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*The Muskoka Watershed*  
**REPORT CARD**

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***Background Report #4***







**Our Water - Drinkability**



***Muskoka***  
**WATERSHED COUNCIL**

**July 2004**

## OUR WATER – DRINKABILITY

Indicator	Are We Happy?	Trend
Clean treatable groundwater		
Clean treatable surface water		
Good municipal water source		

### ***Why are we concerned about good drinking water?***

The outbreak of waterborne disease in Walkerton, Ontario, in May 2000 and North Battleford, Saskatchewan, in the Spring of 2001 have heightened Canadian awareness of the fact that threats to water quality and quantity can have a profound impact on their health, the environment, and the economy.

In recognition of the above, it is imperative that drinking water be kept clean, safe and reliable. In order to do so, the components of the water supply system, from source protection to the treatment and distribution of drinking water to consumers, must be understood and managed as a whole.

Treated drinking water can be defined as safe for human consumption when:

- Densities of disease-causing organisms or concentrations of hazardous or toxic chemicals or radioactive substances do not exceed human health objectives, standards or guidelines; and
- Treatment needed to make raw water suitable for drinking does not exceed the standard treatment used in similar un-degraded portions of the watershed.

### ***Current state***

#### Private water supply

The Ministry of Health, through the Muskoka-Parry Sound Health Unit, is responsible for ensuring safe drinking water for all private and communal systems in Muskoka. Currently, there are approximately 400 communal systems in Muskoka serving resorts, restaurants, campgrounds and mobile home parks, among others. There are in excess of 30,000 households that rely on private water sources.

Regular testing of the treated water from communal systems is required to ensure that it meets Provincial guidelines for bacteria, chemical and radiological standards.

When a drinking water source has been contaminated with bacteria, the Muskoka-Parry Sound Health Unit issues a warning that all water should be boiled before being consumed. In

particular, the Muskoka-Parry Sound Health Unit will place a 'boil water' advisory in the following circumstances:

- When there is no treatment of a public surface water supply (surface water includes dug wells, springs, lakes, rivers); and
- When a public water supply receives an adverse water quality report (it does not meet the provincial guideline for one of the identified parameters).

Over the last three years, the Health Unit has issued 'boil water' advisories for approximately 40 establishments across Muskoka (See Appendix 1)<sup>1</sup>. The most common reason for the advisory is low levels of bacteria in a surface or dug well situation.

The *Safe Drinking Water Act, 2002*, requires all operators that supply the public with drinking water to meet more stringent standards than in the past. As the regulations and standards for drinking water are changing rapidly in reaction to the Walkerton tragedy, there is very little consistent data on which to evaluate any trends in the state of private sources of drinking water in Muskoka. Many operators across Muskoka, however, are bringing their systems into compliance in anticipation of, and before, the compliance deadline.

Water sources for private household use are also considered to be very good. As the rural and waterfront areas of Muskoka develop, new and older private wells or surface water systems appear to be functioning well with no significant illnesses reported. Specifically, the Muskoka-Parry Sound Health Unit has not issued any major health warnings or identified a health risk respecting either groundwater or surface water sources. Where boil water advisories have been issued, they tend to be limited to shallow and dug wells that are susceptible to localized contamination. In addition, water sampling conducted by several organizations indicates surface water has very low bacteria counts, which is treatable using standard disinfectant methods.

### Municipal water supply

The District of Muskoka operates eight water supply systems. Seven draw water from surface water sources. One small system in Port Sydney is reliant on groundwater. Annual reports are prepared by Muskoka and are available for public review after March 31 of each year. Current reports indicate that raw water samples are of good quality and require only standard treatment. All major plants provide filtration and disinfection and treat for low pH or acidity. There are no inorganic or organic parameters that must be treated, with the exception of the MacTier and Bala plants that treat for low levels of manganese in the late summer as a result of the release from natural sources when there are low oxygen levels in the lower parts of the lake.

### ***What are the stresses?***

Four stresses impact the quality of drinking water:

- Microorganisms (e.g. bacteria) from faulty septic or communal waste disposal systems may enter the source water and have an adverse impact on human health.

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<sup>1</sup> Muskoka Parry Sound Health Unit, Boil Water Advisories

- Human use of surface water for recreational purposes, including high use swimming areas, washing, and the discharge of gray water from live-aboard boats may introduce microorganisms that will negatively impact human health.
- Nutrient loading, especially phosphorus, will contribute to plant growth, which in turn increases algal biomass. Excess algae results in taste and odour problems.
- Man-made chemicals, especially toxic and persistent toxic substances, can have an impact upon the health of consumers or contribute to taste and odour problems.

**What action can be taken?**

**Activities that can be undertaken by individuals:**

1. Ensure your private disinfection system is functioning properly and meets current standards.
2. Maintain your septic system to avoid cross-contamination problems.
3. Plant a shoreline vegetative buffer using native species.
4. Do not wash boats in the lake.
5. Do not bathe in the lake.
6. Dispose of both gray and black water in regulated pump out facilities.



**Activities that can be undertaken by municipalities:**

1. Muskoka has built, and will continue to build as required, tertiary sewage treatment plants to ensure that bacteria and other pathogens from areas with higher population concentrations do not enter our recreational waters.
2. Encourage the retention of shoreline vegetation through the planning and development approval process.
3. Require all septic systems to be set back 30 metres from the high water mark of all waterbodies.
4. Continue and improve septic re-inspection programs.

**Activities that can be undertaken by the Muskoka-Parry Sound Health Unit:**

1. Enhance the data management system for private and communal water testing to facilitate better analysis of the data including the geographical analysis of problem areas.





**Activities that can be undertaken by senior levels of government:**

1. Provincial legislation is required that will allow a more thorough septic re-inspection program to be undertaken.
2. Provincial regulation governing the distance a septic system must be setback from surface water should be amended to read 30 metres.
3. Federal legislation is required that will require both gray and black water to be pumped out at regulated facilities.

**References**

1. Muskoka-Parry Sound Health Unit, <http://www.mpslu.on.ca>
2. Ministry of the Environment Drinking Water Treatment, Guide for Owners of Private Communal Works and Other Small Water Supply Systems, Queen's Printer, 2001. <http://www.ene.gov.on.ca/envision/gp/4222e.htm>
3. District of Muskoka, Water System Annual Reports 2003. [http://www.muskoka.on.ca/publicworks/bb\\_water.htm](http://www.muskoka.on.ca/publicworks/bb_water.htm)



### APPENDIX 1 – BOIL WATER ADVISORIES

Property	Sample Date	Town	Area Municipality	Type of Water Source	Reason for Advisory
Arrowhead Provincial Park	12-Sep-00		Huntsville	Surface Water	Five adverse samples of Total coliforms. All resamples negative for coliform presence.
	6-May-03				Two samples. Total coliforms 4, 29. E. coli 1. Free chlorine residual 0.5 ppm.
	16-Jun-03				Four samples. Total coliforms 34, 44, 49 and 36. E.coli 3, 6, 7 and 3. Suspected sampling error.
	6-Aug-03				Total coliforms 21. E. coli 9. Free chlorine residual 0.53 mg/L
Bent River General Store & Café	9-Jul-03		Muskoka Lakes	Surface Water	Total coliform 71. E. coli 22.
Birch Haven Resort	11-Jun-02	Baysville	Lake of Bays	Surface Water	Total coliforms 18.
Camp Frenda	27-Aug-03	Port Carling	Muskoka Lakes	Surface Water	Total coliforms 9. Heterotrophic plate count 614.
	29-Aug-03				Background colonies 720, 223 & 213. Heterotrophic plate count 980. Total coliforms 4.
Camp Crossroads	3-Jul-02		Muskoka Lakes	Surface Water	Total coliforms 65.
Camp Ramah	4-Jul-02		Muskoka Lakes	Surface Water	Total coliforms 4. E. coli 2. Background 380.
Clevelands House	16-Jul-02		Muskoka Lakes	Surface Water	Total coliforms 58.
Delmonte in the Pines Resort	10-Jul-02	Kilworthy	Gravenhurst	Surface Water	Total coliforms 34. E. coli 2. No residual chlorine present.
King's Portage Park	14-Jul-03		Georgian Bay	Surface Water	Total coliforms 3.
	16-Jul-03				Total coliforms 12.

Aspdin Community Centre	6-Nov-02	Aspdin	Huntsville	Dug Well	Total coliforms 6.
	12-Nov-02				Resampling- 26 Total coliforms
Bent River Campground	11-Jul-01		Muskoka Lakes	Ground Water-Dug well	Total coliforms 3.
	19-Jul-01				Total coliforms 1.
Big Pine Acres Trailer Park	4-Oct-01		Gravenhurst	Dug Well	Total coliforms 20.
Camp Kwasind	19-Aug-02		Muskoka Lakes	Surface Water & Ground Water	Surface Water - Total coliforms 4, 14. E. coli 4, 0. Ground water - Total coliforms 4.
Grandview Getaway Cottage Resort	17-Jun-02	Bala	Muskoka Lakes	Surface Water	Total coliforms 6.
	23-Jul-02				Two samples. Total coliforms 2, 24.
	29-Jul-02				Two samples. Total coliforms >80, 3.
Gryffin Lodge	20-Sep-00		Huntsville	Surface Water	Total coliforms 6. E. coli 1.
	27-Sep-00				Total coliforms 10. E. coli 1.
Mentor College Outdoor Educational Centre	16-Jun-03		Gravenhurst	Surface Water	Heterotrophic plate count exceedance.
	20-Jun-03				Two samples. Total coliforms 22, 18. E. coli 2, 4.
Muskoka Lakes Golf & Country Club	12-Jul-02		Muskoka Lakes	Surface Water	Three locations. Total coliforms >80, 23, 1.



Port Carling Water Treatment Plant	13-Aug-02	Port Carling	Muskoka Lakes	Surface Water	Total coliforms 3. E. coli 12. Background >2500. Free chlorine residual 2.2 mg/L
Port Sandfield Municipal Washroom	4-Jun-02	Port Sandfield	Muskoka Lakes	Surface Water	Total coliforms 8.
	11-Jul-02				Resampling negative.
Trail's End Cottages	7-Aug-02	Honey Harbour	Georgian Bay	Surface Water	Two sample locations. Total coliforms 9, 2. E. coli 1, 0.
Windermere House	12-Sep-00	Windermere	Muskoka Lakes	Surface Water	Total coliforms 3. E.coli 1.
Elm Cove Cottages	24-Jul-02	Port Severn	Georgian Bay	Ground Water	Total coliforms 7.
	30-Jul-02				Background >200.
	7-Aug-02				Total coliforms 13.
	25-Aug-03			Surface Water	Total coliforms 2. E. coli 2.
Inverness Tent & Trailer Park	25-Jul-03		Muskoka Lakes	Surface Water & Ground Water	No samples taken. Boil Water Advisory was issued due to a lack of proper treatment and lack of proof of potability of the onsite water supplies.
Ryde Lake Camp	7-Jul-03		Gravenhurst	Surface Water & Ground Water	Total coliforms 7. E. coli 2.
	9-Jul-03				Total coliforms 6. E. coli 4.
	10-Jul-03				Heterotrophic plate count >2000.
	16-Jul-03				Total coliforms 4.
	23-Jul-03				Total coliforms 2. E. coli 2.

Six Mile Lake Provincial Park	20-May-03		Georgian Bay	Surface Water & Ground Water	Seven distribution points sampled. One sample- Total coliforms 24. E.coli 2. Free chlorine residual 1.18 ppm.
Country Friar Restaurant/Motel	7-Jul-03		Gravenhurst	Ground Water	Total coliforms 17.
French's Group Home Inc.	3-Jul-03		Huntsville	Ground Water	Total coliforms >200. E. coli >200.
Glen Orchard Public School	16-Jun-03	Port Carling	Muskoka Lakes	Ground Water	Background 229 CFU.
	23-Jun-03				Background 340 CFU.
	30-Jun-03				Background >2400 CFU.
	7-Jul-03				Heterotrophic plate count 580.
Muskoka Christian School	26-Nov-03	Utterson	Huntsville	Ground Water	Background >200 cfu.
	3-Dec-03				Background >200 cfu.
	9-Dec-03				Background >200 cfu.
	17-Dec-03				Background >200 cfu at 3 sample locations.
Muskoka Montessori School, Brunel Community Centre	28-Aug-03	Huntsville	Huntsville	Ground Water	Boil Water Advisory was issued by the health unit due to the failure of the owner to submit an initial Engineering Evaluation Report in accordance with Ontario Regulation 170/03.
Peninsula Recreation Centre	29-Sep-03	Minett	Muskoka Lakes	Ground Water	Three Samples. Heterotrophic plate count 950 HPC/mL, 880 HPC/mL, 890 HPC/mL.

Stephenson Co-op Nursery	13-Jun-02		Huntsville	Ground Water	Total coliforms 23. E. coli unknown (overgrown).
	28-Aug-03				Boil Water Advisory issued by the health unit pending the submission of an initial Engineering Evaluation Report in accordance with Ontario Regulation 170/03.
Sunset Park Comfort Station	7-Jul-03	Torrance	Muskoka Lakes	Ground Water	Heterotrophic plate count >2000.
	10-Jul-03				Resample result was clean.
	21-Jul-03				Total coliforms 2.
Walkers Point Community Centre	29-Sep-03	Walkers Point	Muskoka Lakes	Ground Water	Total coliforms 2. E. coli 2.
	2-Oct-03				Two samples. Total coliforms 1, 2. E. coli 0, 2.
McCaskie Mobile Home Trailer Park	18-Mar-02		Gravenhurst	Ground Water-Dug Well	Boil Water Advisory issued by the health unit as a precautionary measure.
	25-Jun-02				Total coliforms 2.
	9-Jul-02				Background >200 colonies.
Muskoka Glens Trailer Park	22-Jul-02		Huntsville	Ground Water-Dug well	Total coliform 54.
Muskoka Mobile Home Park	13-Feb-02		Gravenhurst	Ground Water-Dug well	The water works at the park did not have appropriate disinfection equipment.
	28-Mar-02				Presence of Benzene, Ethyl-benzene, Toluene and Xylene. Benzene levels above the Drinking Water Criteria.
	1-Apr-02				All sample locations below Drinking Water Criteria.
My Sister's Bistro	11-Jun-02	Baysville	Lake of Bays	Ground Water-Dug well	Total coliforms 9.

Pleasant Valley Cottages	14-Mar-03		Huntsville	Dug Well	The health unit issued a Boil Water Advisory after finding that the owner/operators were not treating, disinfecting, or routinely sampling the water
Sandwood Tent & Trailer Park	22-Aug-01	Windermere	Muskoka Lakes	Water trucked in from the Town of Huntsville 2 holding tanks draining into shallow dug well	Total coliforms 24.

Source: Muskoka-Parry Sound Health Unit