



## **Municipality of McDougall**

# **Nobel Large Municipal Residential Drinking Water System**

## **Summary Report 2009**

Prepared January 2010  
By: Nobel Waterworks

Presented to Council; February 10, 2010

To be available to the public free of charge.  
Please see Nobel Annual Report 2009

Municipality of McDougall  
Nobel- Large Municipal Residential Drinking – Water System  
Summary Report (2009)

## 1 General

This Summary Report is prepared in accordance with the requirements of the Safe Drinking Water (SDWA) Act and Ontario Regulation 170/03 (as amended) Schedule 22 –“Summary Reports for Municipalities”. This Report covers the period from January 1<sup>st</sup>, 2009 to December 31<sup>st</sup>, 2009. This Report has been prepared prior to the regulated deadline date of March 31<sup>st</sup>, 2009.

A copy of this report is made available for inspection by any member of the public during normal business hours without charge, at the Municipality of McDougall office. This Report is to be kept for at least five years.

## 2 System Descriptions

The current drinking water system can be described as follows:

A stand alone re-chlorination system boosting residual chlorine levels of the water distributed to the community of McDougall, from the existing North Sector Water Tower, located on the east side of Parry Sound Drive, approximately 220m north of Bayside Drive, as follows:

- A building having dimensions 2.4m x 2.6m attached to the base of the elevated water tower, including:
- Two chemical metering pumps (one duty one stand-by) each rated at 1.66 L/hr at 828 kPa;
- One 200 L sodium hypochlorite storage tank;
- Continuous free chlorine residual analyzer; and
- An alarm system complete with a SCADA system.

For a detailed description of the Tower and Transmission main refer to C of A's:

- 0098-6KQHND dated January 5, 2006 (Transmission Water Main)
- 4717-6Q4GGX dated June 9, 2006 (Municipal Dr. Water Main)
- 6940-6WLS5J dated December 20, 2006 (Tower Chlorination)

### 3 List of Requirements – Failed to meet in 2009

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
Jan 13/09	THM	107/86	ug/l	Re-sample	Jan 23/09
Jan 19/09	THM	108/90	ug/l	None	Jan 23/09
Feb 10/09	THM	108/89	ug/l	None	Feb 18/09
Mar 2/09	THM	107/88	ug/l	Flush	Mar 6/09
Apr 7/09	THM	102/80	ug/l	None	Apr 16/09
Jun 1/09	THM	101/76	ug/l	Flush	Jun 4/09
Aug 4/09	THM	103/128	ug/l	Re-sample	Aug 20/09
Aug 11/09	THM	103/127	ug/l	None	Aug 20/09
Oct 5/09	THM	101/107	ug/l	None	Oct 13/09
Nov 2/09	THM	104/118	ug/l	Re-sample	Dec14/09
Nov 16/09	THM	106/125	ug/l	None	Dec14/09

### Summary of Incidents

It can be seen that there were 11 incidents over the course of the year 2009 whereby the system failed to meet certain aspects of its requirements. All 11 incidents were due to THM exceedance. The operations staff working with the Town of Parry Sound Water Treatment Plant have identified the cause of the problem. There is now a strategy in place to reduce THM levels. The most recent samples of THM show a drastic reduction in our distribution system. The staff and the The Nobel system was inspected by the MOE's Drinking Water Inspector Scott Hanselman on November 10/2009. His inspection report found no major issues. There were some small administrative issue's to address. However no "orders" were issued and the item's were dealt with in a timely fashion.

### 4 Annual Water Production / Delivery Information

The McDougall, Nobel System Operators Monitor Flows and trends in the system via the SCADA system, which is also backed up by a daily log sheet filled out by the operator's.

The 2009 values for the McDougall Nobel Water Distribution System are as follows:

Average Daily Flow: 327 m3

Monthly Average Daily Flows	Monthly avg. m3	Maximum daily flow m3	Instantaneous peak flow rates l/second
Jan	256	540	32.2
Feb	247	370	42.4
March	292	350	67.2
April	300	382	21.3
May	410	973	62.1
June	356	452	57.1
July	334	553	48.7
Aug	333	483	107.9
Sep	358	455	25.1
Oct	345	808	68.6
Nov	331	636	54.3
Dec	359	1364	64.3
Peak	410	1364	107.9

Our current Distribution system was designed to allow for expansion and current demands. Our current usage vs. design is as follows:

2009 Average Day Demand = 327 m3/day = 43% of design  
Design Average Day Demand = 763 m3/day

2009 Maximum Day Demand = 1,364 m3/day = 71 % of design  
Design Maximum Day Demand = 1,908 m3/day

2009 Fire Flow Demand (Peak) = 107.9 L/s = exceeds design  
Design Fire Flow Demand = 78 L/s (for 2 hours)

Therefore the system operated within the design criteria set out in the Nobel Water Distribution System Design Brief dated Dec. 14<sup>th</sup>, 2006 by Abacus Engineering and Planning Services Inc. Based on these numbers the system should not require capacity expansion in the near future. It should also be noted that the Fire Flow Demand for 2009 is a Peak number and that we did not run the system for 2 hours at this flow. However, based upon this peak and sustained high flows during our flushing routine we determined that we meet or exceed the Design Fire Flow Demand.

In general there were no major changes in the system for 2009. We anticipate few problems and look forward to monitoring the system's performance.