

Chemicals of Mutual Concern & the Great Lakes Water Quality Agreement

- John Jackson, August 31, 2025¹

Chemicals of Mutual Concern (CMCs) are instruments unique to the Great Lakes Water Quality Agreement 2012 (GLWQA). This means that the principles and commitments in the GLWQA are the ones that the Canadian and United States governments should use when determining the appropriateness of designating CMCs and when taking actions on CMCs.

These are the principles and commitments that we have used to assess the appropriateness of the governments' evaluation of the application by 110 NGOs in 2016 and 2022 to have radionuclides designated as CMCs under the GLWQA.

Principles of the GLWQA should guide Annex 3 CMC designations²

Section 4 of Article 2 of the GLWQA lists “Principles and Approaches” to “guide” work under the Agreement. In determining whether a substance should be designated as a CMC, the following principles and approaches in this section are particularly important:

- (f) “ecosystem approach – taking management actions that **integrate the interacting components** of air, land, water, and living organisms, including humans;”
- (i) “precaution – incorporating the precautionary approach, as set forth in the Rio Declaration on Environment and Development, the

¹ For forty years, John has worked on a wide range of issues throughout the entire Great Lakes-St. Lawrence River basin with Great Lakes United, a coalition of citizens groups in both Canada and the U.S and more recently with the Great Lakes Ecoregion Network (GLEN).. John is an expert on the GLWQA. He was heavily involved in the renegotiation of the GLWQA in 1897 (1987? It DOES feel like we've been working on this forever, but...;-)) and 2012. In recognition of his leadership, in 1987, Canada's Secretary of State for External Affairs gave John official status during the formal negotiations. John was a member of the International Joint Commission's Great Lakes Water Quality Board from 2014 – 2023. He has been a Canadian Advisor to the Great Lakes Fishery Commission since 1998.

² All items in quotation marks in this paper are direct quotes from the GLWQA 2012. Any highlighting within the quotations has been added by the author.

Parties³ intend that, **‘Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation’**’;

- (j) “prevention – **anticipating and preventing** pollution and other threats to the quality of the Waters of the Great Lakes to reduce overall risks to the environment and human health”;
- (k) “Public engagement – incorporating Public opinion and advice, as appropriate, and providing information and opportunities for the Public to participate in activities that contribute to the achievement of the objectives of this Agreement.”
- (m) “sustainability – considering social, economic and environmental factors and **incorporating a multi-generational standard of care to address current needs, while enhancing the ability of future generations to meet their needs**”.

Item (k) “Public engagement” is reinforced by a frequently recurring clause throughout the Agreement, including in Annex 3 on CMCs. This clause reads:

“The Parties, in cooperation and consultation with State and Provincial Governments, Tribal Governments, First Nations, Métis, Municipal Governments, watershed management agencies, other local public agencies, and the Public, shall ...”

This reinforces the importance placed on the public engagement principle.

The principles listed above mean that, among other items, the governments should take a full ecosystem approach, should take long-term perspectives, acting now with the very long-term future in mind instead of waiting for a crisis. It also means that the public should be a central part of the activities.

³ Throughout this paper, the word “Parties” means those who signed the GLWQA and means the Canadian and U.S. governments.

Annex 3: Chemicals of Mutual Concern

The introduction to Section B of this annex says: “The Parties shall mutually determine those chemicals that are **potentially harmful** to human health or the environment ...”

Section B goes on to state that the Parties “shall target these chemicals of mutual concern for action by:

- preparing binational strategies for chemicals of mutual concern, which **may include research, monitoring, surveillance and pollution prevention and control provisions;**” [GLWQA 2012 – Annex 3, Part B, section 1.]

Section C of annex 3 goes on to state that the Governments “shall coordinate on science priorities, research, surveillance and monitoring activities, as appropriate, including:

1. identifying and assessing the occurrence, sources, transport and impact of chemicals of mutual concern, including spatial and temporal trends in the atmosphere, in aquatic biota, wildlife, water, and sediments;
2. identifying and assessing loadings of chemicals of mutual concern into the Waters of the Great Lakes from all sources including point sources, non-point sources, tributaries, and the atmosphere;
3. evaluating the effects of chemicals of mutual concern, and combinations thereof, on human health and the ecosystem, including the development and use of reproductive, physiological and biochemical measures in wildlife, fish and humans as health effect indicators;
4. maintaining biological and sediment banks to support retrospective analysis and to establish background levels for use in assessing future management actions;

5. coordinating research, monitoring, and surveillance activities as a means to provide early warning for chemicals that could become chemicals of mutual concern
6. reviewing and prioritizing research, monitoring, and surveillance needs on an annual basis, taking into account progress made in implementing this Agreement, new developments in science, and other factors; and
7. exploring research, monitoring, and surveillance opportunities related to management at source and treatment technologies under the respective jurisdictional authorities to address chemicals of mutual concern in wastewater effluent and residuals.”

Annex 3 clearly intends that a major part of the work as a result of the designation of a CMC should be on science, monitoring, etc. Therefore, limitations in science and monitoring should **not** be a reason for **not** designating the substance as a CMC. It would be premature to decline a nomination when there is a clear acknowledgement of the limitations with science and monitoring in the governments’ reports. Instead, an important reason for designating a CMC is to **ensure** that the science and monitoring are carried out necessary to improve our understanding of the substance and as a result, know the actions that we need to take in a binational strategy.

International Joint Commission (IJC) recommendations on radionuclides

Twice the International Joint Commission (IJC) made recommendations calling on the governments to include radionuclides in their work under the Agreement.

- In 1994, the IJC Commissioners called on the Federal governments to “incorporate those radionuclides which meet the definition of persistent toxic substances in their strategy for virtual elimination.”⁴

⁴ 7th Biennial Report under Great Lakes Water Quality Agreement, International Joint Commission, 1994, p. 37
<https://ijc.org/sites/default/files/seventh-biennial-report-under-glwqa-ijc.pdf>

- In 1996, the IJC Commissioners repeated their recommendation, stating “We continue to believe, however, that the consideration of radionuclides under the Agreement is important and cannot be ignored, particularly with new proposals to preprocess radioactive material in the Great Lakes Basin.⁵”

Both federal governments rejected these recommendations.

In 2017, the IJC approved the Great Lakes Water Quality Board’s work plan to carry out a study on decommissioning of nuclear power facilities. A problem that the WQB ran into in conducting its work was the gaps in the science and monitoring.

“The WQB recommends the IJC direct its Science Advisory Board or its Health Professionals Advisory Board to update the IJC Nuclear Task Force’s 1997 inventory of radionuclides for the Great Lakes and its accompanying report on bioaccumulation of radionuclides³ to improve the understanding of radionuclides in the Great Lakes and their effects on the basin’s living communities.”⁶

No further work has been undertaken to further these recommendations.

Summary

Since CMCs are an instrument unique to the GLWQA, that Agreement with its principles and approaches must be used as the main framework to guide when making decisions on CMCs or candidate CMCs.

The GLWQA principles listed above mean that, among other items, the governments should take a full ecosystem approach, should take long-term perspectives, acting now with the very long-term future in mind instead of

⁵ Eighth biennial report on Great Lakes Water Quality, International Joint Commission, 1996, pp viii and 36-37. <https://www.ijc.org/sites/default/files/C177.pdf>

⁶ Decommissioning of Nuclear Power Facilities in the Great Lakes Basin, August 2023, Water Quality Board submission to the IJC Commissioners, p. iii & 24. https://ijc.org/sites/default/files/WQB_GLNuclearDecommissioningReport_202111.pdf

waiting for a crisis. It also means that the public should be a central part of the activities. Needs either punctuation or more words...

Annex 3 of the GLWQA clearly intends that a major part of the work as a result of the designation of a CMC should be on science, monitoring, etc. Therefore, limitations in science and monitoring should **not** be a reason for **not** designating the substance as a CMC. Instead, an important reason for designating a CMC is to **ensure** that the science and monitoring are carried out necessary to improve our understanding of the substance and as a result, know the actions that we need to take in a binational strategy.