



Ontario

Water Works Association

a Section of the American Water Works Association

Emerging Water Issues in Ontario

MEA Workshop 2019

What is OWWA?

VISION

A Better Ontario through Better Water

MISSION

Sharing knowledge and developing solutions for responsible water management

OWWA in 2019

- 1500 members
 - 90 municipalities & utilities
 - 60 service providers
- 17 Volunteer Committees
- 2 Advisory Panels



What do we do?

- Knowledge Creation & Exchange
- Member Engagement & Development
- Organizational Stewardship
- Water Policy Leadership



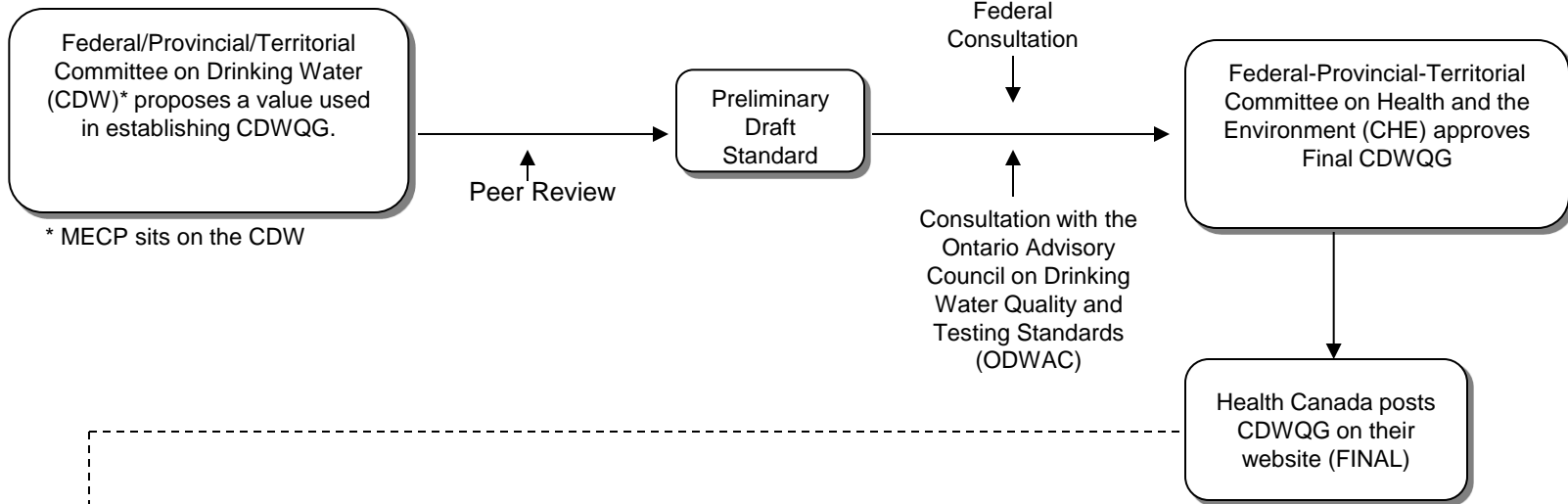
Water Policy Leadership

- OWWA works collaboratively with a number of other organizations (MEA, CWWA, WEAO, ONEIA, OMWA, ...) on matters of mutual interest for the water community
- Key relationships within the provincial government include senior staff at:
 - Ministry of Environment Conservation and Parks
 - Ministry of Infrastructure
 - Ministry of Energy
 - Ministry of Municipal Affairs and Housing

Ontario Drinking Water Quality Standards

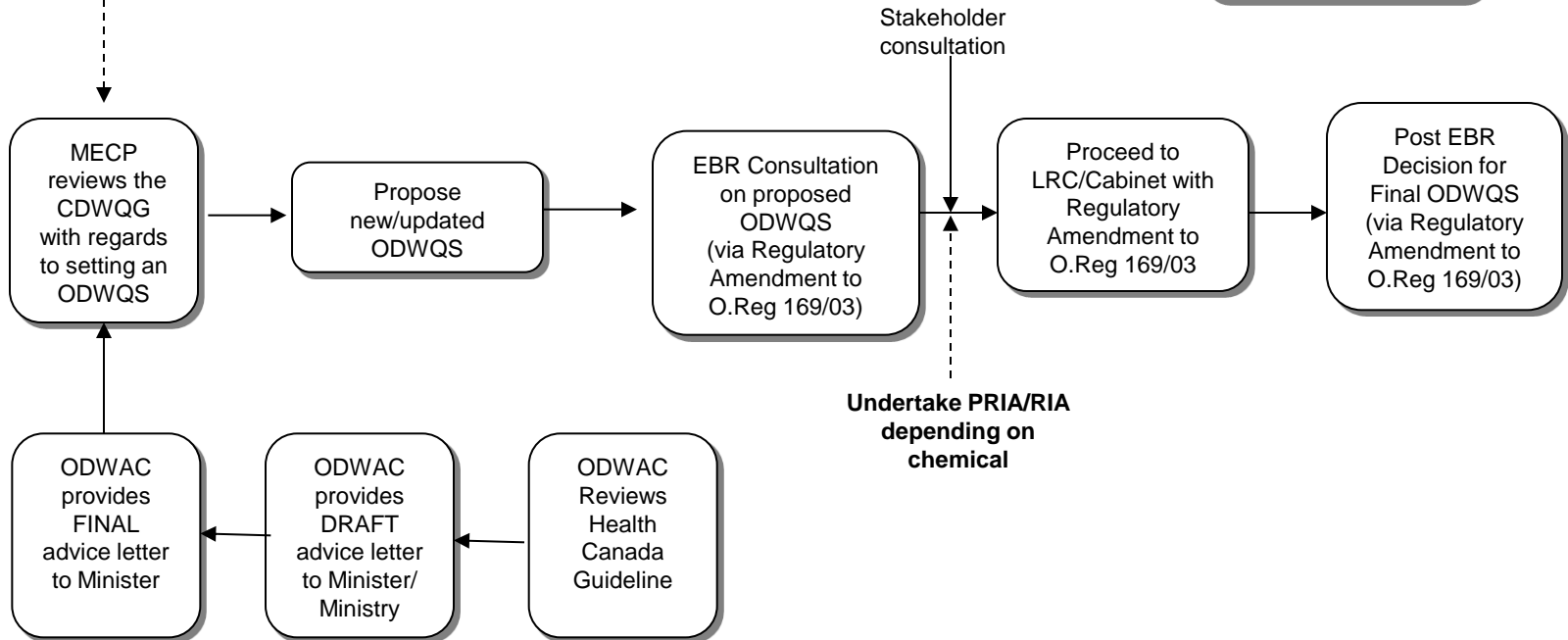
Federal

Canadian Drinking Water Quality Guideline (CDWQG)



Provincial

Ontario Drinking Water Quality Standard (ODWQS)



Recent Changes in ODWQS (last 5 years)

- Chlorate and Chlorite
- 2 methyl-4-chlorophenoxyacetic acid (MCPA)
- Haloacetic Acids (HAAs)
- Arsenic
- Benzene
- Carbon tetrachloride
- Vinyl chloride

Under Evaluation/Consideration

- Bromate
- Lead
- Manganese
- Cyanobacterial toxins
- Strontium
- Copper
- PFOS/PFOA

Bromate

- Proposal:
 - Maintain MAC of 0.01 mg/L
 - Annual running average of monthly samples for systems with ozonation

- Sodium hypochlorite has been found to contain bromate as a contaminant; best management practices related to product quality and storage time for hypochlorite solutions should be in place to minimize levels of bromate in finished drinking water.

Lead

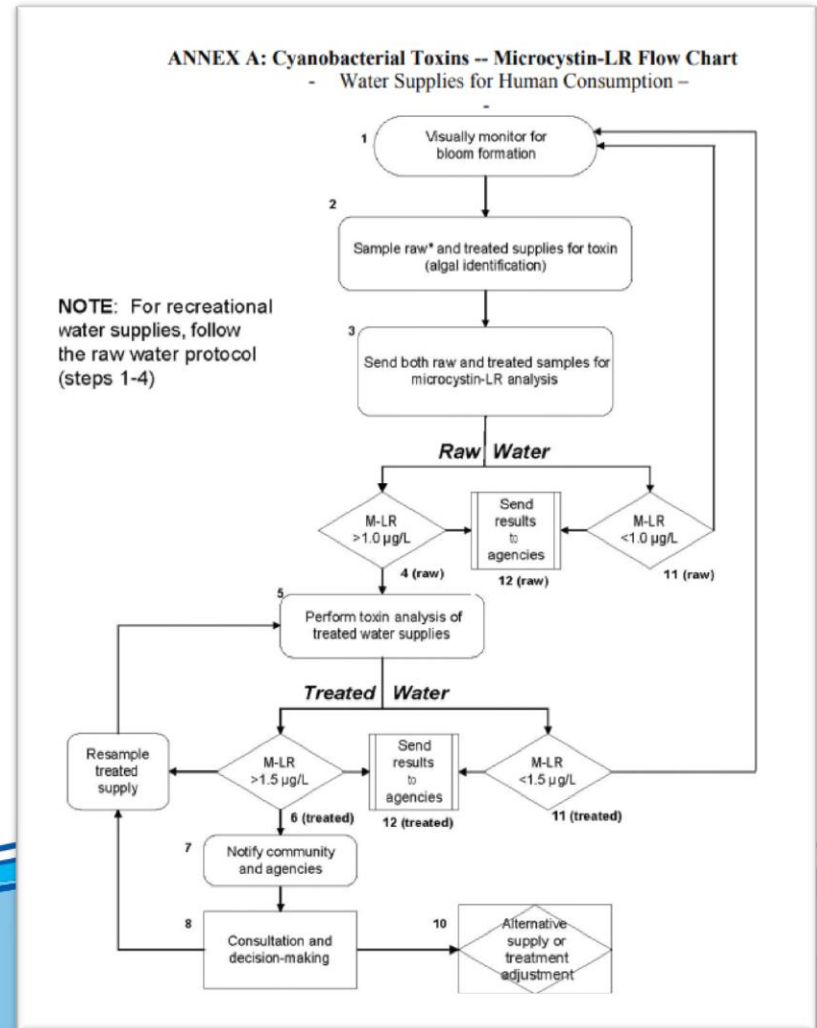
- Health Canada recently reduced the MAC for lead from 10 µg/L to 5 µg/L
- Under Ontario's current compliance model (not more than 10% of community lead samples above the MAC in two out of three most recent sampling periods)
 - 20 systems are required to implement corrosion control plans
 - 36 new systems will be required to implement corrosion control plans should the province adopt 5 µg/L as the new standard

Manganese

- Health Canada recently published a new guideline for manganese:
 - New MAC of 0.12 mg/L
 - Reduced AO from 0.05 mg/L to 0.02 mg/L
- May have significant implications for small systems and groundwater-based systems if adopted into ODWQS
- Additional routine monitoring may be required for all systems

Cyanobacteria Toxins

- Health Canada has established a guideline for total microcystins in drinking water as a MAC of 0.0015 mg/L (1.5 µg/L)
- Current Ontario standard is a MAC of 0.0015 mg/L (1.5 µg/L) for microcystin-LR



Strontium

- Health Canada has published a guideline value for strontium in drinking water at 7.0 mg/L
- There are (some) municipal water supplies in Ontario with strontium levels at or near the Health Canada MAC value
- The only treatment options available to remove strontium from water are ion exchange and reverse osmosis systems

Copper

- Health Canada proposed guidelines for copper in drinking water are a MAC of 2 mg/L and an aesthetic objective of 1 mg/L
- Intended to be measured “at the tap”
- Main areas of concern are:
 - Homes with new copper piping
 - Systems with pH < 7 and alkalinity < 25 mg CaCO₃/L
 - Systems with pH >7 and alkalinity >200 mg CaCO₃/L

PFAS

- Perfluoroalkyl and polyfluoroalkyl substances
- Health Canada has public MACs for two PFAS compounds:
 - Perfluorooctanoic acid (PFOA) = 200 ng/L
 - Perfluorooctane sulfonate = 600 ng/L
- Health Canada Drinking Water Screening Values for other PFAS
- Little data is available about the occurrence of PFAS compounds in drinking water sources in Ontario

Future Considerations

- Barium
- Chloramines
- Natural Organic Matter
- Cadmium
- Aluminum
- Total coliforms

Other Updates

- Procedure for Disinfection of Drinking Water
- GUDI Terms of Reference: “Determination of Minimum Treatment for Municipal Residential Drinking Water Systems Using Subsurface Raw Water Supplies”

Questions & Discussion



Thank You

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