Annual Statement from the Chair of ODWAC for 2016-2017

I am pleased to provide my second report back which highlights Council's work for the period May, 2016 to May, 2017. Commencing this year there will be one comprehensive statement from the chair that will provide an overview of the major accomplishments and activities of the Council. The statement will also reference key papers, regulatory notices and reports that the Council has either presented or published or relied upon, via hyperlinks to those documents on the ODWAC website.

There are three areas I wish to highlight: (1) Ministry of the Environment and Climate Change (MOECC) regulatory changes for Drinking Water; (2) key Council files that are under active deliberation; and (3) other drinking water matters that the Council addressed during the year.

(1) MOECC Regulatory Changes

The MOECC posted a Regulation Decision Notice on the Environmental Registry, outlining a comprehensive set of changes to five regulations (and supporting documents) under the Safe Drinking Water Act, 2002.

These changes have taken into account and are consistent with the advice provided to the Minister and MOECC by the Council over a number of years. The Council notes the following decisions that are key to continuing improvements and safeguards for drinking water quality in Ontario:

Changes to Standards and Guidelines

Three new Ontario Drinking Water Quality Standards (ODWQS), based on new federal guidelines, will be introduced:

• 0.06 mg/L for toluene;

• 0.14 mg/L for ethylbenzene; and

• 0.09 mg/L for total xylenes

Two ODWQSs will be revised:

• from 0.01 mg/L to 0.05 mg/L for selenium; and

• from 0.03 mg/L to 0.01 mg/L for tetrachloroethylene.

One ODWQS, which is a sum of nitrate and nitrite, will be removed. Ontario already has individual ODWQSs for both nitrate and nitrite making the sum of the two parameters redundant. Consequently, the following ODWQS will be revoked:

• 10 mg/L for nitrate + nitrite.

One new Aesthetic Objective (AO) will be introduced:

• 0.015 mg/L for methyl t-butyl ether (MTBE).

Two Aesthetic Objectives will be revised:

• from 0.0024 mg/L to 0.0016 mg/L for ethylbenzene; and

• from 0.3 mg/L to 0.02 mg/L for xylenes.

With these regulatory changes ODWQSs are up-to-date and consistent with national drinking water quality guidelines. All Council recommendations to date on ODWQSs have now been addressed by the MOECC with tritium being the only exception.

Changes to the Regulation Pertaining to the Monitoring of Lead in Schools, Private Schools and Child Care Centres

Since 2007, the MOECC has taken a proactive and precautionary approach in reducing exposure of children to lead through drinking water in Ontario's schools and child care centers. The latest amendments in 2017 strengthen requirements on all schools (private and public) and child care centres re: sampling, flushing of plumbing, reporting of test results, which exceed the ODWQS for lead, corrective actions and records retention. These new requirements will ensure over time that all drinking water fountains and taps used to prepare food in these facilities that are used by or for Ontario children and students will be tested and appropriate corrective actions taken as required.

It should be noted that Health Canada released a proposal for a new more stringent drinking water quality guideline for lead. As part of their proposal, they recommended testing for lead in drinking water in schools and day cares.

Ontario has already implemented measures that fulfill Health Canada's recommendations.

Other Key Regulatory Changes

Two additional noteworthy regulatory changes are:

All pesticides found at levels above 100 nanograms/Litre (ng/L) will initiate an Adverse Water Quality Incident (AWQI). This includes pesticides that are not in Schedule 2 of Ontario Regulation 169/03 and currently do not have an ODWQS in place. All test results that indicate the presence of pesticides – even if their concentration levels are at or below the threshold of 100 ng/L – will need to be provided to the MOECC. This requirement is an additional safeguard when drinking water samples are subjected to comprehensive analytical scans.

Obsolete provisions to grant full relief from treatment for secure groundwater systems related to the presence of viruses in groundwater will be removed from Ontario Regulation 170/03, as they are inconsistent with recent science indicating that viruses are present in some groundwater sources. As such there will be a minimal level of treatment for all Ontario drinking water sources, no exception. The Council commends the MOECC in removing this now outdated provision.

(2) Key Council Files Under Active Deliberation

There are two major files that Council spent considerable deliberation time on during 2016 and 2017. The first is Health Canada's proposal for a more stringent Canadian drinking water guideline for lead, and the second is MOECC's proposal for a new approach to assessing and designating municipal wells that have or may be deemed to have groundwater under the direct influence of surface water (known as GUDI in Ontario).

Proposed Canadian Drinking Water Quality Guideline for Lead

Health Canada released its proposal for a more stringent drinking water quality guideline for lead for national consultation – January, 2017 to March 15, 2017.

Their work also came at a time when the world was focused on the tragic and avoidable drinking water management system failure in Flint, Michigan, which resulted in high exposures of lead through drinking water to the residents of that community. The Council kept the Flint circumstances top of mind while reviewing Health Canada's proposal. Health Canada's primary recommendation is:

"In considering both treatment and analytical achievability and the health risks associated with exposure to lead from drinking water, the Federal-Provincial-Territorial Committee on Drinking Water has proposed a MAC[1] of 5 µg/L for total lead in drinking water, based on a sample of water taken at the consumer's tap, using the appropriate protocol for the type of building being sampled. As this value exceeds the drinking water concentration associated with neurodevelopmental effects in children, every effort should be made to maintain lead levels in drinking water As Low As Reasonably Achievable (or ALARA). "

MAC[1] – maximum acceptable concentration

The current ODWQS for lead is 10 ug/L, and the Council is undertaking a comprehensive review of Health Canada's proposal and Ontario`s regulatory framework and experience to date including:

- review of the science policy approach for setting a standard for a non-threshold neurodevelopmental toxicant such as lead;
- reviewing Ontario specific exposures of lead in drinking water and the risks to sensitive populations; and
- review of ALARA and appropriate risk reduction measures for lead in drinking water:
    - corrosion control for municipal drinking water systems;
    - lead service line replacement as part of urban infrastructure renewal;
    - application of point of use (POU) filters; and
    - review of Ontario`s current regulatory approach for requiring development of lead reduction strategies by municipalities, schools and day nurseries.

The Council has made significant progress during 2016 and 2017 in their review. Key milestones are summarized below:

March, 2016	The Council received Health Canada's draft proposal for lead from the MOECC's representative on the Federal-Provincial-Territorial Committee on Drinking Water (CDW).
November, 2016	The Council and the MOECC organized a meeting with international experts on lead in drinking water in Ottawa.
February, 2017	The Council and the MOECC held a Lead Strategy Workshop
March, 2017	The Council and MOECC participated in a Lead in Drinking Water Webinar sponsored by the Canadian Environmental Law Association (CELA)
May, 2017	The Council held discussions with the Ontario Water Works Association (OWWA) and the Ontario Municipal Water Association (OMWA), including: • presentations at the Ontario Water Conference: May 2016 and May 2017 • the chair's interview by OMWA which was provided to its membership

Ground Water under the Direct Influence of Surface Water (GUDI)

The MOECC is updating one of its key guidance documents, the GUDI Terms of Reference (ToR) dated October, 2001. Written in the immediate aftermath of the Walkerton tragedy, the document provides guidance to municipal drinking water systems to determine if a well supply should be treated as groundwater under the direct influence of surface water (GUDI). The existing ToR are out of date, and not reflective of current science, and the MOECC has worked with system owners, consultants and academia to update the ToR. The MOECC has made a number of presentations on the proposed revisions to the existing ToR proposal, both publically and to Council, from a period spanning 2012 to 2017.

The MOECC currently specifies minimum treatment requirements for municipal drinking water systems to reduce the risk to human health attributable to disease-causing microorganisms (pathogens) based on categorizing source water quality. While the previous GUDI approach relied heavily upon hydrogeological studies, the current approach takes into account the results of water quality testing and the potential for the presence of fecal contamination. The new approach is considered to be an evidence-based approach based on scientific principles related to the fate and transport of pathogens in groundwater.

The MOECC has stated that the proposed approach is more transparent, uses the latest science and should result in greater consistency in decision-making for groundwater source treatment requirements. The Council continues to review the MOECC proposal to ensure it meets the stated outcomes and that it provides equivalent or superior public health protection for Ontario's municipal ground water systems.

(3) Other Drinking Water Matters Addressed by Council during the Year

The Council addressed a range of issues during the year including: fluoride, cyanotoxins and algal blooms, the MOECC's progress on source protection and a range of substances that are in various stages of review by Health Canada, notably manganese, benzo[a]pyrene, and perfluoroalkylated substances (PFAS).

Acknowledgements

I would like to acknowledge three members who are leaving the Council – Dr. Peter Huck, Dr. Alex Hukowich and Mr. John Rudnickas. These three individuals were founding members of the Council contributing every year for the 13 years since the Council's inception. Their expertise has contributed greatly to the Council's deliberations and its ability to formulate sound and timely advice for the Minister; the Council is fortunate to build on the legacy that they helped create.

In Closing

It is imperative that all parties responsible for ensuring the delivery of safe, clean drinking water continue to be vigilant in applying the best science and technology. The Council plays an important role in this regard in ensuring that the Minister has the information needed to make timely and informed decisions about drinking water safety in Ontario. I look forward to reporting again in the fall of 2018 on the Council's work

that is currently underway.

Jim Smith, Chair

Ontario Drinking Water Advisory Council