Annual Statement from the Chair of ODWAC (2020)

I am pleased to provide my fourth report highlighting the Ontario Drinking Water Advisory Council's (ODWAC) accomplishments and activities for the calendar year 2020, as summarized under three areas of focus:

1. Ministry of the Environment, Conservation and Parks (MECP)
Regulatory Changes Related to Drinking Water;
2. Ontario Drinking Water Quality Standards (ODWQS), Operational Guidelines (OG), and Aesthetic Objectives (AO) under Consideration; and
3. Key Drinking Water Policies and Issues under Active Discussion.

1. MECP Regulatory Changes Related to Drinking Water

As noted in previous statements, the MECP posted a Regulation Decision Notice: 012-4213 on the Environmental Registry, outlining a comprehensive set of changes. These changes are consistent with the Council's advice to the MECP and the Minister of the Environment, Conservation and Parks. All these requirements have now come into effect including:

A new standard (ODWQS) for Haloacetic Acids (HAAs) and HAAs testing optimization rule for smaller systems, which came into effect January 1, 2020.

2. ODWQS, OG, AO under Consideration

ODWQS, OG, AO are generally developed through a national process led by Health Canada; however, the MECP may also develop their own for Ontario, as deemed necessary. Ontario is an active participant in the national process and both ODWAC and MECP staff review the proposed Canadian Drinking Water Quality Guidelines (CDWQGs) before they are considered for adoption as ODWQS, OG or AO. As well, ODWQS that are new or have a change in numeric value are posted on the Environmental Registry for public comment, and comments are considered prior to finalization. ODWQS/OG/AO currently under consideration by the Council are listed below and categorized in terms of their status as follows:

CDWQGs Currently Under Development by Health Canada

The following CDWQGs were posted for national consultation by Health Canada from 2018-2020, and the Council will be recommending their integration into MECP policies where appropriate, or will be providing advice to the Minister of the Environment, Conservation and Parks on their potential adoption as ODWQS, OG, or AO:

Contaminant	Consultation End Date	New/Reaffirmed/ Updated CDWQG	Proposed/Current CDWQG Value	Current ODWQS/OG/AO
1,4-dioxane	09-NOV-18	New	0.05 mg/L	None
Chloramines	25-JAN-19	Updated	None	3.0 mg/L
Aluminum	30-AUG-19	New	2.9 mg/L	None
Aluminum OG	30-AUG-19	0.1 - 0.2 mg/L	0.050 mg/L	0.1 mg/L
Boron	13-MAR-20	Updated	2 mg/L	5 mg/L
Metribuzin	11-SEP-20	Reaffirmed	0.08 mg/L	0.08 mg/L

Diquat	02-OCT-20	Updated	0.05 mg/L	0.07 mg/L
Guidance on Monitoring the Biological Stability of Drinking Water in Distribution Systems	16-OCT-20	New	Guidance Document only	None
2,4-D	06-NOV-20	Reaffirmed	0.10 mg/L	0.10 mg/L
Dicamba	21-DEC-20	Updated	0.12 mg/L	0.11 mg/L
Bromoxynil	29-JAN-21	Updated	0.03 mg/L	0.005 mg/L
Guidance on Waterborne Pathogens	03-FEB-21	Updated		

Final CDWQG

The Council has been evaluating the following final CDWQG, published by Health Canada from 2018-2020, and will be recommending their integration into MECP policies where appropriate, or will be providing advice to the Minister of the Environment, Conservation and Parks on their potential adoption as ODWQS, OG, or AO:

Contaminant	Date Published	New / Reaffirmed / Updated CDWQG	CDWQG Value	Current ODWQS/OG/AO
Perfluorooctane Sulfonate (PFOS)	December, 2018	New	0.0006 mg/L	None
Perfluorooctanoic Acid (PFOA)	December, 2018	New	0.0002 mg/L	None
Lead	March, 2019	Updated	0.005 mg/L	0.01 mg/L
Enteric Protozoa: Giardia and Cryptosporidium	April, 2019	Reaffirmed	Minimum 3-log (i.e., 99.9%) removal and/or inactivation of cysts and oocysts.	Minimum 3-log (99.9%) removal or inactivation of Giardia cysts, and minimum 2-log (99%) removal or inactivation of Cryptosporidium oocysts
Enteric Viruses	April, 2019	Reaffirmed	Minimum 4-log (i.e., 99.99%) removal and/or inactivation of enteric viruses	Minimum 4-log (i.e., 99.99%) removal and/or inactivation of enteric viruses
Strontium	May, 2019	New	7 mg/L	None
Uranium	May, 2019	Updated	0.014 mg/L	0.02 mg/L
Copper	June, 2019	New	2 mg/L	None
Guidance on the Use of Quantitative	July, 2019	New	Guidance Document only	None

Microbial Risk Assessment (QMRA)				
Barium	January, 2020	Updated	2.0 mg/L	1.0 mg/L
E. coli	March, 2020	Reaffirmed	None detectable per 100 mL	None detectable per 100 mL
Guidance on the use of Enterococci bacteria as indicators in Canadian drinking water supplies	June, 2020	Updated	Guidance Document only	Not Applicable
Total Coliforms	June, 2020	Reaffirmed	None detectable per 100 mL in water leaving a treatment plant and in non-disinfected groundwater leaving a well	None detectable per 100 mL in water leaving a treatment plant and in non-disinfected groundwater leaving a well
Guidance on Natural Organic Matter in Drinking Water	July, 2020	Not Applicable	Guidance Document only	Not Applicable
Cadmium	July, 2020	Reaffirmed	0.005 mg/L	0.005 mg/L

The Council completed its review and has provided advice to the Minister of the Environment, Conservation and Parks on the following CDWQG, and ensuing ODWQS:

- Bromate (reaffirmed at 0.01 mg/L)
- Microcystins (ODWQS updated from 0.0015 mg/L microcystin LR to 0.0015 mg/L total microcystins)
- Manganese (new at 0.12 mg/L)
- Manganese AO (updated from 0.05 mg/L to 0.02 mg/L)

The Council also completed its review and provided advice to the MECP on a treated water goal for manganese of less than or equal to 0.015 mg/L.

3. Key Drinking Water Policies and Issues under Active Discussion

The Council continued deliberations on four major files that will impact policy direction in drinking water monitoring and safety: Health Canada's more stringent CDWQG for lead (0.005 mg/L); Ontario's interim drinking water guidance for PFAS; MECP's proposal for a new policy to determine treatment requirements for municipal wells, which have or may be deemed to be subject to groundwater under the direct influence of surface water (known as GUDI in Ontario); and MECP's update of the "Procedure for the Disinfection of Drinking Water in Ontario", which prescribes drinking water treatment requirements for Ontario's drinking water systems.

CDWQG for Lead

Health Canada published a revised CDWQG for lead on March 8, 2019, reducing the maximum allowable concentration (MAC) of lead in drinking water from 0.01 mg/L (set in 1992) to 0.005 mg/L. The Guideline statement is as follows:

“The maximum acceptable concentration (MAC) for total lead in drinking water is 0.005 mg/L (5 µg/L), based on a sample of water taken at the tap and using the appropriate protocol for the type of building being sampled. Every effort should be made to maintain lead levels in drinking water as low as reasonably achievable (or ALARA).”

The Council continued its comprehensive review of Health Canada’s CDWQG 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 and behavioural toxicant such as lead;

reviewing Ontario-specific exposures of lead in drinking water and the risks to sensitive sub populations (e.g. children); and

review of ALARA and appropriate risk reduction measures for lead in drinking water, including:
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 the development of lead reduction strategies by municipalities, schools and day nurseries.

Per- and Polyfluoroalkyl Substances (PFAS)

Per- and Polyfluoroalkyl Substances (PFAS) represent a large group of synthetic chemicals that have been in use since the 1950s in industry and consumer products such as water, stain, or oil repellent coatings and firefighting foams. These compounds are receiving considerable attention globally in terms of their presence in all environmental media. Health Canada finalized Canadian Drinking Water Guidelines for two PFAS (PFOS and PFOA) on November 29, 2018.

The MECP and ODWAC have held a number of discussions on these substances and the Council understands that the MECP believes that there is sufficient concern and supporting science to develop guidance for Ontario that goes beyond Health Canada’s review. As such, Ontario developed interim drinking water guidance for PFAS, encompassing both PFOS and PFOA and additional PFAS compounds, which ODWAC is currently engaged in reviewing.

Groundwater under the Direct Influence of Surface Water (GUDI)

The MECP is updating one of its key guidance documents, the GUDI Terms of Reference (ToR) dated October, 2001. This 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).

Due to the progress in the science related to the monitoring of groundwater, the MECP has worked with system owners, consultants, and academia on an approach that is more transparent, and uses the latest science to promote better decision-making for groundwater source treatment requirements. The MECP has made a number of presentations on the proposed revisions to the existing ToR proposal, both publicly and to Council, from a period spanning 2012 to 2019.

The Council has reviewed the proposal including holding discussions with external experts as noted in last year's report from the Chair. The Council has provided its technical comments and will continue to review this file as the MECP works towards finalizing the guidance document.

Update of the Procedure for the Disinfection of Drinking Water

The MECP's "Procedure for the Disinfection of Drinking Water in Ontario" is a document referenced in Ontario Regulation 170/03 that prescribes the treatment requirements for primary and secondary disinfection of drinking water. This document is a cornerstone to the drinking water treatment system approval process used by the MECP as well as its compliance programs. It was last revised in June 2006 and is being updated with new information on risk assessment approaches for pathogens and treatment technologies that have become available over the last decade. The Council continues to be engaged with the MECP as this update evolves.

In Closing

The Council is dependent on the broad expertise and efforts of its members and I am pleased to note that in 2020, the MECP released a building plumbing guide to help building owners and operators ensure water quality is restored before opening their buildings to workers and the public. Individual Council Members were engaged to review the building plumbing guide through their respective organizations and provided valuable feedback. The Council notes that Ministry's efforts to ensure water quality in buildings under reduced-use is important for protecting the health of Ontarians. The document, entitled "Guide for maintaining building plumbing after an extended vacancy" can be found at: https://www.ontario.ca/page/guide-maintaining-building-plumbing-after-extended-vacancy.

The Council continues to be actively engaged in a broad range of drinking water standards and policies to help ensure Ontario's drinking water remains of the highest-level quality based on the latest science and technology developments. Together, the Council and the MECP are well positioned to tackle both the drinking water challenges and opportunities of the future.

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Chair
Ontario Drinking Water Advisory Council