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Steven Carrasco
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Ministry of the Environment, Conservation and Parks
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Delivered via e-mail: steven.carrasco@ontario.ca

**RE: Ontario Environment Industry Association's Discussion Paper:
Opportunities and challenges related to the Ontario Wastewater
Surveillance (WWS) initiative**

Dear Steven,

We are writing on behalf of Ontario's more than 3,000 environment and cleantech firms to provide feedback on the Ministry's ongoing efforts to support wastewater surveillance (WWS) of SARS-CoV-2. Given the importance of this initiative to the health and well-being of Ontario residents, and its potential to develop technologies and approaches that could be commercialized for jurisdictions around the world, we convened a WWS Working Group of members drawn from various water, wastewater and associated firms, academic institutions, law practices, consulting companies, and commercial laboratories to review progress to date and suggest future courses of action for the Province.

ABOUT ONEIA

Ontario is home to Canada's largest cluster of environment and cleantech companies. The most recent statistics from the federal government show that Ontario's environment sector employs more than 134,000 people across a range of sub-sectors. This includes firms working in such areas as water, wastewater and stormwater management, resource recovery, composting and recycling solutions, alternative energy systems, environmental consulting and Brownfield remediation – to name just a few. These companies contribute more than \$25-billion to the provincial economy, with approximately \$5.8-billion of this amount coming from export earnings.

ONEIA members are committed to engaging with governments to encourage policies and regulations that are consistent with our principles of sound science, sound environment and a sound economy. In this light, we are pleased to present the following observations and recommendations.

OVERALL FEEDBACK

The Ministry is to be congratulated for the fact that, in such a short period of time, Ontario has been able to achieve over 80% sampling coverage of the province's wastewater and for making this data available to support public health strategies/ decision making alongside other metrics. ONEIA members believe that there are

considerable opportunities to build on this work to better engage and collaborate with the private sector.

WWS initiative and its current state in Ontario

ONEIA members support MECP in migrating the WWS program to the private sector to create a sustainable platform to ensure the continued availability of wastewater data and epidemiology to protect public health.

The SARS-CoV-2 virus is shed and detected in feces, making WWS an important adjunct surveillance tool for community outbreaks of COVID-19. This is accomplished by monitoring the SARS-CoV-2 virus in wastewater from communities or specific populations. The results of this type of monitoring program contributes to Province-wide COVID-19 surveillance and can be used to guide the deployment of public health resources and interventions, including risk communication to communities and/or health partners

WWS may be used as a predictive tool, providing data suggestive of an increase or decrease in cases before those infections are reflected in community testing or hospital visits. It also provides a more holistic picture that captures data from the entire population, not just those who have been tested.

To date, MECP has facilitated collaboration between academic research institutions and public health partners in the development of testing, reporting and data interpretation for WWS of the SARS-CoV-2 virus. It is our understanding that the province is considering the next phase of the program. We also understand that MECP has conducted surveys of academic institutions to assess their capacities regarding sampling and analysis of wastewater data and is considering transitioning some areas of this program from research and academic groups, currently acting in service roles, to the private sector.

Sampling, methodologies, data analysis, interpretation, continuous research, and communication to stakeholders are key areas requiring special consideration when it comes to a successful migration. ONEIA would like to offer our members' expertise and experience to help facilitate this migration.

ONEIA's WWS Working Group identified some key questions that warrant consideration for the migration of the WWS program to the commercial sector. These include:

- What are MECP's short- and long-term objectives for WWS in Ontario?
- What is the transition plan for moving the existing WWS program to the private sector?
- What components of the current WSI are working well?
- What gaps or challenges remain to be addressed?

With these questions in mind, the ONEIA WWS working group offers the following comments and recommendations for the Province to consider in addressing these questions.

Definition of a sustainable surveillance program

- We recommend that the Province clearly define the short- and long-term goals for WWS in Ontario, highlighting both its importance to Public Health authorities for the management of COVID-19 in communities, and also future public health concerns that could be monitored through WWS.
- Sustainable funding of WWS is key to its long-term viability. The Province may wish to develop, in partnership with municipalities, a municipal-level policy template to embed WWS in their regular operations. This could be accompanied by dedicated funding to provide appropriate resources to support municipalities.
- While universities have had their WWS funding extended until March (and there is a potential for more funding to transition the WWS program to the private sector), we encourage the Province to clearly communicate its plan to transfer responsibility for this portion of the initiative to other, more appropriate bodies (e.g., municipalities, public health authorities, commercial laboratories). As the ongoing financial sustainability of this monitoring initiative is of crucial importance, ONEIA members want to ensure that it finds a long-term home within the budgets and priorities of existing arrangements between local government and the companies that support their efforts in water protection and public health.

Consistency in sampling and testing methodologies

- We recommend that the Province engage a broader group of stakeholders in the sampling and testing community, including municipalities, commercial laboratories, engineering consultants as well as academic institutions, as it considers the migration of routine WWS to the private sector. We also recommend that the Province consider some form of program standardization to ensure a consistent wastewater sampling strategy, that takes into consideration all the required parameters such as sample location (i.e., upstream sampling), sampling frequency, harmonization of methodologies (grab, auto or passive sampling), transport, etc.
- ONEIA strongly recommends that the Province develop robust and harmonized quality assurance systems and standards to demonstrate the technical validity and scientific integrity of the results and ensure the comparability of data.
- We strongly encourage the Province to make a clear commitment to the involvement and value of commercial laboratories in the future of the WWS program. There are currently four commercial laboratories in Ontario that have invested time, capital and staff resources in COVID-19 testing in wastewater. The depth of expertise in these laboratories, particularly in the context of robust and rigorous method development and validation, routine sampling and analysis and quality assurance among others, cannot be understated.

Data analysis, processing, interpretation, and reporting/sharing

- The existing reporting and analytic frameworks, established through the work of the academic institutions, should form the foundation of the WWS program moving forward.
- We recommend the acceleration of standardization of methods for analysis or the establishment of required method performance specifications (allowing for performance-based rather than prescribed methods). ONEIA and the private laboratory community in Ontario have much to offer, through their expertise and experience in facilitating this process. Harmonization of sampling and analysis methods is critical to interlaboratory data comparability

Engagement and communications with the public, municipalities, and facilities

- The Province should develop clear plans for communicating and engaging with the public, municipalities and other stakeholders.

Other potential uses for WWS

The COVID-19 pandemic has imposed a substantial public health burden on the Province, and it has required Ontario to quickly implement monitoring and data-sharing systems that can capture information from wastewater. Going forward, the ongoing monitoring and data interpretation of wastewater can be a beneficial information resource for a range of stakeholders; whether it is used to assess the ongoing risks to public health from renewed COVID-19 strains or other communicable diseases (e.g. influenza); to measure climate-driven changes to our freshwater and aquatic organisms; or to monitor pharmaceutical, chemical and microplastic contamination.

SUMMARY

ONEIA strongly supports the Ministry's efforts in this area and we welcome the opportunity to contribute our membership's experience and expertise in future stakeholder discussions as we jointly develop a policy framework for wastewater surveillance for Ontario.

Should you have any questions about the information contained herein, please do not hesitate to contact the ONEIA office directly at 416-531-7884 / info@oneia.ca.

Yours truly,



Alex Gill
Executive Director, ONEIA