

Highlights of the Ontario Regional Adaptation Collaborative Program



A.D. Latornell Conservation Symposium
November 17, 2011



Natural Resources
Canada

Ressources naturelles
Canada



The Big Picture

“The Regional Adaptation Collaboratives (RACs) Climate Change Program is a three year, \$30 million, cost-shared federal program to help Canadians reduce the risks and maximize the opportunities posed by climate change. The Program helps communities prepare for and adapt to local impacts posed by our changing climate, such as: decreasing fresh water supplies; increasing droughts, floods and coastal erosion; and changing forestry, fisheries and agricultural resources.”

http://adaptation.nrcan.gc.ca/collab/index_e.php

CHAPTER 6
Ontario

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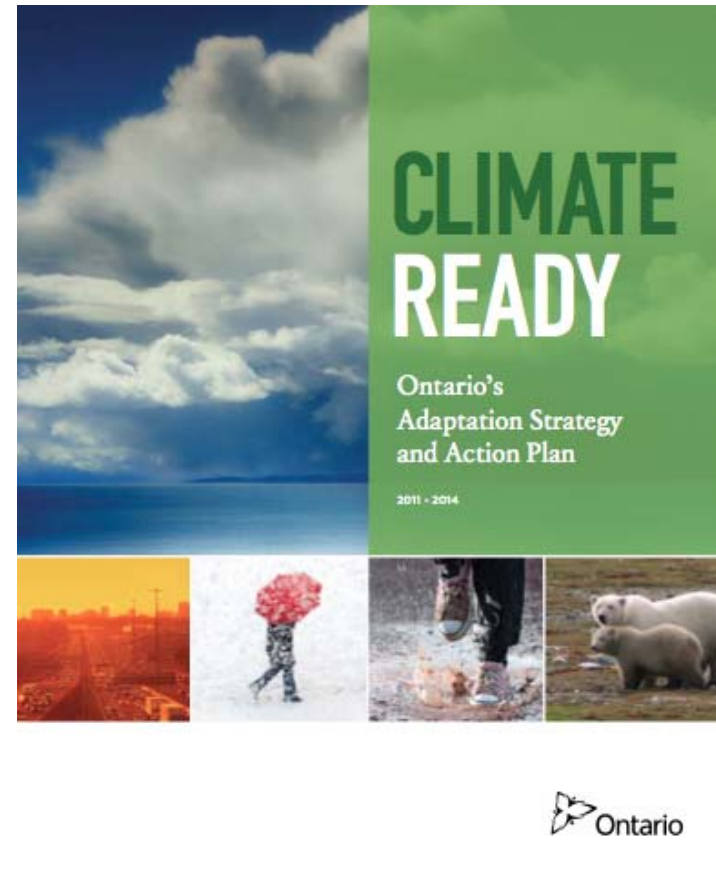
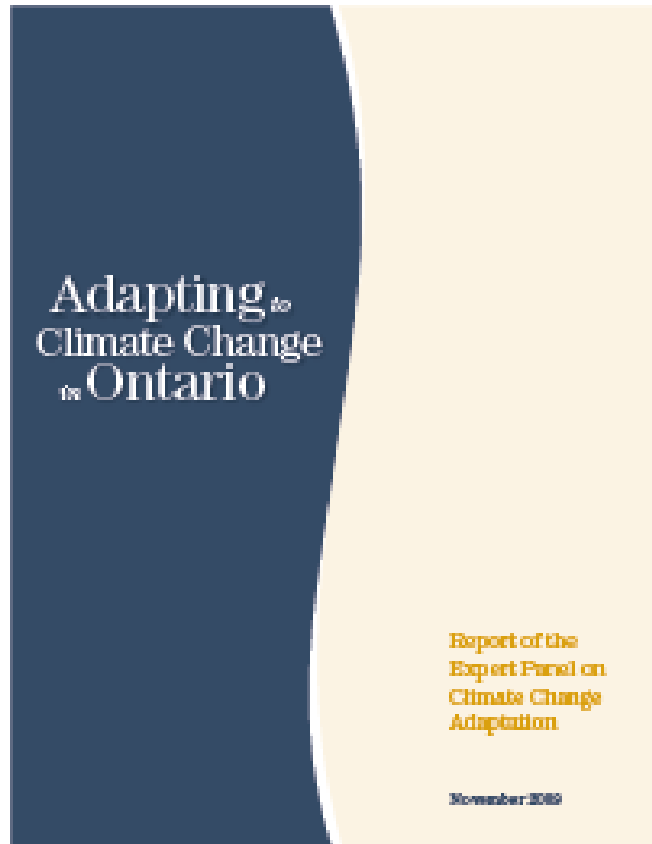
¹ David L. Gossel, University of Waterloo, 800-961-9888; or contact for parts in a digital form: see also in a Chapter 6 Ontario 2017, edited by D.L. Gossel, F.J. Warren, J. Lavender and S. Baskin, Government of Ontario, Ottawa, ON, p. 2-6.

² Public Sector Services, Ontario, 416-325-8300; or contact for parts in a digital form: see also in a Chapter 6 Ontario 2017, edited by D.L. Gossel, F.J. Warren, J. Lavender and S. Baskin, Government of Ontario, Ottawa, ON, p. 2-6.

The Need for Climate Change Adaptation...

- Projections also indicate that intense rainfall events, heat waves and smog episodes are likely to become more frequent.
- Impacts include disruptions to critical infrastructure; water shortages; increased health risks; remote and resource-based communities; unmanaged and managed ecosystems
- Ontario has a strong capacity to adapt to climate change, but it is not uniform across sub-regions and sectors.

The Need for Climate Change Adaptation



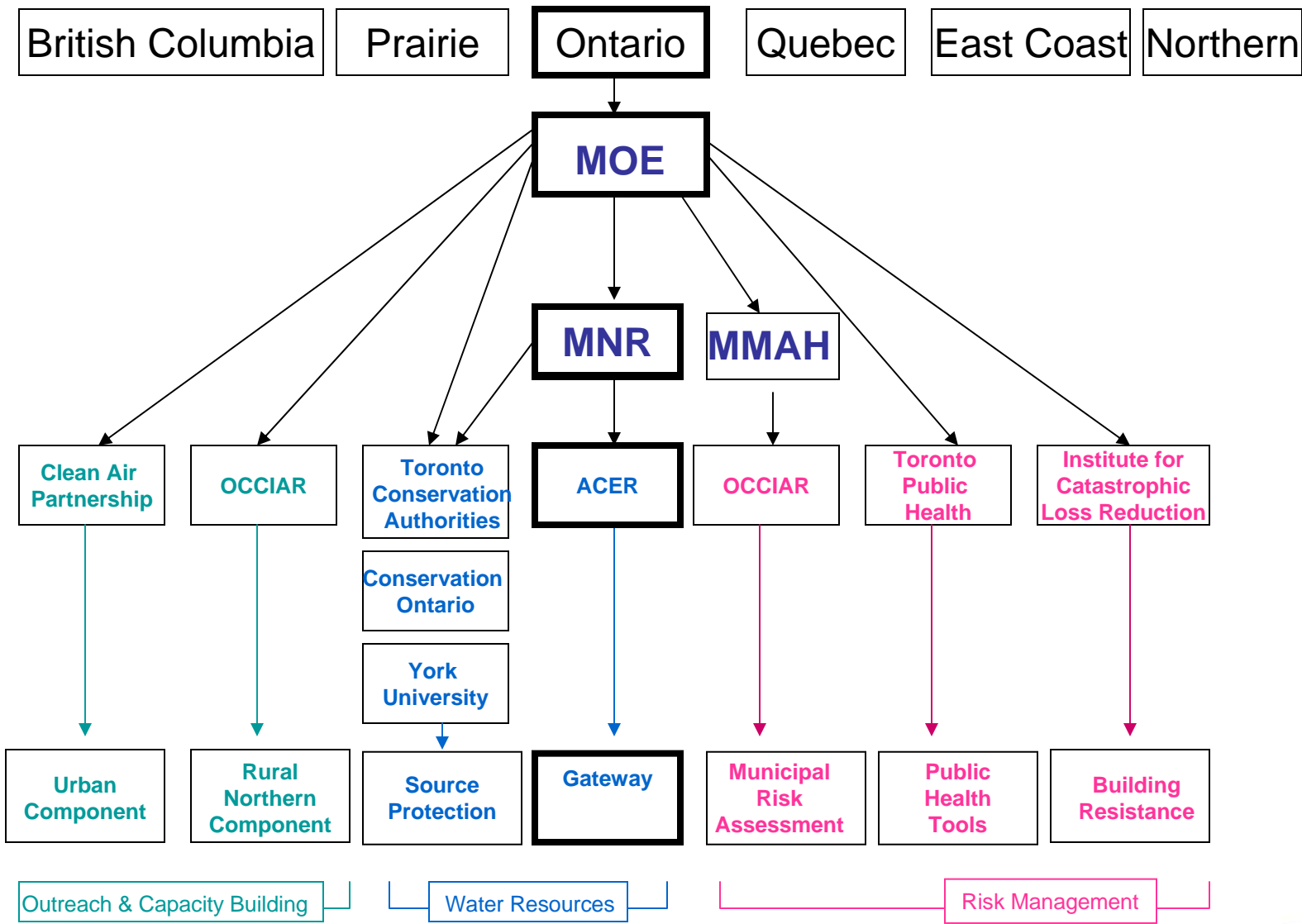
The Need for Climate Change Adaptation...

Impacts from Gradual Change

- Ecosystem shifts
- Lyme disease
- Winter roads
- Increased demand for electricity in summer
- Lower Great Lakes water levels
- Water shortages
- Winter tourism/spring tourism
- Forest pest outbreaks
- Degradation of wetlands

Impacts from Severe Weather

- Storm water flooding
- Electricity transmission failure
- Water-borne disease outbreaks
- Heat stress
- Smog episodes
- Water shortages
- Loss in agricultural productivity
- Increase in forest fires



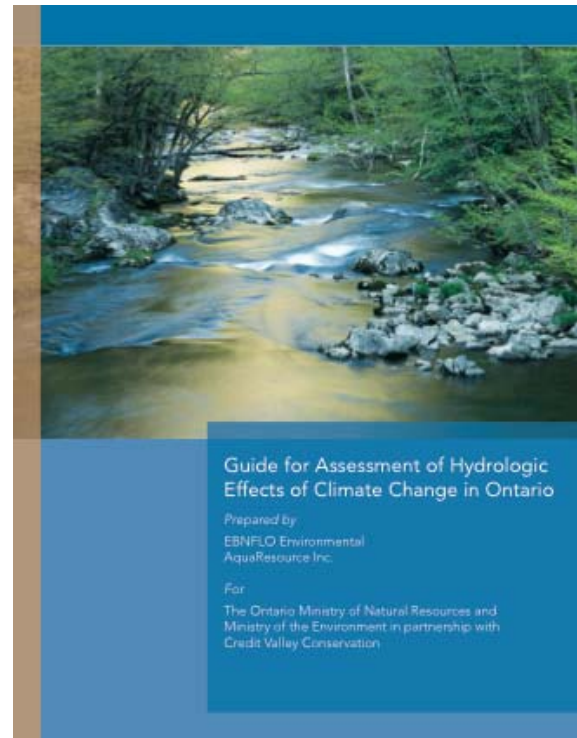
Context – What is the ORAC?

- To support and decentralize Canada's response to climate change, the federal and provincial governments are investing in a \$6.8-million adaptation program to help Ontario communities target climate change issues such as extreme weather risks to infrastructure, public health and safety and water supplies.
- Joint investment in this three-year program aims to help Ontario decision-makers better prepare for extreme weather impacts.
- Each RAC project is made up of provincial government departments and interested partners from the private sector, academia and the broader public sector (including NGOs).

ORAC Water Related Projects

Source Protection

Ensure assessment reports and source protection plans for vulnerable communities in Ontario include climate change adaptation (e.g. potential water shortages) policies and data.

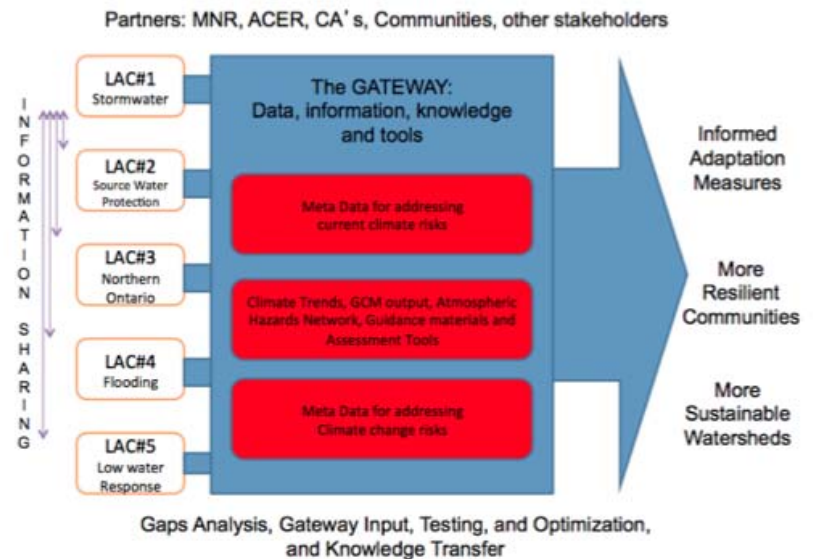


ORAC Water Related Projects

Weather and Water Information Gateway:

Create a web-based integrated Provincial weather and water information discovery and access service to facilitate decision-making the community level.

Funding Partners:
MNR, ACER & LACs



ORAC Water Related Projects

Rural/Northern Component

Build capacity through outreach and training with small, rural, agricultural, resource-based and Northern communities across Ontario.

Funding Partners: OCCIAR, Conservation Ontario, Clean Air Partnership

The Weather and Water Information Gateway

Local-level capacity for Climate Change Adaptation is severely diminished when vulnerabilities to past, current and future climate change and stressors are poorly understood.

Adaptive initiatives can be made more effective if current and accurate data is made accessible to decision-makers in order to help them make the most informed and time-efficient decisions possible.

Experience with recent local-level projects has shown that it is currently quite difficult to find and gain access to government data. As a result, a large proportion of project resources are required for this task.

In order to build local capacity, the Weather and Water Information Gateway (Gateway) will involve the establishment of Local Adaptation Collaboratives (LACs) and display how data can be managed to inform the design and delivery of effective adaptive watershed management measures through local demonstration projects.

The 'Gateway'...

The **Gateway** will be a web-based integrated Provincial weather and water information discovery and access service to facilitate decision-making at the community (or local) level.

The Gateway will allow easy, timely access to data and information required for critical business functions such as:

- Flood and Drought Management
- Source Water Protection
- Permit to Take Water
- Municipal Infrastructure Management

The 'Gateway' LACs

Northern Perspective/Integrated Watershed Management:
Greater Sudbury Climate Change Consortium

Low Water Response: NVCA

Stormwater Flooding: Peterborough, ORCA

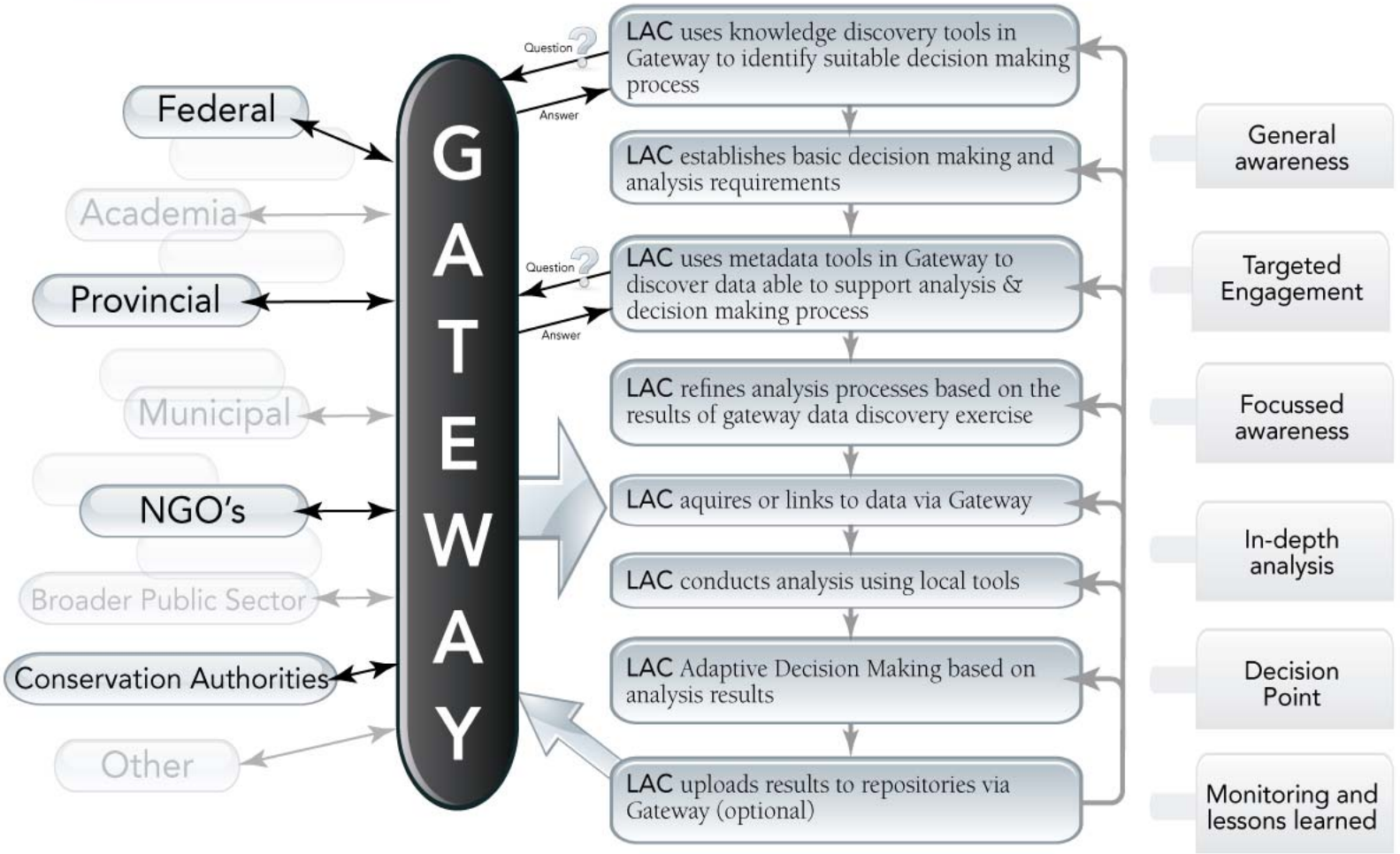
Stormwater Mgt: TRCA, GTA Municipalities

Source Water Protection: MVCA, RVCA

Data Repositories:
Multiple Sectors, Multiple Levels

Local Adaptation Collaborative (LAC)

Decision Making
Continuum



Progress to Date

Meta-Data Gaps and Needs	Decision-Making Continuum	Process and Practice
<ul style="list-style-type: none">• Data<ul style="list-style-type: none">• Climate• Hydrologic• Information• GCM scenarios, IDF curves• Case studies• Guidance documents• Assessment tools	<ul style="list-style-type: none">• General Awareness• Targeted Engagement• Focused Awareness• In-Depth Analysis• Decision Point• Monitoring & Lessons Learned• Effective Adaptation	<ul style="list-style-type: none">• Severe weather event to galvanize action• Readiness and capacity• Baseline knowledge on current risks• Leadership, champions and enablers• Research collaboration• Risk assessment and adaptation implementation

DISCOVERING ONTARIO DATA

Aggregate Results matching search criteria : 1-3/3 (page 1/1), 0 selected

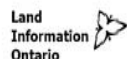
Select : [all](#), [none](#)

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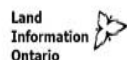
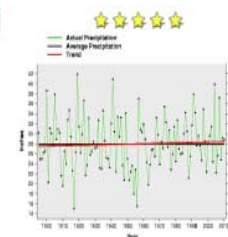
STREAM TEMPERATURE

Abstract Summer Stream temperatures for the Province of Ontario
Keywords WWIG - Low Water Response



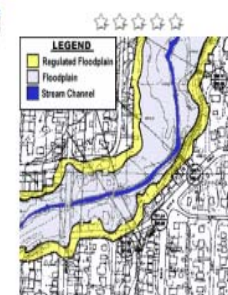
HISTORICAL PRECIPITATION RECORDS 1987-1999

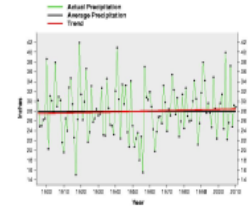
Abstract A database of historical annual precipitation records in the province of Ontario from 1987 to 1999
Keywords WWIG - Flooding, WWIG - Low Water Response, WWIG - Stormwater Management



FLOODPLAIN MAPPING

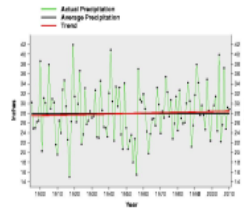
Abstract Tracts of land maintained for the landing and takeoff of aircraft and for receiving /discharging passengers and cargo. Includes: Hangar Heliport Runway Seaplane Base www.google.ca;
Keywords Airports, Hangars, Heliport, Runway, Seaplane base, WWIG - Flooding





Abstract A database of historical annual precipitation records in the province of Ontario from 1987 to 1999
 Keywords WWIG - Flooding, WWIG - Low Water Response, WWIG - Stormwater Management

Metadata



Identification info

Title Historical Precipitation Records 1987-1999
 Date 2011-07-26
 Date type **Adopted:** date identifies when the resource has been adopted

Cited responsible party

Individual name	Inventory Monitoring and Assessment	Electronic mail address	LIO@ontario.ca
Role	Author: Party who authored the resource		

Abstract A database of historical annual precipitation records in the province of Ontario from 1987 to 1999
 Status **Historical archive:** Data has been stored in an offline storage facility
 Descriptive keywords WWIG - Flooding , WWIG - Low Water Response , WWIG - Stormwater Management (theme).
 Language English

Extent

Geographic bounding box

WGS 84
North bound
 58.58008

Next Steps

- Gaps and Needs: Ongoing
- Testing and Optimization of The Gateway
- Information sharing and communication
- Knowledge Transfer Workshops
- Exchange of Drivers Driving the Adaptation Bus
- RAC1 wraps up March 31, 2012
- RAC2? Adaptation funding 2012-2017

ORAC Contacts

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Thank you!

Questions?