

Mississaugas of Scugog Island First Nation (Band No. 140)

Date of Visit: March 16, 2001

By George Culhane (OCWA)

Site Address: Scugog I.R. No. 34

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Tribal Council Affiliation: Ogemawahj Tribal Council (OTC)

Operator:

Location: The Mississaugas of Scugog Island First Nation community is located on Scugog Island in Lake Scugog, approximately 45 km southwest of Peterborough

Population: 32 people in the community (November 2000 - INAC)

No. of Units: 28 housing units (CAIS)

1.0 Description of the Community Water Supply

Based on the CAIS report and information supplied to OCWA, water to the houses in the Mississaugas of Scugog Island community is treated as follows:

- 16 people are serviced by piped water
- 16 people are serviced by individual wells.
- 14 houses are serviced by the following:
 - Pump House #1 services five houses with a water softener, three pressure tanks, no disinfection and water distribution system;
 - Pump House #2 – services four houses with a water softener, two pressure tanks, no disinfection and water distribution system;
 - Pump House #3 – services one apartment complex (five units) with a water softener, one pressure tank, and no disinfection; and
- 14 houses are serviced by individual wells.

Description of the Community Sewage Facilities

Based on information supplied to OCWA, the Mississaugas of Scugog Island community is serviced by the following:

- 32 people are serviced by individual septic tanks.
- 28 houses are serviced by individual septic tanks.

3.0 Overall Assessment for Communal Water Treatment Supply

The questionnaire developed by PWGSC required OCWA to undertake a risk assessment of the Water Source, Design, Operation, Reporting, and Operators. To properly assess these areas, a revisit to the water treatment facilities would be required.

OCWA was requested to undertake the evaluation without a visit to the site. With the available information, OCWA has undertaken the requested assessment of the facilities.

The ranking system used is as follows:

- 0 = Not enough information to assess
- 1-4 = Low Risk
- 5-7 = Medium Risk
- 8-10 = High Risk

For more detailed information on the Risk Assessment used see the Terms of Reference, Appendix B.

SECTION Water	SECTION RANKING Water	RISK Water
A. Water Source		
Biological	0	No lab data
Chemical	0	No lab data
Physical	0	No lab data
Overall Ranking for Water Source	0	No lab data
B. Design		
Biological	0	No lab data
Chemical	0	No lab data
Physical	0	No lab data
Risk to Public Health	2	UV and chlorine disinfection system installed
Condition of Laboratory Equipment	0	
Overall Ranking for Design	2	
C. Operations		
Reservoir Cleanliness	0	Not inspected
Emergency Plan	0	
Overall Ranking for Operations	7	No spare parts, no operations and maintenance manuals.
D. Reporting		
Ranking for Laboratories and Testing	0	
Ranking for Boil Water Advisories	1	Boil Water Advisory was removed in 2002
Overall Ranking for Reporting	3	Poor record keeping

E. Operators		
Overall Ranking for Operators	2	New operator has been formally designated
F. Statistical Data		
Overall Ranking for Individual Wells	0	
Overall Ranking for the System	3	Low Risk (originally High Risk)

4.0 Communal Water Supply (14 houses)

4.1 Water Source

The community is supplied from to groundwater.

4.2 Design

The community communal well system is comprised of three separate pump house systems supplying groundwater to 14 houses.

Pump House #1 is a wood-framed building built in 1990. The water system consists of a well, three pressure tanks equipped with a water softener, and a water distribution system. The first pump house services five houses. A UV and chlorine disinfection system was installed in 2002.

Pump House #2 is a wood-framed building built in 1992 and services four houses. The water system consists of a well, two bladder type pressure tanks with a water softener, and a distribution system. A UV and chlorine disinfection system was installed in 2002.

Pump House #3 is located in an apartment complex with five units. The complex was built in 1998 and contains a well, and one bladder type pressure tank with a water softener. A UV and chlorine disinfection system was installed in 2002.

The rated design capacity of all the pumps is unknown, however the demand in all systems is met.

4.3 Operations

Some safety concerns include inadequate ventilation for the pump house and chemical storage area, and inadequate safety equipment on site.

There are no operating and maintenance manuals for plant equipment and no as-built drawings on site. There is also inadequate laboratory and office/filing area within the pump house.

A new operator has been formally designated to operate the pump houses.

New UV and chlorination disinfection systems were installed in 2002. A new colilert unit and incubator are now on site.

There is no main valve operating and maintenance program. Emergency spare parts and contact listing of technicians and trades people are also not readily available. The average response time of technicians is also unknown.

There have been no service disruptions in the last two years and no re-occurring operational problems.

4.4 Reporting

Health Canada conducts bacteriological tests twice per year on the well system. The results are recorded and kept in the Environmental Health Officer (EHO) Office.

In the last two years, there have not been any disease or other health related outbreaks. Health Canada issued one boil water advisory on one of the communal water systems. The Boil Water Advisory was removed in 2002 after disinfection equipment was installed.

The turbidity of the treated water is not recorded. A chemical analysis of the treated water is conducted once per year and no chemical analysis has exceeded the GCDWQ guidelines.

There was no bacteriological or chemical data available from Health Canada.

4.5 Operators

There is now a new operator who is formally designated to operate the plant and is working towards certification.

5.0 Deficiencies in the Communal Water Supply

1. The pump house systems do not have backup power supply in case of power failure.
2. There are no operating and maintenance manuals for the pump house equipment and there are no as-built drawings on-site.
3. Several safety hazards/concerns were noted including inadequate ventilation for the pump house, and inadequate laboratory and office/filing area.
4. The operator does not perform valve operating and maintenance program on the water distribution systems.
5. There is no written contingency plan available.
6. There are no technicians/trades people available for immediate response to mechanical breakdowns in the plant.
7. Record keeping needs improvement.

6.0 Classification

Based upon the terms of reference - Appendix I – Plant Classification Guideline developed by Public Works and Government Services Canada and with discussions with the Ontario Ministry of the Environment Classification Group, OCWA classified this plant as follows:

Water Treatment Facility- Class I

7.0 Recommendations

- Increase frequency of the system maintenance and site checks.
- Implement record keeping.
- Establish and implement a protocol for taking water samples at the water pumping stations, including raw water samples.
- Consider backup power for the water pumping stations.
- Review and provide additional safety equipment on-site.
- Implement a house cleaning and general maintenance program at the facilities. Consider additional storage/office space for operator and equipment.
- Develop a comprehensive contingency plan to address operational problems, breakdowns, vacations and sickness, main breaks and boil water advisories.

- Obtain as-built drawings and operating and maintenance manuals.
- Implement a sewage septic tank inspection program to inspect all septic tanks in the community for proper operations and meeting the required standards.

8.0 Overall Community Risk Assessment

Water Category – Low Risk

- **Low Risk (formally High Risk) because of the following:**
 - Disinfection equipment has been installed; and
 - Boil Water Advisory has been removed.

Note: Information within this report is based on discussions with the plant operator and a quick visual walkthrough of the facilities. No detailed review was undertaken by OCWA.