordance with the Ministry's Procedure for Disinfection of Drinking Water in Ontario; and 2. At all times, CT provided shall be greater than or equal to the CT required to achieve the log removal credits assigned.
Primary Disinfection Notes	

Appendix C

Ontario

DRINKING WATER WORKS PERMIT

Permit Number: 255-201
Issue Number: 2

Pursuant to the *Safe Drinking Water Act*, 2002, S.O. 2002, c. 32, and the regulations made thereunder and subject to the limitations thereof, this drinking water works permit is issued under Part V of the *Safe Drinking Water Act*, 2002, S.O. 2002, c. 32 to:

The Corporation of the Township of Billings

15 Old Mill Road
Kagawong, ON
P0P 1J0

For the following municipal residential drinking water system:

Kagawong Drinking Water System

This drinking water works permit includes the following:

Schedule	Description
Schedule A	Drinking Water System Description
Schedule B	General
Schedule C	All documents issued as Schedule C to this drinking water works permit which authorize alterations to the drinking water system
Schedule D	Process Flow Diagrams

DATED at TORONTO this 20th day of May, 2016

Signature

Aziz Ahmed, P.Eng.
Director
Part V, *Safe Drinking Water Act*, 2002

Schedule A: Drinking Water System Description

System Owner	**The Corporation of the Township of Billings**
Permit Number	**255-201**
Drinking Water System Name	**Kagawong Drinking Water System**
Schedule A Issue Date	**May 20, 2016**

1.0 System Description

1.1 The following is a summary description of the works comprising the above drinking water system:

Overview

The **Kagawong Drinking Water System** services the community of Kagawong and consists of a membrane filtration water treatment plant and a distribution system. The Kagawong Drinking Water System obtains its raw water from Mudge Bay, Lake Huron and comprises a raw water intake, a low lift pumping station, two (2) membrane filter trains, one (1) chlorine contact reservoir, a high lift pumping station, an elevated storage tank and approximately 9.6 kilometers of distribution watermains. The waste water produced at the water treatment plant is discharged periodically to a ditch which flows to Mudge Bay in Lake Huron.

Kagawong Water Treatment Plant

General Information

Name	Kagawong Water Treatment Plant
Street Address	75 Beach Street
UTM Coordinates	NAD 27, Zone 17, 401030 m E, 5084420 m N
System Type	Surface Water Treatment and Distribution
Notes	

Surface Water Supply

Intake Pipe

Description	A 355 mm diameter polyethylene intake pipe extending 116 m into Mudge Bay in the North Channel of Lake Huron, with a 10 mm opening stainless steel screen
Notes	

Inlet Chamber

Description	Inlet chamber
Dimensions	2.48 m x 2.44 m x 5.00 m deep (from underside of floor)
Notes	

Raw Watermain

Description	500 m of 150 mm diameter raw watermain from the existing Low Lift Pumping Station to the Water Treatment Plant
Notes	

Raw Water Sample Lines

Description	A raw water sampling pump complete with a sampling line from the pump to the intake complete with a foot valve
Dimensions	25 mm diameter sampling line
Notes	Sampling pump is used during zebra mussel control. When no zebra mussel control is being used, raw water samples can be collected at the raw water sample station within the water treatment plant.

Low Lift Works

Low Lift Pumps

Location	Low lift pumps located at the raw water intake at 316 Main Street
UTM Coordinates	NAD 27, Zone 17, 401041 m E, 5084920 m N
Description	A low lift pumping station to pump water from the intake to the treatment plant
Equipment	Two (2) low lift vertical turbine pumps rated at 11.6 L/s at a total dynamic head (TDH) of 60 m
Standby Power	One (1) 80 kW propane generator.
Notes	

Membrane Filtration

Membrane Filter Trains

Description	Two (2) ultrafiltration membrane filter trains, complete with all associated equipment
Capacity	Each train rated at 900 m³/d
Notes	- Although each train capacity is 900 m^3/d, total supply to trains is limited by the low lift pump capacity of 11.6 L/s. This only allows a maximum flow rate of 1002.24 m^3/d. - Third party test results for the membranes (GE ZeeWeed® 1000) verified for 4 log removal credit for both *Cryptosporidium* oocycts and *Giardia* cysts. Up to 4 log removal credit for *Crypto* and *Giardia* may be awarded provided that direct integrity testing is performed daily and other requirements, as per the Procedure for Disinfection of Drinking Water in Ontario, are fulfilled.

Chlorine Contact

Chlorine Contact Tank

Description	Chlorine contact reservoir with overflow weir to the high lift well
Capacity	126 m³
Notes	

Neutralization

Neutralization Tank-

Description	Neutralization reservoir and associated equipment;
Capacity	18 m^3
Notes	

Instrumentation and Control

Monitoring and Control Equipment

Description	Monitoring and Control Equipment
Equipment	Plant SCADA system
	Various chlorine sampling points in the distribution system
	Main flow meter with electronic output 1242 pulses/100 g (and remote display unit)
	Pressure transducer with a range of 0-200 psi, and an output of 4-20 ma
	Pressure switch, with high pressure alarm
	Alarm autodialer
	Programmable logic controller
	On-line continuous monitoring turbidity meter
	On-line continuous chlorine residual analyzer
Notes	

Waste Residual Management

Backwash Holding Tank

Description	A backwash holding tank to hold the backwash water
Capacity	84 m^3
Notes	Backwash water is discharged periodically to a ditch and a composite sample for Total Suspended Solids is taken monthly.

Backwash Pumps

Description	Two (2) backwash pumps, one duty one standby
Capacity	Each rated at 1.3 L/s at a 4.4 m TDH
Notes	Supernatant discharged to the existing ditch along Beach Road via a 50 mm diameter backwash discharge pipe

Sump Pumps

Description	Three (3) sump pumps, one for sewage and two for foundation drains
Capacity	Sewage pump rated at 1.26 L/s at a 6.4 m TDH. Foundation pumps each rated at 1.3 L/s at a 1.3 m TDH.
Notes	

High Lift Works

High Lift Well

Description	A 16 m^3 high lift well attached to the existing chlorine contact reservoir housing high lift vertical turbine pumps
Notes	

High Lift Pumps

Description	Two (2) high lift vertical turbine pumps (one duty, one standby) located inside the high lift well
Capacity	Each pump rated at 10.4 L/s at a TDH of 36.4 m
Notes	Turbine pumps pump treated water into the distribution system via a 200 mm diameter watermain from the plant to the intersection of Beach Road and Main Street, as well as to the storage tower as it is a shared watermain.

Emergency Power

Standby Power

Description	One (1) 80 kW standby propane generator set to provide power for the water treatment plant and low lift station during power outage situations
Location	Low lift works at 316 Main Street.
Notes	

Chemical Addition

Sulphuric Acid

Description	Standby pH control system using sulphuric acid
Feed Point	Raw water main within the WTP before the water enters the filters
Equipment	Two (2) metering pumps (duty and standby) complete with isolation, back pressure and pressure relief valves, and connecting piping
	One (1) storage tank, mixer, and spill containment
Notes	

Sodium Hypochlorite

Zebra Mussel Control

Description	Sodium hypochlorite feed system for zebra mussel control
Feed Point	Intake
Equipment	One (1) chemical metering pump and a 12 mm diameter feed pipe inside a carrier pipe
Notes	

Pre-chlorination

Description	Sodium hypochlorite feed system for pre-chlorination
Feed Point	Common filtrate pipe from the 3 filter trains, prior to the clearwell
Equipment	Two (2) metering pumps (duty and standby) complete with isolation, back pressure and pressure relief valves, and connecting piping
	One (1) chemical storage tank with spill containment
Notes	

Post-chlorination

Description	Sodium hypochlorite feed system for post-chlorination
Feed Point	Into the watermain just before it leaves the building
Equipment	Two (2) metering pumps (duty and standby) complete with isolation, back pressure and pressure relief valves, and connecting piping
	One (1) chemical storage tank with spill containment
Notes	

Clean-in-Place Cycles

Description	Sodium hypochlorite feed system for clean-in-place cycles
Feed Point	Each filter unit break tank
Equipment	One (1) metering pump complete with related accessories and connecting piping
	One (1) chemical storage tank with spill containment
Notes	

Citric Acid

Description	Citric acid feed system for clean-in-place cycles
Feed Point	CIP solution line
Equipment	Two (2) metering pumps (duty and standby) complete with related accessories and connecting piping
	One (1) chemical storage tank with spill containment
Notes	

Calcium Thiosulphate

Description	Calcium thiosulphate feed system for dechlorination
Feed Point	Neutralization tank
Equipment	One (1) metering pump complete with related accessories and connecting piping, 200 L storage tank and spill containment
	One (1) chemical storage tank with spill containment
Notes	

Sodium Hydroxide

Description	Sodium hydroxide feed system for neutralization
Feed Point	Neutralization tank
Equipment	One (1) metering pump complete with related accessories and connecting piping and a storage tank with spill containment
	One (1) chemical storage tank with spill containment
Notes	

Elevated Storage Tanks

Elevated Water Storage Tank

Location	The southwest corner of Beach Road and Rainbow Road
UTM Coordinates	UTM coordinates: 401320 m E, 5084370 m N
Description	Elevated composite water storage tank
Capacity	600 m^3
Equipment	A valve and control room at the base
	Inlet pipe from the water treatment plant
	A discharge pipe and an overflow pipe
	Provisions for future use for residual chlorine measurements and all other items necessary to have a complete and operable system
Notes	

Watermains

1.2 Watermains within the distribution system comprise:

1.2.1 Watermains that have been set out in each document or file identified in column 1 of Table 1.

Table 1: Watermains

Column 1 Document or File Name	Column 2 Date
Kagawong Distribution Schematic	December 15, 2015

1.2.2 Watermains that have been added, modified, replaced or extended further to the provisions of Schedule C of this drinking water works permit on or after the date identified in column 2 of Table 1 for each document or file identified in column 1.

1.2.3 Watermains that have been added, modified, replaced or extended further to an authorization by the Director on or after the date identified in column 2 of Table 1 for each document or file identified in column 1.

Schedule B: General

System Owner	**The Corporation of the Township of Billings**
Permit Number	**255-201**
Drinking Water System Name	**Kagawong Drinking Water System**
Schedule B Issue Date	**May 20, 2016**

1.0 Applicability

1.1 In addition to any other requirements, the drinking water system identified above shall be altered and operated in accordance with the conditions of this drinking water works permit and the licence.

1.2 The definitions and conditions of the licence shall also apply to this drinking water works permit.

2.0 Alterations to the Drinking Water System

2.1 Any document issued by the Director as a Schedule C to this drinking water works permit shall provide authority to alter the drinking water system in accordance, where applicable, with the conditions of this drinking water works permit and the licence.

2.2 All Schedule C documents issued by the Director for the drinking water system shall form part of this drinking water works permit.

2.3 All parts of the drinking water system in contact with drinking water which are:

2.3.1 Added, modified, replaced, extended; or

2.3.2 Taken out of service for inspection, repair or other activities that may lead to contamination,

shall be disinfected before being put into service in accordance with a procedure approved by the Director or in accordance with the applicable provisions of the following documents:

a) The ministry's Watermain Disinfection Procedure, effective November 20, 2016;
b) AWWA C652 – Standard for Disinfection of Water-Storage Facilities;
c) AWWA C653 – Standard for Disinfection of Water Treatment Plants; and
d) AWWA C654 – Standard for Disinfection of Wells.

2.4 The owner shall notify the Director within thirty (30) days of the placing into service or the completion of any addition, modification, replacement or extension of the drinking water system which had been authorized through:

2.4.1 Schedule B to this drinking water works permit which would require an alteration of the description of a drinking water system component described in Schedule A of this drinking water works permit;

2.4.2 Any Schedule C to this drinking water works permit respecting works other than watermains; or

2.4.3 Any approval issued prior to the issue date of the first drinking water works permit respecting works other than watermains which were not in service at the time of the issuance of the first drinking water works permit.

2.5 For greater certainty, the notification requirements set out in condition 2.4 do not apply to any addition, modification, replacement or extension in respect of the drinking water system which:

2.5.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03;

2.5.2 Constitutes maintenance or repair of the drinking water system; or

2.5.3 Is a watermain authorized by condition 3.1 of Schedule B of this drinking water works permit.

2.6 The owner shall notify the legal owner of any part of the drinking water system that is prescribed as a municipal drinking water system by section 2 of O. Reg. 172/03 of the requirements of the licence and this drinking water works permit as applicable to the prescribed system.

2.7 For greater certainty, any alteration to the drinking water system made in accordance with this drinking water works permit may only be carried out after other legal obligations have been complied with including those arising from the *Environmental Assessment Act*, *Niagara Escarpment Planning and Development Act*, *Oak Ridges Moraine Conservation Act, 2001* and *Greenbelt Act, 2005*.

3.0 Watermain Additions, Modifications, Replacements and Extensions

3.1 The drinking water system may be altered by adding, modifying, replacing or extending a watermain within the distribution system subject to the following conditions:

3.1.1 The design of the watermain addition, modification, replacement or extension:

a) Has been prepared by a Professional Engineer;

b) Has been designed only to transmit water and has not been designed to treat water;

c) Satisfies the design criteria set out in the Ministry of the Environment and Climate Change publication “Watermain Design Criteria for Future Alterations Authorized under a Drinking Water Works Permit – June 2012”, as amended from time to time; and

d) Is consistent with or otherwise addresses the design objectives contained within the Ministry of the Environment and Climate Change publication “Design Guidelines for Drinking Water Systems, 2008”, as amended from time to time.

3.1.2 The maximum demand for water exerted by consumers who are serviced by the addition, modification, replacement or extension of the watermain will not result in an exceedance of the rated capacity of a treatment subsystem or the maximum flow rate for a treatment subsystem component as specified in the licence, or the creation of adverse conditions within the drinking water system.

3.1.3 The watermain addition, modification, replacement or extension will not adversely affect the distribution system's ability to maintain a minimum pressure of 140 kPa at ground level at all points in the distribution system under maximum day demand plus fire flow conditions.

3.1.4 Secondary disinfection will be provided to water within the added, modified, replaced or extended watermain to meet the requirements of O. Reg. 170/03.

3.1.5 The watermain addition, modification, replacement or extension is wholly located within the municipal boundary over which the owner has jurisdiction.

3.1.6 The owner of the drinking water system consents in writing to the watermain addition, modification, replacement or extension.

3.1.7 A Professional Engineer has verified in writing that the watermain addition, modification, replacement or extension meets the requirements of condition 3.1.1.

3.1.8 The owner of the drinking water system has verified in writing that the watermain addition, modification, replacement or extension meets the requirements of conditions 3.1.2 to 3.1.6.

3.2 The authorization for the addition, modification, replacement or extension of a watermain provided for in condition 3.1 does not include the addition, modification, replacement or extension of a watermain that:

3.2.1 Passes under or through a body of surface water, unless trenchless construction methods are used;

3.2.2 Has a nominal diameter greater than 750 mm;

3.2.3 Results in the fragmentation of the drinking water system; or

3.2.4 Connects to another drinking water system, unless:

a) Prior to construction, the owner of the drinking water system seeking the connection obtains written consent from the owner or owner's delegate of the drinking water system being connected to; and

b) The owner of the drinking water system seeking the connection retains a copy of the written consent from the owner or owner's delegate of the drinking water system being connected to as part of the record that is recorded and retained under condition 3.3.

3.3 The verifications required in conditions 3.1.7 and 3.1.8 shall be:

3.3.1 Recorded on "Form 1 – Record of Watermains Authorized as a Future Alteration", as published by the Ministry of the Environment and Climate Change, prior to the watermain addition, modification, replacement or extension being placed into service; and

3.3.2 Retained for a period of ten (10) years by the owner.

3.4 For greater certainty, the verification requirements set out in condition 3.3 do not apply to any addition, modification, replacement or extension in respect of the drinking water system which:

3.4.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03; or

3.4.2 Constitutes maintenance or repair of the drinking water system.

3.5 The document or file referenced in Column 1 of Table 1 of Schedule A of this drinking water works permit that sets out watermains shall be retained by the owner and shall be updated to include watermain additions, modifications, replacements and extensions within 12 months of the addition, modification, replacement or extension.

3.6 The updates required by condition 3.5 shall include watermain location relative to named streets or easements and watermain diameter.

4.0 Minor Modifications to the Drinking Water System

4.1 The drinking water system may be altered by adding, modifying or replacing the following components in the drinking water system:

4.1.1 Raw water pumps and treatment process pumps in the treatment system;

4.1.2 Coagulant feed systems in the treatment system, including the location and number of dosing points;

4.1.3 Valves;

4.1.4 Instrumentation and controls, including SCADA systems, and software associated with these devices;

4.1.5 Filter media, backwashing equipment and under-drains in the treatment system; or,

4.1.6 Spill containment works.

4.2 The drinking water system may be altered by adding, modifying, replacing or removing the following components in the drinking water system:

4.2.1 Treated water pumps and associated equipment;

4.2.2 Re-circulation devices within distribution system storage facilities;

4.2.3 In-line mixing equipment;

4.2.4 Chemical metering pumps and chemical handling pumps;

4.2.5 Chemical storage tanks (excluding fuel storage tanks) and associated equipment; or,

4.2.6 Measuring and monitoring devices that are not required by regulation, by a condition in the Drinking Water Works Permit, or by a condition otherwise imposed by the Ministry of the Environment and Climate Change.

4.3 The drinking water system may be altered by replacing the following:

4.3.1 Raw water piping, treatment process piping or treated water piping within the treatment subsystem;

4.3.2 Fuel storage tanks and spill containment works, and associated equipment; or

4.3.3 Coagulants and pH adjustment chemicals, where the replacement chemicals perform the same function;

a) Prior to making any alteration to the drinking water system under condition 4.3.3, the owner shall undertake a review of the impacts that the alteration might have on corrosion control or other treatment processes; and

b) The owner shall notify the Director in writing within thirty (30) days of any alteration made under condition 4.3.3 and shall provide the Director with a copy of the review.

4.4 Any alteration of the drinking water system made under conditions 4.1, 4.2 or 4.3 shall not result in:

4.4.1 An exceedance of a treatment subsystem rated capacity or a treatment subsystem component maximum flow rate as specified in the licence;

4.4.2 The bypassing of any unit process within a treatment subsystem;

4.4.3 A deterioration in the quality of drinking water provided to consumers;

4.4.4 A reduction in the reliability or redundancy of any component of the drinking water system;

4.4.5 A negative impact on the ability to undertake compliance and other monitoring necessary for the operation of the drinking water system; or

4.4.6 An adverse effect on the environment.

4.5 The owner shall verify in writing that any addition, modification, replacement or removal of drinking water system components in accordance with conditions 4.1, 4.2 or 4.3 has met the requirements of the conditions listed in condition 4.4.

4.6 The verifications and documentation required in condition 4.5 shall be:

4.6.1 Recorded on "Form 2 – Record of Minor Modifications or Replacements to the Drinking Water System", as published by the Ministry of the Environment and Climate Change, prior to the modified or replaced components being placed into service; and

4.6.2 Retained for a period of ten (10) years by the owner.

4.7 For greater certainty, the verification requirements set out in conditions 4.5 and 4.6 do not apply to any addition, modification, replacement or removal in respect of the drinking water system which:

4.7.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03; or

4.7.2 Constitutes maintenance or repair of the drinking water system.

4.8 The owner shall update any drawings maintained for the drinking water system to reflect the modification or replacement of the works, where applicable.

5.0 Equipment with Emissions to the Air

5.1 The drinking water system may be altered by adding, modifying or replacing any of the following drinking water system components that may discharge or alter the rate or manner of a discharge of a compound of concern to the atmosphere:

5.1.1 Any equipment, apparatus, mechanism or thing that is used for the transfer of outdoor air into a building or structure that is not a cooling tower;

5.1.2 Any equipment, apparatus, mechanism or thing that is used for the transfer of indoor air out of a space used for the production, processing, repair, maintenance or storage of goods or materials, including chemical storage;

5.1.3 Laboratory fume hoods used for drinking water testing, quality control and quality assurance purposes;

5.1.4 Low temperature handling of compounds with a vapor pressure of less than 1 kilopascal;

5.1.5 Maintenance welding stations;

5.1.6 Minor painting operations used for maintenance purposes;

5.1.7 Parts washers for maintenance shops;

5.1.8 Emergency chlorine and ammonia gas scrubbers and absorbers;

5.1.9 Venting for activated carbon units for drinking water taste and odour control;

5.1.10 Venting for a stripping unit for methane removal from a groundwater supply;

5.1.11 Venting for an ozone treatment unit;

5.1.12 Natural gas or propane fired boilers, water heaters, space heaters and make-up air units with a total facility-wide heat input rating of less than 20 million kilojoules per hour, and with an individual fuel energy input of less than or equal to 10.5 gigajoules per hour; or

5.1.13 Emergency generators that fire No. 2 fuel oil (diesel fuel) with a sulphur content of 0.5 per cent or less measured by weight, natural gas, propane, gasoline or biofuel, and that are used for emergency duty only with periodic testing.

5.2 The owner shall not add, modify or replace a drinking water system component set out in condition 5.1 for an activity that is not directly related to the treatment and/or distribution of drinking water.

5.3 The emergency generators identified in condition 5.1.13 shall not be used for non-emergency purposes including the generation of electricity for sale or for peak shaving purposes.

5.4 The owner shall prepare an emission summary table for nitrogen oxide emissions only, for each addition, modification or replacement of emergency generators identified in condition 5.1.13.

Performance Limits

5.5 The owner shall ensure that a drinking water system component identified in conditions 5.1.1 to 5.1.13 is operated at all times to comply with the following limits:

5.5.1 For equipment other than emergency generators, the maximum concentration of any compound of concern at a point of impingement shall not exceed the corresponding point of impingement limit;

5.5.2 For emergency generators, the maximum concentration of nitrogen oxides at sensitive populations shall not exceed the applicable point of impingement limit, and at non-sensitive populations shall not exceed the Ministry of the Environment and Climate Change half-hourly screening level of 1880 ug/m^3 as amended; and

5.5.3 The noise emissions comply at all times with the limits set out in publication NPC-300, as applicable.

5.6 The owner shall verify in writing that any addition, modification or replacement of works in accordance with condition 5.1 has met the requirements of the conditions listed in condition 5.5.

5.7 The owner shall document how compliance with the performance limits outlined in condition 5.5.3 is being achieved, through noise abatement equipment and/or operational procedures.

5.8 The verifications and documentation required in conditions 5.6 and 5.7 shall be:

5.8.1 Recorded on “Form 3 – Record of Addition, Modification or Replacement of Equipment Discharging a Contaminant of Concern to the Atmosphere”, as published by the Ministry of the Environment and Climate Change, prior to the additional, modified or replacement equipment being placed into service; and

5.8.2 Retained for a period of ten (10) years by the owner.

5.9 For greater certainty, the verification and documentation requirements set out in conditions 5.6 and 5.8 do not apply to any addition, modification or replacement in respect of the drinking water system which:

5.9.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03; or

5.9.2 Constitutes maintenance or repair of the drinking water system.

5.10 The owner shall update any drawings maintained for the works to reflect the addition, modification or replacement of the works, where applicable.

6.0 Previously Approved Works

6.1 The owner may add, modify, replace or extend, and operate part of a municipal drinking water system if:

6.1.1 An approval was issued after January 1, 2004 under section 36 of the SDWA in respect of the addition, modification, replacement or extension and operation of that part of the municipal drinking water system;

6.1.2 The approval expired by virtue of subsection 36(4) of the SDWA; and

6.1.3 The addition, modification, replacement or extension commenced within five years of the date that activity was approved by the expired approval.

7.0 System-Specific Conditions

7.1 Not Applicable

8.0 Source Protection

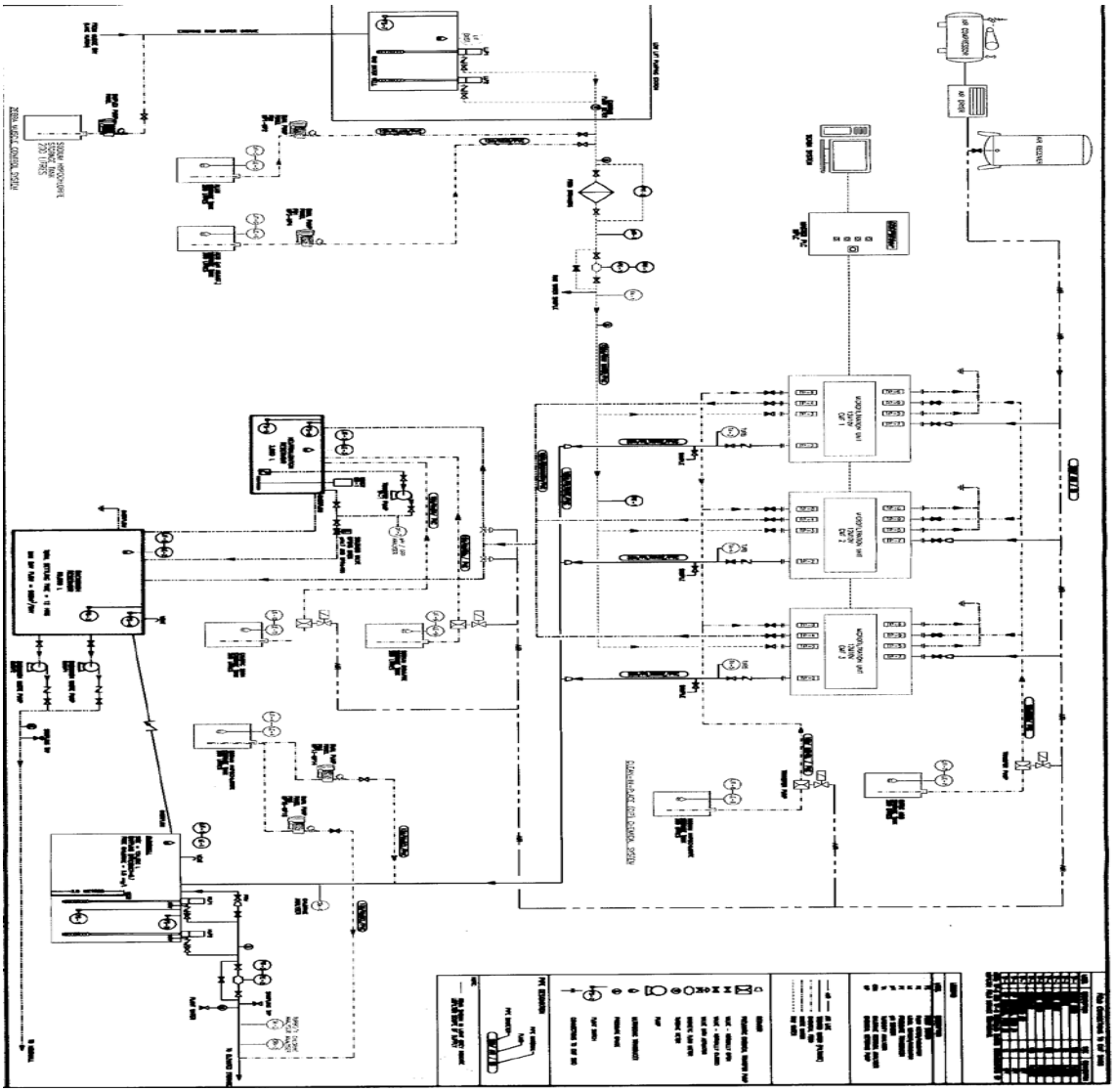
8.1 Not Applicable

Schedule D: Process Flow Diagrams

System Owner	**The Corporation of the Township of Billings**
Permit Number	**255-201**
Drinking Water System Name	**Kagawong Drinking Water System**
Schedule D Issue Date	**May 20, 2016**

1.0 Process Flow Diagrams

Kagawong Water Treatment Plant



[Source: Operational Plan For The Kagawong Water Treatment Facility and Distribution System, Revision 5, June 15, 2015.]

Appendix D

Ministry of the Environment, Conservation and Parks
Northern Region
Technical Support Section
Water Resources
331-435 James St S
Thunder Bay ON P7E 6S7
Fax: (807) 475-1754
Tel: (807) 475-1714

Ministère de l'Environnement, de la Protection de la nature et des Parcs
Direction régionale du Nord
Bureau du district de Sudbury
Bureau du district de Thunder Bay
331-435 rue James S
Thunder Bay ON P7E 6S7
Télécopieur: (807) 475-1754
Tél:(807) 475-1714

Ontario

June 21, 2019

Attn: Kathy McDonald
The Corporation of the Township of Billings
Post Office Box 34
Kagawong, Ontario, P0P 1J0
Canada

Dear Madam,

RE: Permit to Take Water Number 8607-BB3LLK
Reference Number 5766-BA3JTJ

Please find attached Permit to Take Water (PTTW) 8607-BB3LLK, which renews, and replaces PTTW 7363-7SXNEP and grants the taking of water from Lake Huron, North Channel, Mudge Bay, in the Township of Billings, District of Manitoulin for the purpose of municipal water supply. The rate of taking shall not exceed a maximum of 700 litres per minute and 1008000 litres per day. The Permit is valid until May 02, 2029.

The Terms and Conditions are shown on pages 2-6 of the Permit. The Terms and Conditions have been designed to allow for the development of water resources, while providing reasonable protection to existing water uses and users.

This Permit does not relieve you, or The Corporation of the Township of Billings as the proponent, from compliance with provisions of any of the applicable Federal or Provincial statutes, regulations or other legal requirements.

Ontario Regulation 387/04 (Water Taking) requires all water takers to report daily water taking amounts to the Water Taking Reporting System (WTRS) electronic database: https://www.ontario.ca/environment-and-energy/permits-take-water. Daily water taking must be reported on a calendar year basis. If no water is taken, then a "no taking" report must be entered. Please consult the Regulation and Section 4 of this Permit for monitoring requirements.

If you have questions about reporting requirements, please call the WTRS Help Desk at 416-235-6322 (toll free: 1-877-344-2011) or by email, WTRSHelpdesk@ontario.ca. It is preferred that you submit your data directly and electronically to the WTRS. Where this is

impracticable, please use the Water Taking Submission Form (included as Appendix C of the Technical Bulletin: Permit To Take Water (PTTW) - Monitoring and Reporting of Water Takings), which can be downloaded from the above web site, and fax your completed forms to 416-235-6235 or mail them to: Water User Reporting Section,125 Resources Rd. Toronto, ON M9P 3V6.

Should you have any questions or concerns, please contact this office as soon as possible.

Yours truly,

Dana Woods
Surface Water Scientist
Sudbury District Office

File Storage Number: TS 31-02 04-P-5018 [THE CORPORATION OF THE TOWNSHIP OF BILLINGS - KAGAWONG WTP]

PERMIT TO TAKE WATER
Surface Water
NUMBER 8607-BB3LLK

Pursuant to Section 34.1 of the Ontario Water Resources Act, R.S.O. 1990 this Permit To Take Water is hereby issued to:

The Corporation of the Township of Billings
Post Office Box 34
15 Old Mill Rd
Kagawong, Ontario, P0P 1J0
Canada

For the water taking from: Lake Huron (North Channel, Mudge Bay)

Located at: 316 Main St Kagawong
Billings, District of Manitoulin

For the purposes of this Permit, and the terms and conditions specified below, the following definitions apply:

DEFINITIONS

(a) "Director" means any person appointed in writing as a Director pursuant to section 5 of the OWRA for the purposes of section 34.1, OWRA.

(b) "Provincial Officer" means any person designated in writing by the Minister as a Provincial Officer pursuant to section 5 of the OWRA.

(c) "Ministry" means Ontario Ministry of the Environment, Conservation and Parks.

(d) "District Office" means the Sudbury District Office.

(e) "Permit" means this Permit to Take Water No. 8607-BB3LLK including its Schedules, if any, issued in accordance with Section 34.1 of the OWRA.

(f) "Permit Holder" means The Corporation of the Township of Billings.

(g) "OWRA " means the *Ontario Water Resources Act,* R.S.O. 1990, c. O. 40, as amended.

You are hereby notified that this Permit is issued subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. Compliance with Permit

1.1 Except where modified by this Permit, the water taking shall be in accordance with the application for this Permit To Take Water, dated February 7, 2019 and signed by Kathy McDonald, and all Schedules included in this Permit.

1.2 The Permit Holder shall ensure that any person authorized by the Permit Holder to take water under this Permit is provided with a copy of this Permit and shall take all reasonable measures to ensure that any such person complies with the conditions of this Permit.

1.3 Any person authorized by the Permit Holder to take water under this Permit shall comply with the conditions of this Permit.

1.4 This Permit is not transferable to another person.

1.5 This Permit provides the Permit Holder with permission to take water in accordance with the conditions of this Permit, up to the date of the expiry of this Permit. This Permit does not constitute a legal right, vested or otherwise, to a water allocation, and the issuance of this Permit does not guarantee that, upon its expiry, it will be renewed.

1.6 The Permit Holder shall keep this Permit available at all times at or near the site of the taking, and shall produce this Permit immediately for inspection by a Provincial Officer upon his or her request.

1.7 The Permit Holder shall report any changes of address to the Director within thirty days of any such change. The Permit Holder shall report any change of ownership of the property for which this Permit is issued within thirty days of any such change. A change in ownership in the property shall cause this Permit to be cancelled.

2. General Conditions and Interpretation

2.1 Inspections
The Permit Holder must forthwith, upon presentation of credentials, permit a Provincial Officer to carry out any and all inspections authorized by the OWRA, the *Environmental Protection Act* , R.S.O. 1990, the *Pesticides Act* , R.S.O. 1990, or the *Safe Drinking Water Act,* S. O. 2002.

2.2 Other Approvals
The issuance of, and compliance with this Permit, does not:

(a) relieve the Permit Holder or any other person from any obligation to comply with any other

applicable legal requirements, including the provisions of the *Ontario Water Resources Act* , and the *Environmental Protection Act* , and any regulations made thereunder; or

(b) limit in any way any authority of the Ministry, a Director, or a Provincial Officer, including the authority to require certain steps be taken or to require the Permit Holder to furnish any further information related to this Permit.

2.2.1 Prior to the taking of any water under the authorization of this Permit, the Permit Holder shall ensure full compliance with the *Safe Drinking Water Act* , 2002 and its regulations. At no time does this permit authorize the taking of water when out of compliance with the *Safe Drinking Water Act* , 2002 and its regulations.

2.3 Information

The receipt of any information by the Ministry, the failure of the Ministry to take any action or require any person to take any action in relation to the information, or the failure of a Provincial Officer to prosecute any person in relation to the information, shall not be construed as:

(a) an approval, waiver or justification by the Ministry of any act or omission of any person that contravenes this Permit or other legal requirement; or

(b) acceptance by the Ministry of the information's completeness or accuracy.

2.4 Rights of Action

The issuance of, and compliance with this Permit shall not be construed as precluding or limiting any legal claims or rights of action that any person, including the Crown in right of Ontario or any agency thereof, has or may have against the Permit Holder, its officers, employees, agents, and contractors.

2.5 Severability

The requirements of this Permit are severable. If any requirements of this Permit, or the application of any requirements of this Permit to any circumstance, is held invalid or unenforceable, the application of such requirements to other circumstances and the remainder of this Permit shall not be affected thereby.

2.6 Conflicts

Where there is a conflict between a provision of any submitted document referred to in this Permit, including its Schedules, and the conditions of this Permit, the conditions in this Permit shall take precedence.

3. Water Takings Authorized by This Permit

3.1 **Expiry**

This Permit expires on **May 2, 2029**. No water shall be taken under authority of this Permit after the expiry date.

3.2 Amounts of Taking Permitted

The Permit Holder shall only take water from the source, during the periods and at the rates and

amounts of taking specified in Table A. Water takings are authorized only for the purposes specified in Table A.

Table A

	Source Name / Description:	Source: Type:	Taking Specific Purpose:	Taking Major Category:	Max. Taken per Minute (litres):	Max. Num. of Hrs Taken per Day:	Max. Taken per Day (litres):	Max. Num. of Days Taken per Year:	Zone/ Easting/ Northing:
1	Lake Huron (North Channel, Mudge Bay)	Lake	Municipal	Water Supply	700	24	1,008,000	365	17 401405 5085124
						Total Taking:	1,008,000		

4. Monitoring

4.1 The Permit Holder shall, on each day water is taken under the authorization of this Permit, record the date, the volume of water taken on that date and the rate at which it was taken. The daily volume of water taken shall be measured by a flow meter or calculated in accordance with the method described in the application for this Permit or as otherwise accepted by the Director. A separate record shall be maintained for each source. The Permit Holder shall keep all records required by this condition current and available at or near the site of the taking and shall produce the records immediately for inspection by a Provincial Officer upon his or her request. The Permit Holder, unless otherwise required by the Director, shall submit, on or before March 31st in every year, the daily water taking data collected and recorded for the previous year to the ministry's Water Taking Reporting System.

5. Impacts of the Water Taking

5.1 Notification

The Permit Holder shall immediately notify the local District Office of any complaint arising from the taking of water authorized under this Permit and shall report any action which has been taken or is proposed with regard to such complaint. The Permit Holder shall immediately notify the local District Office if the taking of water is observed to have any significant impact on the surrounding waters. After hours, calls shall be directed to the Ministry's Spills Action Centre at 1-800-268-6060.

5.2 For Surface-Water Takings

The taking of water (including the taking of water into storage and the subsequent or simultaneous withdrawal from storage) shall be carried out in such a manner that streamflow is not stopped and is not reduced to a rate that will cause interference with downstream uses of water or with the natural functions of the stream.

6. Director May Amend Permit

The Director may amend this Permit by letter requiring the Permit Holder to suspend or reduce the taking to an amount or threshold specified by the Director in the letter. The suspension or reduction in taking shall be effective immediately and may be revoked at any time upon notification by the Director. This condition does not affect your right to appeal the suspension or reduction in taking to the Environmental Review Tribunal under the *Ontario Water Resources Act* , Section 100 (4).

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is included to ensure that the conditions in this Permit are complied with and can be enforced.

2. Condition 2 is included to clarify the legal interpretation of aspects of this Permit.

3. Conditions 3 through 6 are included to protect the quality of the natural environment so as to safeguard the ecosystem and human health and foster efficient use and conservation of waters. These conditions allow for the beneficial use of waters while ensuring the fair sharing, conservation and sustainable use of the waters of Ontario. The conditions also specify the water takings that are authorized by this Permit and the scope of this Permit.

In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 101 of the Ontario Water Resources Act, R.S.O. 1990, as amended, provides that the Notice requiring the hearing shall state:

1. The portions of the Permit or each term or condition in the Permit in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

In addition to these legal requirements, the Notice should also include:

a. The name of the appellant;
b. The address of the appellant;
c. The Permit to Take Water number;
d. The date of the Permit to Take Water;
e. The name of the Director;
f. The municipality within which the works are located;

This notice must be served upon:

The Secretary
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto ON
M5G 1E5
Fax: (416) 326-5370
Email: ERTTribunalsecretary@ontario.ca

AND

The Director, Section 34.1,
Ministry of the Environment, Conservation and Parks
331-435 James St S
Thunder Bay ON P7E 6S7
Fax: (807) 475-1754

Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal:

by Telephone at	by Fax at	by e-mail at
(416) 212-6349	(416) 326-5370	www.ert.gov.on.ca
Toll Free 1(866) 448-2248	Toll Free 1(844) 213-3474	

This Permit cancels and replaces Permit Number 7363-7SXNEP, issued on 2009/06/12.

Dated at Greater Sudbury this 2nd day of May, 2019.

Shannon Innis

Shannon M Innis
Director, Section 34.1
Ontario Water Resources Act , R.S.O. 1990

Schedule A

This Schedule "A" forms part of Permit To Take Water 8607-BB3LLK, dated May 2, 2019.

Appendix E

Kagawong Drinking Water System Components

COMPONENTS DESCRIPTION

Site (Name): RAW WATER
Type: Source **Sub Type:** Surface
Comments:
The Kagawong Water Treatment Plant (WTP) intake lies in Mudge Bay, just off the North Channel of Lake Huron.

The intake line is a 116 m long, 355 mm diameter polyethylene pipe with 10 mm opening stainless steel screen. The intake pipe lies weighted down with stone at a depth of approximately 12 feet. The shallow depth makes the intake prone to frazzle ice during winter conditions. The low lift pumping station includes an intake backflush facility to aid in clearing frazzle ice from the intake line, using treated water.

The lowlift pumping station which sits on the banks of Mudge Bay also houses a pre-chlorine zebra mussel control system, and the frazzle ice surge tank. Two wet wells, two low lift turbine pumps and a standby propane generator are also located in the raw water pumphouse. The associated propane tank is located on the lake side of the lowlift building.

The Drinking Water Works Permit (#255-201, issue 1) indicates that the raw watermain between the low lift Pumping Station and the water treatment plant is 150 mm in diameter and approximately 1000 metres in length.

Site (Name): TREATED WATER
Type: Treated Water POE **Sub Type:** Treatment Facility
Comments:
The Kagawong Water Treatment Plant is a Class 2 water treatment subsystem operated by the Ontario Clean Water Agency (OCWA). This is a large municipal, residential system.

The plant was constructed in 2005 and originally outfitted with US Filter microfiltration membranes utilizing a pressure system (which became problematic causing pipe failure). Since the 2015 retrofit, treatment consists of 2 ultrafiltration GE Zeeweed package units utilizing a suction system which draws water through membranes, followed by injection of sodium hypochlorite for primary and secondary disinfection.

Raw water is pumped from the low lift pumping station to the water treatment plant.

Water passes through a strainer to remove larger objects and is then distributed to a header, which directs the water into tanks on each of the two membrane ultra filtration trains. Sodium hypochlorite is added for primary disinfection as water is pumped to the chlorine contact chamber.

The chlorine contact chamber maintains a constant volume of 162m3 with overflow weir to the highlift well. Two high lift vertical turbine pumps provide water to 200mm watermain from plant to intersection of Beach Road and Main Street as well as to the storage tower as it is a shared watermain.

Post chlorine injection of sodium hypochlorite (trim) is possible but is not currently in use. Treated water is then pumped via one of two high lift pumps to the water tower. There are no connections on the line prior to the tower.

Turbidity is continuously monitored on the two membrane trains. Pre-chlorine is monitored just prior to water entering the contact chamber, and post chlorine (used in CT calculations) is measured post contact chamber.

Backwash water enters a settling reservoir then a neutralization reservoir with supernatant discharged to a nearby ditch when ORP and pH are within acceptable ranges.

Site (Name): DISTRIBUTION
Type: Other **Sub Type:** Class I
Comments:
This distribution system is a class 1 water distribution subsystem and is operated by OCWA.

The population of Kagawong is estimated to be approximately 350 in the summer months, with approximately 150 residents year round. There are a reported 162 service connections, with approximately eight connections to commercial premises. There are also two public water taps located at the Kagawong Firehall. There are two marinas in town, both municipally operated, providing slips for 35 boats, eighteen of which have access to potable water taps. There are no industrial connections in Kagawong.

It is noted that residents often allow taps to run a small amount of water all winter to avoid frozen connections. Services are not metered. There are also 4 bleeders in use in the distribution system to help prevent frozen lines and to aid in maintaining chlorine residual levels. Three are located on Maple Drive and one by the municipal building.

The distribution system consists of three main components: the elevated water tower, town lines, and private or wild lines.

(i) Elevated Water Tower:
The tower was constructed in 2005 and is used for storage and to maintain pressure in the distribution system. The tower is located on the same property as the water plant. A sampling port is located at the tower but there is no capability to continuously analyze chlorine residual. In 2017 the tower was recoated.

(ii) Town Lines:
The distribution system includes 50 through 200 mm diameter lines. PVC piping has been used throughout approximately 99% of the system. One line of galvanized 2 inch pipe does form part of the distribution system. A PVC pipe runs under the Kagawong River at the outfall. There are 9 hydrants owned and maintained by the township.

(iii) Private Lines:
The Township was formerly working towards procuring ownership of all private lines that were allowed to connect to the distribution system but has had some difficulty in achieving this. The Township no longer allows private lines to connect to the distribution system.

Appendix F

Kagawong Drinking Water System – Best Practice Recommendations

1. Basement Ceiling:

Basement ceiling coating is decaying in large strips at a location under the first-floor chemical overflow holding area. Operating authority must investigate and examine integrity of structure.

2. Basement Cracks:

Basement wall is the outer wall of clearwell. Cracks are apparent and have been filled years ago. Operator will mark walls so as to track any progression. A clearwell inspection occurred in 2015. Coatings and cracks were examined with recommendations for inspections every three years and further examination by OCWA engineers. These activities should be scheduled to avoid further complications.

3. PH System:

The sulphuric acid (pH) system is in place (tank and 2 prominent metering pumps) - either maintain system or remove it. OCWA indicates efforts are underway to adjust the Permit/Licence and subsequently remove this system.

4. Trim Chlorine Equipment:

The "post-chlorination" system at the plant is in place (currently unplugged with 2 metering pumps being used for parts) to provide trim chlorine if required. There is no separate day tank. This trim system would use the storage tank associated with "pre-chlorination" system. Though unused, the trim system needs to be maintained. OCWA indicates efforts are underway to adjust the Permit/Licence and subsequently remove this system.

5. Lowlift Building:

The lowlift building at the lakeshore requires some maintenance as rainwater seeps in under the main door. Also the wetwell and screens require periodic inspection and cleaning. These activities should be scheduled to avoid future problems.

6. Zebra Mussel Control System:

In 2011, divers noted 60% zebra mussel coverage, which increased to 100% in 2019. In May 2019 divers returned and inspected the intake lines. Though unable to access the zebra mussel control system, divers did find the intake structure to be in generally good condition. Recommendations included cleaning intake screen at least every two years and examining and repairing as necessary straps holding down the chlorine carrier pipe.

7. SOP for elevated log removal credits:

Currently (see Schedule E) the plant is attributed with 2 log removal credits for Crypto and 3 log removal credits for Giardia, however Schedule A of the DWWP establishes that up to 4 log removal for Crypto and Giardia may be awarded provided that direct integrity testing is performed daily and other requirements (as per the Procedures for Disinfection) are fulfilled. Though the operator indicates that a warning alarm on integrity testing is in place, prior to the use of elevated log removal credits, an SOP needs to be developed which will provide guidance if not a checklist for operators.

8. Filter Efficiency:

Operator should be completing manual filter efficiency calculations at month end when filtrate turbidity dataset includes false data such as air entrainment. Operating authority should examine programming for efficiency calculations to ensure accuracy of filter #2 monthly levels given that dataset shows static efficiency even when turbidity is present.

9. Electronic Logbooks:

Operators are reminded to enter start date and end date of EOS (equipment out of service).

□ **Little Current Site**
Box 640, Little Current, ON P0P 1K0
(705) 368-2300

MANITOULIN HEALTH CENTRE
www.manitoulinhealthcentre.com

□ **Mindemoya Site**
Box 170, Mindemoya, ON P0P 1S0
(705) 377-5311

December 14, 2021

Mayor Ian Anderson
Corporation of the Township of Billings
P.O. Box 34
Kagawong, ON
P0P 1J0

Dear Mayor Anderson & Council,

Thank you for your support in 2020 in raising funds to purchase four ventilators for MHC. This was a very successful effort by the Island community and in a few short days, the $80,000 goal was exceeded. Once, MHC finalized the purchase of the ventilators, a surplus of funds remained.

This brings me to the reason for this letter. You generously supported this campaign, and with costs now expensed and a surplus remaining, MHC is seeking further direction from you regarding your gift. MHC would be pleased to either:

- Redirect your donation towards MHC's other capital needs, such as the Mindemoya ED Renovation and Expansion project, or
- Return your donation to you.

I would appreciate hearing from you if you have a preference between the options above. To reduce the burden of correspondence on you, if we do not hear back from you by January 31, 2022, MHC will redirect your donation to support our capital needs. My e-mail address is tvine@mhc.on.ca or you can call me directly at 705-368-2300, #2506.

Once again, I would like to sincerely thank you for your kind donation and support of Island healthcare.

Best regards,

Tim Vine
Interim Co-CEO
VP/CFO Corporate Support Services

Henderson Electric Manitoulin Inc

2181 Rockville Rd
R R #1
Mindemoya, Ontario P0P 1S0

705 377 5351 hendersonelec@eastlink.ca

QUOTE

Quote No.: 1308
Date: 12/15/2021
Page: 1
Ship Date:

Sold To:

Billings Township
15 Old Mill Rd
PO Box 34
Kagawong, ON P0P 1J0
Canada

Ship To:

Billings Township
15 Old Mill Rd
PO Box 34
Kagawong, ON P0P 1J0
Canada

Business No.: 825594831RT001

ECRA #7010066

Item No.	Quantity	Unit	Description	Tax	Unit Price	Amount
MISC	1	Each	22kw Generac air cooled standby generator	H	7,812.52	7,812.52
MISC	1	Each	200Amp 120/240V Service rated transfer switch	H	1,450.74	1,450.74
MISC	1	Each	9 - 22 kwatt cooled battery heater	H	187.14	187.14
MISC	1	Each	9 - 22 kwatt air cooled oil heater	H	187.14	187.14
MISC	1	Each	26R series wet cell battery	H	188.29	188.29
NOTES		Each		H		
MISC	1	Each	Cabling, labour, travel, ESA inspection, to install above generator	H	3,480.00	3,480.00
			Subtotal:			13,305.83
			H - HST 13% GST/HST			1,729.77

Thank you!

Matt

Shipped by

Comments

Sold By:

Total Amount 15,035.60

Health and Safety Report

December 2021

Health and safety activities for the year 2021 have been successful in the multiple categories of the health and safety program listed below.

WSIB Injury/Illness Claims

a) 2021 was a year where there were not any Lost Time Claims/No Lost Time Claims filed with the WSIB.
b) I am suggesting that an employee recognition luncheon be held with all staff as a reward and recognition for the continued safe work performance.

WSIB Program of Excellence

a) As reported in October/November, the Township of Billings will be receiving a $4000.00 premium rebate for topical submissions relating to the health and safety program.
b) I am recommending that the Township enroll in 3 more topical options to obtain continued premium rebates.
c) Topical submissions that were made and submitted did identify areas of the health and safety program that did require improvement.

JH&SC

a) The JH&SC did not meet its required amount of committee meetings as it met only 3 times over the course of the year. Minimum legislative requirements states that there should be a JH&SC every 3months.
   The primary reasoning for this was scheduling with the Public Works department and the roadworks that were scheduled for the summer and fall months.
   While roadworks are a priority to be completed during the good weather, the Public Works department needs to prioritize its commitment to the Township health and safety in its communications and work performance.
   A JH&SC meeting schedule will be prepared and distributed at the beginning of January 2022.
b) For the same reasons mentioned in item a) the JH&SC workplace inspections, that are legislatively required to be performed monthly, were not being performed and submitted. A schedule for inspections will be distributed at the beginning of January 2022.

Health and Safety Policy and Procedures

a) The health and safety policy and procedures were reviewed as required by the OH&SA.
b) The Township health and safety policies and procedures will be reviewed and amended as needed.

c) Work is continuing on developing an employee wellness policy and program in conjunction with the Mood Disorders Society of Canada.
   The intention is to have the Policy and implementation program in place during the first quarter of 2022.
d) Safety related items identified in Employee Handbook should be reviewed in the first quarter of 2022.

Standard Operating Procedures

a) Currently there are 29 written safe operating procedures for hazardous tasks that are performed by the Public Works and Marina employees.
   All of the procedures have been revised and updated to include a listing of specific hazards and a yearly performance review to verify the understanding of the procedures.
b) The procedures will be reviewed on a bi-weekly basis and employees will be required to sign-off on an understanding and training recording form.

Health and Safety Training

a) The revised new hire training process that was implemented this past year and the results of getting the work specific training performed by supervisory staff was effective.
   There are some minor adjustments that will be initiated in 2022.
b) 5 Township employees completed the required 1st aid training course that is delivered by the Red Cross.
c) Specialized training regarding legislative requirements and responsibilities for public roads was completed by one member of the Public Works staff.
d) A training session for staff and volunteers who are not providing proof of Covid vaccination information has been produced and the training has been delivered.
e) A safety training session and a rink inspection checklist has been produced and will be delivered to the volunteers who will be assisting with maintaining the outdoor rink at the park centre.
   The training will be delivered via zoom presentation at the beginning of 2022.

Covid

a) The realities and changes of the Covid virus and its affects on the Island population has kept all Township staff and employees vigilant while performing their daily duties.
   The Township staff and employees will continue to abide by the recommended hygiene, social distancing, masking and written procedures as well as rotating work from home.

General Comments

a) While there have been gains made in the program development, there are still occasions where compliance with the Township health and safety policies seems to be optional, which to me is very concerning.
   I have started working an extra day per week with the Public Works employees and at the Public Works office to assist in instilling an organized process that addresses employee training and compliance, maintenance plans for all equipment and ensuring that all legislative requirements that affect the work are being complied with.

b) I will also be working with the Public Works Superintendent in developing the habit of written documentation of employee safety contacts with respect to performance or training.
c) In regards to the concern that health and safety procedures appear to optional on occasions, I am recommending that a staff and employee meeting regarding the use of the Progressive Disciplinary Procedures identified in the employee handbook be held at the beginning of 2022 and that it will be enforced in a discretionary manner by the supervisory and managerial staff.

A health and safety program is a process that continues to evolve with legislative change, changes in personnel and input from all work parties. With that being stated, the health and safety program for Billings Township is functioning quite well, but still with a need for some improvements.

My objective as the health and safety coordinator for the Township is to continue improving the program to ensure that health and safety liability exposures are eliminated or controlled.

Respectfully

Arthur Moran
Health and Safety Coordinator
Billings Township

Tiana Mills

To: Kathy McDonald
Subject: RE: Minister's Annual Report on Drinking Water 2021 and 2020-21 Chief Drinking Water Inspector Annual Report / Le rapport annuel 2021 du ministre sur l'eau potable et le rapport annuel 2020-21 de l'inspectrice en chef de l'eau potable

Anyone that wants the information can ask to be forwarded the email so they can have the link to the reports.

From: Minister, MECP (MECP) <Minister.MECP@ontario.ca>
Sent: Thursday, December 23, 2021 1:23 PM
To: Kathy McDonald <kmcdonald@billingstwp.ca>
Subject: Minister's Annual Report on Drinking Water 2021 and 2020-21 Chief Drinking Water Inspector Annual Report / Le rapport annuel 2021 du ministre sur l'eau potable et le rapport annuel 2020-21 de l'inspectrice en chef de l'eau potable

As Minister of the Environment, Conservation and Parks, I'm pleased to release my annual report on drinking water and confirm that Ontario's drinking water continues to be among the best protected in the world.

The 2020-21 data shows that 99.9 per cent of more than 505,000 test results from municipal residential drinking water systems met Ontario's stringent drinking water quality standards.

Today, the ministry also released the Chief Drinking Water Inspector's Annual Report, which provides an overview of the ministry's progress during 2020-21 and includes in-depth information on the performance of Ontario's drinking water systems and licensed laboratories. You can also visit ontario.ca to see the supporting drinking water quality and enforcement data.

These reports demonstrate the positive results of Ontario's ongoing actions to help ensure drinking water sources remain secure and reliable.

Effective drinking water protection in all jurisdictions and corners of the province is only possible through collaborative effort. I am very proud of all the work the Ministry of the Environment, Conservation and Parks staff are doing with conservation authorities, municipalities, Indigenous communities, the Ontario Clean Water Agency, water associations and the Walkerton Clean Water Centre to keep our drinking water clean and safe, and I thank our partners for their many efforts.

The people of Ontario value safe water to drink, clean air to breathe and well-protected lands and greenspaces. The Government of Ontario is committed to protecting these important environmental resources today and for generations to come.

Sincerely,

David Piccini
Minister of the Environment, Conservation and Parks

En tant que ministre de l'Environnement, de la Protection de la nature et des Parcs, j'ai le plaisir de publier mon rapport annuel sur l'eau potable et de confirmer que l'eau potable de l'Ontario continue d'être l'une des mieux protégées au monde.

Les données de 2020-2021 montrent que 99,9 pour cent des quelque 505 000 résultats d'analyse de l'eau potable provenant des réseaux d'eau potable résidentiels municipaux répondaient aux normes strictes de l'Ontario en matière de qualité de l'eau potable.

Aujourd'hui, le ministère a également publié le rapport annuel de l'inspectrice en chef de l'eau potable, qui donne un aperçu des progrès réalisés par le ministère en 2020-2021 et contient des renseignements détaillés sur les résultats d'analyse obtenus par les réseaux d'eau potable de l'Ontario et les laboratoires autorisés. Vous pouvez également visiter ontario.ca pour prendre connaissance des données justificatives concernant la qualité de l'eau potable et l'application des règlements.

Ces rapports démontrent les résultats positifs découlant des mesures continues prises par l'Ontario pour veiller à ce que les sources d'eau potable demeurent sûres et fiables.

Une protection efficace de l'eau potable dans toutes les juridictions et l'ensemble de la province n'est possible que grâce à un effort de collaboration. Je suis très fier de tout le travail que le personnel du ministère de l'Environnement, de la Protection de la nature et des Parcs a réalisé de concert avec les offices de protection de la nature, les municipalités, les collectivités autochtones, l'Agence ontarienne des eaux, les associations de l'eau et le Centre de Walkerton pour l'assainissement de l'eau pour maintenir notre eau potable saine et salubre, et je remercie également nos partenaires pour leurs nombreux efforts.

La population de l'Ontario accorde de l'importance à l'eau potable qu'elle consomme, à l'air pur qu'elle respire et aux terres et espaces verts bien protégés. Le gouvernement de l'Ontario s'est engagé à protéger ces importantes ressources environnementales aujourd'hui et pour les générations à venir.

Cordialement,

David Piccini
Ministre de l'Environnement, de la Protection de la nature et des Parcs

Stantec Consulting Ltd.

January 7, 2022
File: 165001086

Attention: Ms. Kathy McDonald
CAO / Clerk,
Municipality of Billings,
15 Old Mill Road, P.O. Box 34
Kagawong, ON P0P 1J0

Dear Ms. McDonald,

Reference: Heritage Impact Assessment - Highway 6 Little Current Swing Bridge and Planning, Preliminary Design and Class Environmental Assessment for Highway 6 Little Current Swing Bridge (G.W.P. 5268-14-00)

The Ontario Ministry of Transportation (MTO) retained Stantec Consulting Ltd. to undertake a Planning, Preliminary Design and Class Environmental Assessment (Class EA) Study for the Highway 6 Little Current Swing Bridge located in the Town of Northeastern Manitoulin and the Islands in northeastern Ontario. The bridge provides the only year-round highway access between the community of Little Current and Manitoulin Island and mainland areas of northern Ontario. As the existing bridge is nearing the end of its service life, the purpose of this study was to identify a Recommended Plan that addresses current and future transportation needs at the bridge crossing.

Based on the findings of this Class EA Study, the Recommended Plan includes the removal of the existing Highway 6 Little Current Swing Bridge, following construction of the new bridge. The existing bridge is the oldest and longest known example of a swing bridge within the province and has been identified by MTO as a Provincial Heritage Property of Provincial Significance (PHPPS) under section 25.2 of the *Ontario Heritage Act* (OHA). MTO must comply with the 2010 Standards and Guidelines for Conservation of Provincial Heritage Properties (Standards and Guidelines) pursuant to Part III.1, section 25.2, of the OHA. MTO must also adhere to the MTO's Ontario Heritage Bridge Guidelines (Interim 2008) (OHBG).

MTO's OHBG sets out eight conservation options that must be considered for its bridges. Under the Standards and Guidelines, removal or demolition of all or part of a provincial heritage property should be considered as a last resort, having considered all other alternatives, subject to Heritage Impact Assessment (HIA) and community engagement. The Standards and Guidelines also requires the consent of the Minister of Heritage, Sport, Tourism and Culture Industries be obtained prior to the demolition or removal of any building or structure located on a PHPPS.

In accordance with provincial requirements, MTO has prepared a HIA, a study that documents how the conservation options were considered, identifies the impacts associated with the removal of the bridge and recommends options and mitigation measures to reduce negative impacts and conserve cultural heritage value or interest. The HIA will also support MTO's Request for the Minister of Heritage, Sport, Tourism and Culture Industries' consent and will guide next steps and the future of the existing bridge.

Reference: **Heritage Impact Assessment - Highway 6 Little Current Swing Bridge and Planning, Preliminary Design and Class Environmental Assessment for Highway 6 Little Current Swing Bridge (G.W.P. 5268-14-00)**

An electronic copy of the HIA is attached for your review for a 30-day review period until February 7, 2022. It would be greatly appreciated if you could kindly provide any comments and/or feedback you may have via email to diana.addley@stantec.com by **Monday, February 7, 2022**.

Should you have any additional questions and/or concerns, please do not hesitate to contact the project team (ProjectTeam@swingbridgestudy.ca).

Regards,

Stantec Consulting Ltd.

Diana Addley
Senior Environmental Planner
Email: Diana.Addley@stantec.com

Attachment: Heritage Impact Assessment Report

c. M. Delfino, J. Haddow, M. Hedges – Ministry of Transportation
G. Cooke, T. Belliveau – Stantec Consulting Ltd.

Heritage Impact Assessment—Little Current Swing Bridge, Site 49X-0002/B0 (GWP 5268-14-00)

REPORT

November 30, 2021

Prepared for:

Ministry of Transportation Ontario
Northeastern Region
447 McKeown Ave. #301
North Bay, ON P1B 9S9

Prepared by:

Stantec Consulting Ltd.

600-171 Queens Ave.
London, ON N6A 5J7

Project Number: 165001086

Table of Contents

EXECUTIVE SUMMARY ..... **I**

ABBREVIATIONS ..... **IV**

1.0 INTRODUCTION **1.1**

2.0 STATEMENT OF CULTURAL HERITAGE VALUE **2.1**

3.0 ASSESSMENT OF EXISTING CONDITIONS **3.1**
3.1 BRIDGE REHABILITATIONS/MODIFICATIONS 3.1
3.2 TECHNICAL INSPECTIONS 3.2
3.3 LAND ARCHAEOLOGICAL ASSESSMENTS 3.3
3.4 MARINE ARCHAEOLOGICAL ASSESSMENT 3.3

4.0 DESCRIPTION AND PURPOSE OF THE PROPOSED ACTIVITY **4.1**

5.0 IMPACT ASSESSMENT **5.1**

6.0 CONSIDERED ALTERNATIVES AND MITIGATION MEASURES **6.1**
6.1 CONSERVATION OPTIONS 6.1
6.2 SUMMARY OF CONSERVATION OPTIONS 6.6
6.3 MITIGATION MEASURES 6.7
6.3.1 Salvage, Relocation and Interpretation & Commemoration Plan 6.7
6.3.2 Sympathetic Design of Replacement Bridge 6.8

7.0 SUMMARY OF COMMUNITY ENGAGEMENT **7.1**
7.1 INTRODUCTION 7.1
7.2 STUDY DESIGN REPORT (FALL 2018) 7.1
7.3 PIC #1 (AUGUST 2018) AND INDIGENOUS CISS (OCTOBER 2018) 7.2
7.4 PIC #2 AND CISS #2 (JULY 2019) 7.2
7.5 PIC # 3 (MARCH 30-APRIL 30, 2021) 7.3
7.6 MINISTRY OF HERITAGE, SPORT, TOURISM AND CULTURE INDUSTRIES ENGAGEMENT 7.3

8.0 RECOMMENDATIONS **8.1**
8.1 SYMPATHETIC DESIGN OF REPLACEMENT BRIDGE 8.1
8.2 SALVAGE, RELOCATION AND INTERPRETATION & COMMEMORATION PLAN 8.1
8.2.1 Salvage and Relocation Plan 8.1
8.2.2 Interpretation and Commemoration Plan 8.2
8.2.3 Bridge Documentation 8.2

9.0 REFERENCES **9.1**

10.0 CLOSURE **10.1**

LIST OF TABLES

Table 1: Consideration of Conservation Options.....6.3

LIST OF FIGURES

Figure 1: Study Area Location 1.3

LIST OF APPENDICES

APPENDIX A PROJECT PERSONNEL AND QUALIFICATIONS

APPENDIX B PUBLIC INFORMATION CENTRE HERITAGE COMMENTS

APPENDIX C COMMUNITY INPUT SHARING SESSIONS #1 COMMENTS

APPENDIX D COMMUNITY INPUT SHARING SESSIONS #2 COMMENTS

Executive Summary

The Little Current Swing Bridge (Site 49X-0002/B0) is located in the community of Little Current, former Howland Township, present-day Town of Northeastern Manitoulin and the Islands, Ontario. The Little Current Swing Bridge provides the only year-round highway/road access between Manitoulin Island and mainland areas of northern Ontario. The bridge connects the community of Little Current to Goat Island, crossing the North Channel of Lake Huron. The Little Current Swing Bridge was constructed in 1913 for use as a railway bridge and was adapted in 1945 to accommodate both rail and vehicular traffic. The bridge was acquired by the Ontario Ministry of Transportation (MTO) in 1982 and retained for exclusive vehicular use. The bridge remains under MTO ownership.

As part of its Provincial Highway Management Program, MTO determined that the bridge was nearing the end of its service life and was not accommodating the community's transportation needs. Therefore, MTO retained Stantec Consulting Ltd (Stantec) in 2018 to undertake a Planning, Preliminary Design, and Class Environmental Assessment (Class EA) Study for the Highway 6 Little Current Swing Bridge. The purpose of the Class EA is to identify a Recommended Plan that addresses the identified current and future transportation needs. The Preferred Plan is construction of a new swing bridge west of the current bridge alignment. The plan also requires the removal of the existing historic bridge once the new replacement bridge is constructed.

The Little Current Swing Bridge has been identified by MTO as a Provincial Heritage Property of Provincial Significance (PHPPS). All Ontario government ministries, including MTO, and public bodies, prescribed under Ontario Regulation 157/10, are required to follow the Standards and Guidelines for Conservation of Provincial Heritage Properties (S&Gs), prepared under section 25.2 of the Ontario Heritage Act (OHA), when making any decisions affecting cultural heritage resources on lands under their control.

Additionally, MTO's Ontario Heritage Bridge Guidelines (OHBG) (MTO 2008) provide direction on the conservation of provincially owned heritage road bridges and establish eight conservation options that must be considered. See Section 6.2 for an analysis of how these conservation options were considered.

Provision F.4 of the S&Gs requires that, all other alternatives having been considered, consider removal or demolition as a last resort, subject to Heritage Impact Assessment (HIA) and public engagement. In addition, the use of best efforts to mitigate loss of cultural heritage value is required.

Provision F.5 of the S&Gs requires that, in the case of a provincial heritage property of provincial significance such as the Little Current Swing Bridge, the MTO must obtain the consent of the Minister of Heritage, Sport, Tourism and Culture Industries (MHSTCI) before removing or demolishing the bridge.

The purpose of this HIA is to assess the impacts of the project on the existing Little Current Swing Bridge and to document how the eight conservation options under the OHBG (MTO, 2008) have been considered. This HIA has been prepared according to Information Bulletin 3: Preparing Heritage Impacts

Assessments for Provincial Heritage Properties (MHSTCI, 2017. This HIA will be used to support MTO's request for the MHSTCI's minister's consent for demolition or removal of the Little Current Swing Bridge. Circulation of this HIA to key local and heritage stakeholders and to interest parties, is required under the S&GS. Any public or stakeholder input or comments will be considered as part of the Request for MHSCTI's minster's consent.

Having considered all other alternatives, MTO has determined that removal and/or demolition of the existing Little Current Swing Bridge is the only viable option and will be seeking the consent of the Minister of Heritage, Sport, Tourism and Culture Industries for the removal and/or demolition of the bridge.

To mitigate the loss of CHVI associated with removal of the Little Current Swing Bridge, a series of mitigative measures is proposed including:

- Documentation of the bridge prior to removal;
- Commemoration of the bridge; and
- Sympathetic design of the replacement bridge, including use of salvaged materials in the new design where practicable.

The Executive Summary highlights key points from the report only; for complete information and findings, the reader should examine the complete report.

Acknowledgements

Ministry of Heritage, Sport, Tourism, and Culture Industries	Rosi Zirger, Karla Barboza, James Hamilton
Ontario Ministry of Transportation	Melissa Delfino, Jane Haddow, Michelle Hedges

Project Personnel

A summary of Project Personnel and their qualifications is contained in Appendix A.

Abbreviations

AA	Archaeological Assessment
BCI	Bridge Condition Index
CHAR	Cultural Heritage Assessment Report
CHER	Cultural Heritage Evaluation Report
CHVI	Cultural Heritage Value or Interest
CISS	Community Information Sharing Session
CP	Canadian Pacific
EA	Environmental Assessment
ft	Feet
HAER	Historic American Engineering Record
HIA	Heritage Impact Assessment
In	Inches
km	Kilometres
m	Metres
MECP	Ministry of the Environment, Conservation and Parks
MHSTCI	Ministry of Heritage, Sport, Tourism and Culture Industries
MNRF	Ministry of Natural Resources and Forestry
MTO	Ontario Ministry of Transportation
NEMI	Northeastern Manitoulin and the Islands
NPS	National Park Services
O. Reg.	Ontario Regulation
OHA	*Ontario Heritage Act*

OHBG	*Ontario Heritage Bridge Guidelines*
OSIM	Ontario Structure Inspection Manual
PHPPS	Provincial Heritage Property of Provincial Significance
PIC	Public Information Centre
SCHVI	Statement of Cultural Heritage Value or Interest
SCP	Strategic Conservation Plan
S&Gs	*Standards and Guidelines for Conservation of Provincial Heritage Properties*
TESR	Transportation Environmental Study Report

1.0 INTRODUCTION

The Little Current Swing Bridge located in the community of Little Current, former Howland Township, present-day Town of Northeastern Manitoulin and the Islands (NEMI), Ontario (Figure 1) connects the community of Little Current to Goat Island and provides the only year-round connection between Manitoulin Island and the mainland, crossing the Little Current water body (the North Channel of Lake Huron). The Little Current Swing Bridge was constructed in 1913, originally for use as a railway bridge, and was adapted to accommodate both rail and vehicular traffic in 1945. The bridge was acquired by the Ontario Ministry of Transportation (MTO) in 1982 for the exclusive use of vehicles, and currently remains under MTO ownership.

The Little Current Swing Bridge was listed on the MTO Ontario Heritage Bridge List in 1983. A Cultural Heritage Evaluation Report (CHER) was completed in 1987 by David Cuming and Associates and in 2009 by Unterman McPhail Associates. An additional CHER was completed in 2019 by Stantec Consulting Ltd. (Stantec) to meet updated standards. Based on the recommendations of the 2019 CHER, MTO identified the bridge property as a Provincial Heritage Property of Provincial Significance (PHPPS).

As part of MTO's Provincial Highways Management program, MTO determined that the bridge was nearing the end of its service life and was not accommodating the community's transportation needs. Conditions and concerns identified by MTO, include:

- The bridge has undergone major rehabilitation cycles in the past and in future would require significant and ongoing maintenance and repairs to maintain a safe and reliable connection between Manitoulin Island and the mainland;
- Due to its age, failure of the opening mechanism has caused major disruptions to the transportation network. There is significant risk of future mechanical breakdowns. Additionally, due to its age, replacement mechanism cannot be sourced and must be specifically manufactured resulting in increased repair costs and delays in repairs;
- The type of structure (through-truss) provides no redundancy (i.e. single load path structure) in the design, which increases the risk of a bridge collapse and/or closure causing major disruption to the transportation network; and
- Potential bridge closures, whether for repairs or mechanical failures poses a potential risk for disruptions to emergency access and evacuation.

MTO retained Stantec in 2018 to undertake a Planning, Preliminary Design, and Class Environmental Assessment (Class EA) Study for the Highway 6 Little Current Swing Bridge. The purpose of the Class EA is to identify a Recommended Plan that addresses the identified current and future transportation needs. The Preferred Plan is construction of a new swing bridge west of the current bridge alignment. The plan also requires the removal of the existing historic bridge once the new replacement bridge is constructed.

MTO has considered factors related to this project, including physical condition of the existing bridge, factors related to on-going rehabilitation/maintenance, and transportation needs of the community. Having considered all other alternatives, MTO has concluded that removal and/or demolition of the existing bridge is the best alternative and a last resort. In accordance with the S&Gs, MTO will be seeking the Consent of the Minister of Heritage Sport, Tourism and Culture Industries to remove and/or demolish the existing bridge.

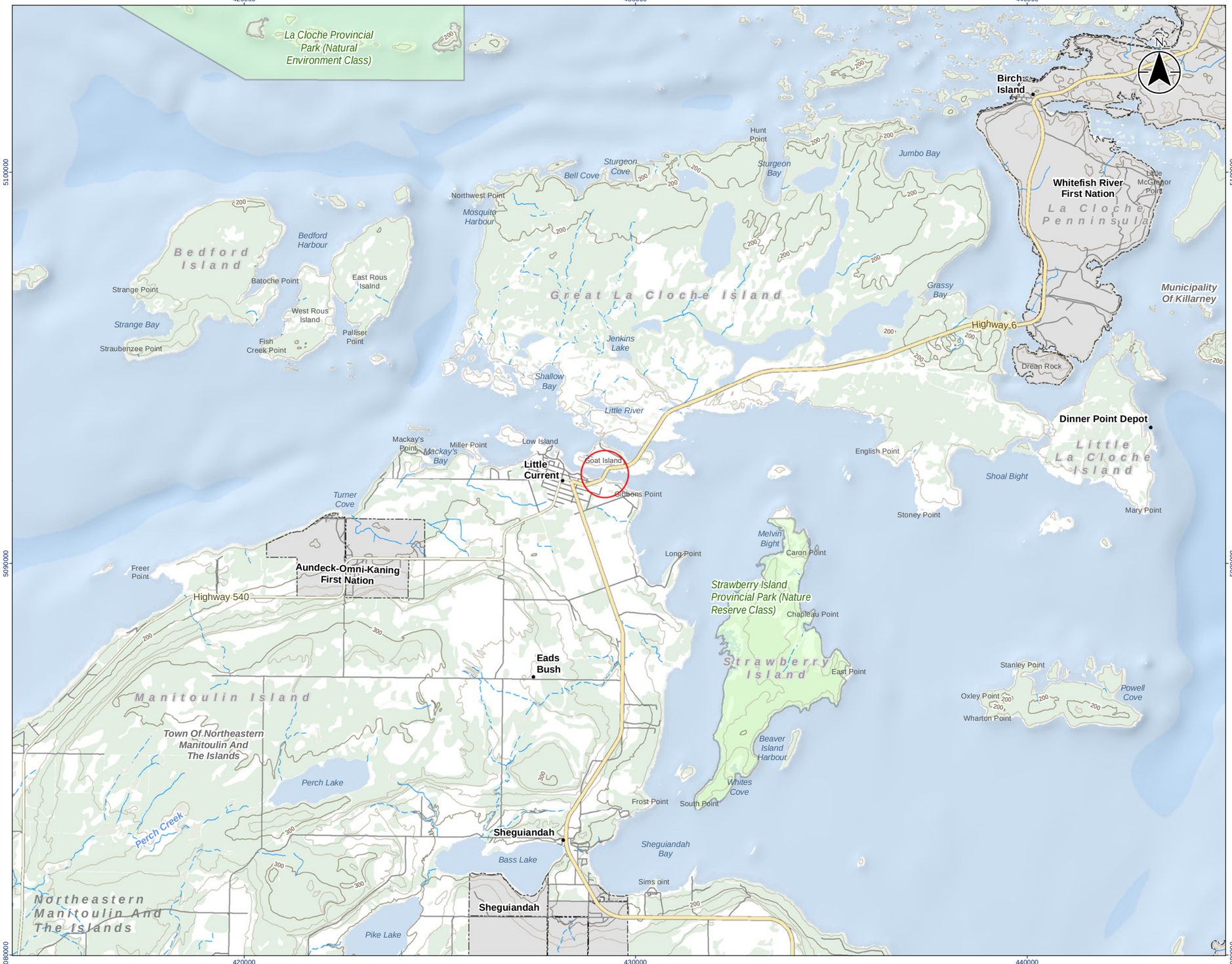
Details of the mitigation measures are included in Sections 6.3 and 8.0. Measures to mitigate the loss of cultural heritage value or interest (CHVI) associated with removal of the Little Current Swing Bridge, include:

- Documentation of the bridge prior to removal;
- Commemoration of the bridge; and
- Sympathetic design of the replacement bridge, including use of salvaged materials in the new design where practicable.

A commemoration plan will be completed following this preliminary design phase, as the project progresses toward detail design phase. As part of the commemoration plan, relocation of the historic bridge, in whole or in part, will be investigated including completing technical and economic feasibility studies to determine if it is physically possible. MTO will consult with the municipalities, First Nations, and others to develop the commemoration plan.

The proposed commemoration plan will:

- Commemorate the bridge at an appropriate location that is associated with the bridge (preferably close by the crossing) and publicly accessible;
- Record the history of the bridge and its impact on the area; and
- Include interpretive materials such as display panels and, if feasible, the entire bridge or significant components of it such as the gears and the control booth.



Stantec

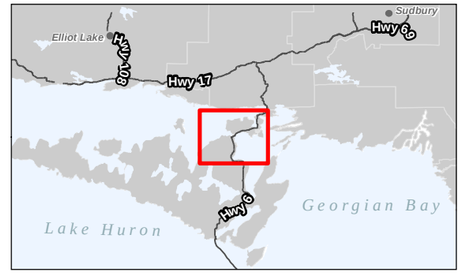
Legend

- Study Area
- Highway
- Major Road
- Minor Road
- Contour (100 m Interval)
- Contour (10 m Interval)
- Watercourse (Intermittent)
- Watercourse (Permanent)
- First Nation Reserve
- Provincial Park
- Wooded Area
- Waterbody

1:100,000 (At original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2018.



Project Location
District Of Manitoulin

165001086 REVA
Prepared by on 2018-11-02
Technical Review by MR on 2018-11-19
Independent Review by CV on 2019-01-17

Client/Project
MINISTRY OF TRANSPORTATION
PLANNING, PRELIMINARY DESIGN - HIGHWAY 6 LITTLE CURRENT SWING BRIDGE STUDY (GWP 5268-14-00)

Figure No.
1

Title
Study Area Location

2.0 STATEMENT OF CULTURAL HERITAGE VALUE

The Statement of Cultural Heritage Value was adopted by MTO's Heritage Bridge Committee on November 1, 2021, as follows[1]:

Description of Property

The Little Current Swing Bridge is a five-span steel through truss movable swing bridge. The bridge is located on Highway 6 at the community of Little Current, on Manitoulin Island, and crosses the North Channel of Lake Huron to connect through Goat Island to the mainland. The southern end of the bridge is located in Lot 23, Concession 12, former Township of Howland, present-day Town of Northeastern Manitoulin and the Islands. The northern end of the bridge is located on Goat Island, part of the Mink Island Area, present-day Town of Northeastern Manitoulin and the Islands. Constructed in 1913, the bridge was originally designed to carry only railway traffic but was modified to accommodate both rail and vehicular traffic in 1945. Currently, the Little Current Swing bridge accommodates one lane of vehicular traffic and is the main structure connecting Manitoulin Island to the mainland.

The Little Current Swing Bridge was identified as a Provincial Heritage Property of Provincial Significance (PHPPS) by MTO.

Cultural Heritage Value

The Little Current Swing Bridge is associated with the development of railways in northern Ontario and was constructed as part of the Algoma Eastern Railway. Railway connection between northern and southern Ontario was seen as an important factor in the development of mining, pulp and paper, and timber industries in the north that needed access to markets in the southwest of the province. Planning for the Algoma Eastern Railway began as early as the 1880s as a way of connecting Manitoulin Island to the mainland and the erection of a swing bridge across the North Channel at Little Current would allow shipping traffic use of the channel while trains were not crossing the bridge. Passenger service was also part of the operation providing residents of the island with a permanent link to the mainland and eventually supporting tourism on Manitoulin Island that developed into a significant industry by the 1920s. While the plan was to connect Sudbury with southern Ontario, the railway never reached further south than Little Current. Passenger service ceased in 1963 with all rail service ending in the 1980s. The bridge is the only surviving remnant of the Algoma Eastern Railway line between Little Current and Espanola and serves as a visible reminder of the importance that was given to railway and resource development in the early 20th century.

The Little Current Swing Bridge is significant as a rare surviving example of a moveable swing bridge. It is the longest known example of a swing bridge in Ontario. The use of swing bridge designs was most prominent between 1890 and 1910. As these types of bridges often require complex systems for allowing

[1] Source: Draft Cultural Heritage Evaluation Report Planning, Preliminary Design and Class Environmental Assessment Study for the Highway 6 Little Current Swing Bridge (2018) prepared by Stantec Consulting Ltd

their movement, they were used only in specific situations, typically where road or rail traffic needed to pass over a watercourse without inhibiting marine traffic. At the time of its construction, the Little Current Swing Bridge represented the height of engineering technology in movable swing bridge types.

The superstructure consists of a two-span riveted steel through truss swing section and three riveted steel deck plate fixed approach spans. The control room is located above the centre of the bridge and accessed via a metal staircase on the east side of the bridge. To facilitate the passage of ships, the superstructure is built atop a central pier in the watercourse upon which the bridge pivots. The pivot motion allows the bridge to swing horizontally at 90 degrees, allowing marine traffic to pass through the open channel created on either side of the central pier. A pedestrian walkway on the west side of the bridge consists of wood decking and a steel railing that is supported from the bridge stringer.

The substructure of the bridge consists of the abutments, wingwalls, piers, and machinery associated with the swing bridge. The bridge has six cast-in-place concrete piers some of which contain machinery and mechanisms associated with the bridge's swinging operation. The two piers, located approximately 50 metres to the east and west of the bridge, support the bridge when it is swung into the open position. The centre pier contains the ring gear, balancing trucks, the centre pivot bearing, and four wedges and is protected from ice and ship collisions by protection cribs. The ring gear mechanism turns on a pivot using disks and eight wheels running on steel track. The bridge is locked into place by a system of wedges. Most swing bridge designs consist of two central wedges but the Little Current Swing Bridge employs four. The use of additional wedges is attributed to the substantial size of the structure when compared to other swing bridges.

Research suggests that the bridge was designed by the Canadian Bridge Company of Walkerville, Ontario, as well as the New York firm Boller, Hodge and Baird. The Canadian Bridge Company was noted in the early 20th century as a major manufacturing and construction firm in Ontario specializing in the design and construction of steel bridge structures in the province.

Set within a rural landscape, the Little Current Swing Bridge is a highly visible, unique and dominant structure crossing the channel. It is a prominent feature in the Little Current area and is a highly recognizable local landmark. The bridge features strongly in local identity, and its image is used on municipal entrance signage, banners, commemorative and interpretive materials, and local business advertisements. The bridge dominates views of the North Channel from the boardwalk and harbourfront and has been the only constant point of crossing at the area for over a century.

Description of Heritage Attributes

Heritage attributes that contribute to and/or support the cultural heritage value or interest of the Little Current Swing Bridge include:

Structure

- The size and massing of the overall structure;
- Movable swing bridge design characterized by:
  - Riveted steel through truss superstructure

- Cast in place concrete piers including central pivot pier
- Cast in place concrete abutments and wing walls
- Protection cribs
- Plate girder approach spans
- Mechanical elements related to 'swing' infrastructure including the ring gear and wedges (four centre wedges and two end wedges at each end of the bridge)
- Elevated control room above central pier and bridge deck (not including machinery and electronics, which are not original)
- Pedestrian walkway (former train worker walkway) on west side of bridge with wood decking and steel railing

Siting and Location

- Prominent and original location and setting on the North Channel of Lake Huron between Little Current and Goat Island;
- Functional and visual integration into the landscape making it a highly recognizable landmark; and
- Last surviving remnant of the Algoma Eastern Railway line between Little Current and Espanola.

Views

- Views to the bridge from Highway 6 and Little Current.

3.0 ASSESSMENT OF EXISTING CONDITIONS

The Little Current Swing Bridge is located approximately 480 metres northeast of the intersection of Highway 6 and Sim Street in Little Current, former Township of Howland, and approximately 465 metres southwest of the intersection of Highway 6 and Goat Island Road on Goat Island, former Mink Island Area. The bridge has a total deck length of 573 feet (ft) (175 metres (m)), a width of 20 ft and 6 inches (in) (6 m), and overall area of 10,463 ft^2 (972 m^2). The bridge is oriented in a north to south direction and carries a single lane of traffic on King's Highway 6 over the North Channel. Since the bridge offers only one travel lane, northbound and southbound traffic alternates use of the bridge by means of timed traffic signal. The bridge provides the only year-round highway access between the community of Little Current and Manitoulin Island and mainland areas of Northern Ontario.

A site visit was completed by Frank Smith, Cultural Heritage Specialist with Stantec, and Louis Cordon, MTO Bridge Operator, on October 4, 2018. Supplemental information was gathered at the MTO Northeastern Region Office with the assistance of Michael McCormick from MTO. In addition, Ontario Structure Inspection Manual (OSIM) reports dated 2016, 2018 and 2020 were reviewed to supplement the assessment of existing conditions.

The superstructure of the Little Current Swing Bridge is a five-span, steel plate deck girder and steel through truss design. From the south, spans one, four, and five have a steel plate deck girder superstructure. Spans two and three have a steel through truss superstructure. The steel girders and diaphragms on the bridge include I-type and cross type. The bridge has steel bracing, steel I-type floor beams, and steel I-type stringers. The west elevation of the bridge contains a pedestrian path with an anti-skid wearing surface on top of laminated wood decking that is supported from the bridge stringer and a steel handrail. The control room is located above the centre of the bridge and accessed via a metal staircase on the east side of the bridge. The substructure of the bridge consists of the abutments, wingwalls, piers, and machinery associated with the swing bridge.

3.1 BRIDGE REHABILITATIONS/MODIFICATIONS

In 1943, Canadian Pacific (CP) modified the bridge to accommodate vehicular traffic in addition to the railway traffic it was constructed to carry. As part of the modifications, new motors were installed that allowed the bridge to complete the swing sequence in three minutes. A bridge deck of wooden planking was laid down and automated traffic lights and gates were installed at the bridge approaches. The modifications were completed November 28, 1945.

In 1980, CP discontinued rail service to Manitoulin Island and in 1982 the bridge was transferred from the rail company to the Ministry of Transportation and Communications for the sum of $1.00. In 1985, the MTO replaced the wooden Douglas fir decking of the bridge and removed the railway tracks; however, the bridge continues to maintain a single-lane configuration.

During the last 35 years, expenditures for bridge rehabilitation were approximately $17.6 million, or approximately $500,000 per year. Since 1988, the following rehabilitations have been undertaken:

- 1988: Reconstruction of the top of the centre pier, refurbishment of the ring gear, tracks and trucks.
- 1993: Installation of submarine cable to centre pier.
- 1999: Conversion of swing operation from diesel motor to electric motor, repair of structural steel, wedge replacement, and coating of structural steel.
- 2002: Structural steel repairs and centre bearing replacement.
- 2002: Coating of approach spans.
- 2005: Structural steel repairs and coating of bottom half of swing spans.
- 2009: Replacement of deck, repairs to piers and abutments, replacement of electrical components, repairs to structural steel, and catwalk installation.
- 2011: Coating of top half of swing spans.
- 2015: Repairs to mechanical components.

3.2 TECHNICAL INSPECTIONS

Chemical analysis and strength testing was completed in 1986 on two steel samples extracted from the existing bridge. Empirical analysis undertaken using the test results indicates that the steel could become brittle at normal temperatures.

As noted above, OSIM reports dated 2016, 2018 and 2020 were reviewed to supplement the assessment of existing conditions. All bridges in Ontario are inspected biennially (every two years) using OSIM to confirm that the structure, as a vital part of Ontario's highway system, is kept in good repair. The condition of all elements is summarized in the Bridge Condition Index (BCI). The MTO uses the BCI to plan maintenance and repairs. The following outlines the BCI ratings and recommended maintenance schedule:

- **Good:** Maintenance is not usually required within the next five years.
- **Fair:** Maintenance work is usually scheduled within the next five years. This is the ideal time to schedule major bridge repairs to get the most out of the bridge spending.
- **Poor:** Maintenance work is usually scheduled within one year.
- **Critical:** Consider bridge evaluation, closure, and removal or replacement.

The most recent OSIM report for the structure, conducted in 2020, indicates that the bridge components are generally in good condition, with some elements showing fair condition and few showing poor condition. Generally, the abutments are in good to fair condition, showing some narrow cracks and wet areas. The barriers/railing systems are in good condition, with minor collision damage. The diaphragms in the beams are in good condition, while the girders on the bridge range from good to poor. The girders demonstrate light to medium corrosion and perforations, as well as rust jacking on the top flange. Bracing

on the bridge is in good to fair condition, with localized perforations and deformations in several bracing connections, and light corrosion. Coatings on the structural steel and hand railings are in good to fair conditions, with minor breakdown and peeling in isolated locations. The bridge piers have been refaced and are in good to poor condition, with narrow to medium cracks, wet areas, minor spalls, and rust staining. Pile bents are in good to poor condition, with severe rot noted along waterline. The trusses and various components (bottom chords, connections, top chords, diagonals) range in condition from good to poor, with light to severe corrosion, pitting and localized perforations. Joints on the bridge range from excellent to poor, with light corrosion, minor scrape damage, and some loose connections, and narrow cracks. Seals on the joints are in poor conditions and are displaced with gaps. The bridge deck top (non-original), soffit, and sidewalks were noted to be in excellent condition.

3.3 LAND ARCHAEOLOGICAL ASSESSMENTS

Stantec completed a Stage 1 archaeological assessment under a separate cover in 2019, the findings of which determined that portions of the study area retained potential for the recovery of archaeological resources. A Stage 2 archaeological assessment for the recommended alignment (i.e., approximately 80 m west of the existing bridge alignment) was subsequently conducted on September 8 and 9, 2020 under PIF P415-0246-2020. No archaeological resources were identified during the Stage 2 assessment.

3.4 MARINE ARCHAEOLOGICAL ASSESSMENT

A marine archaeological overview assessment was completed for the North Channel within the preferred alignment, the findings of which indicated that the area is associated with several indicators of marine archaeological potential. While the marine portion of the study area may retain potential for submerged cultural resources associated with the original historical occupation, such as the North West Company facility, and the fur trade in general, as submerged cultural resources have been identified in similar contexts, the study has been subjected to complex changes in channel depth due to historical and modern dredging, strong currents, and fluctuations in water-levels. Numerous dredging events conducted to provide for safe operation of shipping vessels within the North Channel have occurred historically.

The in-water geotechnical investigation undertaken as part of this study indicated that there is minimal to no soil over top of bedrock along the channel bottom, and therefore the preservation of in situ marine cultural resources is considered unlikely. In addition, there is also no historical documentation or accounts of historic wrecks within the study area.

As such, the archaeological potential for marine archaeological resources to be present in the area is considered low, and there is low to no potential for the identification for pre-contact Indigenous, post-contact Indigenous, and Euro-Canadian marine archaeological resources.

4.0 DESCRIPTION AND PURPOSE OF THE PROPOSED ACTIVITY

MTO is proposing to remove the Highway 6 Little Current Swing Bridge and replace it with a new sympathetically designed structure. The proposed activity will involve the following:

- Removal of the entire movable swing bridge, including steel truss, mechanical elements, concrete piers, and approach spans.
- Construction of new support piers and approach spans.
- Construction of a new movable swing bridge with truss design and two lanes of traffic in each direction and active transportation path.

The project was initiated as a part of MTO's Provincial Highways Management Program to support an efficient, safe, and integrated multi-modal transportation system in Ontario. Specifically, in undertaking a Transportation Needs Assessment, for Highway 6 and the Little Current Swing Bridge in the community of Little Current, on Manitoulin Island, as part of the ongoing management and administration of the provincial transportation system. The actions of the MTO are guided by the transportation policies included in the 2020 Provincial Policy Statement.

As part of MTO's Provincial Highways Management Program, MTO determined that the bridge was nearing the end of its service life and was not accommodating the community's transportation needs. Conditions and concerns identified by MTO, include:

- The bridge had undergone major rehabilitation cycles in the past and would require future significant and ongoing maintenance and repairs to maintain a safe and reliable connection between Manitoulin Island and the mainland.
- Due to its age, failure of the opening mechanism had caused major disruptions to the transportation network. There continues to be significant risk of future mechanical breakdowns. Additionally, due to its age, a replacement mechanism cannot be sourced and must be specifically manufactured resulting in increased repair costs and delays in repairs.
- The type of structure (through truss) provides no redundancy (i.e. single load path structure) in the design, which increases the risk of a bridge collapse and/or closure causing major disruption to the transportation network; and
- Potential bridge closures, whether for repairs or mechanical failures, pose a potential risk for disruptions to emergency access and evacuation.

To address this, MTO retained Stantec in 2018 to undertake a Planning, Preliminary Design, and Class Environmental Assessment (Class EA) Study for the Highway 6 Little Current Swing Bridge. The purpose of the Class EA is to identify a Recommended Plan that addresses the identified current and future transportation needs.

The Project's key objectives are:

- Objective 1: Improving the reliability of the crossing
- Objective 2: Reducing ongoing maintenance and operating costs
- Objective 3: Improving boat access
- Objective 4: Improving evacuation and emergency service access
- Objective 5: Improving traffic capacity and flow

The Planning, Preliminary Design, and Class EA process reviewed several Alternatives to the Undertaking that might meet the project objectives, including the following:

- Do nothing (maintain the existing structure and provide on-going maintenance and repairs, as required) or
- Replacement of the existing bridge with a new structure (see Section 6.0 for range of options).

Early in the process, rehabilitation or alteration of the existing bridge to meet transportation needs and current safety standard were considered. The following constraints were identified:

Structural

- MTO has undertaken several rehabilitation projects in recent decades to maintain the bridge in good condition and to minimize the risk of breakdowns, which hinder access for vehicular and/or navigation traffic.
- The structural design of the Little Current Swing Bridge lacks redundancy (i.e. single load path structure). Non-redundant bridges are not up to current highway and safety standard permitted by the MTO without prior approval.
- The existing bridge is limited to one lane of vehicular travel. Widening of the bridge to accommodate an additional lane of travel would raise both structural (load-carrying capacity and brittle steel) and practical (space limitation between trusses) issues. Cantilevering a 2nd lane from the outside of the truss would also not be possible as the bridge would not be stable and balanced when swinging open.

Cost

- At 108 years of age, the structure is beyond the end of its expected life. In total, expenditures for bridge rehabilitation are approximately $17.6 million (approximately $500,000 annual average) over the past 35 years. As bridge deterioration generally increases exponentially with age, a continual increase in rehabilitation costs is expected.

Traffic and Access

- The bridge provides the only direct and year-round access to Manitoulin Island and is, therefore, one of the highest priority structures in Northeast Region. Residents, emergency services, service providers, and tourists require that the crossing be in service, and any shutdowns due to structural repairs or mechanical breakdown are problematic for the community.
- Due to its age, failure of the opening mechanism has caused major disruptions to the transportation network. There continues to be significant risk of future mechanical breakdowns. Additionally, due to its age, replacement mechanism cannot be sourced and must be specifically manufactured resulting in increased repair costs and delays in repairs.

Summary

- The MTO reviewed and analyzed the project alternatives (See Section 6.0). To meet the project objectives, the Recommended Plan is a new moveable swing bridge. Due to the existing conditions at the crossing, removal of the existing bridge is required. In addition, MTO is proposing to remove the Little Current Swing Bridge and replace it with a new sympathetically designed structure.

5.0 IMPACT ASSESSMENT

To meet the project objectives, The Planning, Preliminary Design, and Class Environmental Assessment (Class EA) Study for the Highway 6 Little Current Swing Bridge the Recommended Plan is a new moveable swing bridge. Due to the existing conditions at the crossing, removal of the existing bridge is required. In addition, MTO is proposing to remove the Little Current Swing Bridge and replace it with a new sympathetically designed structure.

The impacts of the removal and replacement of the Little Current Swing Bridge were evaluated according to the MTO *Ontario Heritage Bridge Guidelines* (MTO 2008) and the MHSTCI *Information Bulletin 3 Heritage Impact Assessments for Provincial Heritage Properties* (MHSTCI 2017).

A *Cultural Heritage Assessment Report* (CHAR) was completed by Stantec for the adjacent area. Except for the existing bridge no other built heritage resources or cultural heritage landscapes were identified.

The proposed undertaking to remove and replace the Little Current Swing Bridge with a new structure will result in direct, permanent, adverse impacts to all identified heritage attributes of the bridge, including removal of:

- All features of the existing movable swing bridge, including but not limited to, truss, piers and abutments, spans, mechanical equipment, control room and walkway;
- A landmark structure in a prominent location in the channel visible to the community and visitors from Highway 6 and Little Current; and
- All remaining tangible features associated with the historical Algoma and Eastern Railway.

There would be no beneficial effects to CHVI resulting from the proposed undertaking. The character of the surrounding community will be significantly impacted by the removal of the PHPPS as well. However, recommendations outlined in Section 8 are intended to mitigation the impacts.

6.0 CONSIDERED ALTERNATIVES AND MITIGATION MEASURES

The Ontario Ministry of Transportation (MTO) retained Stantec in 2018 to undertake a Planning, Preliminary Design, and Class Environmental Assessment (Class EA) Study for the Highway 6 Little Current Swing Bridge to identify a Recommended Plan that addresses the identified current and future transportation needs.

The Planning, Preliminary Design, and Class EA process reviewed several Alternatives to the Undertaking that might meet the project objectives, including the following:

- Do Nothing (maintain the existing structure and provide on-going maintenance and repairs, as required);
- Ferry from Goat Island to Little Current including docking terminals on both sides of the shore, and loading and queuing areas for vehicles;
- A two-lane tunnel to provide year-round vehicular access;
- A two-lane movable bridge (lift, swing, or bascule options) with pedestrian and vehicular facilities; and
- A fixed bridge that has higher vertical clearance to allow for boat navigation with long approaches to meet safety and geometric standards.

The full assessment of the proposed alternatives will be documented in the Transportation Environmental Study Report (TESR) for the project.

The Recommended Plan is to construct a new swing bridge to meet the identified transportation needs. This alternative requires removal of the existing Little Current Swing Bridge when the new bridge is constructed.

It is noted that, aside from the “Do Nothing” alternative, all other alternatives only contemplated the removal of the existing bridge. The ferry and tunnel alternatives may have allowed for retention of the existing bridge, but they were ruled out as viable alternatives because they did not meet the project objectives (refer to analysis in the TESR). Retention of the existing bridge with another new bridge (moveable or fixed) in the vicinity is analyzed and documented in Table 1 using the criteria in the OHBG.

6.1 CONSERVATION OPTIONS

The OHBG are designed to provide direction on the conservation of provincially owned heritage road bridges and establish eight conservation options that must be considered.

The OHBG’s eight conservation options are as follows:

1. Retention of the existing bridge with no major modifications undertaken
2. Restoration of missing or deteriorated elements where physical or documentary evidence (e.g. photographs and drawings) exists for their design

3. Retention of the existing bridge with sympathetic modification
4. Retention of the existing bridge with sympathetically designed new structure in proximity
5. Retention of the existing bridge no longer in use for vehicular purposes but adapted for a new use (e.g. as a pedestrian bridge, cycling bridge or scenic viewing platform)
6. Retention of the existing bridge as a heritage monument for viewing purposes only
7. Relocation of smaller, lighter single span bridges to an appropriate new site for continued use (see 4) or adaptive re-use (see 5).
8. Bridge removal and replacement with sympathetically designed structure
    a. Where possible, salvaging elements/members of the bridge for incorporation into new structure for future conservation work or displays
    b. Undertaking a full recording and documentation of the existing structure

(MTO 2008)

Options are arranged according to level or degree of intervention from minimum to maximum. They are applied in rank order such that Option 1 must be shown to be non-viable before Option 2 can be considered, and so on. The OHBG acknowledges that as bridges are a component of a larger transportation system, structural improvements may be required from time to time to maintain the bridge as structurally adequate and that system requirements are met. The rehabilitation or replacement of any bridge usually demands consideration of several design options irrespective of whether the bridge has cultural heritage value. The OHBG notes that “even in cases where new construction on or approaching the bridge may be required, retention of the existing structure may still be possible” (OHBG 2008:19). As per Section 4.4 of the OHBG, before replacement is determined to be the preferred option, at least one of the following conditions must be demonstrated in the Structural Planning Report:

- The safety of the existing structure is compromised to the extent that rehabilitation is not a practical option
- The cost of rehabilitation is prohibitive compared to replacement (i.e., exceeds replacement cost by 10%)
- The bridge has been severely altered from its original form
- Replacement is required to meet demand requirements that are not achievable through rehabilitation or upgrading the existing structure.

Table 1: Consideration of Conservation Options

OHBG Conservation Option		Analysis	Viable Option
1	Retention of existing bridge with no major modifications undertaken	Retention of the existing bridge as required for OHBG Conservation Options 1 and 2 - Options 1 and 2 assume that the existing bridge would remain a single-lane bridge and would require on-going regular maintenance and rehabilitations. From a conservation perspective – options 1 and 2: • Would require significant rehabilitation requiring strengthening of trusses, inclusion of redundant members and reconstruction of pivot gear with new parts. • Reconstruction of the pivot gear could be costly and difficult to source. This could result in prolonged bridge closures. • Extensive and ongoing maintenance would be costly. Since 1985, the Ministry has invested almost $18 million to maintain the bridge to provide a safe and reliable link between Manitoulin Island and the mainland. This has included extensive maintenance and replacement of the bridge deck, structural steel and center bearing replacement, and pier and abutment repairs. This annual average investment of over $500, 000 per year is much higher than other typical bridges in the provincial highway network (typically greater than $100,000 per year). From a transportation perspective, options 1 and 2 do not the basic project objectives: Objective 1: Improving the reliability of the crossing. Objective 2: Reducing ongoing maintenance and operating costs. Objective 3: Improving boat access. Objective 4: Improving evacuation and emergency service access and Objective 5: Improving traffic capacity and flow. • Retaining a single-lane movable crossing would not improve or address traffic capacity or emergency service. • The reliability of the pivot mechanism may remain a risk to the reliability of the crossing, even if repaired or replaced.	No
2	Restoration of missing or deteriorated elements where physical or documentary evidence exists for their design		

Table 1: Consideration of Conservation Options

OHBG Conservation Option		Analysis	Viable Option
3.	Retention of the existing bridge with sympathetic modification Additional assumptions: • That the existing bridge could be modified or widened to accommodate an additional traffic lane and/or pedestrian sidewalk(s).	In theory, this could address the project objectives, However, from an engineering perspective widening of the existing bridge is not a viable option. • Cantilevering a second lane from the outside of the truss would also not be possible as the bridge would not be stable and balanced when swinging open. • Other factors outlined under Options 1 and 2 such as on-going repairs, maintenance and cost would continue to be factors in Option 3.	No
4.	Retention of existing bridge with sympathetically designed new structure in proximity Additional Assumptions: • The existing bridge could be "twinned" with a similar or complementary bridge being constructed along side the existing one.	As with option 3, in theory, this could address the project Objectives, However, from an engineering perspective "twinning" is not a viable option. • Due to the existing conditions at the crossing. In addition, given the structural design and movement of swing bridges, the two bridges cannot be accommodated in this location. • Due to the swing function of the existing bridge an additionally structure in close proximity could inhibit opening of the bridge. • The width of physical site cannot accommodate the footprint for two side-by-side structures • Other factors outlined under options 1 and 2 such as on-going repairs, maintenance and cost would continue to be factors in option 3.	No
5	Retention of existing bridge no longer in use for vehicle purposes but adapted for new use Additional *Assumptions:* • Existing structure will be rehabilitated for active transportation access (e.g. bicycles, pedestrians). • New 2-lane structure provided for vehicles on new alignment.	Retention of the existing bridge for an alternative use is not feasible because it would be required to remain in the open position to allow for ship access through the channel, and thus would not be able to serve non-vehicle uses. Although this option would meet some project objective 1 to increase reliability, as noted for option 4, this does not address project objective 2. The maintenance of two separate structures significantly increases maintenance and operating costs. This option includes unknown risks (i.e. costs) to meet current technical and safety requirements. Objective 3 will not be met, as the existing bridge will be a hazard for boat traffic if left in place adjacent to a new bridge. The presence of new piers and/or abutments in proximity to the existing piers and/or	No

Table 1: Consideration of Conservation Options

OHBG Conservation Option		Analysis	Viable Option
		abutments is anticipated to create a navigational hazard and increases the risk for boat-bridge collisions. Objectives 4 and 5 would be met with this option.	
6	Retention of bridge as a heritage monument for viewing purposes only Additional Assumptions: • Bridge will be left in place and in open position for boat traffic. • New two-lane structure provided for vehicles and active transportation on a new alignment.	Retention of the existing bridge in its existing location as a heritage monument is not possible. Refer to the discussion for option 5, as all conditions are the same for this option. In addition, leaving the swing bridge open and stationary negatively affects its cultural heritage value as a landmark.	No
7	Relocation of smaller lighter single span bridges to an appropriate new site for continued or adaptive use Additional Assumptions: • Swing bridge spans moved off-site for re-use. • Approach bridge spans removed. • New two-lane structure provided for vehicles and active transportation on a new alignment.	While this conservation option is directed towards smaller and lighter span bridges, it may be possible to relocate the Little Current Swing Bridge, in whole or, more likely, in part, to an appropriate new site nearby for commemorative purposes. This option would include the construction of a new bridge that would meet all of the project objectives.	Yes
8	Bridge removal and replacement with a sympathetically designed structure Additional Assumptions: • New two-lane structure provided for vehicles and active transportation on a new alignment. • New structure is expected to be a movable swing bridge type. • New structure is expected to be a through-truss design. • New structure is expected to be located in an alignment within close proximity to the existing structure.	Replacing the existing movable swing bridge with a new sympathetically designed structure is a viable option and the Recommended Plan. The proposed replacement bridge type is a sympathetically designed movable swing bridge with through truss component that will be visually similar to the existing structure. As the existing bridge is the new one will be designed as a landmark structure in the community. Construction of a new bridge will meet all of the project objectives.	Yes

Table 1: Consideration of Conservation Options

OHBG Conservation Option		Analysis	Viable Option
a)	Where possible, salvage elements/members of bridge for incorporation into new structure or for future conservation work or displays	As further discussed in Section 6.3, a commemoration plan will be prepared during the detail design phase of the project. The plan will determine whether the existing bridge, in whole or in part will be included in an interpretive display. An evaluation of incorporation of salvaged components of the existing bridge in the new bridge design where feasible will be part of the detail design phase of the project.	Yes
b)	Undertake full recording and documentation of existing structure	The bridge and setting will be documented using digital photography, reality capture using LiDAR scanning, or photogrammetry to create a point cloud model and video recording of the bridge in motion.	Yes

6.2 SUMMARY OF CONSERVATION OPTIONS

To proceed with OHBG, conservation option 8, at least one of the four following requirements to be met:

- The safety of the existing structure is compromised to the extent that rehabilitation is not a practical option.
- The cost of rehabilitation is prohibitive compared to replacement (i.e., exceeds replacement cost by 10%).
- The bridge has been severely altered from its original form.
- Replacement is required to meet demand requirements that are not achievable through rehabilitation or upgrading the existing structure.

The analysis documented in this HIA and the TESR demonstrates that option 4, “Replacement is required to meet demand requirements that are not achievable through rehabilitation or upgrading the existing structure” have been met.

In summary, analysis determined that OHBG Conservation options 1 through 6, requiring the bridge to remain in its current location, were not viable because the transportation needs could not be met. Therefore, the only viable option is to remove the existing bridge, and supporting piers, approaches etc., from its current location after the new structure is constructed. This is the only viable option which satisfies the transportation objectives to improve traffic capacity, safety, and reliability at the crossing, reduce maintenance costs, and improve access for boats and emergency services.

6.3 MITIGATION MEASURES

To mitigate the loss of CHVI associated with removal of the Little Current Swing Bridge, a series of mitigative measures are proposed, including:

- Documentation of the bridge prior to removal.
- Salvage, in whole or in part.
- Sympathetic design of the replacement bridge, including use of salvaged materials in the new design where practicable; and
- Commemoration of the bridge.

6.3.1 Salvage, Relocation and Interpretation & Commemoration Plan

MTO will develop an Interpretation and Commemoration Plan for the Little Current Swing Bridge, in consultation with MHSTCI, the municipality, and as appropriate, with Indigenous communities and other parties. The plan should be completed by during and prior to the completion of detail design.

MTO will also complete a salvage plan for the little Current Swing Bridge during detail design and prior to the decommissioning or removal of the bridge. The plan will investigate and document the bridge components and follow MTO's Environmental Guide for Built Heritage Resources and Cultural Heritage Landscapes – Section 6.3.2 Heritage Bridges, which includes:

For incorporation of heritage bridges elements, specific details, such as the following, should be included in the contract documentation:

- A requirement for expertise in cultural resource removal with a specialized knowledge in bridge construction.
- Specifications with instructions for the labelling, storage and reassembly of elements; and
- A requirement to have photographic documentation of the re-assembly and have it filed with the construction record.

Commemoration of the bridge will include information on the role of the bridge in local history, iconography, and tourism. Operating for more than 100 years, the history of the bridge is intimately linked with the development of Manitoulin Island. It is the only remaining remnant of the historic the Algoma Eastern Railway and physical reminder of the railway's importance in the connection between northern and southern Ontario which facilitated development of mining, pulp and paper, and timber industries in the north that needed access to markets in the southern Ontario.

The goal of salvaging the bridge in whole or in part, is to provide a tangible artifact for interpretation in a publicly accessible space. A suitable location for commemoration of the bridge may be a large public park or vacant land where the structure and some component pieces of machinery could be situated alongside commemorative/interpretive material (such as interpretive display panels, public art, and links to online

resources through QR codes or similar technology). Preferably, the new site would be in close proximity to the original location of the bridge to enhance interpretation of the display.

6.3.2 Sympathetic Design of Replacement Bridge

The design of the replacement bridge has potential to mitigate the removal of the existing bridge by careful integration of the original bridge design or type in the design or type of the new bridge, with allowances for use of modern materials. In accordance with the OHBG guidance for sympathetic design for replacement bridges, any new structure should reflect the heritage attributes of the existing bridge. The new design will respect the design principles of the original bridge and its setting.

Given the prominent status of Little Current Swing Bridge in the community, the new bridge will be designed to be a landmark structure. The proposed use of a swing bridge type to replace the existing bridge will provide a sense of continuity with the current experience of bridge users; locals and tourists alike.

- As defined in Section 4.5.1 of the OHBG, sympathetic design for replacement bridges can be accomplished through aspects of design and construction.

The value of retaining the design and appearance of a bridge is also articulated in The Canadian Highway Bridge Design Code (CAN/CSA-S6-14), Clause 1.4.2.8, which states:

> "In the design and the rehabilitation of structures, consideration shall be given to the appearance of the finished structure and its compatibility with the surroundings. Wherever possible, the appearance of a structure shall be such that it will be generally perceived as an enhancement to its surroundings."

Therefore, in addition to the guidelines above from the OHBG and the required provincial safety and code requirements, the following sympathetic design guidelines may also be considered to enhance compatibility of any replacement structure:

- Maintain a similar size and multiple span design to the original structure.
- Be a movable swing bridge type to maintain a prominent presence in the channel and continue the history of a moveable bridge in MTO northeastern region.
- Include high-profile vertical elements in design, such as tall piers, trusses, or towers to allow the bridge to be a landmark within the channel crossing and enhance the visual character of the crossing through its form, utility, views, and connectivity.
- Employ contemporary design language of form and materials to provide a new element or layer in the channel crossing that contributes to its surroundings.

- Respect the historical character of the crossing and the original bridge structure using materials such as concrete piers and the use of steel as either structural or decorative elements (e.g., trusses, towers, girders, railings, light standards.
- Include commemoration of the original swing bridge in a prominent location in a safe and accessible spot for the public (pending further investigation and discussions with the municipality, the business association and heritage stakeholders.

Prior to enacting any of the above mitigation measures and decommissioning the existing bridge, the Little Current Swing Bridge should be fully documented to capture its cultural heritage value and retain a record of the bridge for archival purposes. The documentation materials can also be used in the Commemoration Plan. Documentation will include digital photography, reality capture using LiDAR scanning or photogrammetry to create a point cloud model and video recording of the swing bridge in operation. A documentation report will be created and will include research from the CHER, Statement of Cultural Heritage Value or Interest (SCHVI) and any available photographs and drawings. Documentation should follow the standards of the National Park Services (NPS) Historic American Engineering Record (HAER). Upon completion the documentation should be deposited in appropriate institutions. When sending the documentation to the institutions, MTO shall copy MHSTCI on the cover letter.

7.0 SUMMARY OF COMMUNITY ENGAGEMENT

7.1 INTRODUCTION

Community engagement was conducted as part of the EA process. Engagement included a notice of study commencement, three Public Information Centre (PIC) events, and public comment periods on project reports including the Study Design Report and TESR (to be conducted at a later date). In addition, a project website was established and has been maintained throughout the Class EA process to offer an online resource for all project-related information. The website has been updated as the study progresses to include notifications of key study milestones, including public events, project reports and supplementary information. A dedicated project email account was also developed at study commencement and provided on all public consultation materials.

A notice of project commencement was released in July 2018. The notice provided an outline of the project purpose, the EA process, and community engagement opportunities. The study notice also provided contact information for the study's project managers for comments, questions, or opportunities to be added to the project mailing list. The HIA will also be provided to stakeholders for comment and made available upon request to the public.

7.2 STUDY DESIGN REPORT (FALL 2018)

A Study Design Report was released in draft in November 2018 and finalized in February 2019. The Study Design Report provides a documentation of the study process that guides the Class EA and leads to the submission of a final TESR. The Study Design Report included the following:

- Documented the need and justification for the project.
- Defined the study area.
- Identified alternative methods for carrying out the project undertaking.
- Described the environmental assessment process to be undertaken, and
- Defined the scope of work to be carried out.

The Study Design Report was released for public and agency review and comments. Comments received on the report included comments from the MHSTCI regarding the descriptions of the CHAR and CHER, inclusion of conservation options for the bridge, suggestions for additional groups to be consulted, and archaeological reporting. A detailed log of the comments is included in the Final Study Design Report or available online here.

7.3 PIC #1 (AUGUST 2018) AND INDIGENOUS CISS (OCTOBER 2018)

The first PIC and Indigenous Community Information Sharing Sessions (CISSs) were held in August and October 2018. Relevant contacts such as external agencies, local businesses, municipal governments, property owners, Indigenous communities and other stakeholders were notified about each PIC.

The purpose of the first round of consultation events was to introduce the study, the Class EA process and associated planning alternatives being considered, the history of the existing swing bridge and its associated cultural heritage value, the process for identifying conservation options for the existing bridge and commitment to complete a CHER to review and confirm the cultural heritage value or interest of the existing bridge.

Following PIC #1, 59 emails and letters with comments were received from the general public. Comments included a wide range of preferences for possible alternatives, including keeping the existing bridge, replacing the existing bridge, alternative transportation methods (tunnel, ferry), and concerns on potential wait times, property impacts, environmental impacts, tourism impacts, and economic impacts. A detailed summary of comments is included in the TESR. The comments received from the general public related to heritage concerns are contained in Appendix D.

External agencies also provided comment and feedback, including the Ministry of Natural Resources and Forestry (MNRF), MHSTCI, Ministry of the Environment, Conservation and Parks (MECP), the Conseil scolaire du Grand Nord de l'Ontario, the Town of Gore Bay, and the Township of Assiginack. Comments and information were received from the MNRF (providing available information on significant species and environmental considerations) and the MHSTCI regarding heritage processes to be followed and request for further consultation. Detailed summaries of the consultation responses will be provided in the TESR.

CISSs were held in the M'Chigeeng First Nation, Wiikwemkoong Unceded Territory, Sheshegwaning First Nation, and Aundeck Omni Kaning First Nation communities. The intent of the CISS was to present, discuss, and gather input on the planning, preliminary design and Class EA for the proposed bridge replacement.

In total, 13 comments were received at/following the CISSs. Responses were wide-ranging and included identification of preference for a two-lane fixed structure, or movable structure, improved safety and maintenance, preference for preserving the existing bridge for aesthetic purposes, and preference for a tunnel. Detailed summaries of the consultation comments will be included in the TESR. The comments received following CISS #1 are contained in Appendix E.

7.4 PIC #2 AND CISS #2 (JULY 2019)

The second round of CISSs and PIC were held in July 2019 to review and solicit feedback on the recommended planning alternative. Relevant contacts such as external agencies, local businesses, municipal governments, property owners, Indigenous communities and other stakeholders were notified in advance of each consultation event.

Following PIC#2, 111 letters or emails of comment were received. Comments were wide-ranging and generally included preference of the various EA alternatives, preference of specific bridge types, concerns of potential property impacts due to recommended alignments, support for replacement of the bridge, support for retention of the bridge, and support for retention of the bridge as a monument. Detailed summaries of comments will be contained in the TESR. The comments received from the general public related to heritage concerns are contained in Appendix D.

CISSs were held within the M'Chigeeng First Nation, Wiikwemkoong Unceded Territory, Sheshegwaning First Nation, and Aundeck Omni Kaning First Nation communities to provide community members with an opportunity to review and provide feedback on the assessment of alternatives to the undertaking, alignment alternatives, structure type alternatives, the proposed evaluation criteria and evaluation process, heritage conservation options for the existing bridge, and project activities to date.

In total, 12 comments forms were received following the CISS. Comments included concerns related to environmental impacts and preferences for the different EA alternatives (fixed bridge, tunnel, and movable bridge of similar design). Detailed summaries of the comments will be included in the TESR. The comments received during CISS #2 are contained in Appendix F.

7.5 PIC # 3 (MARCH 30-APRIL 30, 2021)

Due to the global COVID-19 pandemic, the third PIC event was conducted online between March 30 and April 30, 2021. Online engagement methods included a presentation with voiceover narrative uploaded to the project website. A recording was also provided in Anishinaabemowin.

Following PIC#3, six letters or emails of comments were received. Comments included approval concerning the decision to construct a new swing bridge in place of the existing Little Current Swing Bridge and support for the rehabilitation and retention of the existing Little Current Bridge. Detailed summaries of comments will be contained in the TESR. The comments received from the general public related to heritage concerns are contained in Appendix D.

7.6 COMMUNITY ENGAGEMENT FOR HERITAGE IMPCAT ASSESSMENT

Pursuant the requirements of the S&Gs, this HIA will be made available for review to key heritage stakeholders and the public as requested. Comments received will be included in the final HIA.

7.6 MINISTRY OF HERITAGE, SPORT, TOURISM AND CULTURE INDUSTRIES ENGAGEMENT

Consultation with the MHSTCI has occurred throughout the Class EA. The following is a summary of engagement between the study team and the MHSTCI:

- July 3, 2018: Notice of Study Commencement and Comment Form issued via email and mail to MHSTCI.

- August 3, 2018: MHSTCI initial letter in response to Notice of Commencement advising that:

  - A Stage 1-2 AA had been undertaken in 2009. However, further AA may be required if study area differs.
  - A 2009 CHER had been completed determining that the bridge should be include in the OHBL.
  - That MTO should apply criteria O. Reg. 9/06 and O. Reg. 10/06 and include the bridge property in the list of provincial heritage properties maintained by MHSTCI.
  - Provision F.4 and F.5 of the MHSTCI Standards and Guidelines require that demolition and removal be considered a last resort and if the property was determined to be PHPPS that demolition/removal would require consent of MHSCTI Minister to be obtained prior to completion of the EA.

- August 7, 2019: Notice of PIC #1 issued via mail and email to MHSTCI.
- September 11, 2018: Email received from MHSTCI following review of PIC #1 materials.
- Sept 21, 2018: A teleconference was held with MTO, Stantec, and MHSTCI to discuss heritage requirements of the project.
- October 16, 2018: Email correspondence received in follow up to September 21, 2018, meeting.
- November 15, 2018: Notice and copy Study Design Report issued to MHSTCI.
- Dec 21, 2018: MHSTCI provided comments on Study Design Report.
- April 4, 2019: CHER issued to MHSTCI for review/approval.
- June 28, 2019: Notice of Agency Webinar issued via email to MHSTCI.
- July 2, 2019: Notice of PIC 2 issued vial mail to MHSTCI.
- July 9, 2019: MHSTCI attended Agency Webinar and provided comments and suggestions.
- November 14, 2019: A teleconference was held with MTO, Stantec, and MHSTCI to discuss bridge conservation options and requirements for MHSCTI minster consent if the bridge is to be removed or demolished.
- February 24, 2020: email received from MHSTCI (suggestion to complete Marine Archaeological Assessment as part of Class EA, request to receive copy of HIA and final November 14, 2019 meeting notes).
- November 6, 2020: telephone conversation with MHSTCI to review study status, including delay in issuing HIA report and holding PIC #3.

- February 18, 2021: copy of draft HIA report issued to MHSTCI for review and comment
- March 10, 2021: copy of Online PIC 3 materials issued to MHSTCI for review and comment
- March 12, 2021: MHSTCI provided comments on the draft HIA for the Little Current Swing Bridge
- March 16,2021: MHSTCI provided comments on the draft PIC #3 presentation
- March 30, 2021: copy of updated PIC materials, along with summary of how comments were addressed in final materials issued to MHSTCI
- September 9, 2021: MHSTCI provided comments on the revised draft HIA for the Little Current Swing Bridge
- October 4, 2021: A teleconference was held with MTO, Stantec, and MHSTCI to discuss revisions to the draft HIA for the Little Current Swing Bridge and project process and timelines

8.0 RECOMMENDATIONS

Replacement of the existing Little Current Swing Bridge with a new, sympathetically designed structure is the only viable alternative to satisfy the identified transportation needs to improve traffic capacity, safety, and reliability at the crossing, reduce maintenance costs, and improve boat and emergency services access. As per the MHSTCI Standards and Guidelines, removal of the Little Current Swing Bridge will require the consent of the Minister of Heritage, Sport, Tourism and Culture Industries as the bridge is a *Provincial Heritage Property of Provincial Significance*. The following are proposed methods to mitigate the impact of removing the bridge:

8.1 SYMPATHETIC DESIGN OF REPLACEMENT BRIDGE

The existing Little Current Swing Bridge will be replaced with a sympathetically designed new structure that is a movable swing bridge design with through-truss components. The new design for the bridge will respecting the design principles of the original bridge and its setting and integrate the original bridge type with allowances for use of modern materials and where feasible use salvaged components from the heritage bridge pending additional technical studies. The design team will undertake consultations with the MHSTCI, Town of NEMI, and key stakeholders to design a new landmark structure appropriate to the character of the area.

8.2 SALVAGE, RELOCATION AND INTERPRETATION & COMMEMORATION PLAN

8.2.1 Salvage and Relocation Plan

MTO will also complete a salvage plan for the Little Current Swing Bridge during detailed design and prior to the decommissioning or removal of the bridge. The plan will investigate and document the bridge components and follow MTO's Environmental Guide for Built Heritage Resources and Cultural Heritage Landscapes – Section 6.3.2 Heritage Bridges, which includes:

For incorporation of heritage bridges elements, specific details, such as the following, should be included in the contract documentation:

- A requirement for expertise in cultural resource removal with a specialized knowledge in bridge construction.
- Specifications with instructions for the labelling, storage and reassembly of elements; and
- A requirement to have photographic documentation of the re-assembly and have it filed with the construction record.

8.2.2 Interpretation and Commemoration Plan

MTO will develop an Interpretation and Commemoration Plan for the Little Current Swing Bridge, in consultation with MHSTCI, the municipality, and as appropriate, with Indigenous communities and other parties. The Plan should be completed by during and prior to the completion of detail design.

The proposed commemoration plan will:

- Commemorate the bridge at an appropriate location that is associated with the bridge (preferably close by the crossing) and publicly accessible.
- Record the history of the bridge and its impact on the area.
- Include interpretive materials such as display panels and, if feasible, the entire bridge or significant components of it such as the gears and the control booth.

8.2.3 Bridge Documentation

Prior to decommissioning and replacement of the bridge, documentation of the historic structure should be conducted. At a minimum, this should include:

- Photographic documentation in accordance with the NPS HAER guidelines (recommended in the absence of established Canadian documentation guidelines).
- Measured drawings in accordance with the NPS HABS/HAER guidelines (recommended in the absence of established Canadian documentation guidelines).
- Reality capture including LiDAR scanning or photogrammetry to create a point cloud model of the bridge.
- Video/digital recording of the swing bridge in operation.

In accordance with the OHBG Section 4.4, where the MTO has made a decision to replace a PHPPS, this HIA has been reviewed by the MTO Heritage Bridge Committee. Following review and comment by the MTO Heritage Bridge Committee, this HIA will be included in a package to support the MTO's Request for Minister's Consent to remove the Little Current Swing Bridge and submitted to the MHSTCI for approval.

When finalized, a copy of this report and the previous CHER will be filed with the MTO, MHSTCI, and the Northeastern Manitoulin and the Island Public Library at 50 Meredith Street West, Little Current.

9.0 REFERENCES

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Stantec. 2019a. *Cultural Heritage Evaluation Report—Little Current Swing Bridge, Site 49X-0002/B0.* On File at Stantec.

Stantec 2019b. *Study Design Report: Planning, Preliminary Design and Class Environmental Assessment Study for the Highway 6 Little Current Swing Bridge*. On file at Stantec.

10.0 CLOSURE

This report has been prepared for the sole benefit of Ontario Ministry of Transportation. Any use which a third party makes of this report is the responsibility of such third party.

We trust this report meets your current requirements. Please do not hesitate to contact us should you require further information or have additional questions about any facet of this report.

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APPENDIX A
Project Personnel and Qualifications

Appendix A PROJECT PERSONNEL AND QUALIFICATIONS

Project Manager: Gregg Cooke, P. Eng., VMA, SP

Gregg Cooke is a licensed Professional Engineer in the Province of Ontario with more than two decades of experience as a Project Manager and Project Engineer for many large transportation and municipal infrastructure projects across Ontario. Gregg has a thorough understanding of the technical and environmental aspects of transportation projects, and he is able to develop design solutions that provide a balanced approach while meeting client expectations. He also has extensive experience consulting with municipalities, agencies, and stakeholders for complex EA studies.

Senior Environmental Planner: Diana Addley

Diana Addley is a senior environmental planner with over 20 years of environmental consulting experience, participating in a broad range of multidisciplinary studies. She is responsible for coordinating/managing Class EAs, including Master Plans and detailed design assignments, managing a variety of specialists/disciplines, ensuring that all legislative requirements are fully met and that consultation processes are fully documented and coordinated in a seamless manner. Diana specializes in the Municipal Class EA process, is a skilled environmental team lead on projects of varying complexity and is experienced in navigating through the Part II Order process. Diana's experience includes liaising communications between clients, Indigenous peoples, government agencies, financial institutions, legal firms, property management and land development corporations. She has conducted and/or managed numerous Phase I and II environmental site assessments (ESAs) in Canada, Records of Site Condition, property condition assessments, property contamination and waste assessments, and contamination overview studies. Diana's range of experience also includes Indigenous engagement and First Nation community outreach in relation to EA planning and environmental due diligence studies.

Report Writer: Lashia Jones, MA, CAHP

Lashia Jones is a Cultural Heritage Specialist and member of Stantec's Environmental Services Team, with experience in identifying, evaluating and planning for cultural heritage resources. Ms. Jones is a member of the Canadian Association of Heritage Professionals, and has a Master's Degree in Canadian Studies from Carleton University, specializing in Heritage Conservation. Ms. Jones has worked for both public and private sector clients, providing a variety of cultural heritage services including heritage impact assessments, cultural heritage evaluations, inventories of cultural heritage resources, heritage conservation districts, heritage master plans, conservation plans and cultural heritage bridge evaluations. Ms. Jones is well versed with local, provincial and national tools for the identification, evaluation and planning best practices for cultural heritage resources, including the Ontario Heritage Act, Provincial Policy Statement, Planning Act, Environmental Assessment Act, Ontario Heritage Tool Kit, Standards and Guidelines for the Conservation of Provincial Heritage Properties and the Standards and Guidelines for the Conservation of Historic Places in Canada. Lashia's role on various project types has given her experience in public engagement and consultation, constructive dialogue with clients, heritage committees, local councils and multi-disciplinary project teams

Report Writer: Frank Smith, MA

Frank Smith is a cultural heritage specialist with more than five years of experience in detailed historical research and evaluation of cultural heritage resources for cultural institutions, universities, and various levels of government in the United States and Canada. His work with Stantec has spanned the province, from Northern Ontario pipelines and hydroelectric facilities to a heritage conservation district study in Toronto. Over the course of his career with Stantec, he has evaluated dozens of bridges across Ontario for potential cultural heritage value or interest. Frank has deep knowledge of sound historical research practices and the requirements when working with municipal and provincial agencies during the assessment and approvals process. Frank's research skills have been developed over the years while working in museums in the United States and Canada, serving as a research assistant, volunteer work for conservation organizations, and during the completion of his master's degree in public history at Western University.

Quality Review: Meaghan Rivard, MA, CAHP

Meaghan Rivard is Stantec's Senior Heritage Consultant with experience in the identification, evaluation, and documentation of heritage resources as well as expertise in the environmental assessment process as it pertains to heritage resources. Ms. Rivard is a member of the Canadian Association of Heritage Professionals and a graduate of the master's degree in public history at Western University. She works across disciplines in a variety of settings from municipal conservation planning to transportation infrastructure and environmental assessments. Ms. Rivard has experience managing and executing all aspects of Cultural Heritage Evaluation Reports, Heritage Impact Assessments, Photographic Documentations, and Heritage Conservation Plans. She has assessed more than 2,500 properties as part of windshield surveys and worked under various classed environmental assessments. In addition to EA related work, Meaghan continues to be actively involved in the assessment of individual properties. Here she utilizes knowledge in the identification, evaluation, and documentation of heritage resources alongside expertise in the assessment of proposed change and preparation of options to mitigate negative impacts on heritage resources.

Independent Reviewer: Colin Varley, MA, RPA

Colin Varley, M.A., R.P.A., is a Senior Archaeologist and Heritage Planning Consultant listed with the Register of Professional Archaeologists, and has been a practicing archaeologist for over twenty five years. Colin has managed hundreds of archaeological and heritage assessment projects in Ontario, Nova Scotia, New Brunswick, Prince Edward Island, Labrador and Saskatchewan, including such major projects as: the Samsung Grand Renewable Energy Project in Haldimand County, Ontario; all phases of archaeological assessment at the Canadian War Museum site at LeBreton Flats, Ottawa; six highway projects; over 500 km of natural gas pipeline routes; the proposed Halifax Superport terminal; the Halifax Harbour Solutions sewage treatment project; numerous road and bridge twinning projects; several hydro powerline corridors; the Lower Churchill River hydro project, and a gold mining operation in Niger, West Africa. Colin has completed projects for all levels of government and has been the Project Manager and Key Client Contact for standing services contracts with the National Capital Commission, the City of Hamilton, Infrastructure Ontario and the City of Ottawa. Outside of his professional consulting work, Colin

has also been a member of the Township of Tiny Heritage and Historical Committee and the City of Ottawa's Heritage Advisory Committee, acting as Vice-Chair in 2003-2004. He was also a member of the City of Ottawa Heritage Master Plan Workgroup. Colin currently holds Ontario Professional Consulting License # P-002.

APPENDIX B

Public Information Centre Heritage Comments

Study Commencement

From:
Sent: Friday, August 17, 2018 10:25 AM
To: ProjectTeam@swingbridgestudy.ca
Subject: re: Little Current Swing bridge

I am a resident on Manitoulin Island, and I would be interested in being informed on information related to this study.

In my opinion, the current swing bridge is a very important piece of history to Manitoulin, and it gives the island a unique character that many tourists talk about. Maintaining that small island "charm" is an important factor to consider, since this island is heavily economically dependent upon tourist season.

GREGG COOKE
200-835 PARAMOUNT DRIVE,
STONEY CREEK ONTARIO,
L8J OB4.

Hi Gregg

I enjoyed talking with you about some idea I had for the existing bridge in Little Current. The attached drawing I'm sending you might be of some interest for the proposal upcoming . The one thing I thought of was you would be keeping some local people employed with a bascule bridge, as they now are. This I feel is important to the locals, being sort of a depressed area. Also by keeping the existing bridge as shown the town and Island would be keeping some heritage. This could be a great tourist attraction for the town to use in their brochure. Also placing plagues at the site outlining the full history of the bridge would be very interesting to the travelling public, there isn't that many types of bridges left in the country. Also incorporating the entrance into the tourist information booth would also help. I've been going to the Island since 1957 and know it very well.

Anyway this is only my thoughts which might help yourself and MTO come up with some type of idea. If you would like to discuss anything further on my sketch , please feel free to contact me . Thanks for your time.

Regards

LENNE BRIDGE TO TELL THE HISTORY FROM RAILWAY TO PRESENT DATE

PRESENT DAY STRUCTURE

SOME ROCK FILL

REMOVE THIS SECTION OF ROAD

CHAIN LINK FENCE

LEAVE EXISTING BRIDGE OPEN PEDESTRIAN FOR TOURISTS TO READ ABOUT AND SEE

DOUBLE LEAF BASCULE

LEAVE EXISTING BRIDGE OPEN DURING CONSTRUCTION

EXISTING

CHAIN LINK SECURITY FENCE

TOURIST INFO BOOTH

INCORPERATE INTO BRIDGE ENTRANCE

EXISTING SHORELINE

SOME ROCK FILL

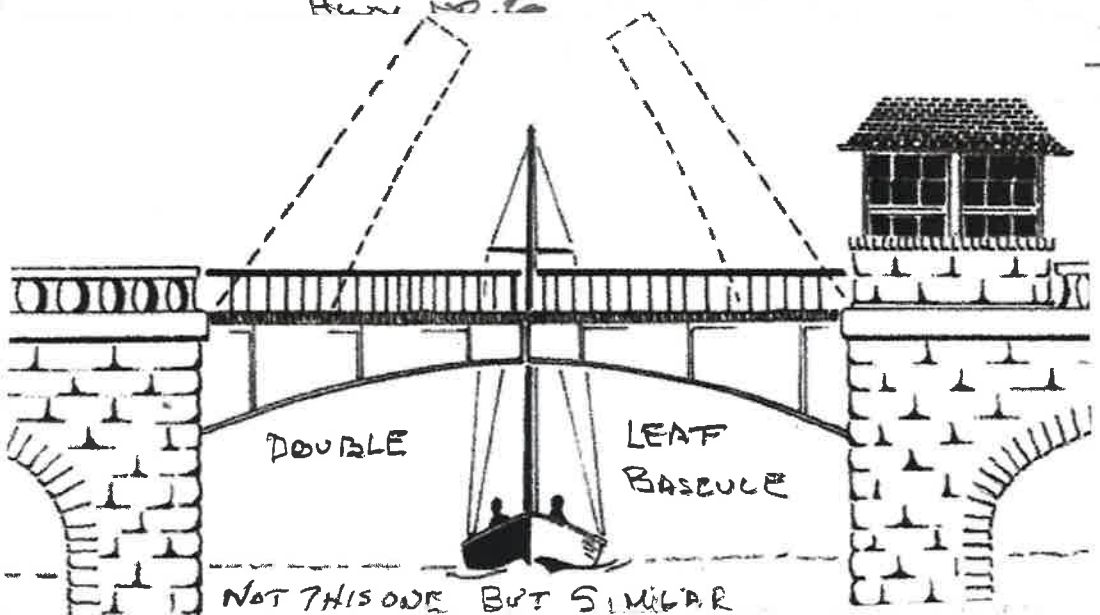
PARKING AREA FOR TOURISTS

CONCRETE BARRIER

OPERATOR HOUSE.

TOWN CAN USE THIS AS ONE OF THE TOURIST ATTRACTIONS

LOCALS WILL BE HAPPY WITH THIS TYPE OF STRUCTURE AS IT WILL STILL EMPLOY LOCAL OPERATORS



NOT THIS ONE BUT SIMILAR

TITLE - THE OLD AND THE NEW

From: contactform@swingbridgestudy.ca <contactform@swingbridgestudy.ca>
Sent: Sunday, July 22, 2018 8:00 PM
To: projectteam@swingbridgestudy.ca
Subject: swingbridgestudy.ca contact form

from:
email:

message:
_____

Why dont you leave the swing bridge there and keep it secured in the fully open position, therefore maintaining history without it affecting boating traffic and put in an bridge that is a double opening that only needs to open for sailboats and cruise ships and not personal yaughts

From: contactform@swingbridgestudy.ca <contactform@swingbridgestudy.ca>
Sent: Monday, July 09, 2018 7:28 AM
To: projectteam@swingbridgestudy.ca
Subject: swingbridgestudy.ca contact form

from:
email:

message:
_____

Good Morning!
Thank you for the opportunity to comment about the swing bridge study. My main concern is how the swing bridge is an important visual icon of Manitoulin in general and Little Current in particular. What's the best way for me to show decision makers that the Manitoulin tourist industry needs to retain the century-old icon that is the swing bridge?
Thank you,

From:
Sent: Saturday, July 07, 2018 9:05 AM
To: ProjectTeam@swingbridgestudy.ca
Subject: Please add me to notifications, information, etc

Hello,

My Name is and I was born and raised on Manitoulin so the bridge is a very important symbol & concern. I now reside in Creemore, ON where one of the only other century old bridges was recently replaced with pros and cons.

Looking forward to proving my input in whatever way I can.

Thanks

From: contactform@swingbridgestudy.ca <contactform@swingbridgestudy.ca>
Sent: Thursday, July 05, 2018 10:11 PM
To: projectteam@swingbridgestudy.ca
Subject: swingbridgestudy.ca contact form

from:
email:

message:
_____

As someone who has grown up on the Island for 30 years now, I'd like to share a few things that are important to me.
1. The fact that the bridge brings traffic close to downtown Little Current, therefore supporting the local businesses down by the water. A bypass could interfere with this and put some small businesses in a dire spot.

2. The swing bridge adds to Island culture by forcing us to slow down to "island time" and wait for the boats to pass. As a part of our heritage, we love sharing stories with our kids about how the bridge used to only have trains and then cars, etc. It is a special part of our culture and many Islanders would be very sad to see it go.

3. The fact that it swings allows for the big ships to come through, thus supporting our economy and supporting our summer tourism industry.

Thank you

Study Design Report

-----Original Message-----
From:
Sent: Friday, December 21, 2018 5:03 PM
To: projectteam@swingbridgestudy.ca
Subject: Swing bridge study design report

Hi, I have just returned from the library at Providence Bay. I was not aware until today that I could have looked at this study from my home, on the website. I wish that had been more widely advertised.

My main concern is the evaluation criteria, 4.2. You do not include explicitly any consideration for the tourism value of the swing bridge. The swing bridge is an iconic structure, one of only a handful like it left in the world.

Thank-you

Sent from my iPad

From:
Sent: Thursday, December 13, 2018 2:06 PM
To: Gazibara, Nevena <Nevena.Gazibara@stantec.com>
Cc: projectteam@swingbridgestudy.ca
Subject: Response to DSR

Hello,
I reviewed the Study Design Report and have a few questions for clearer understanding.
As a layperson, I didn't understand whether the project is considering other design alternatives also or just the ones outlined in "Alternatives to the Undertaking." Are these the only alternatives being considered for the "Preferred Plan?"

If you are looking at "all" alternatives that might come up in this phase, how would you compile them? In other words, if an idea comes to your attention that is worth exploring further, will you do that? I noticed 'Sympathetic Design Options' in the case of rehabilitation of the bridge in the report but am not clear on that process.

The idea that some people like is the one that was carried out to replace a swing bridge in the US with an identical but better one. Would such an idea (submitted to you earlier by Bert Liffmann) be considered? It fits into the category of 'replacement' as an option. http://www.industrytap.com/largest-swing-bridge-in-the-usa-completely-dismantled-and-replaced-in-9-days/7952

According to your DSR, the swing bridge in Little Current is "one of the last operating swing bridges in North America," and an Ontario Heritage site. We're keen to maintain those distinctions.

Thank you for your attention.

Respectfully,
Gore Bay ON

On Fri, Nov 16, 2018 at 11:04 AM Gazibara, Nevena <Nevena.Gazibara@stantec.com> wrote:

Dear Sir/Madam,

Stantec Consulting Ltd. has been retained by the Ontario Ministry of Transportation (MTO) to undertake a Planning, Preliminary Design and Class Environmental Assessment (Class EA) Study for the Highway 6 Little Current Swing Bridge located in the Town of Northeastern Manitoulin and the Islands in Northeastern Ontario.

The purpose of this study is to identify a Recommended Plan that addresses current and future transportation needs at the bridge crossing. You are also encouraged to visit the project website at www.swingbridgestudy.ca for project information and updates.

The purpose of this letter is to advise you that a *Study Design Report* (SDR) has been prepared. The SDR documents the project Need and Justification, the study area, the alternative crossing types (Alternatives to the Undertaking), and the Class EA process including consultation. The SDR will be available for a 30 day public review period from November 22, 2018 to December 21, 2018. The SDR will be available on the project website (www.swingbridgestudy.ca), starting on November 22nd, as well as locations listed on the attached notice. Comments may be provided to the project team or on the website.

If you would like further information regarding the study, please contact either the undersigned or one of the project team members named in the enclosed information.

Kind regards,

Nevena Gazibara B.Sc., MREM, ENV SP

Environmental Planner

Direct: 905 381-3249
Fax: 905 385-3534
nevena.gazibara@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4 CA

Public Information Centre 1

COMMENT FORM

Planning, Preliminary Design and Class Environmental Assessment
Highway 6 Little Current Swing Bridge Study
(GWP 5268-14-00)

Public Information Centre 1, Manitoulin Hotel and Conference Centre – Wednesday, August 22, 2018

Your comments will help us to understand what is important to people in the study area. Please provide your comments on the following questions. (*Use the back of this sheet if you need more space.*) Visit the project website at www.swingbridgestudy.ca for project information and to submit additional comments. The PIC displays will also be available on the project website.

1. Do you have any comments on the Alternatives to the Undertaking?

The swing bridge is part of who we are. You cannot take that away from us. Moving the bridge will change Manitoulin in many forms. Personal, business and just in general. It has many affects on jobs here in Little Current which are hard to come by. Traffic is not an issue as you are on Island time. We encourage the slower pace.

2. Do you have any additional comments or questions?

I hope that our views thoughts and concerns are taken seriously as this is our home and not just another place to make changes. It will affect our livelyhood.

Please leave your completed comment sheet in the drop box provided or submit (**by September 28, 2018**) to:

Nevena Gazibara, B.Sc., MREM, ENV SP.
Environmental Planner
Stantec Consulting Ltd.
200-835 Paramount Drive
Stoney Creek ON L8J 0B4
Tel. (905) 381-3249 Email: projectteam@swingbridgestudy.ca

Name and Address (optional) PLEASE PRINT

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1. Do you have any comments on the Alternatives to the Undertaking?

Realizing there is additional maintenance cost involved, however, due to heritage and sentimental hold island & visitors have with the swing bridge, a suggestion would be to keep the existing bridge & have it fully closed end of Oct to April (non boating season) and fully open April to Oct during boating season. During winter it would provide an alternate route.

2. Do you have any additional comments or questions?

A new form of swing, lift bridge built to have a similar look would very likely satisfy those with a sentimental attachment & the "view" of the bridge.

Please leave your completed comment sheet in the drop box provided or submit (**by September 28, 2018**) to:
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1. Do you have any comments on the Alternatives to the Undertaking?

Regardless of construction &/or ongoing maintenance costs if swing bridge is replaced New bridge MUST have pedestrian AND Bicycle access lane independent of vehicular traffic Preference is to keep existing bridge in excellent condition so it lasts indefinately not assumed to be 100 years & demolished. Next best to maintaining swing bridge is tunnel as it is generally protected from natural disaster can offer emergency shelter during tornado or nuclear war & has no moving parts so ongoing maintenance is minimized.

2. Do you have any additional comments or questions?

Please leave your completed comment sheet in the drop box provided or submit (**by September 28, 2018**) to:

Nevena Gazibara, B.Sc., MREM, ENV SP.
Environmental Planner
Stantec Consulting Ltd.
200-835 Paramount Drive
Stoney Creek ON L8J 0B4
Tel. (905) 381-3249 Email: projectteam@swingbridgestudy.ca

Name and Address (optional) PLEASE PRINT

Name:

Mailing Address:

(include postal code)

Tel: Fax: Email:

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1. Do you have any comments on the Alternatives to the Undertaking?

→ Would prefer to keep the Swing Bridge due to its "look"; its merit for vacationers → attraction, & its historical flavor ... I would prefer continued maintenance, done in a timely fashion, regularly would reduce costs. If there is a change, I would pick the tunnel idea but still the impact would be on/off the Island. (Land purchase etc.)

2. Do you have any additional comments or questions?

→ I'm not interested in a moveable bridge because of the pieces/parts (moveable) that will also require ongoing maintenance plus cost

Please leave your completed comment sheet in the drop box provided or submit (**by September 28, 2018**) to:

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1. Do you have any comments on the Alternatives to the Undertaking?

I'd like to see the old Swing Bridge kept for its heritage value and maintained to the degree necessary to keep it in good (but not necessarily working) condition.

2. Do you have any additional comments or questions?

Thank you for giving us to opportunity to voice our preferences and treating this issue with sensitivity.

You're doing a good job.

Please leave your completed comment sheet in the drop box provided or submit (**by September 28, 2018**) to:

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1. Do you have any comments on the Alternatives to the Undertaking?

My preference #1 is to keep on repairing the current swing bridge. If that is not feasible, then I'd like to keep it as a historical site. Could it be used as a bike bridge? It's an important tourism attraction and helps to give Manitoulin its own character.

2. Do you have any additional comments or questions?

It would cost less to preserve the current bridge.

Please leave your completed comment sheet in the drop box provided or submit (**by September 28, 2018**) to:

Nevena Gazibara, B.Sc., MREM, ENV SP.
Environmental Planner
Stantec Consulting Ltd.
200-835 Paramount Drive
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1. Do you have any comments on the Alternatives to the Undertaking?

- the swing bridge is an important unique part of Manitoulin Island identity
- the solution must maintain existing traffic flow. to NOT cut off the business core of Little Current. still allow boat traffic through the North Channel.

2. Do you have any additional comments or questions?

Please leave your completed comment sheet in the drop box provided or submit **(by September 28, 2018)** to:

Nevena Gazibara, B.Sc., MREM, ENV SP.
Environmental Planner
Stantec Consulting Ltd.
200-835 Paramount Drive
Stoney Creek ON L8J 0B4
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1. Do you have any comments on the Alternatives to the Undertaking?

For financial and historical reasons we should continue to maintain the current swing bridge. Alternatives are very expensive and payback to current costs are poor.

2. Do you have any additional comments or questions?

Study current bridge and understand maintenance / preventative maintenance to ensure long effective usage

Please leave your completed comment sheet in the drop box provided or submit (**by September 28, 2018**) to:

Nevena Gazibara, B.Sc., MREM, ENV SP.
Environmental Planner
Stantec Consulting Ltd.
200-835 Paramount Drive
Stoney Creek ON L8J 0B4
Tel. (905) 381-3249 Email: projectteam@swingbridgestudy.ca

Name and Address (optional) PLEASE PRINT

Sent: Monday, September 10, 2018 11:20 AM
To: ProjectTeam@swingbridgestudy.ca
Subject:

Please note part in bold:

Dear Council members, Gordon/Barrie Island Township,

Welcome back to your fall term. I am writing with some comments and feedback

This note was occasioned by an article in the Recorder that indicated that the Gordon/Barrie council has taken a formal stand on the Swing Bridge repair/replacement discussion.

Council has voted for any replacement option that may be proposed after the 2-year consultative period. I feel that perhaps this carte blanche endorsement was premature. The Swing Bridge is an iconic symbol of the island's identity as we all know, began life as a railway bridge, and now torments many who wait in line to access its single lane to cross the Channel.

At the presentation in Little Current organised by consultants Stantec and the MOT, many Islanders, businesses, councils showed up to discuss the proposed process and the options to be considered. From a cost point of view they ranged from the tens of millions to hundreds of millions to be potentially spent dependent on the option chosen.

There are many other critical issues that must be considered, but the bottom line is that this is the beginning of a process not the end of it.

One community in the US, for example, replaced a similar historic swing bridge in 9 days with a new, identical-looking bridge, but with two lanes. They did this in a clever way at minimal cost. A solution like this one could satisfy the history and nostalgia buffs (and the tourist market) and business and practical considerations as well (safety, traffic flow etc). There's something to be said about how things look here that attracts attention and there's no

denying the importance of tourism to the Island; a working swing bridge is rare and interesting, why not explore an option that allows for modernization without sacrificing the unique look of the structure of the 1900s. This too could be looked at by the consultants.

http://www.industrytap.com/largest-swing-bridge-in-the-usa-completely-dismantled-and-replaced-in-9-days/7952

I was surprised that residents of the township were not consulted on this issue of vital concern to everyone on the Island, before a stand was announced. Yes, the councilors represent the taxpayers here, but perhaps a forum or a survey on an important issue before it is settled by council could be considered in future.

Consulting with us, a community of 600 more or less, by mail, email, or via the Gordon/Barrie web site on substantive issues would encourage engagement in the issues people care about. Posting notices of meetings, with agendas and subsequent minutes, of municipal elections and the candidates' statement of priorities, for example, gives a sense of inclusion in the life of the community.

In closing, please accept my apologies for speaking out at such length. My comments are intended to be constructive, and so please read my feedback as being notes from a neighbour who may harbour the occasional debatable opinion.

I commend you all for your public service and all the time and energy that you put in on our community's behalf. Carrie Lewis and her crew do an outstanding job and thanks to them too.

Sincerely,

Public Information Centre 2

COMMENT FORM

Planning, Preliminary Design and Class Environmental Assessment
Highway 6 Little Current Swing Bridge Study
(GWP 5268-14-00)

Public Information Centre 2, Manitoulin Hotel and Conference Centre – Wednesday, July 17, 2019

Your comments will help us to understand what is important to people in the study area. Please provide your comments on the following questions. (*Use the back of this sheet if you need more space.*) Visit the project website at **www.swingbridgestudy.ca** for project information and to submit additional comments. The PIC displays will also be available on the project website.

1. Do you have any comments on the alignment alternatives?

All efforts should be exerted to avoid impacting homes, business and public areas.

2. What do you think about the bridge type alternatives?

Heritage & Conservation option is not presented w/ much detail or comparative to other options. I feel it would be the preferred alternative of most Islanders to modify the existing bridge.

3. Do you have any comments on the draft evaluation criteria? Are there any other criteria that should be considered?

- Minimizing the rerouting from business is offensive
- Heritage and conservation options should be presented including cost.

COMMENT FORM

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4. Do you have any additional comments or questions?

- Slowing traffic down before entering the island is not just a negative it has psychological and cultural impacts that most consider positive.
- Slowing boat traffic is not a negative. I have witnessed people (boat traffic) stop downtown and utilize business since they had to wait for the bridge to open.
- Slowing things down is not a sweeping negative.

Please leave your completed comment sheet in the drop box provided or submit **(by August 16, 2019)** to:

Nevena Gazibara, B.Sc., MREM, ENV SP.
Environmental Planner
Stantec Consulting Ltd.
200-835 Paramount Drive
Stoney Creek ON L8J 0B4
Tel. (905) 381-3249 Email: projectteam@swingbridgestudy.ca

Name and Address (optional) PLEASE PRINT

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4. Do you have any additional comments or questions?

A number of local business's would / could be impacted if the traffic flow does not follow the existing road to the current bridge

Most cost effective to utilize current transportation route

Old bridge must be retained as a Heritage Bridge and would provide a back-up bridge for many more years at minimal cost.

Please leave your completed comment sheet in the drop box provided or submit (**by August 16, 2019**) to:

Nevena Gazibara, B.Sc., MREM, ENV SP.
Environmental Planner
Stantec Consulting Ltd.
200-835 Paramount Drive
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Highway 6 Little Current Swing Bridge Study
(GWP 5268-14-00)

Public Information Centre 2, Manitoulin Hotel and Conference Centre – Wednesday, July 17, 2019

4. Do you have any additional comments or questions?

We must save or do something with the old bridge.

Please leave your completed comment sheet in the drop box provided or submit (**by August 16, 2019**) to:

Nevena Gazibara, B.Sc., MREM, ENV SP.
Environmental Planner
Stantec Consulting Ltd.
200-835 Paramount Drive
Stoney Creek ON L8J 0B4
Tel. (905) 381-3249 Email: projectteam@swingbridgestudy.ca

Name and Address (optional) PLEASE PRINT

COMMENT FORM

Planning, Preliminary Design and Class Environmental Assessment
Highway 6 Little Current Swing Bridge Study
(GWP 5268-14-00)

Public Information Centre 2, Manitoulin Hotel and Conference Centre – Wednesday, July 17, 2019

Your comments will help us to understand what is important to people in the study area. Please provide your comments on the following questions. (*Use the back of this sheet if you need more space.*) Visit the project website at **www.swingbridgestudy.ca** for project information and to submit additional comments. The PIC displays will also be available on the project website.

1. Do you have any comments on the alignment alternatives?

Keep it where it is!

2. What do you think about the bridge type alternatives?

Please repair & maintain our current bridge!

3. Do you have any comments on the draft evaluation criteria? Are there any other criteria that should be considered?

COMMENT FORM

Planning, Preliminary Design and Class Environmental Assessment
Highway 6 Little Current Swing Bridge Study
(GWP 5268-14-00)

Public Information Centre 2, Manitoulin Hotel and Conference Centre – Wednesday, July 17, 2019

4. Do you have any additional comments or questions?

The Bridge is A LANDMARK that is protected under the Ontario Heritage Act. As a former Board member of The Ontario Historical Society I have to defend this designation.

Please leave your completed comment sheet in the drop box provided or submit (**by August 16, 2019**) to:

Nevena Gazibara, B.Sc., MREM, ENV SP.
Environmental Planner
Stantec Consulting Ltd.
200-835 Paramount Drive
Stoney Creek ON L8J 0B4
Tel. (905) 381-3249 Email: projectteam@swingbridgestudy.ca

Name and Address (optional) PLEASE PRINT

COMMENT FORM

Planning, Preliminary Design and Class Environmental Assessment
Highway 6 Little Current Swing Bridge Study
(GWP 5268-14-00)

Public Information Centre 2, Manitoulin Hotel and Conference Centre – Wednesday, July 17, 2019

4. Do you have any additional comments or questions?

- THIS BRIDGE IS A TOURIST ATTRATION WITH MUCH HISTORICAL & CULTURAL HERITAGE VALUE.

Please leave your completed comment sheet in the drop box provided or submit (**by August 16, 2019**) to:

Nevena Gazibara, B.Sc., MREM, ENV SP.
Environmental Planner
Stantec Consulting Ltd.
200-835 Paramount Drive
Stoney Creek ON L8J 0B4
Tel. (905) 381-3249 Email: projectteam@swingbridgestudy.ca

Name and Address (optional) PLEASE PRINT

COMMENT FORM

Planning, Preliminary Design and Class Environmental Assessment
Highway 6 Little Current Swing Bridge Study
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Public Information Centre 2, Manitoulin Hotel and Conference Centre – Wednesday, July 17, 2019

4. Do you have any additional comments or questions?

The swing bridge has been part of Manitoulan life for many decades. over 100 yr. It is worth saving. What is the rush and hurry for traffic There is no safety issues in reducing the number of times bridge swings in a day. The providence has regognized The bridge as a historical structure They will have to relocate and preserve Why not do it now and keep the bridge as is and repairs when needed. Do not get rid of the swing bridge model It is part of Manitoulan History.

Please leave your completed comment sheet in the drop box provided or submit (**by August 16, 2019**) to:

Nevena Gazibara, B.Sc., MREM, ENV SP.
Environmental Planner
Stantec Consulting Ltd.
200-835 Paramount Drive
Stoney Creek ON L8J 0B4
Tel. (905) 381-3249 Email: projectteam@swingbridgestudy.ca

Name and Address (optional) PLEASE PRINT

COMMENT FORM

Planning, Preliminary Design and Class Environmental Assessment
Highway 6 Little Current Swing Bridge Study
(GWP 5268-14-00)

Public Information Centre 2, Manitoulin Hotel and Conference Centre – Wednesday, July 17, 2019

4. Do you have any additional comments or questions?

Swing bridge is part of our heritage

Please leave your completed comment sheet in the drop box provided or submit (**by August 16, 2019**) to:

Nevena Gazibara, B.Sc., MREM, ENV SP.
Environmental Planner
Stantec Consulting Ltd.
200-835 Paramount Drive
Stoney Creek ON L8J 0B4
Tel. (905) 381-3249 Email: projectteam@swingbridgestudy.ca

Name and Address (optional) PLEASE PRINT

COMMENT FORM

Planning, Preliminary Design and Class Environmental Assessment
Highway 6 Little Current Swing Bridge Study
(GWP 5268-14-00)

Public Information Centre 2, Manitoulin Hotel and Conference Centre – Wednesday, July 17, 2019

Your comments will help us to understand what is important to people in the study area. Please provide your comments on the following questions. (*Use the back of this sheet if you need more space.*) Visit the project website at **www.swingbridgestudy.ca** for project information and to submit additional comments. The PIC displays will also be available on the project website.

1. Do you have any comments on the alignment alternatives?

- The Swing Bridge has to be kept - at least for historical purposes.
- It is a tourist destination, rarely not see someone taking pictures of it.

2. What do you think about the bridge type alternatives?

5a & 6a - are my preferred as the maintenance costs of the existing swing bridge is just not feasible.

3. Do you have any comments on the draft evaluation criteria? Are there any other criteria that should be considered?

Criteria: Keep the ambiance. The relaxed non-city simpleness of nature.

From: contactform@swingbridgestudy.ca <contactform@swingbridgestudy.ca>
Sent: Thursday, August 22, 2019 12:49 PM
To: projectteam@swingbridgestudy.ca
Subject: swingbridgestudy.ca contact form

from:
email:

message:
_____

What exactly is wrong with the current bridge? Is it a problem sourcing materials to maintain it? Why would any professional want to attach their name to the destruction of a historic landmark? Why is this swing bridge not protected as a historical landmark? Why would anyone want to change the entrance to such a magical, spectacular place as the Manitoulin Island? What do the Indigenous people have to say? Sad days ahead for whatever the decision.

From:
Sent: Tuesday, August 20, 2019 9:10 AM
To: ProjectTeam@swingbridgestudy.ca
Subject: Swing bridge @ Little Current!

It us a "Heritage site" in my opinion. It needs to be maintained. The cost of "whatever" they replace it with would cover the maintenance costs for years to come! It is what helps to make this "unique and singular freshwater Island" in the World so attractive to the visitors. In addition the North Channel is second only to the Mediterranean for Sailors. Water clairity and deep water dockage make it ideal! Please keep our Heritage!!

Sent from my Verizon Motorola Smartphone

From: contactform@swingbridgestudy.ca <contactform@swingbridgestudy.ca>
Sent: Tuesday, July 30, 2019 9:01 AM
To: projectteam@swingbridgestudy.ca
Subject: swingbridgestudy.ca contact form

from:
email:

message:
_____

This is the letter I am sending to the Manitoulin Expositor. I think it conveys my opinion on the process and lack of interest in the "fix" option.

Thank you.

****

Thoughts on the Swing Bridge

Everywhere you look: advertising, logos, sweatshirts, thousands of gorgeous photographs (hardly an exaggeration), the Swing Bridge figures. It is as iconic to this Island as the Eiffel Tower is to Paris, as the Taj Mahal is to India. Granted on a smaller scale, but still.

It is hard to fathom the possibility that this symbol of the Island could be taken apart and removed. Surely not.

Speaking of major tourist attractions, where is the discussion of Manitoulin's vision for tourism? Many, many world-famous sites and entire cities are being destroyed by too many tourists. People must buy tickets in advance to view almost anything. (For a more "to scale" example, think of the Blue Grotto in Tobermory). No one wants to stifle the tourist trade, far from it, but increasing accessibility to the Manitoulin will make a difference that is not being considered. Much (most?) of the charm of the Island is the slower way of life, and the lack of such citified things as franchises. How many times have you heard visitors say, "When we cross that Bridge, life slows down and we breathe a sigh of relief."?

Do we want to share our Island? Of course we do. Do we want crowds at the Cup and Saucer or Bridal Veil Falls to destroy the very thing they came to enjoy? Likely not.

The explanation for why the swing bridge cannot be repaired for once and for all (or for another 100 years) was never given. It seems it was never an option, but in the way of the political, it was made to seem like an option for a while, until it wasn't. The firms that stand to make a lot of money from a new construction appear to be reluctant to consider the "fix" option.

The mayor of Gore Bay noted that the visual impact of a new bridge could be considerable but that, because there are already giant windmills and hydro corridors, one more thing won't matter (my interpretation). I, for one, would object to this way of thinking, and hope that the visual impact of any change would be of utmost importance.

People need to consider the big picture and what a slick new bridge will do to traffic patterns, and how, once we have given up the history and culture and instant recognition of the iconic swing bridge, we will never be able to get it back.

From: contactform@swingbridgestudy.ca <contactform@swingbridgestudy.ca>
Sent: Tuesday, July 23, 2019 9:56 PM
To: projectteam@swingbridgestudy.ca
Subject: swingbridgestudy.ca contact form

from:
email:

message:
_____

Please add my name to the project mailing list. I am interested in being updated on the review process and decisions regarding this landmark. Please keep in mind that the bridge in Little Current is an iconic structure with much cultural and historical value. It is not just a piece of "infrastructure" to be maintained or replaced. I would also like to voice my concern that there is so little opportunity to provide input for all the people that will be affected, not just those who live nearby, but also those that come to the islands as regular, seasonal, or occasional visitors. The swing bridge in Little Current is perhaps the most important icon that defines what is 'Manitoulin Island'. Please do not destroy this cultural treasure. Renew it, improve it, and maintain it for its historic value and keep it part of the experience of coming to Manitoulin. I quite understand the irritating issues of traffic control such as "jumping the queue", which could be dealt with by installing cameras & ticketing just like other "line-ups" such as traffic lights at intersections or on toll roads. More important issues such as access for emergency vehicles when the bridge is open can be addressed with advanced warning systems that would alert the operator/controller the same time that the emergency services are alerted... in a coordinated effort to ensure the bridge is ready when the vehicles arrive. Medical emergencies could also be addressed by helicopter as is normal practice in isolated areas.

Looking to the potential for future growth, I think a better alternative to replacing the structure is to provide ADDITIONAL infrastructure to carry any projected increase in traffic, NOT to remove this point of access. By this, I mean that the current structure should be updated, improved, and maintained for future generations to enjoy. This does not preclude that a second structure, whether that be a tunnel or a bridge farther away from the existing structure, should not be part of future transportation plans, but this should not be a question of EITHER "keeping the bridge" OR building "something else". Rather... it should be a matter of "keeping the bridge" AND building "something else". My recommendation would be to make whatever improvements are necessary to keep the current structure in working order for say 30-50 years, while undertaking a project over say a 10-20 year span to provide an additional, alternative access route onto Manitoulin Island.

I would also like to mention that other locations in Canada, as well as many other countries, have dealt with similar situations with aging infrastructure, and have found creative ways to maintain and protect their cultural treasures along side their efforts of modernization. Perhaps our legacy is not as old as a roman road/bridge such as that in Rhonda, Spain or the canals in Amsterdam, but thank goodness that someone had the courage and foresight to preserve these treasures for future generations to enjoy.

From: contactform@swingbridgestudy.ca <contactform@swingbridgestudy.ca>
Sent: Thursday, July 18, 2019 3:31 PM
To: projectteam@swingbridgestudy.ca
Subject: swingbridgestudy.ca contact form

from:
email:

Hi: I was unable to make the Open House yesterday. I live on the first street (Simm Street) in Little Current. I strongly support the repair of the turning gear of the current bridge; the remediation and stabilization of the base of the current bridge; and the maintenance/continuation of use of the current bridge in its current configuration.. This makes the most sense from a cost/benefit perspective; from a historic/cultural preservation perspective; and from an Annual Average Daily Traffic/utilization perspective (with the possible exception of certain weekends in the Summer months). Demographic growth has eluded the Manitoulin for a long time and this bridge could likely handle the prospective traffic for the next twenty years or so. With the advent of AI, the traffic flows could be analyzed and the lights could be managed better to maximize/improve traffic flow. The only problem with the current bridge may be the need for it in a multi-party emergency. In most cases, one-off emergencies are handled by Ornge helicopters anyway. Please accept this as my input into your study. I will also forward my comments to Dave Williamson and Mayor Al McNevin for their information. I can be available via this email address, and my phone # is . Tha ttention and for including my comments in your input documentation.

From: contactform@swingbridgestudy.ca <contactform@swingbridgestudy.ca>
Sent: Thursday, July 11, 2019 7:34 PM
To: projectteam@swingbridgestudy.ca
Subject: swingbridgestudy.ca contact form

from:
email:

message:
_____

I grew up on Manitoulin, and for people who didn't, don't realize how much that bridge means to the people who have lived there, or visit the island. I would not want to see it replaced with another bridge. It is something that people don't see everyday, and its part of our history, that needs to be protected, so our younger generations can see and understand how things were made, instead of all this cement world we live in. My Uncle worked on that bridge for many years. It is part of the island, and I would love to see it protected and looked after. Thank you.

From: contactform@swingbridgestudy.ca <contactform@swingbridgestudy.ca>
Sent: Wednesday, July 10, 2019 2:57 PM
To: projectteam@swingbridgestudy.ca
Subject: swingbridgestudy.ca contact form

from:
email:

message:
_____

Please add me to the mailing list.
The swing bridge has an enormous historical and economical value for the area .

Public Information Centre 3

From: contactform@swingbridgestudy.ca on behalf of Contact Form <contactform@swingbridgestudy.ca>
Sent: Wednesday, March 31, 2021 5:53 AM
To: projectteam@swingbridgestudy.ca
Subject: swingbridgestudy.ca contact form

Follow Up Flag: Follow up
Flag Status: Flagged

from:
email:

message:
_____

My son lives on the island and the idea you have to copy the old bridge is fantastic,, the island is famous for that bridge,,Im 63 and been going to the island almost every year since i was seven,, love that bridge its a historic site

From: contactform@swingbridgestudy.ca on behalf of Contact Form <contactform@swingbridgestudy.ca>
Sent: Tuesday, March 30, 2021 4:53 PM
To: projectteam@swingbridgestudy.ca
Subject: swingbridgestudy.ca contact form

Follow Up Flag: Follow up
Flag Status: Flagged

from:
email:

message:
_____

Very pleased with the announcement today! Thank you. I also submit my choice for naming the Bridge. = Chi Aazhigan = big bridge. Since South Bay Mouth ferry is Chi Cheemaun = big boat . Thank you

From:
Sent: Tuesday, March 30, 2021 9:42 AM
To: Robinson, Jennifer
Subject: Swing bridge, Little Current Ontario

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Ms. Robinson

This morning when I saw the MTO article regarding the proposed plan for a new double lane swing bridge across the channel from the mainland to Manitoulin Island I was pleasantly surprised that a new swing bridge is planned and not a tunnel, or huge modern bridge. Also I hope that the bridge will retain the same design as the old and that some of the steel can be used.

A new bridge cannot replace the Heritage importance of the old, however, I believe that this is the best option.

Thank you for replying to my email on March 26, 2021.

Regards,

From: contactform@swingbridgestudy.ca on behalf of Contact Form <contactform@swingbridgestudy.ca>
Sent: Friday, March 19, 2021 5:47 PM
To: projectteam@swingbridgestudy.ca
Subject: swingbridgestudy.ca contact form

from:
email:

message:
_____

As a heritage site and tourist attraction to Manitoulin Island I implore the MTO to keep the bridge. It would be much less expensive to maintain than build a new structure. It would be a great loss to the Island's charm to replace it. I have been going to Manitoulin for many, many years, and don't mind one bit to wait, see it swing, and know that I'm looking at something very unique to Ontario.

From:
Sent: Friday, March 19, 2021 6:36 PM
To: projectteam@swingbridgestudy.ca
Subject: MI BRIDGE

Again I say please leave Manitoulin Bridge the way it is only REDO THE (new) INFRASTRUCTURE. And name it Chi Aash gan = Big Bridge! almost like Chi Cheemaun = big boat. Miigwech. Thank you

Good morning to you.
I am wondering what the status is on our Swing Bridge? I was born on Manitoulin and raised in Little Current and our bridge is an icon, symbolic of history. I realize progress is the way of the day and that means tearing down the old and building the new.We have extremely intelligent people working on a design for a fancy modern bridge but why does so much destruction of our heritage have to be? ?Why are these intelligent engineers not able to devise a plan of utilizing our old bridge by reconstruction of its base and updating the swing mechanisms and possibly adding a second lane to the bridge allowing us to still have the uniqueness of " A Swing Bridge".
I know public meetings are held for the people to express their opinions but for the most part the plans are already set, the objectives are firm and the powers to be have made their decisions but I merely pray their is someone out there that is trying to think of a way to work with our beautiful bridge. We have been known for the peaceful tranquil ambiance of Manitoulin, but unfortunately we have more and more city people moving here and they are wanting to bring the city to our Manitoulin. We do not want it. With the 15 minute delay when the bridge is swung it gives you a chance to unwind, think, and just be in the moment. I am hoping you will inform we of the status of your project. You have a good day and keep safe from COVID

APPENDIX C

Community Input Sharing Sessions #1 Comments

Table 1: Input Received and Response Provided/Action Taken

Indigenous Community Affiliation	Comment	Response Provided and/or Action Taken
Wiikwemkoong Unceded Territory	• Prefer a fixed bridge alternative • We need two-way traffic on the bridge. We have to also think of emergency and people who have appointments	Thank you for your interest in the study and your comments submitted at/following Community Information Sharing Session (CISS) 1. Your preference for a two-lane fixed bridge alternative has been noted by the project team. Your concerns regarding emergency response and impacts to personal appointments caused by delays at the crossing have also been noted by the project team. Replacement options are being considered that improve the reliability of the crossing, and reduce operating and maintenance costs, while improving traffic operations, emergency and evacuation access, and boat access. During the next phase of the study, an assessment will be completed to evaluate the Alternatives to the Undertaking and to select reasonable alternatives to carry forward for further study. This process allows unreasonable alternatives, or alternatives that do not address the problem and opportunity statements, to be eliminated from consideration in advance of the detailed development and evaluation of alternatives. Thank you again for taking the time to provide your comments. Your contact information has been added to the project mailing list and you will be updated on the status of the study as it progresses. Should you have any comments, questions or concerns, please do not hesitate to contact me by telephone at (905) 415-6401, or by email at diana.addley@stantec.com.

Indigenous Community Affiliation	Comment	Response Provided and/or Action Taken
Wiikwemkoong Unceded Territory	• Good to know pros and cons, and cost factors to them	Comment noted by project team.
Wiikwemkoong Unceded Territory	• Any decisions made now should be ideal for boat traffic for 20 plus years	Thank you for your interest in the study and your comments submitted at/following Community Information Sharing Session (CISS) 1. Your suggestion to accommodate boat traffic for the long term have been received by the project team. This study will consider a variety of crossing alternatives, including 'do nothing', ferry, tunnel, moveable bridge, and fixed bridge alternatives. As per the Navigation Protection Act, under Transport Canada's jurisdiction, all alternatives considered must provide navigational clearance for boats. Thank you again for taking the time to provide your comments. Your contact information has been added to the project mailing list and you will be updated on the status of the study as it progresses. Should you have any comments, questions or concerns, please do not hesitate to contact me by telephone at (905) 415-6401, or by email at diana.addley@stantec.com.
Wiikwemkoong Unceded Territory	• Make a safer bridge	Thank you for your interest in the study and your comments submitted at/following Community Information Sharing Session (CISS) 1. Your preference for a safer bridge alternative has been noted by the project team. This study will consider a variety of crossing alternatives, including 'do nothing', ferry, tunnel, moveable bridge, and fixed bridge alternatives. During the next phase of the study, an assessment will be completed to evaluate the Alternatives to the Undertaking and to select reasonable

Indigenous Community Affiliation	Comment	Response Provided and/or Action Taken
		alternatives to carry forward for further study. This process allows unreasonable alternatives, or alternatives that do not address the problem and opportunity statements, to be eliminated from consideration in advance of the detailed development and evaluation of alternatives. Thank you again for taking the time to provide your comments. Your contact information has been added to the project mailing list and you will be updated on the status of the study as it progresses. Should you have any comments, questions or concerns, please do not hesitate to contact me by telephone at (905) 415-6401, or by email at diana.addley@stantec.com.
Wiikwemkoong Unceded Territory	• Prefer a fixed or movable bridge alternative	Thank you for your interest in the study and your comments submitted at/following Community Information Sharing Session (CISS) 1. Your preference for either the fixed bridge alternative or movable bridge alternative has been noted by the project team. During the next phase of the study, an assessment will be completed to evaluate the Alternatives to the Undertaking and to select reasonable alternatives to carry forward for further study. This process allows unreasonable alternatives, or alternatives that do not address the problem and opportunity statements, to be eliminated from consideration in advance of the detailed development and evaluation of alternatives.

Indigenous Community Affiliation	Comment	Response Provided and/or Action Taken
		Thank you again for taking the time to provide your comments. Your contact information has been added to the project mailing list and you will be updated on the status of the study as it progresses. Should you have any comments, questions or concerns, please do not hesitate to contact me by telephone at (905) 415-6401, or by email at diana.addley@stantec.com.
Wiikwemkoong Unceded Territory	• Preserving the old bridge is very, very important and aesthetics	Thank you for your interest in the study and your comments submitted at/following Community Information Sharing Session (CISS) 1. Your concerns regarding the preservation of the existing bridge and the aesthetics in the study area have been noted by the project team. This study is considering a variety of crossing alternatives, including 'do nothing', ferry, tunnel, and moving or fixed bridge alternatives. Replacement of the existing structure is being considered as it is nearing the end of its service life and will require extensive and ongoing maintenance if retained. Many of the bridge's structural components are custom-fabricated, resulting in higher maintenance costs. Replacement options are being considered that improve the reliability of the crossing, and reduce operating and maintenance costs, while improving traffic operations, emergency and evacuation access, and boat access. The heritage components and heritage value of the existing bridge will be considered throughout the project through the development and evaluation of alternatives. MTO's Heritage Bridge Committee has deemed the existing structure a heritage property worthy of inclusion on the Ontario Heritage Bridge list. As such, this project will apply the Ontario Heritage Bridge Guidelines

Indigenous Community Affiliation	Comment	Response Provided and/or Action Taken
		protocol criteria for conservation/ mitigation options when developing preliminary design alternatives and considering the overall goals and objectives for this roadway within the province's highway improvement program. A Cultural Heritage Evaluation Report will be completed as part of this study to review the existing bridge's heritage value and consider potential impacts of the preliminary design alternatives. The Ministry of Tourism, Culture and Sport will also be consulted as part of this study, particularly with respect to the heritage designation of the bridge. During the next phase of the study, an assessment will be completed to evaluate the Alternatives to the Undertaking and to select reasonable alternatives to carry forward for further study. This process allows unreasonable alternatives, or alternatives that do not address the problem and opportunity statements, to be eliminated from consideration in advance of the detailed development and evaluation of alternatives. Further information about this study is available for review on the project website (www.swingbridgestudy.ca). Thank you again for taking the time to provide your comments. Your contact information has been added to the project mailing list and you will be updated on the status of the study as it progresses. Should you have any comments, questions or concerns, please do not hesitate to contact me by telephone at (905) 415-6401, or by email at diana.addley@stantec.com.

Indigenous Community Affiliation	Comment	Response Provided and/or Action Taken
Wiikwemkoong Unceded Territory	• Prefer a fixed bridge • Prefer removal of the existing bridge and foundation	N/A – comments submitted by anonymous CISS attendee
Wiikwemkoong Unceded Territory	• Two-way traffic with less traffic delays are very important • Concerned regarding health and safety, as there is only one way on and off of Manitoulin Island when the ferry is not operating for 6 months of the year • Prefer a fixed or movable bridge alternative	N/A – comments submitted by anonymous CISS attendee
Wiikwemkoong Unceded Territory	• Indicated that more information is needed, as the existing bridge is a historical structure	N/A – comments submitted by anonymous CISS attendee
Sheshegwaning First Nation	• Prefer replacement of the existing structure with a tunnel due to additional maintenance that will be required on the existing structure	Thank you for your interest in the study and your comments submitted at/following Community Information Sharing Session (CISS) 1. The project team has noted your support of the study and that your preferred Alternative to the Undertaking is the tunnel alternative. This study will consider a variety of crossing alternatives, including 'do nothing', ferry, tunnel, moveable bridge, and fixed bridge alternatives. During the next phase of the study, an assessment will be completed to evaluate the Alternatives to the Undertaking and to select reasonable alternatives to carry forward for further study. This process allows unreasonable

Indigenous Community Affiliation	Comment	Response Provided and/or Action Taken
		alternatives, or alternatives that do not address the problem and opportunity statements, to be eliminated from consideration in advance of the detailed development and evaluation of alternatives. Thank you again for taking the time to provide your comments. Your contact information has been added to the project mailing list and you will be updated on the status of the study as it progresses. Should you have any comments, questions or concerns, please do not hesitate to contact me by telephone at (905) 415-6401, or by email at diana.addley@stantec.com.
Aundeck Omni Kaning First Nation	• What will happen to the existing bridge?	N/A – comments submitted by anonymous CISS attendee
Aundeck Omni Kaning First Nation	• Take your time in making the final decision, as this is what we will have to live with for the rest of our lives, including our future generations • What will happen to the existing bridge? • Will the existing bridge remain on the island?	N/A – comments submitted by anonymous CISS attendee
Aundeck Omni Kaning First Nation	• Cost of the Alternatives to the Undertaking will increase over time	N/A – comments submitted by anonymous CISS attendee

Indigenous Community Affiliation	Comment	Response Provided and/or Action Taken
Aundeck Omni Kaning First Nation	• Prefer a tunnel alternative due to health and safety benefits, including emergency response times • Will people be able to vote or state their preference on the Alternatives to the Undertaking?	Thank you for taking the time to provide your comments regarding the above noted project. Your comment form was received at the CISS held in Aundeck-Omni-Kaning First Nation on August 23, 2018. Your preference for the tunnel alternative has been noted by the project team. Based on your comments, it is also understood that you are interested in learning more about the decision-making process for the preferred option. During the next phase of the study, an assessment will be completed to evaluate the Alternatives to the Undertaking and to select reasonable alternatives to carry forward for further study. This process allows unreasonable alternatives, or alternatives that do not address the problem and opportunity statements, to be eliminated from consideration in advance of the detailed development and evaluation of alternatives. The evaluation also considers the comments and concerns gathered through the consultation process. Throughout the duration of the study, the project team will consult with key stakeholders, agencies, members of the public, tourists, businesses, and Indigenous communities, and will take all comments and concerns into consideration in the development and evaluation of alternatives. Thank you again for taking the time to provide your comments. Your contact information has been added to the project mailing list and you will be updated on the status of the study as it progresses. Should you have any comments, questions or concerns, please do not hesitate to contact me by telephone at (905) 415-6401, or by email at diana.addley@stantec.com.

APPENDIX D

Community Input Sharing Sessions #2 Comments

Table 1: Input Received and Response Provided/Action Taken

Indigenous Community Affiliation	Comment	Response Provided and/or Action Taken
M'Chigeeng First Nation	• Concerned that some of the corridor alternatives could have positive and/or negative effects on Little Current • A bridge unique to Manitoulin Island could be developed through ideas • It's an excellent process which is really solving traffic issues • Implementing a hydroelectric generating station into the bridge to produce electricity year-round would benefit Manitoulin Island	Thank you for taking the time to provide your comments regarding the above noted project. Your comment form was received at the CISS held in M'Chigeeng First Nation on July 18, 2019. Based on your comments, it is understood that you feel that some of the corridor alternatives could have positive and/or negative effects on Little Current. The corridor alternatives were selected, in-part, due to their minimal impacts to existing businesses and residences. Construction of a full bypass of the town was screened out due to the potential for significant impacts to the Town of Little Current and local businesses. The criteria being used to evaluate the alternatives consider potential effects to the existing community of Little Current, including the possible impacts property, business, recreation and tourism. Your recommendation to implement a hydroelectric generating station into a new bridge structure has been noted by the project team; however, please note that the installation of a hydroelectric generating station in the North Channel is beyond the scope of this study. During the next phase of the study, a detailed evaluation of the alternatives presented at CISS 2 will be carried out to identify a plan that improves traffic operations and access for all users, reduces operating and maintenance costs, and improves reliability of the crossing, while minimizing the effects on the natural, social, and cultural environments.

Indigenous Community Affiliation	Comment	Response Provided and/or Action Taken
		Thank you again for taking the time to provide your comments. Your contact information has been added to the project mailing list and you will be updated on the status of the study as it progresses. Should you have any comments, questions or concerns, please do not hesitate to contact me by telephone at (905) 415-6401, or by email at diana.addley@stantec.com.
M'Chigeeng First Nation	• Prefers the fixed bridge alternative • Tunnel alternative is second best if cost is not considered • When will a final decision be made?	N/A – comments submitted by anonymous CISS attendee
M'Chigeeng First Nation	• Prefers the fixed bridge alternative on corridor alternative 6 • Opposes the lift bridge alternative as there are too many moving parts • Would have preferred to see corridor alternative 7 as an option moving forward, as it would alleviate vehicle congestion within business zones, and aligns with all criteria, especially those identified under community	N/A – comments submitted by anonymous CISS attendee

Indigenous Community Affiliation	Comment	Response Provided and/or Action Taken
Sheshegwaning First Nation	• Prefers the fixed bridge alternative • Alignment alternatives show more choices to consider	Thank you for taking the time to provide your comments regarding the above noted project. Your comment form was received at the CISS held at Sheshegwaning First Nation on July 19, 2019. Your preference for the fixed bridge structure alternative has been noted by the project team. During the next phase of the study, a detailed evaluation of the alternatives presented at CISS 2 will be carried out to identify a plan that improves traffic operations and access for all users, reduces operating and maintenance costs, and improves reliability of the crossing, while minimizing the effects on the natural, social, and cultural environments. Thank you again for taking the time to provide your comments. Your contact information is on the project mailing list and you will be updated on the status of the study as it progresses. Should you have any comments, questions or concerns, please do not hesitate to contact me by telephone at (905) 415-6401, or by email at diana.addley@stantec.com.
Sheshegwaning First Nation	• Prefers the fixed bridge alternative due to easy flow of traffic	N/A – comments submitted by anonymous CISS attendee
Whitefish River First Nation	• Prefers the tunnel alternative; however, prefers a suspension bridge as long as they do not go sailing into the North Channel	Thank you for taking the time to provide your comments regarding the above noted project. Your comment form was received at the CISS held in Whitefish River First Nation on July 23, 2019. Your preference for the tunnel structure alternative has been noted by the project team. During the next phase of the study, a detailed evaluation of the alternatives presented at CISS 2 will be carried out to identify a plan that

Indigenous Community Affiliation	Comment	Response Provided and/or Action Taken
		improves traffic operations and access for all users, reduces operating and maintenance costs, and improves reliability of the crossing, while minimizing the effects on the natural, social, and cultural environments. Thank you again for taking the time to provide your comments. Your contact information has been added to the project mailing list and you will be updated on the status of the study as it progresses. Should you have any comments, questions or concerns, please do not hesitate to contact me by telephone at (905) 415-6401, or by email at diana.addley@stantec.com.
Whitefish River First Nation	• Prefers an alternative that is close in design to the existing bridge, and one that would provide safety to users and emergency vehicles • Indicated that they were stuck waiting at the bridge twice in the weeks before the CISS due to emergency and mechanical difficulties, and that alternative situations should be explored for these cases also • Prefers a structure that is aesthetically pleasing and does not impact viewscapes	Thank you for taking the time to provide your comments regarding the above noted project. Your comment form was received at the CISS held at Whitefish River First Nation on July 23, 2019. Your preference for a bridge type alternative that is similar in design to the existing bridge has been noted by the project team. Based on your comments, it is also understood that you would prefer a solution that is safe, maintains access for vehicles, including emergency services, and does not impact the aesthetics of the area. During the next phase of the study, a detailed evaluation of the alternatives presented at CISS 2 will be carried out to identify a plan that improves traffic operations and access for all users, reduces operating and maintenance costs, and improves reliability of the crossing, while minimizing the effects on the natural, social, and cultural environments. The potential to improve access for emergency service providers and

Indigenous Community Affiliation	Comment	Response Provided and/or Action Taken
		minimize impacts to existing views/area aesthetics are some of the criteria that will be used to evaluate the alternatives. Thank you again for taking the time to provide your comments. Your contact information has been added to the project mailing list and you will be updated on the status of the study as it progresses. Should you have any comments, questions or concerns, please do not hesitate to contact me by telephone at (905) 415-6401, or by email at diana.addley@stantec.com.
Whitefish River First Nation	• Prefers the tunnel alternative • How long has the bridge been closed for when broken down? • How often do emergency vehicles get caught in lineups when the bridge is closed? • A feasibility study should be undertaken to determine the most expensive to least expensive alternative • Who will be paying for the bridge and construction?	Thank you for taking the time to provide your comments regarding the above noted project. Your comment form was received at the CISS held at Whitefish River First Nation on July 23, 2019. Your preference for the tunnel structure alternative has been noted by the project team. Based on your comments, it is understood that you are also seeking additional information regarding: the length of time the bridge is closed for repairs; the emergency vehicle delays associated with bridge closures; the preliminary costs associated with each alternative; and the current ownership of/responsibility for the bridge. The existing bridge is nearing the end of its service life and ongoing maintenance is required to continue operating the bridge. The duration of past bridge closures to carry out maintenance or repairs has varied depending on the extent of the work being undertaken. Emergency service providers, including the Ontario Provincial Police (OPP), have noted that access across the existing bridge is an issue with respect to their operations. However, the purpose of this study is to identify a plan

Indigenous Community Affiliation	Comment	Response Provided and/or Action Taken
	• The contaminated material on Goat Island is only a stockpile of rip-rap from Highway 6 projects	that improves traffic operations and access for all users, reduces operating and maintenance costs, and improves reliability of the crossing. With respect to the costs associated with each of the alternatives, the preliminary estimates prepared for the structure alternatives are currently approximately $130M for the bascule and lift bridge options; $140M for the swing bridge option; $150M for the fixed bridge option; and, $500 M for the tunnel option. It should be noted that these costs are preliminary in nature and will continue to be reviewed and developed as the project progresses. More detailed estimates will be prepared to support the evaluation phase of the project. The bridge is owned and operated by the Ontario Ministry of Transportation (MTO). As such, all funding for this project is provided by the Province. Your comment regarding the stockpiled material on Goat Island is also noted. These materials are situated on private property and may be subject to further investigation as part of future project planning, if required. Thank you again for taking the time to provide your comments. Your contact information has been added to the project mailing list and you will be updated on the status of the study as it progresses. Should you have any comments, questions or concerns, please do not hesitate to contact me by telephone at (905) 415-6401, or by email at diana.addley@stantec.com.

Indigenous Community Affiliation	Comment	Response Provided and/or Action Taken
Whitefish River First Nation	• Indicated the current bridge has to be fixed or replaced, but does not have a preference for what type of bridge or where it is located • Noted that construction should not hamper access to the island (Little Current) for emergency or general medical reasons, or access to the mainland for getting to the bank • Construction should not hamper UCCM Police from policing their community, as the UCCM Police Office is located in M'Chigeeng • The finished bridge should not be a toll bridge • The finished bridge should be built in such a fashion that those scared of heights can cross with less anxiety	N/A – comments submitted by anonymous CISS attendee
Wiikwemkoong Unceded Territory	• Prefers corridor alternatives 2 and 4, due to fewer environmental impacts and similarities to existing bridge	Thank you for taking the time to provide your comments regarding the above noted project. Your comment form was received at the CISS held in Wiikwemkoong Unceded Territory on July 24, 2019. Your preference for corridor alignment alternative 2 or 4 with the moveable bridge structure alternative has been noted by the project team.

Indigenous Community Affiliation	Comment	Response Provided and/or Action Taken
	• Draft evaluation criteria are well thought of and have many good ideas to consider • The CISS was very informative and presentation was well done	During the next phase of the study, a detailed evaluation of the alternatives presented at CISS 2 will be carried out to identify a plan that improves traffic operations and access for all users, reduces operating and maintenance costs, and improves reliability of the crossing, while minimizing the effects on the natural, social, and cultural environments. Thank you again for taking the time to provide your comments. Your contact information has been added to the project mailing list and you will be updated on the status of the study as it progresses. Should you have any comments, questions or concerns, please do not hesitate to contact me by telephone at (905) 415-6401, or by email at diana.addley@stantec.com.
Wiikwemkoong Unceded Territory	• Common sense should prevail – too many idealistic alternatives, it should be kept simple • Closer scrutiny should be given to the new structures, as the existing structure would last a total of 130-140 years and a new structure would last 75 years. Is the steel not as good? What are the costs of the structure alternatives? • The draft evaluation criteria should include steel strength	N/A – comments submitted by anonymous CISS attendee

Indigenous Community Affiliation	Comment	Response Provided and/or Action Taken
	• Eco-friendly options should be considered • The tunnel option could lead to traffic jams if an accident occurred inside it, and it is unhealthy to be underground • Winds and snow could be very strong for the fixed bridge alternative	
Wiikwemkoong Unceded Territory	• Prefers a fixed bridge or tunnel alternative • Concerns with other alternatives are that imported loads may be too high or heavy, and how to operate safely in winter • The swing bridge alternative is cosmetically pleasing as a reflection of the current bridge • If the bridge remains in place as a heritage site, does it still turn? • Agrees that it is time for an update and safer options	N/A – comments submitted by anonymous CISS attendee

Ministry of Northern Development, Mines, Natural Resources and Forestry

Resources Planning and Development
Policy Branch
Policy Division
300 Water Street
Peterborough, ON K9J 3C7

Ministère du Développement du Nord, des Mines, des Richesses Naturelles et des Forêts

Direction des politiques de planification et d'exploitation des ressources
Division de l'élaboration des politiques
300, rue Water
Peterborough (Ontario) K9J 3C7

Ontario

Subject: Proposed regulatory changes under the Aggregate Resources Act

Dear Ontario Heads of Council and Clerks,

The Ministry of Northern Development, Mines, Natural Resources and Forestry recognizes the critical role Ontario's municipalities play in the lives of Ontarians. We value our strong collaborative partnership with municipalities and the associations that represent their interests.

I am writing to inform you, the Ministry of Northern Development, Mines, Natural Resources and Forestry is proposing regulatory changes under the *Aggregate Resources Act*. These changes will harmonize with Ministry of the Environment, Conservation and Parks' new provincial requirements under the *Environmental Protection Act* (EPA) for soil that is moved during construction activities to another site for a beneficial reuse (i.e., excess soil). Ontario Regulation 406/19, and Rules for Soil Management and Excess Soil Quality Standards include risk-based quality standards for the safe reuse of excess soil.

We invite you to review the changes and offer comments.

A complete summary of the proposed regulatory changes can be found on the Environmental Registry at the following address: www.ero.ontario.ca
Then search for notice: 019-4801

There are several ways you can comment on this proposal, including:

1. Directly through the Environmental Registry posting (click on the "Submit a comment" button)
2. By email to aggregates@ontario.ca, or
3. By mail to:

   Resources Development Section
   Ministry of Northern Development, Mines, Natural Resources and Forestry
   300 Water Street, 2nd Floor South
   Peterborough, ON K9J 3C7

If you have any questions you can contact Darryl Mitchell at (705) 313-2154.

Sincerely,

Jennifer Keyes,
Director, Resources Planning and Development Policy Branch

ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

To: OCWA Clients
RE: COVID-19 Update – January 10, 2022

We hope that you had an enjoyable time with your families over the holidays.

We are writing to tell you about the steps OCWA is taking in response to the Ontario government's recent announcement that the province is Temporarily Moving to Modified Step Two of the Roadmap to Reopen.

This isn't the news anyone wanted to hear, especially at the start of a new year. But as we face this new wave of the pandemic, we would like to assure you that OCWA remains focused on the continuous operation of your water and wastewater treatment facilities and protecting the health and safety of our employees and the public.

With the highly transmissible nature of the Omicron variant, maintaining the stability of critical workforces, including water and wastewater operations, is more important than ever. Throughout the pandemic, OCWA has utilized regional continuity of operation plans (COOP) as well as facility-specific emergency plans as needed. These plans are designed to address any potential staff shortages at OCWA-operated facilities due to COVID-19, including this new variant. If you have any questions about the COOP for your facility or region, please contact your OCWA Regional Hub Manager.

In the meantime, we wanted to tell you about the following measures we are taking in order to minimize the spread of the virus and protect staff:

- All non-essential OCWA staff who can work from home will do so until the current situation changes. Regular access to workplaces will be limited to front line operations staff with access by Operations Managers as needed to ensure the continuity of operations.

- Staff who must attend the workplace will be on staggered shifts, and will be socially distanced and adhering to proper PPE protocols.

- We are regularly monitoring to ensure we have an adequate supply of PPE.

- We are assessing all of our non-essential activities to determine if they can be deferred to a later date. All work that is critical to the short-term reliable operation of the facilities will proceed.

- Direct interactions with Municipal staff, council and the public will be restricted to phone and video communications wherever possible.

ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

We will continue to monitor the outbreak and changing restrictions and are working with government and health authorities to ensure we are prepared for any situation that may arise. As we have been doing throughout the pandemic, we will keep you updated and will contact you immediately should the situation change with respect to your facilities.

Please do not hesitate to reach out to us should you have any additional questions or concerns about your water/wastewater operations. We appreciate your support and thank you for placing your continued trust in OCWA.

Sincerely,

Nevin McKeown
President & CEO, OCWA

Jeff St. Pierre
Regional Hub Manager, OCWA
Northwestern Ontario

Township of Billings
ACCOUNTS FOR PAYMENT from Jan 06, 2022 to Jan 12, 2022

Cheque No.	Cheque Date	Payee	Amount
7084	Jan 12, 2022	Allens Auto Parts	278.30
7085	Jan 12, 2022	Association of Municipalities of Ontario	1,341.47
7086	Jan 12, 2022	Brendan Addison Mobile Mechanical	146.90
7087	Jan 12, 2022	Bridal Veil Variety	277.57
7088	Jan 12, 2022	Briscoe, Lawrence	50.00
7089	Jan 12, 2022	DataFix	565.00
7090	Jan 12, 2022	Denis Gratton Construction Ltd.	436,851.99
7091	Jan 12, 2022	Encompass IT	274.59
7092	Jan 12, 2022	G. Stephen Watt LLB	1,423.80
7093	Jan 12, 2022	Grand & Toy Ltd.	302.98
7094	Jan 12, 2022	H & R Noble	51,656.82
7095	Jan 12, 2022	McDougall Energy Inc.	3,034.61
7096	Jan 12, 2022	Mercer, Bruce	37.00
7097	Jan 12, 2022	Minister of Finance (Policing)	17,993.00
7098	Jan 12, 2022	Municipal Information Network	186.45
7099	Jan 12, 2022	Municipality of Central Manitoulin	5,453.00
7100	Jan 12, 2022	North Channel Marine Tourism Council	150.00
7101	Jan 12, 2022	Ontario Clean Water Agency	18,003.97
7102	Jan 12, 2022	Ontario Municipal Tax & Revenue Association	259.90
7103	Jan 12, 2022	Osborne, Dan	856.00
7104	Jan 12, 2022	Pinchin Ltd	1,663.00
7105	Jan 12, 2022	Public Health Sudbury & Districts	2,308.00
7106	Jan 12, 2022	Randy Noble Trucking Ltd	535.61
7107	Jan 12, 2022	Thomson Reuters	273.00
7108	Jan 12, 2022	Tiana Mills	41.49
7109	Jan 12, 2022	Township of Billings	81.50
7110	Jan 12, 2022	Total Power Limited	1,689.35
7111	Jan 12, 2022	UCCM Castle Building Supplies	282.55
PREAUTHORIZED DEBITS			
DS	12/20/2021	Rogers-PW cell phones	288.15
DS	12/20/2021	Canada Life-RSP	1,353.48
DS	12/21/2021	Superior Propane	31.97
DS	12/22/2021	Payroll	15,171.60
DS	12/22/2021	Council Renumeration	7,043.61
DS	12/23/2021	Bell Canada	578.48
DS	12/23/2021	Hydro One	3,976.75
DS	12/24/2021	Eastlink-Fire Tower	148.81
DS	12/24/2021	LBPC Leasing-copier lease	175.00
DS	12/31/2021	Bank of Montreal-Fire Truck	1,356.67
DS	12/31/2021	Wells Fargo-Phoe System Lease	108.01
DS	Jan 04, 2022	DSSAB	29,854.76
DS	Jan 05, 2022	Payroll	14,024.30
DS	Jan 05, 2022	Canada Life-RSP	1,281.76
DS	Jan 10, 2022	Superior Propane	3,316.39
DS	Jan 10, 2022	Manulife-Benefits	2,328.24
DS	Jan 11, 2022	Mastercard	1,409.83
DS	Jan 11, 2022	WSIB-quarterly (Includes Fire Dept)	7,198.67
	TOTAL		**635,664.33**