

2020

# Workshop Summary: A Grand-Erie Estuary Monitoring Framework

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# WORKSHOP SUMMARY: A GRAND-ERIE ESTUARY MONITORING FRAMEWORK

**Date:** Monday October 5, 2020

**Time:** 9:00 AM-12:00 PM

**Scribes:** Ana Carolina Esteves Dias, Marta Veenhof, Kelly-Ann Wright, and Navjot Dhaliwal

## Workshop participants in attendance

1. Mark Anderson, Water Quality Engineer, GRCA
2. Debbie Balika, Source Water Protection Lead, Conservation Ontario
3. Luca Cargnelli, Great Lakes Program Officer, ECCC
4. Dorianne Cushman, Program Analyst, OMAFRA
5. Andrea Dunn, Coordinator, Monitoring Ecology, Conservation Halton
6. Kim Funk, Aquatic Monitoring Ecologist, Conservation Halton
7. Mary-Kate Gilbertson, Biologist, Anwaatin
8. Lorne Greig, Independent Scientist (semi-retired), Associate, ESSA Technologies Ltd.
9. Todd Howell, Great Lakes Ecologist, MECP
10. Jack Imhof, Director of Conservation Ecology, Trout Unlimited
11. Georgina Kaltenecker, Lead, Provincial Water Quality Monitoring Program, MECP
12. Martin Keller, Source Protection Program Manager, GRCA
13. Tom MacDougall, Rehabilitation Ecologist, Lake Erie Management Unit, MNRF
14. Mark McMaster, Research Scientist, ECCC
15. Jenn Richards, Program Analyst, Environmental Management Branch, OMAFRA
16. Gerald Tetreault, Research Scientist, Aquatic Contaminant Research Division, ECCC

GRCA = Grand River Conservation Authority

ECCC = Environment and Climate Change Canada

OMAFRA = Ontario Ministry of Agriculture, Food and Rural Affairs

MECP = (Ontario) Ministry of the Environment, Conservation and Parks

## Introduction

This workshop was the culminating event for PhD research carried out from 2016 to 2020. The goal of this research was to develop a monitoring framework for the lower Grand River and nearshore Lake Erie that considers cumulative effects, is co-created by diverse stakeholders (this workshop is the final stage of co-creation), and that connects monitoring to broader river or lake management decisions. Literature, interviews, consultation with practitioners and Global Water Futures researchers, public engagement and engagement of Indigenous youth have all contributed to the development of the proposed framework and

its process. This workshop was a sense-making exercise through which past research participants could verify or revise their contributions to the work, and where all workshop participants could contribute to reorganizing the framework in a more feasible and meaningful way.

Participants were sent the following materials to review before the workshop:

- Workshop information and agenda
- Background to historical treaties in the Grand River Watershed
- Two PDFs of the framework breakdown – one with full-page slides, one with notes pages included for further explanation
- Two links about the Haudenosaunee Thanksgiving Address – one with English text, and one with a video of the *Hiawatha and the Peacemaker* story, followed by a brief description of the Address

In addition, participants were offered several optional resources: a demo video of how to use Microsoft Teams (the platform used to hold the workshop), a link to the Chatham House Rule website, and links to past outcomes of the research for more context. Shortly before the workshop, participants were also sent the link to the live notes document (a Google doc) and the list of participants and observers, including breakout group assignments.

## Breakout Discussion A

*What changes or additions to this framework would you recommend?  
How would you change the goals/purpose?*

Participant consensus suggested the current framework would be effective when managing conservation within an estuary area. However, participants recommended several improvements to increase the framework's overall impact. Participants specified the following aspects should be included in the framework:

- Early engagement with essential First Nations groups
- Complete program funding
- Co-solution generation
- Amalgamation of western data with traditional ecological knowledge
- Dedicated data use and storage

Several participants stressed the importance of early engagement with First Nations communities, stating that this phase must go beyond initial contact and stakeholder registration. The adapted framework must include co-solution generation to initiate a strategy that is beneficial for all parties. One participant suggested identifying a business case for the project that would provide value to everyone involved. Several participants agreed that a pragmatic and mutually feasible framework would promote a collaborative effort from Western and First Nations parties.

Participants also mentioned that a community driven initiative from a local level, supported by citizen science, would further First Nations' desire to engage with a collaborative project. A community-driven initiative would also develop effective rapport when retrieving data for key performance indicators (KPI).

Finally, data are regularly used improperly or not used at all after collection. Suggestions to rectify this included developing clear targets to clarify what data are to be collected and which KPI(s) will be verified with this data. Furthermore, it was suggested that a single stakeholder should be nominated to manage all data to ensure that data is cohesive throughout the project and easily dispersed to users.

## Breakout Discussion B

*How would you suggest applying/including Western knowledge alongside Indigenous cultural knowledge?*

To truly create a collaborative initiative, a framework for estuary management must include both Western knowledge and Indigenous knowledge. Participants indicated that information from each approach is not easily amalgamated with the other. While Western knowledge is maintained in databases and can be readily obtained or purchased, Indigenous knowledge – especially cultural knowledge – is more difficult to record and interpret. As a way of Indigenous life, cultural knowledge is passed on from Chiefs and elders through storytelling and experience. Although difficult to transcribe, the depth of this knowledge is immense.

It was stated that it would be best to develop a meaningful relationship with First Nations communities before pursuing any data endeavors, to create a collective worldview. Western and Indigenous members view the world through different lenses; establishing a relationship would assist both sides gain an understanding of the other. Participants suggested that Indigenous cultural knowledge would be best obtained through conversations and cultural integration – i.e., witnessing the information through an indigenous perspective.

Suggestions were made to include broader community engagement of all impacted parties during these complex interactions to equitably disseminate this information. This would allow all parties to incorporate both forms of knowledge to generate a truly well-informed strategy. One participant mentioned that in addition to integrating Indigenous knowledge, parameters must be set to ensure that both Indigenous knowledge and Western knowledge are equally weighed, so that one dataset does not take priority over the other.

One participant highlighted the importance of understanding Indigenous cultural knowledge to identify the conservation desires of the First Nations communities. This individual suggested it may then be possible to pursue projects desired by Indigenous communities, which they may be willing to fund with their own resources. The resultant project may be significantly more resilient due to the added funding security.

## Breakout Discussion C

*Can you envision your organization becoming involved in implementing this framework? Why or why not?  
In an ideal world, what role would your organization play in implementing this framework?*

Consensus reveals that this framework would likely be impactful for the Grand River. Some participants had the following reservations regarding implementation of this framework:

- Problematic to alter the framework for ongoing projects
- Redundancies within the framework and existing monitoring agencies
- We need an understanding of commitments before framework implementation
- Framework may be more effective for relationship building at a community level
- The framework would need to have a champion (or champions) to be effective

Several participants referenced current efforts within the Grand River as a potential barrier. The current strategy incorporates an action plan and funding, which may promote resistance when attempting to alter the existing framework. This issue was discussed further by other participants, who cited redundancies between the proposed framework and existing ones as a potential point of contention for those resisting alterations.

The value of the proposed framework must be communicated with all parties upfront, including the rationale for why the Grand River area requires a more robust monitoring framework. This may bolster stakeholder cohesion by providing a ubiquitous endeavor for multiple organizations, each with their own mandate. Most participants suggested this framework may be most successful when attempting to develop relationships with community groups and community members. Once a relationship exists, larger organizations and government agencies may have greater incentive to collaborate. Participants iterated that framework implementation would require a champion to moderate the effort. This could be a group or a few individuals, responsible for managing the project and ensuring that key performance indicators are met.

## Closing Discussion

*Are there any other aspects of this framework you would like to discuss?  
Do you have any takeaways, lessons learned (i.e., would you apply anything at your organization) or final thoughts?*

The closing discussion consisted of three topics: creating a metadatabase, community engagement, and recent changes in legislation. One participant raised the need to create a metadatabase of all existing monitoring efforts to establish monitoring gaps before designing or implementing a framework like the one proposed in this workshop. However, participants recognized this is technically challenging due to the many different parties involved who don't often communicate or share their data with the 'usual' monitoring



organizations. There are also issues around consistency and protocols or techniques, data security and questions around access and sharing of data.

Community engagement was a prominent topic of discussion throughout the workshop, and its value was repeated by multiple participants. Participants stressed the importance of familiarizing with community concerns and key issues up front (i.e., the health – whether edible – and physical presence of fish is a known priority). Community priorities are believed to align with those of management, though the way these issues are described is different for each person or group of people.

Disconnects between management and the public in this regard are believed to be the result of not communicating the issues or implications of decisions in language that is accessible to or relatable for the public. One of the biggest challenges is demonstrating how our science demonstrates how things connect (i.e., animals and the quality of water) versus how they think these things are related. The ideal benchmark described by participants is whether our moms would understand our science communications.

One participant raised the point that this framework does not consider recent changes to provincial legislation (i.e., *Conservation Authorities Act* and others in the recent omnibus bill). This was the most concerning aspect of the workshop's discussion, not so much because of implications for this framework, but more so because of the broader societal implications of these changes – that no one is responsible for ensuring a healthy environment for the species and communities of Ontario. In the case of Conservation Authorities, their mandate has essentially been reduced to managing their own properties and regulating flood hazards.

If the framework does not focus on these mandates, it will depend on the support of member municipalities and partners under independent funding arrangements. Strong leadership would be required in this scenario, which puts municipalities into an extremely difficult position. Given the current context of provincial agencies taking an increasing 'back seat' to focus on their specific mandates, some participants suggested municipal leadership may need to be part of the solution.

An alternative is to put the public at the centre of this framework, as they are more resilient to political changes. They may drive the process until changes to the political context result in more support from authorities; however, if we want them to lead, we (the public at-large) need to demand they take responsibility. In a community-led scenario, the question of who will pay for implementation of this framework was raised, as all agencies' purses (i.e., municipal, provincial) are getting smaller. Thus, the question was raised, how do we fund a new initiative when we have others in play already?

Finally, one participant suggested this exercise is timely, mostly due to Lake Erie's Eastern basin nutrient issue being predominantly influenced by the Grand River. So, despite the many considerations brought forward in this workshop, the task of exploring an improved framework for monitoring should continue to be pursued.

## Emailed comments

Several participants contributed a total of six pages of comments via email in the two weeks after the workshop. Email contributors included participants who attended the workshop live, in addition to two participants who were not able to participate live:

- Sandra Cooke, Director, Municipal Consortium, Canadian Water Network
- Nancy Goucher, Knowledge Mobilization Specialist (University of Waterloo), Global Water Futures

In response to discussion from workshop participants regarding the loss of legislative responsibility over environmental health, it was noted that legislative changes have not all received royal assent as of the date this summary report was released (October 19, 2020). However, the need for champions to keep the initiative running was strongly reiterated by email participants, who suggested that ongoing mandate changes and continuing (long-term) reductions in organizational capacity would require the public to take on this role.

Public-led monitoring would engage the public in all aspects of the program, from design to implementation to co-solution building. As such, the process of learning and collective knowledge generation should be valued at least as much as the monitoring data (if not more so). For this reason, hiring consultants to assist the public with data analysis and interpretation – a component of the proposed framework – was raised as a potential problem due to their short-term involvement (and, often, little vestment) in the monitoring program and its outcomes. Further, a consultant not engaged from the start may introduce a confounding factor resulting from the lack of context in which the data were collected. One suggestion was to ensure staff hired for the coordination team may include specialized staff with the skills and networks to conduct analysis and interpretation for all parties in the framework.

There should be recognition of existing internal processes and priorities regarding public consultation and engagement by the various agencies involved in this work. These processes would likely influence the timelines proposed by the framework. Also, existing processes and requirements by government and academia related to data management (including rights to use data) should be explicitly considered. This relates to discussion of the First Nations Principles of OCAP™ - the spirit of which may be respected as a guiding principle or as part of the value system of this kind of initiative.

Data-related discussion from the workshop was carried into email comments. Specifically, transparent, and equal weighting of Western and Indigenous knowledge (i.e., regarding criteria-based ranking process for indicator selection) was highlighted in both live and email contributions.

The proposed adaptive process was supported by email participants. A recommendation was to include a statement explicitly stating adaptive review process should be driven by Indigenous and Western evidence. In addition, the Tamarack Institute's collective impact framework was recommended as an approach to consider incorporating, which has been applied successfully to collaborations in the Grand River Watershed before. An example to model for in-kind contributions from partners is Southern Ontario Water Consortium. Finally, a participant reiterated the importance of the development of an improved framework like this one.

## More Information

Results from all phases of this research are summarized on the research website: <http://granderiestudy.ca/results>. The final version of the proposed framework will be posted here by early December, 2020. Products (publications, presentations, etc.) are posted on the *Resources* page. Any questions or comments should be directed to the researcher, Elaine Ho, at [e23ho@uwaterloo.ca](mailto:e23ho@uwaterloo.ca).