

## **Drinking Water Quality Management System Report**

### **BACKGROUND**

The residents of the City of Greater Sudbury (CGS) demand and expect that the potable water they use daily is clean, safe and is of the highest quality, meeting or exceeding all of the provincial regulations found in the Safe Drinking Water Act of 2002.

Council's responsibility is to have an understanding that there is a direct link between the decisions and approvals Council makes concerning the operational, maintenance and allocation of capital funds for the drinking water systems. This report gives a broad overview of what is required to maintain a drinking water license and also gives a "top down" update on the health of our drinking water system for the year 2019.

### **Municipal Drinking Water Licensing Program**

All owners of a municipal drinking water system must acquire and hold in good standing a license to operate their drinking water systems. A Municipal Drinking Water License is issued by the Ministry of Conservation and Parks (MECP) and must have:

- A Drinking Water Works Permit
  - A permit to establish or alter a drinking water system;
- A Permit to Take Water
  - A permit to take 50,000 L or more of source water per day;
- An Operational Plan
  - A plan prepared in accordance with the Drinking Water Quality Management Standard (DWQMS) developed by the MECP;
- Accreditation as an Operating Authority
  - A comprehensive audit and periodic review of the Operational Plan (OP) by an independent certified accreditation body appointed by the province; and
- A Financial Plan updated on a 5 year cycle maximum
  - A long-term strategic plan developed to ensure the financial sustainability of the drinking water system (the financial plan was recently updated in recent budget deliberations).

To assist in attaining the goals stated above the CGS has implemented a Quality Management System (QMS). Our QMS follows the requirements set out in the DWQMS, developed by the MECP. Our QMS was first accredited in 2010 and has received re-accreditation on an annual basis by a MECP approved third party body ever since. This management standard follows the principles found in the ISO 9001:2000 Quality Management Standard and uses the Hazard Analysis and Critical Control Points (HACCP) methodology to identify and mitigate risks through effective management of our drinking water right from water source to residential taps.

Of note is that the DWQMS has recently been updated with a second version produced by the MECP since first released and the CGS has attained accreditation under the revised standard.

### **City of Greater Sudbury Drinking Water Systems**

The City of Greater Sudbury has successfully maintained six drinking water system (DWS) licenses for our residents since 2010 (Sudbury DWS, Valley DWS, Dowling DWS, Falconbridge DWS, Onaping/Levack DWS, & the Vermilion DWS).

### **Quality Management Standard Requirements**

The Water/Wastewater Treatment & Compliance QMS details a set of comprehensive policies and procedures that ensures;

- Effective management of all aspects of the drinking water systems within the CGS;
- That continuous water testing is conducted (annually we conduct and test more than 10,000 samples); and
- A culture of continual improvement is fostered in our water treatment and distribution systems.

Water/Wastewater Treatment & Compliance ensures this is accomplished, in part, by conducting audits of the MECP approved OP, a document that details how the City will ensure compliance with the Safe Drinking Water Act.

The audits are conducted by both trained internal staff and by an MECP approved third party. The audit focus is on conformance to the OP and involves a comparison of what is stated in the OP to what is actually occurring in the field. Any non-conformances or opportunities for improvements (OFI) found are then required to be reported and acted upon.

### **KEY RESULTS FROM 2019 AUDITS**

External Audits - In August 2019, a third party audit was conducted by NSF International Strategic Registrations and there were no non-conformances were found. There were three OFI's identified as indicated in the following areas;

- Competency – Investigate and implement continual improvement on staff competencies;
- Continual Improvement – develop methodology and procedure that permits staff to identify potential non-conformances; and
- Critical Control Points – implement control points in high risk areas where control points have not already been established.

Internal Audits – There were a total of three internal audits conducted resulting in one minor non-conformance. The non-conformance was related to how the documentation process is conducted for the maintenance and calibration of water testing devices. The documentation error was corrected and a solution was implemented to prevent further errors. A follow up inspection conducted by a QMS Representative verified the correction of the non-conformance.

Additionally there were five OFI's indicated as follows;

- With the new structure under Growth & Infrastructure the QMS policy requires an update to include Linear Infrastructure Services and the Infrastructure Capital Planning groups;
- Since an update by the MECP the DWQMS and subsequent CGS approval of QMS version 2, a re-endorsement from council is recommended;
- A review of the current method of documenting training records is recommended with the desired state to include an improved database able to deliver up to date training records and compliance reports;
- Update the OP to include the roles and responsibilities of the newly added Legislative Compliance Supervisor position; and
- Create links on the intranet Citylinks for information regarding the QMS, the OP, access to standard operating procedures, related forms; and
- Develop a clearer link between internal audits and the continual improvement process.

All of these OFI's have been discussed and action plans have been put into practice.

## **Management Review Summary**

A document released in 2019 by the MECP highlighted the need for municipalities to consider the impacts of climate change, source water supply quantity issues, extreme weather events, vandalism, back-flow prevention within water distribution systems and a monitoring system with mitigation plans for algal blooms in the source water from Ramsey Lake.

As a result, the Water Management team, utilizing the techniques in the HACCP process, evaluated the risk presented by each scenario and incorporated monitoring procedures, preventative measures and mitigation response plans into the OP.

Management Review occurs annually to discuss any documented deficiencies, MECP inspections or any other issues that occurred in the drinking water systems in the previous year.

During the review it was noted that there would be a need to develop a standard procedure to enhance the existing documentation concerning blue green algae blooms in Ramsey Lake. Specifically, a detailed contingency plan indicating the required steps to be taken should the associated toxins from blue green algae be discharged from the treatment process at the David Street Water Treatment facility into the drinking water distribution system. The other item discussed was a way to track deviations of critical control points within our systems by use of preexisting form. Subsequently action plans were created and assigned for these improvements.

## **SUMMARY**

The City of Greater Sudbury's

DWQMS has successfully maintained its accreditation for 2019 and transitioned to the updated version 2 of the DWQMS.

The Water & Wastewater Treatment and Compliance Division is committed to communicating the state of the drinking water system with City Council while continuing to make improvements to the CGS DWQMS.