

# Local Water Governance, Conservation Authorities, and Community-based Monitoring Groups; A Case Study of the Oak Ridges Moraine, Ontario, Canada

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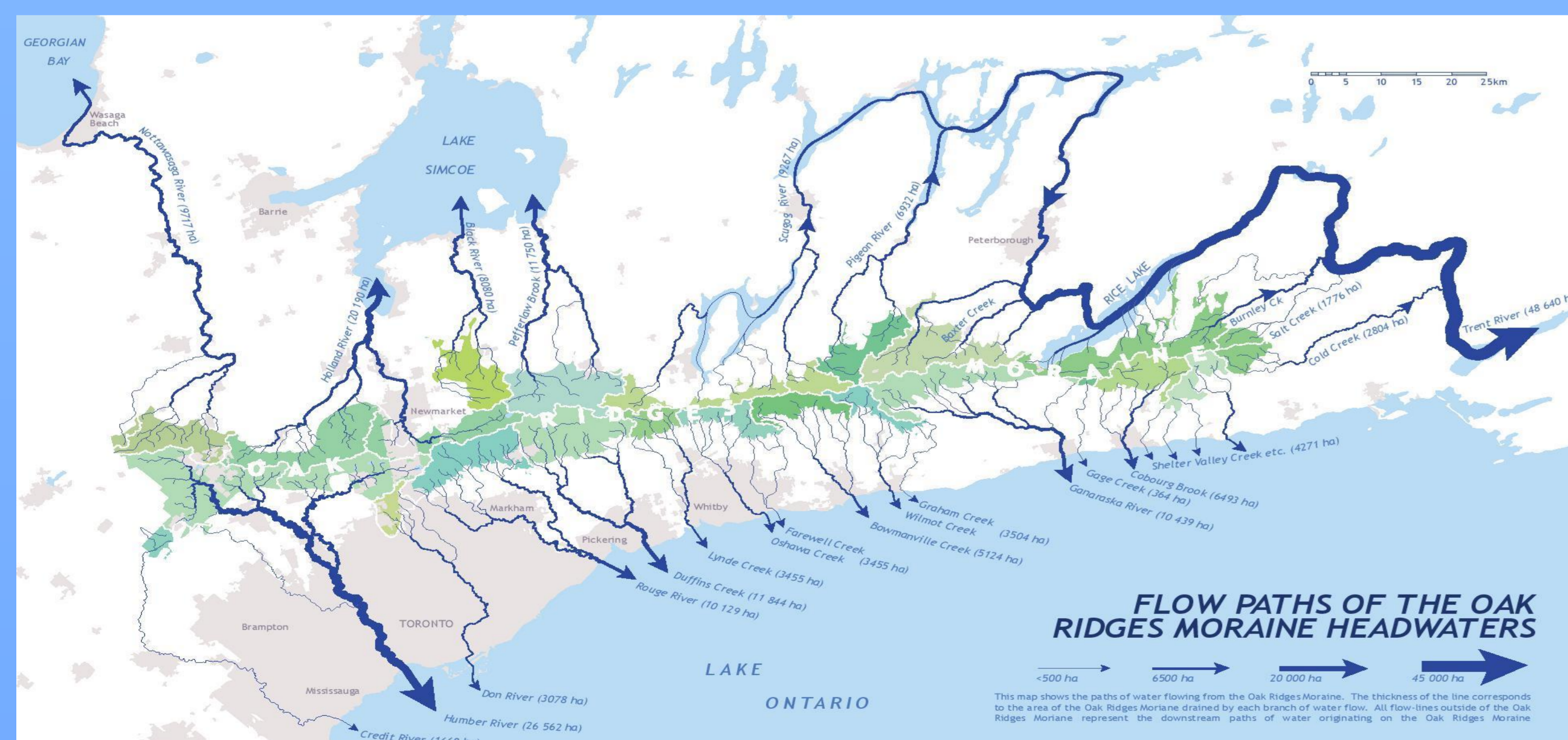
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## Introduction

- Community-based ecosystem monitoring (CBM) is a multi-stakeholder approach to monitoring in order to respond to issues of common concern.
- CBM is a relatively new concept but there is growing interest.
- CBM creates unique opportunities and challenges.
- The **CURA H2O Project** (supported by SSHRC) has emerged in response to growing interest in CBM.
- CURA H2O carries out research in support of CBM; distributes equipment to community groups (WetPro kit, includes YSI data logger); provides training for community volunteers; and maintains an online database for monitoring data.
- CURA H2O's research has indicated the need for comparative studies in other areas of Canada.

## Case Study (Oak Ridges Moraine, Ontario)

- Nova Scotia lacks government agencies which would normally monitor and protect watersheds and water resources.
- CBM is extensive in Nova Scotia.
- Ontario, in contrast, has conservation authorities (CAs) to monitor and respond to environmental change; therefore it is important to understand current CBM programs in Ontario and the role of CAs in CBM in Ontario.
- The Oak Ridges Moraine (ORM) has an important role as a water recharge/discharge area which supports the ecosystem health of many watersheds which originate in the moraine. The moraine has permeable sands and gravels which take up precipitation, filter the water and recharge the aquifers that exist deep belowground.
- There is a coalition of CAs on the ORM called the Conservation Authority Moraine Coalition (CAMC).
- ORM was chosen as a case study due to its ecological diversity, its role as the source of the headwaters for watersheds in Ontario, as well as the strong presence of CAs in this area.

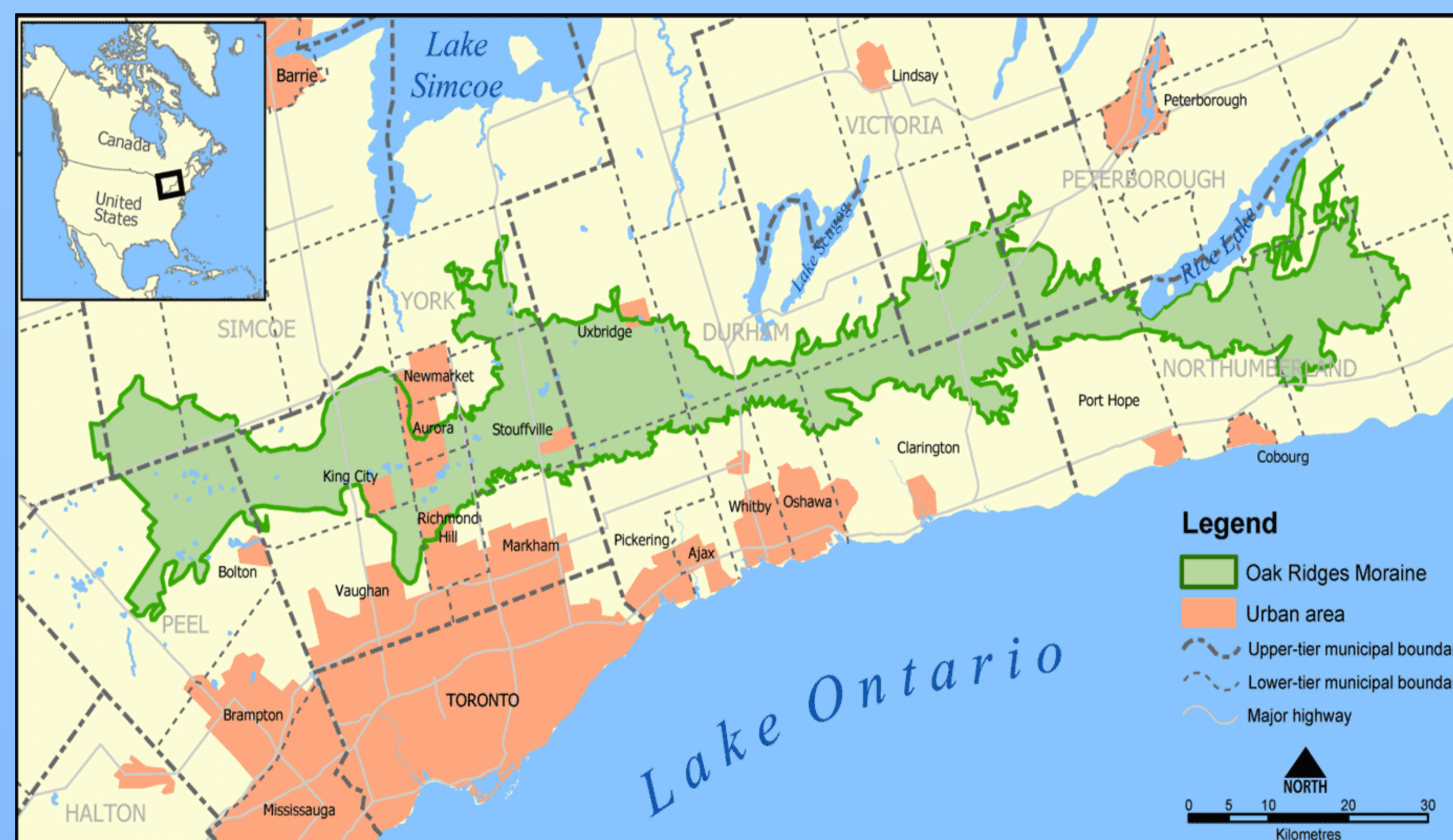


The ORM as headwaters for watersheds in Ontario. Picture from: <http://www.ecojustice.ca/oak-ridges-moraine-flow-paths-of-the-oak-ridges-moraine-headwaters>

## Objectives

### My research questions will explore:

- What is the current status of water governance in the ORM?
- How has the role of CAs regarding water governance evolved in Ontario and impacted CBM?
- What are the types of CBM that are taking place on the ORM and what are the existing CBM initiatives on the ORM, with a particular focus on water?
- What are the potential impacts of recent government cutbacks on CBM in the ORM?
- How does the current situation regarding community-based water monitoring in the ORM compare with the water monitoring situation in Nova Scotia?



Map of the Oak Ridges Moraine. Picture from: [http://en.wikipedia.org/wiki/Oak\\_Ridges\\_Moraine](http://en.wikipedia.org/wiki/Oak_Ridges_Moraine)

## Methods

The first step of my research was a literature review to determine the evolution and current state of community-based monitoring in Canada.

### Interviews (24 completed):

- Conservation authority staff
- Environmental movement organization staff
- Community-based monitoring volunteers
- Ministry of Natural Resources staff
- Ministry of Environment staff
- Municipal decision makers

### Document Analysis (acquisition in process):

- Using grey literature from government and civil society.
- Conservation authority documents: watershed report cards, newsletters, data sheets, data collection protocols, field manuals.
- Community-based monitoring groups: reports, data sheets, field manuals, data collection protocols, newsletters.

## Preliminary results

- There is some evidence of multi-party monitoring on ORM with CAs taking on a leadership role in CBM.
- Although CAs are generally seen as a great link between government and communities and should be incorporated into CBM, not all CAs are interested/currently involved.
- On the ORM, CBM includes: water quality/quantity, aquatic ecosystem health, water temperature, water clarity.
- Role of CA in CBM is generally perceived positively (Note: one respondent saw it as the CA taking control from the community).
- Government cutbacks negatively impact NGOs involved in CBM (ex: loss of EMAN).
- There are still some concerns regarding the usefulness of CBM data for decision-making.
- Suggested future directions of CBM: increased collaboration and trust between government agencies and communities, using technology to increase citizen interest in monitoring, and creating partnerships between agencies, universities and communities.

## Next Steps

The Ontario research will be presented through a workshop to community groups in Nova Scotia to determine the similarities and differences between the monitoring situations in Ontario and Nova Scotia, as part of the CURA H2O Project.



CURA H2O Volunteers and WetPro Kit. Picture from <http://curah2o.com/>

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