

THE MUNICIPAL ROLE IN ONTARIO'S GREAT LAKES BULK WATER TRANSFER REGULATIONS

**Implementation of the Great Lakes-St. Lawrence River Basin
Sustainable Water Resources Agreement**

by

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Abstract

The Municipal Role in Ontario's Bulk Water Transfer Regulations
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Despite being creatures of the province under the Canadian Constitution, municipalities are emerging as a partner by taking action on problems seemingly outside their jurisdiction. Because Ontario municipalities have delegated authority from the Province to directly use and manage the Great Lakes-St. Lawrence River Basin, they have reason to be engaged in related policy development and act as partners in this intergovernmental framework. How can municipalities, however, truly act as a partner with those that have ultimate authority over them? Using the example of bulk water transfers, findings from this study provide an understanding of opportunities and barriers for wider municipal involvement within the Basin. While some municipalities can be considered principal actors, differing priorities and limited resources constrain the role municipalities can play as a whole. Further, although municipalities want to be treated like a partner, they remain bound by provincial and federal decisions, thus, limiting the partnership scope.

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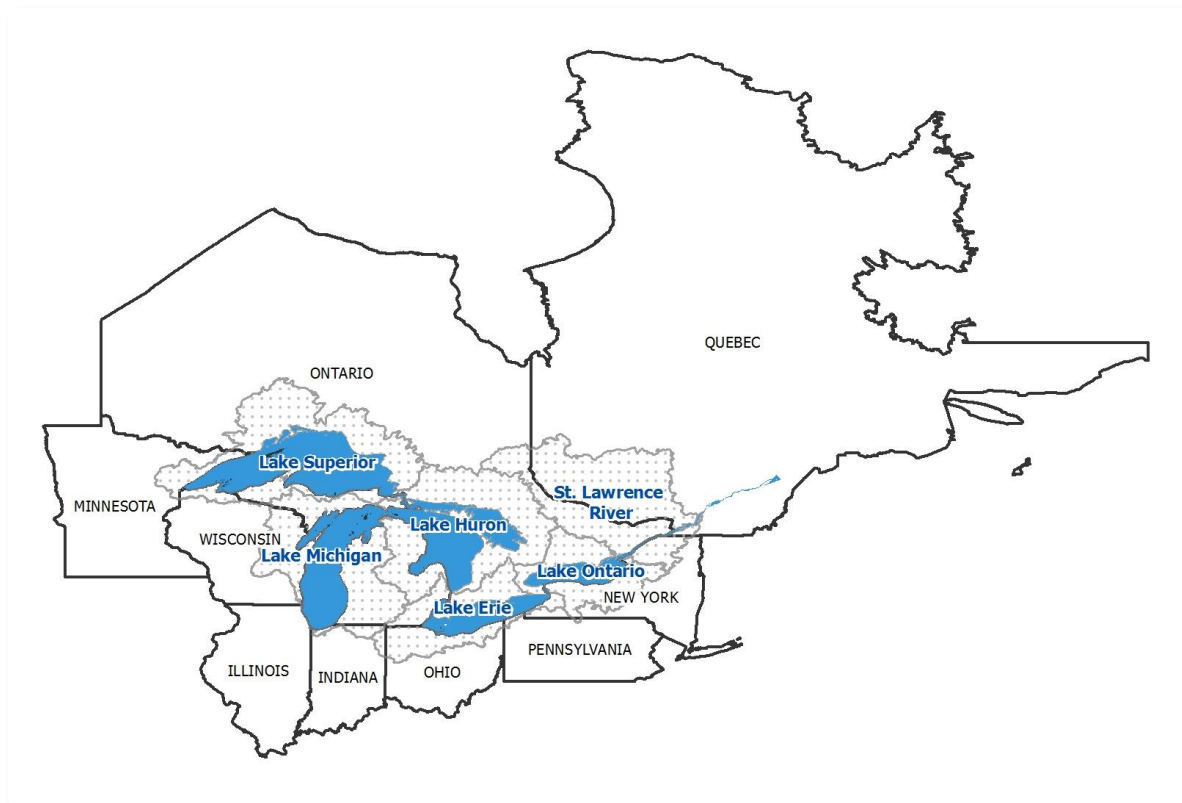
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Chapter 1: Introduction

The Great Lakes-St. Lawrence River Basin consists of the watersheds of the five Great Lakes – Lake Erie, Lake Huron, Lake Michigan, Lake Ontario, and Lake Superior – and the St. Lawrence River, covering an area of 767,000 square kilometres. Straddling the border between Canada and the United States (US), the Great Lakes-St. Lawrence River Basin also crosses into the jurisdictions of two Canadian provinces – Ontario and Quebec, and eight US states – Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania and Wisconsin (see Figure 1).

GREAT LAKES-ST. LAWRENCE RIVER BASIN



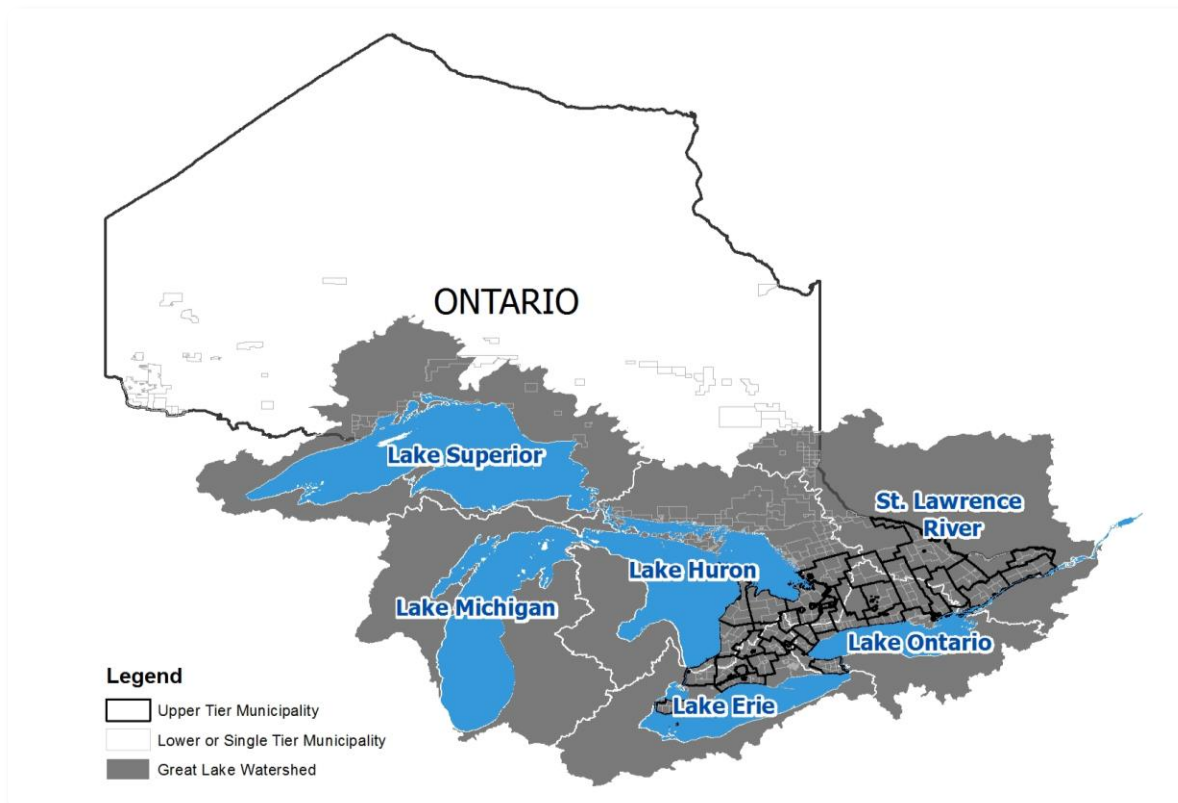
Sources: (Great Lakes Information Network, 2000; Great Lakes Information Network, 2006a; Great Lakes Information Network, 2006b; Great Lakes Information Network, 2012)

Figure 1: Map of Provinces and States in the Great Lakes-St. Lawrence River Basin

Approximately 105 million people live in the Great Lakes-St. Lawrence River Basin (Ecojustice, 2013, p. 5) with more than 23 million depending on the lakes for their drinking water supply (Botts & Muldoon, 2005, p. 2). Public and domestic supply accounts for 15.2 percent of water use and 37.9 percent of consumptive use in the Great Lakes Basin (Schaffer & Runkle, 2007, p. 15). As defined by the US Geological Survey, public and domestic supply is the water drawn for the purposes of domestic, commercial, industrial and public water uses (Schaffer & Runkle, 2007, p. 17). Consumptive use is the portion of water that is not returned to the Basin after use and is estimated using the difference between the withdrawal amount and return flows (Schaffer & Runkle, 2007, p. 9). Public and domestic supply accounts for the second biggest water use and largest consumptive use in the Great Lakes-St. Lawrence River Basin.

Of the 444 municipal bodies in Ontario (Figure 2), 409 are within the Great Lakes-St. Lawrence River Basin, which includes 138 that are single-tier and 30 that are upper-tier encompassing 241 lower-tier municipalities. These municipalities in the Great Lakes-St. Lawrence River Basin are responsible for providing safe drinking water to their residents, representing nearly 75 percent of Ontario's population (Environmental Commissioner of Ontario, 2005, p. 64).

ONTARIO MUNICIPALITIES IN THE GREAT LAKES-ST. LAWRENCE RIVER BASIN



Sources: (Great Lakes Information Network, 2000; Great Lakes Information Network, 2006a; Great Lakes Information Network, 2006b; Great Lakes Information Network, 2012; Ontario Ministry of Municipal Affairs and Housing, 2012a; Ontario Ministry of Municipal Affairs and Housing, 2012b)

Figure 2: Map of Ontario Municipalities in the Great Lakes-St. Lawrence Basin

In addition to drinking water, the Great Lakes also provides assimilative capacity for wastewater effluent, waters for recreational uses and drainage basins for stormwater, which all fall directly under municipal spheres of jurisdiction. The Great Lakes also provide uses for agriculture and irrigation, commercial fishing and shipping and industry (Johns, 2010, p. 64). With so many uses that support the economic vitality of municipalities and the responsibility of continuing to provide these services to an ever-growing population (Figure 3), municipalities in the Great Lakes-St. Lawrence River Basin have high stakes in the protection of this valuable resource.

FEATURES AND FUNCTIONS OF THE GREAT LAKES

The Great Lakes ...

...has a multitude of stakeholders



2

Canadian Provinces

8

US States

105
million
People

685

Municipalities
in Ontario and Quebec

including...
8 of Canada's
largest cities

...is a Major Drinking Water Source

3 out of 4 Ontarians get drinking water
from the Great Lakes



Public and domestic supply
accounts for



15.2%
Water Use



37.9%
Consumptive
Use

...provides ecological and recreational functions

~18%

of the world's fresh water surface
making it the largest system of
fresh water surface on earth

1.5M

recreational boaters enjoy the
Great Lakes, with a \$350M
recreational fishing industry

1,400

wastewater treatment plants
discharge 18 billion litres
of treated effluent per day

...supports our economy

40%

of Canada's economic activity
is within the Basin

\$180B

in Canada-US trade



Sources: (Ecojustice, 2013; Environment Canada, 2013; International Joint Commission, 2013; Natural Resources Canada, 2013; Ontario Ministry of Municipal Affairs and Housing, 2012a)

Figure 3: Importance of the Great Lakes

Despite collectively being a large user of Great Lakes waters, municipalities did not have direct involvement in the early stages of development of management policies for the Basin. In the case of the 1987 Great Lakes Water Quality Agreement, municipalities became involved in the later stages when remedial action plans required action from local governments (Johns, 2010, p. 69). This raises the question: if Great Lakes-St. Lawrence River Basin resources are important to municipalities and if municipalities are integral in implementing Great Lakes policies, how well are they being integrated into the various intergovernmental processes designed to protect and monitor the Basin? This thesis examines how municipalities are involved in Great Lakes policy development and water resource management and will investigate whether municipalities can be involved differently in the Great Lakes-St. Lawrence River Basin for a more interactive and robust intergovernmental framework in the future.

While the Canadian Constitution assigns authority over municipal institutions to provinces, they have emerged as important actors in environmental and Basin issues by taking action on problems that are seemingly outside their jurisdiction. Ontario municipalities have delegated authority from the Province to directly use and manage the Great Lakes-St. Lawrence River Basin. As a result, they have reason to be engaged in policy development related to the Basin and act as a partner in this intergovernmental framework. As constitutionally subordinate to the province, however, a problem and challenge emerges: how can municipalities be partners with an institution (the provincial or federal government) that has authority over them?

The Canadian Constitution distributes legislative responsibility among the federal and provincial governments (Boyd, 2007, p. 135). Although the federal government has historically controlled cross-boundary, subnational governments have been able to take

action more definitively on issues related to water quantity than on water quality as a result of external threats, economic interests, institutionalization and the state of intergovernmental relations (Johns & Thorn, forthcoming, pp. 13-16). The provinces and states in the Basin have formed agreements that supplement their individual regulatory frameworks to control water takings and protect their interests in the Great Lakes.

Commitments made by the Great Lakes-St. Lawrence River Basin states and provinces in The Great Lakes Charter: Principles for the Management of Great Lakes Water Resources (“1985 Charter”) and 2005 Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement (“2005 Agreement”) set intergovernmental processes in motion within the Basin which require interaction on at least two levels – between local government and state or provincial government as well as among state and provincial governments. Bulk water transfer proposals under the 1985 Charter or 2005 Agreement provide a good example of the multiple interactions between different institutions. Bulk water transfer proposals must meet international requirements set by provincial-state agreements as well as domestic requirements implemented by each province and state to regulate bulk water transfers. Hence, bulk water transfer proposals made under the 1985 Charter and 2005 Agreement provide examples of the inner workings of intergovernmental relations in the Great Lakes-St. Lawrence River Basin and serve as an important illustration of the intergovernmental complexity in the Basin that involves municipal governments. This thesis uses bulk water transfers to explore how municipalities are engaged in Basin management.

The 2005 Agreement requires its signatories to incorporate the bi-national commitments into domestic legislation. Commitments that may have implications to municipalities include banning water transfers out of the Basin with strictly regulated

exceptions, implementing water conservation and efficiency programs, and regulating and managing water takings based on the provisions outlined in the Agreement. The Agreement has implications for Ontario municipalities because they take and treat water to provide drinking water to their residents according to provincial water taking regulations. Changes to the bulk water transfer regulatory regime in Ontario have the potential to affect service delivery models. This effect is illustrated by the bulk water transfer proposal in York Region. York Region is an upper-tier municipality straddling two Great Lakes watersheds and is responsible for treating and providing drinking water to nine lower-tier municipalities, who in turn distribute this drinking water to residents.

Like many municipalities in Ontario, York Region invests in infrastructure according to their long term master planning exercises that determine their preferred service delivery model. Often, municipalities build infrastructure to support and continue long-standing delivery models, which may take many years. Regulatory restrictions that require changes to long-standing delivery models have the potential to put municipalities at a loss with their investments if they have to abandon infrastructure or make changes to projects already underway. To avoid this situation, York Region worked with the Province of Ontario to submit a bulk water transfer proposal for consultation under the 1985 Charter with the other Great Lakes-St. Lawrence River Basin jurisdictions. This case provides a valuable example for studying the intergovernmental relationships involving municipalities within the Great Lakes-St. Lawrence River Basin.

The results of this thesis build on an existing body of knowledge and address a knowledge gap in the body of literature: a gap exists in understanding the constraints and opportunities for involving local governments in intergovernmental decision-making despite evidence that municipalities can influence problems that appear to be global or regional in

scope (Gore, 2010, p. 28). Using the lens of bulk water transfers, the findings in this thesis provide an understanding of intergovernmental relations in the Great Lakes-St. Lawrence River Basin and what role municipalities can play in policy development and resource management. While some municipalities with available resources and political will can be considered principal actors in the Great Lakes-St. Lawrence River Basin, differing priorities among municipalities and limited resources constrain the role municipalities can play as a whole. Further, municipalities want to be treated like a partner by provincial and federal governments and bi-national agreements promote the engagement of municipalities in Basin issues. Yet, municipalities remain regulated and bound by provincial and federal decisions limiting the scope of the partnership.

1.1 Methodology

The research methods for this thesis were triangulated to ensure a robust research design through a literature review, a case study, and key informant interviews.

1.1.1 Literature Review

Peer-reviewed and secondary research was used to identify the municipal context of Great Lakes protection issues and why these issues are important to municipalities. The intergovernmental framework in the Great Lakes-St. Lawrence River Basin is examined using the available body of literature with attention to how it currently allows and invites municipalities to be engaged. A profile detailing the types of Great Lakes protection and management issues that municipalities are concerned with provided an understanding of when and where municipalities should be engaged.

1.1.2 Case Study

A case study of municipal involvement in bulk water transfers was used to illustrate how interactions between governments take place in a Great Lakes policy development and resource management situation involving multiple governmental agencies, including Canadian provincial ministries, US state departments as well as regional and local municipalities. The case study in this thesis involves a regional municipality in Ontario and its application for a bulk water transfer under the 1985 Charter. The case study illustrates the challenge of collaborating to achieve municipal water needs under the bi-national review process and Ontario's regulatory regime. As a method, a case study provides an opportunity to examine connections among variables within the case study in relation to a concept, which can then be incorporated into the research analysis (Palys, 2003, pp. 315-8). This inductive approach involves understanding the case study in its own context and using that analysis to further understand how to build successful intergovernmental relations.

Examining a single case study limits the findings as it provides a very specific viewpoint. Proposals that have been considered under the 1985 Charter were brought forward by the state of Wisconsin (City of New Berlin) in 2009, the state of Michigan (Genessee County Drain Commission) in 2009, the province of Quebec (Town of Thetford Mines) in 2009 and the province of Ontario (The Regional Municipality of York) in 2010. The York Region proposal was selected for the case study because it differs from the other proposals in terms of depth of collaboration within the intergovernmental framework. The York Region proposal was the only one that had to meet the spirit of the 2005 Agreement, resulting in the need for in-depth collaboration between a sub-national government and municipality.

1.1.3 Key Informant Interviews

Eight interviews were conducted with key professional representatives involved in the Great Lakes intergovernmental framework. Four of the key informants provided different municipal perspectives with the remaining four representing an Ontario agency, provincial government and academia. Purposive sampling was employed whereby interviewees were targeted for inclusion in the study based on their knowledge of and experience in intergovernmental relations in Great Lakes issues (Palys, 2003, pp. 142-4). More specifically, interviewees were selected if they were involved in the development of the 2005 Agreement in some capacity. A snowball sampling method (Palys, 2003, pp. 144-5) was also used to identify further potential interviewees based on feedback from successfully recruited interviewees on suggestions of other people that he/she thought would be valuable to communicate with for the purposes of this study. The versatility of the key informant method (Palys, 2003, p. 150) allowed questions more specific to this study, which may not be explicit in the body of literature, to be answered. These questions include those that relate to municipal involvement in Great Lakes protection in practice. Interviewees were asked about their organizations and organizational goals related to the Great Lakes-St. Lawrence River Basin, their professional interactions with other stakeholders, the status of implementation of bi-national commitments and their perceived strengths and challenges of the intergovernmental framework. The interview guide can be found in Appendix A.

With the interviewees' permission, the interviews were recorded and transcribed. The transcriptions were analyzed qualitatively for common themes. The qualitative data were compared and contrasted with concepts found in the body of literature on how the intergovernmental framework in the Great Lakes-St. Lawrence River Basin currently allows and invites municipalities to be engaged and when and where municipalities should be

engaged according to the types of Great Lakes protection and management issues with which municipalities are concerned. Key informants confirmed the importance of the Great Lakes-St. Lawrence River Basin to municipalities and highlighted some of the barriers to municipalities having greater involvement in the Great Lakes-St. Lawrence River Basin and acting as partners in collaborations with the provincial and federal governments.

There are limitations to the findings in this study stemming from the relatively small sample and narrow representation of key informants. Interviewees were targeted based on their experience with bulk water transfers. Over 70 people were identified as potential key informants having direct involvement with the development of bulk water transfer regulations in the Basin. The number of potential key informants was significantly reduced as many people have moved on to other jobs. Twenty people were contacted for interviews with three additional people being recruited at the suggestion of interviewees. Potential interviewees were informed that this thesis focused on implementation at the municipal level, which potentially affected the response rate. As a result, the perspective may be skewed as those who believe municipalities have a role to play in Basin issues or have an interest in advocating for this are more likely to respond than those that do not hold this opinion.

1.2 Contribution of Study

The analysis from this thesis will be of interest to all parties in the intergovernmental framework in the Great Lakes-St. Lawrence River Basin, which includes federal governments, provincial and state governments, and local governments as well as agencies and associations representing these stakeholders. It may provide guidance on how the intergovernmental framework can encourage better input from municipalities in relation to

Great Lakes policy development and resource management initiatives. The findings from this thesis may be of interest to proactive provincial and municipal governments alike to gain an understanding of barriers to collaboration so that they can work towards improving their intergovernmental relations.

Despite the spatial concentration of problems and potential for solutions around urban areas, Canada's approach to urban policy has been described as disjointed and its engagement with municipal problems as lagging, which draws attention to the need to improve areas of intergovernmental interaction (Bradford, 2004, p. 40). Improving intergovernmental relations will help minimize implementation gaps whereby local governments do not fully commit to achieving policy goals with which they do not agree and that were imposed upon them by higher levels of government (Morison & Brown, 2010, p. 212). While municipal objections to provincial policies may be seen as positive in the sense that it forces policy-makers to take a more comprehensive approach, their input can be more valuable if included in earlier stages of policy development.

If municipal collaboration and advocacy is understood comprehensively, the municipal role as well as what municipalities can bring to the table with respect to intergovernmental policy discussions can be identified (Gore, 2010, p. 36). This municipal contribution is especially important for ensuring successful policy implementation. Using the findings from this study, the federal, provincial and state governments may consider engaging municipalities differently in Great Lakes policy and management issues, which may ultimately help municipalities provide services.

From the municipal perspective, the findings from this thesis may provide an understanding of where their limited resources may be best allocated in terms of policy engagement and collaboration with the provincial government to produce policies that are

possible to implement. With respect to municipalities working with the provincial and federal governments who have authority over them, the findings provide an understanding of how and where municipalities are able to act as partners related to water use and protection in the Great Lakes-St. Lawrence River Basin. Potential areas include municipalities recognizing their relationship with the Great Lakes-St. Lawrence River Basin and developing capacity to be engaged. Taking a proactive approach and implementing best practices for collaboration with the provincial and federal governments will ensure their input provides value to Great Lakes-St. Lawrence River Basin policy development and resource management in such a way to protect their best interests involving the servicing they provide to residents.

Over twenty years ago, Caldwell (1994, p. 29) emphasized that knowledge of the deficiencies with the Great Lakes management system was necessary to build a better system and argued that research on institutional arrangements within the Basin was insufficient at the time. The results of this thesis build on an existing body of knowledge that has developed since then as well as addresses a knowledge gap that continues to persist in the body of literature: a gap exists in understanding the constraints and opportunities for involving local governments in intergovernmental decision-making. This knowledge gap exists despite evidence that municipalities can influence problems that appear to be global or regional in scope (Gore, 2010, p. 28). The findings in this thesis provide an understanding of intergovernmental relations in the Great Lakes-St. Lawrence River Basin and what role municipalities can play in Great Lakes policy development and resource management.

Despite a lack of formal recognition of municipalities as a partner in the Great Lakes-St. Lawrence River Basin through bi-national agreements, municipalities should have an interest to actively protect the Basin and act as a partner by engaging in policy development and collaborating with other stakeholders in the Great Lakes-St. Lawrence River Basin to

resolve Basin-wide issues. Overall municipal representation on Basin issues can be more comprehensive in terms of engagement. To this end, municipalities look to the federal and provincial governments to provide overarching coordination of municipalities, to engage them, and to help them work collectively to address Basin-wide issues. As a result of the Canadian Constitution, however, municipalities ultimately remain a subordinate within the provincial-municipal framework. Thus, the paradox of municipalities as partners and leaders was revealed – they can engage collaboratively, but the outcomes of those collaborations ultimately sit with the province. Further research is required to investigate how municipalities can overcome being seen as subjects who need to be regulated and truly emerge as a partner in the Great Lakes-St. Lawrence River Basin.

1.3 Outline

The thesis proceeds in the following manner: Chapter 2 provides information and context about how municipal governments are engaged in Great Lakes management. While provincial involvement in the management of Great Lakes issues has increased since the 1970s, municipalities have only recently become more involved and are only beginning to be more formally recognized in the development of policy agreements. Although municipalities are not officially recognized as an order of government in Canada, Ontario municipalities have delegated authority from the Province to directly use and manage the Great Lakes. These delegated authorities include the provision of drinking water which is affected by the regulation of bulk water transfers.

Chapter 3 outlines the intergovernmental framework for bulk water transfer in the Great Lakes-St. Lawrence River Basin. The chapter highlights the opportunities municipalities have to play in situations when bulk water transfers are being negotiated. Bi-

national commitments made in relation to bulk water transfers are implemented through domestic legislation, forcing municipalities to be involved as a subordinate to the Province but also allowing them to be involved as a partner.

Chapter 4 presents the York Region case study with an in-depth analysis of the opportunity municipalities have within this framework. The chapter entails a discussion about whether provincial-municipal relations in the Great Lakes-St. Lawrence River Basin hinder or facilitate effective implementation of bi-national commitments, how well bi-national commitments have been integrated into domestic regulations and processes and whether the role municipalities have had in this process should change. Findings and recommendations from this analysis are summarized in Chapter 5.

Chapter 2: Municipalities and the Great Lakes

Despite collectively being a large user of Great Lakes waters, municipalities did not have direct involvement in the early stages of development of management policies such as the 1972 Great Lakes Water Quality Agreement; instead, municipalities became involved in later stages when remedial action plans under the re-negotiated agreement in 1987 required action from local governments (Johns, 2010, p. 69). Municipal involvement in policy development can help inform which policy options would most likely be successful in achieving desired objectives. Bradford (2004, p. 42) argues that one-size-fits all policy approaches for municipal governments must be replaced with a policy lens that is sensitive to diverse needs and capacities of the variety of municipalities. Those approaches that are sensitive to local needs and that encompass sector best practices are more conducive to buy-in for policies and subsequent implementation. Buy-in provides momentum for best practices to be implemented.

Municipalities can learn best practices from each other in light of the fact that there is no single solution to any policy problem (Chenier, 2009, p. 413). Case in point, Lake's analysis (1994) of waste management policies in the US illustrated that policy options available to local governments are limited by both centralized and decentralized policy making regimes. The author puts forward a solution to this predicament that begins with recognition of constraints followed by greater intergovernmental coordination to expand local policy options. By this analysis, municipal constraints should be acknowledged before developing or promoting a municipal role within the Great Lakes intergovernmental framework.

The role of municipalities has evolved over time and their emergence as a partner requires a change in provincial direction. Further, there is a cascading effect of increased municipal responsibility as subnational governments become more involved in Great Lakes issues. This effect is more prominent in the case of water quantity issues than water quality issues as external threats, economic interests, institutionalization and the state of intergovernmental relations have led the provinces and states to take action in protecting the Great Lakes-St. Lawrence River Basin (Johns & Thorn, forthcoming, pp. 13-16).

This chapter explains how the Canadian constitution, which provides the provinces with control over municipal institutions, creates a two-fold effect in the Great Lakes-St. Lawrence River Basin: municipalities are expected to both play a lead role in Basin issues and require water in the Basin but are also beholden to provincial and bi-national processes and rules. This chapter also provides a profile of municipalities and their interest in Great Lakes issues for an understanding of what municipalities are concerned with as it relates to Great Lakes policy development and resource management.

2.1 Municipalities within the Canadian Government Structure

The federal and provincial orders of Canadian government are established by the *Constitution Act, 1982*. Sections 91 and 92 of the Constitution distribute legislative responsibility among the federal and provincial governments (Boyd, 2007, p. 135). While section 91 lists the areas in which the federal government has jurisdiction, section 92 lists the areas that fall under provincial jurisdiction. 'Classes of Subject' for which provinces may make laws include 'Municipal Institutions in the Province' (Sancton, 2006, p. 307). Section 92 also lists "Local Works and Undertakings" with the exception of those related to

responsibilities that would fall under federal jurisdiction such as navigable waters. Further, section 92A, which took effect in 1982, delineates the legislative authority of the federal and provincial governments in relation to natural resources. Termed the resource amendment, this section gives the provinces enhanced powers related to resource production into extra-provincial markets and taxation for non-renewable natural resources, forestry resources and electrical energy (Cairns, Chandle, & Moull, 1985, p. 266).

As a result of the constitutional power the provincial government has over municipalities, municipalities in Canada have been seen as ‘creatures of the province’ (Magnusson, 2005, pp. 7-8; Gore, 2010, p. 31). According to this view, municipalities are often understood as subordinates to subnational governments and, as a result, are controlled by subnational law in all matters such as municipal boundaries, services and fiscal autonomy (Magnusson, 2005, pp. 21-2). This view leaves very little flexibility for municipalities to function independently from the provinces.

Incorporation of a municipality through provincial legislation gives it legal personality, a precisely defined geographic area, a mechanism to make legally enforceable decisions, and a list of areas within its jurisdiction (Sancton, 2006, p. 307). Canadian municipalities have been assigned the functions of fire protection, local roads, waste management, water and wastewater systems, land taxes and land use regulation by their respective province in nearly all cases (Sancton, 2006, p. 308). These assigned functions have resulted in the political perception that local governments are responsible for regulating, servicing and taxing our built environment and other functions are considered unnecessary (Sancton, 2006, p. 308). With these types of delegated responsibilities, it is within Canadian municipalities’ mandate to only deal with local matters related to the built environment. However, the municipal role has evolved over time as a result of their change in structure.

Provincial legislation that delegates them responsibilities has been departing from express authority and moving toward spheres of jurisdiction: while responsibilities were explicitly delegated and narrowly defined with express authority, spheres of jurisdiction represent areas of responsibilities that municipalities would oversee. Although provincial legislative frameworks still restrict municipalities in many senses, municipalities have reason to do more than their delegated responsibilities and are doing more.

2.1.1 Municipalities in Ontario

Significant changes to municipal structures were made in the mid-1960s until the late 1970s as upper-tier municipalities were introduced in Ontario, British Columbia and Quebec and lower-tier municipalities were merged in Ontario in the late 1990s (Sancton, 2006, p. 316). The changes were made with the objectives of providing local political authority to plan future development, achieving cost efficiencies, and increasing equity among municipalities (Sancton, 2006, p. 316). The two-tier system aims to maximize resources through economies of scale while providing tailored municipal services. For example, historically, upper-tier counties in rural parts of Ontario and Quebec were responsible for building and maintaining major roads among other inter-municipal services while the lower tier had jurisdiction over more local matters such as local streets and recreational services (Sancton, 2002, p. 58). The traditional view that urban and rural needs in land use regulation and local services differ fundamentally, and require municipal division to reflect this, is evident with Ontario's remaining two-tier regional governments (Sancton, 2002, p. 65). The control the provinces have over the structure of municipalities is evident in the change municipalities have experienced across Canada over time.

The platform of the Harris government in the 1990s, coined the *Common Sense Revolution*, sought to reduce government and the overlap between upper-tier and lower-tier governments, which materialized in the form of Bill 26 (Sancton, 2000, p. 138). As a result of the passage of Bill 26, the number of municipal bodies in Ontario was reduced from 815 by 229 to 586 municipalities in 1996 (Sancton, 2000, pp. 140-1). Single-tier municipalities were created in a number of areas including Toronto, Ottawa and Hamilton. As a result of these changes, urban municipalities in Ontario are no longer governed by two-tier systems with the exception of Waterloo, Niagara, Halton, Peel, York and Durham Regions (Sancton, 2009, p. 4). Since the 1990s, the number of municipalities has been further reduced to 444; a series of maps produced by the Ontario Ministry of Municipal Affairs and Housing that illustrate the magnitude of this change can be found in Appendix B. This shift was accompanied by a gradual transfer of responsibilities from special-purpose bodies to municipalities (Siegel, 2009, p. 29). As listed by the Ontario Ministry of Municipal Affairs and Housing (2013a), of the 444 municipal bodies that currently exist, 241 are single-tier and 30 are upper-tier encompassing 173 lower-tier municipalities (see Appendix C for list). Although the Province of Ontario has exerted its power over municipalities by influencing its restructuring, provincial legislation that delegates them responsibilities has appeared to somewhat loosen the controls over what municipalities are responsible for and how these responsibilities are fulfilled.

2.1.2 Ontario's legislative framework for municipalities

In Ontario, legislation was introduced with the intention of departing from the notion that all municipal powers were only granted with express authority (Siegel, 2009, p. 31). The *Municipal Act, 2001*, which took effect on January 1, 2003, identified spheres of municipal

jurisdiction for municipalities in Ontario. Section 11 of the *Municipal Act, 2001* lists the spheres of jurisdiction for municipalities. Rules set out in subsection 11(4) of the Act limit and delineate the powers to pass bylaws between upper- and lower-tier municipalities. In addition to providing “any service or thing that the municipality considers necessary or desirable for the public” per subsection 11(1), municipalities may pass bylaws within the following spheres of jurisdiction listed in subsection 11(3):

1. Highways, including parking and traffic on highways.
2. Transportation systems, other than highways.
3. Waste management.
4. Public utilities.
5. Culture, parks, recreation and heritage.
6. Drainage and flood control, except storm sewers.
7. Structures, including fences and signs.
8. Parking, except on highways.
9. Animals.
10. Economic development services.
11. Business licensing.

Although legislation such as Ontario’s *Municipal Act, 2001* attempts to provide necessary authority to municipalities to provide services that their residents require, provincial legislative frameworks, program policies and financial decisions restrict municipalities greatly in Canada (Stevenson & Gilbert, 2005, p. 530). For example, Ontario mandates almost 40 percent of municipal spending but only contributes approximately 20 percent to municipal budgets (Hanna & Walton-Roberts, 2004, p. 59). These constraints leave municipal governments with limited fiscal autonomy and little real power to fix their economic problems (Slack & Bird, 2008, p. 73). Additionally, downloading of various services from provincial governments to municipal governments transfers delivery and funding responsibility but is backed by very little support (Hanna & Walton-Roberts, 2004, p. 47). Slack & Bird (2008, p. 75) warn that the limited and relatively inelastic revenue base is eroding Canada’s foundation for urban prosperity, which has potentially detrimental

implications for its national well-being. Despite a restrictive provincial legislative framework, municipalities are working towards betterment in their communities.

2.1.3 The evolving role of municipalities

The evolving body of knowledge on municipalities shows that there are several reasons to move away from the traditional view of municipalities that they are just creatures of the province to be controlled by provincial law. Not only do municipalities exemplify the right to local self-government, one of the major principles of a free and democratic society (Magnusson, 2005, p. 6), they act as an order of government (Stevenson & Gilbert, 2005, p. 544). Municipalities are directly affected by non-local issues and have demonstrated and realized tangible benefits from taking local actions that produce benefits locally and globally. Municipal climate change actions are perhaps the best example of this in Canada (Gore, 2010; Gore & Robinson, 2009; Robinson & Gore, 2005). Furthermore, the literature recognizes that local communities have the necessary knowledge to solve local problems.

Municipal governments are often expected to be policy-takers, not policy-makers with respect to problems considered non-local (Gore, 2010, p. 30). However, as Pralle (2006, pp. 172-3) illustrates with Canadian pesticide politics, issue definition is important to how issues are discussed, understood and considered. This case exemplifies the ability for municipalities to challenge policy principles, which are core values, beliefs, or guidelines used in decision making (Pralle, 2006, p. 172) and to successfully play a role in redefining policy in Canada. A redefinition of problems can highlight the potential for seemingly non-local issues to have real local implications.

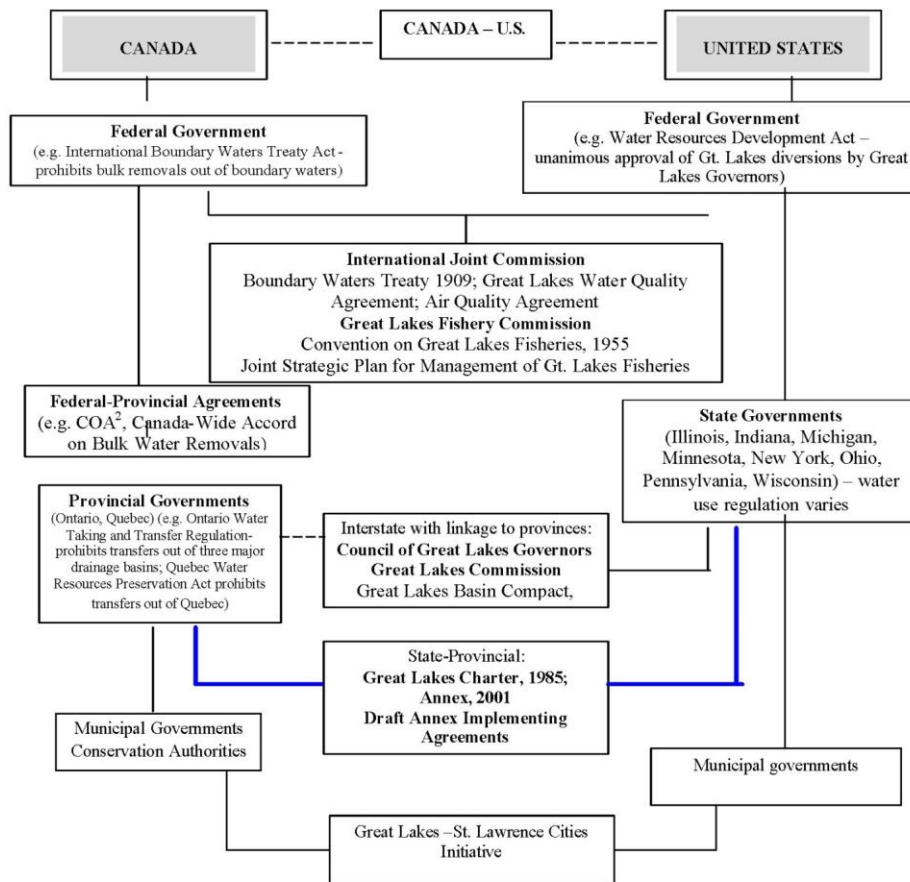
Local governments are taking action despite a lack of provincial or federal directives in several areas including climate change (Gore, 2010), control of pesticides use (Pralle,

2006), stormwater management planning (Morison & Brown, 2010), and food policy (Mendes, 2008). While the rationale behind these actions varies, overall, municipalities realize that there are tangible benefits to taking action locally that produce local and non-local benefits (Gore, 2010, pp. 34-5). These benefits can be more readily realized as major public problems tend to concentrate spatially around urban areas and the knowledge and networks critical to solving them also reside in local communities (Bradford, 2004, p. 44). The increasingly complex problems of urban life also require new revenue sources and more authority for municipalities (Sancton, 2006, p. 319). However, Ontario is challenged shifting from a one-size-fits-all policy directive to a more flexible partnership (Siegel, 2009, pp. 21-2). This shift requires the Province to move away their historical practice of exerting control and treating municipalities all the same.

2.2 Intergovernmental Framework within the Great Lakes-St. Lawrence River Basin

Interactions with respect to the Great Lakes have evolved over time from being exclusively at the federal level with the 1909 Boundary Waters Treaty and 1972 Great Lakes Water Quality Agreement to including provinces and states with the 1985 Great Lakes Charter and eventually involving municipalities in implementation of the 1987 Great Lakes Water Quality Agreement. The multi-jurisdictional situation of the Great Lakes-St. Lawrence River Basin has resulted in numerous agreements between the two nations as well as between the ten subnational government bodies. These agreements have created an intergovernmental framework involving all levels of government on both sides of the border (see Figure 4).

GREAT LAKES-ST. LAWRENCE RIVER BASIN INTERGOVERNMENTAL FRAMEWORK



¹ Adapted from "Pathways to Sustainability: Assessing our Progress" National Round Table on the Environment and the Economy, 1995

² Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem

Source: (Ontario Ministry of Natural Resources, 2005a)

Figure 4: Great Lakes-St. Lawrence River Basin Intergovernmental Framework

Interactions between the US and Canada in the Great Lakes-St. Lawrence River Basin can be attributed to the various agreements included in Figure 4. Although municipalities are not directly involved in negotiating or signing these agreements, those agreements that regulate water takings and diversions affect them directly because of the necessity of this resource to carry out their responsibility over public utilities. Water taking and diversion proposals must first meet domestic requirements and then international requirements or in

some respect, both. This requirement necessitates municipalities' involvement in the intergovernmental framework in the Great Lakes-St. Lawrence River Basin.

Various types of water taking and diversion issues are managed by the International Boundary Waters Treaty, The Great Lakes Charter: Principles for the Management of Great Lakes Water Resources ("1985 Charter"), and the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement ("2005 Agreement"). The main features of these agreements are highlighted in Table 1. The interaction prescribed by each bi-national agreement varies in engagement from only requiring notification to other signatories of the agreement to full review and decision by a body established by the agreement. These interactions are described in further detail in the following sections.

**TABLE 1: MULTIJURISDICTIONAL AGREEMENTS RELATED TO WATER QUANTITY
IN THE GREAT LAKES-ST. LAWRENCE RIVER BASIN**

Agreement	Signatory	What It Regulates	Intergovernmental Interaction
Boundary Waters Treaty (1909)	Federal Governments	Uses, obstructions or diversions in shared boundary waters	Federal government submits an application to the International Joint Commission for an Order of Approval
The Great Lakes Charter (1985)	Provincial / State Governments	Diversions or consumptive uses greater than 19 million litres per day	Provincial/state government initiates Prior Notice and Consultation with other signatories
Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement (2005)	Provincial / State Governments	Diversions greater than 379,000 litres per day or consumptive uses greater than 19 million litres per day	Regional Body Review (Exception Standard)

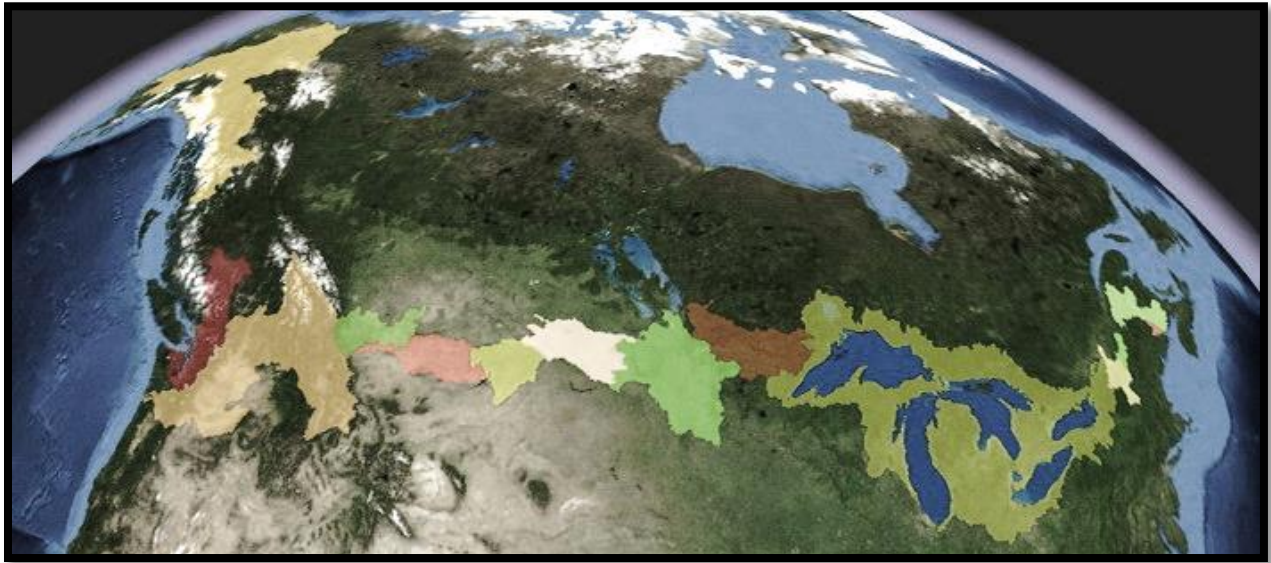
2.2.1 The bi-national relationship

The Boundary Waters Treaty is a bi-national agreement signed in 1909 by the federal governments in both countries. This Treaty was the result of an increasing need at the time for a permanent bi-national institution to investigate and report on issues related to the use of boundary and transboundary waters between Canada and the United States (Botts &

Muldoon, 2005, p. 9). While the use of boundary and transboundary waters formalized the interactions between the US and Canadian governments, the need to regulate water shared by the two countries would evolve from large scale water uses to smaller but numerous proposals requiring involvement from subnational governments.

The main focus of the original treaty was to manage diversions in shared boundary waters along the entire length of the United States/Canada border, which includes the Great Lakes (Heinmiller, 2007, p. 658). Boundary waters are defined as those water bodies the border runs through, providing the federal governments jurisdiction in their management as a result of their constitutional power over international relations (Heinmiller, 2007, p. 658). The basins which are governed by the Boundary Waters Treaty are illustrated in Figure 5; from top left to right: Alaska-Yukon Rivers; Fraser River; Columbia River; St. Mary and Milk Rivers; Poplar and Big Muddy Rivers; Souris River; Red River; Lake of the Woods and Rainy River; Great Lakes-St. Lawrence River; Lake Champlain and Richelieu River; St. John River; and St. Croix River. The Boundary Waters Treaty does not regulate non-boundary water diversions.

BOUNDARY WATERS TREATY BASINS

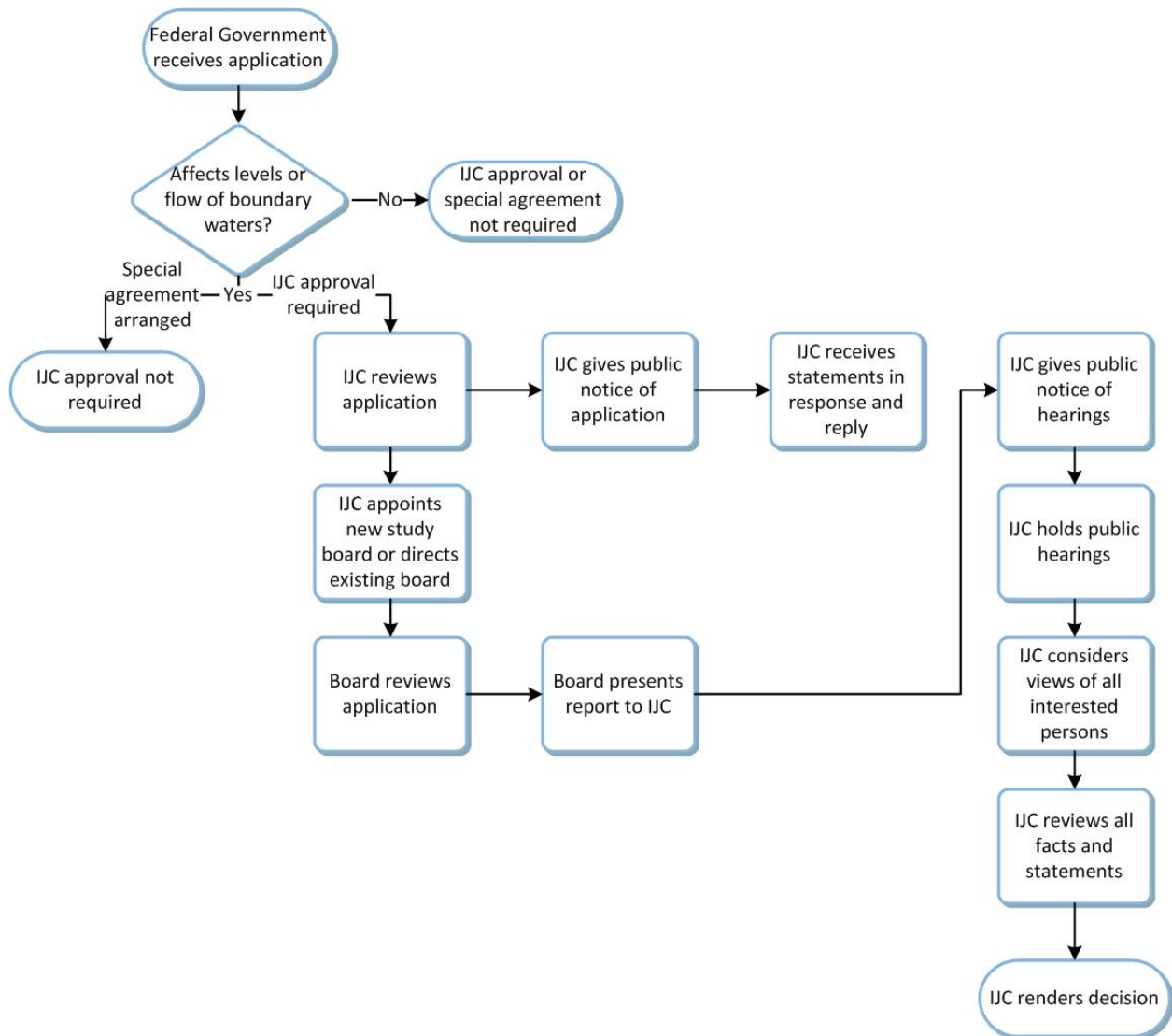


Source: (International Joint Commission, 2014)

Figure 5: Basins Governed by the Boundary Waters Treaty

The Treaty formed the International Joint Commission which is comprised of three representatives from Canada appointed by the Governor in Council with advice from the Prime Minister and three representatives from the United States appointed by the President with approval from the Senate (International Joint Commission, 2012, p. 5). When requested by the Canadian and US governments through a 'reference', the International Joint Commission investigates and makes recommendations on how the governments should act to address a particular problem (Botts & Muldoon, 2005, p. 10). The International Joint Commission also acts as a quasi-judicial body making decisions, in addition to relevant domestic approvals, on what can be built or undertaken in boundary waters that will affect the water level or flow on the other side of the international boundary (International Joint Commission, 2012, pp. 2-3). Figure 6 illustrates the process for an application submitted to the International Joint Commission under the Boundary Waters Treaty.

APPLICATION PROCESS UNDER THE 1909 BOUNDARY WATERS TREATY



Source: (International Joint Commission, 2012)

**Figure 6: Process Flow Chart of
Application Process under the 1909 Boundary Waters Treaty**

History of water diversions

Diversions that have been contemplated and approved in the Great Lakes-St. Lawrence River Basin are numerous with four in the United States predating the 1909 Boundary Waters Treaty, as shown in Table 2. Major diversion projects in Canada began in the early 1900s but are larger in cumulative volume than that in the US (Laserra, 2007, p.

143). Twelve diversions have been considered for hydroelectricity and navigation purposes since the introduction of the Boundary Waters Treaty in 1909, nine of which were approved and three deferred (Heinmiller, 2007, p. 662). As the federal government on either side of the border vets proposals prior to submitting them for consideration under the Boundary Waters Treaty, a proposed diversion for boundary waters has not been brought forward since 1976 (Heinmiller, 2007, pp. 665-6). It has been argued that it is the federal governments' preference for arranging special agreements that bypass the International Joint Commission process for proposals that only involve water quantity issues (Flaherty, Pachecco-Vega, & Isaac-Renton, 2011, p. 931).

TABLE 2: WATER DIVERSIONS IN THE GREAT LAKES-ST. LAWRENCE RIVER BASIN

Location [Year]	Proposal	Purpose	Status
Forestport, New York [1825]	Inter-basin out of Lake Ontario watershed	Navigation	Approved by New York State Legislature
Welland Canal [1829/1913/1932]	Intra-basin transfer from Lake Erie watershed to create navigable waterway	Navigation	Approved by Upper Canada Legislature
Chicago, Illinois [1848/1900]	Inter-basin out of Lake Michigan watershed (Chicago Diversion)	Navigation, wastewater, irrigation	Approved by US Supreme Court
Portage Canal, Wisconsin [1860]	Inter-basin into Lake Michigan watershed	Navigation	Approved by US Department of Army
St. Mary's River [1914]	Diversion from Lake Superior watershed (St. Mary's River Dam)	Hydropower	Approved under BWT
New York State Barge Canal [1918]	Intra-basin from Lake Erie watershed to Lake Ontario watershed (Erie Canal)	Navigation	Approved by New York State Legislature
Massena, New York [1918]	Submerged weir by St. Lawrence Power Company	Hydropower	Approved under BWT
Richelieu River, Quebec [1937]	Diversion from St. Lawrence River watershed for Richelieu River Remedial Works	Flood control	Approved under BWT
Long Lac, Ontario [1939]	Inter-basin into Lake Superior	Hydropower	Approved under BWT
Ogoki, Ontario [1943]	Inter-basin into Lake Superior	Hydropower	Approved under BWT

Location [Year]	Proposal	Purpose	Status
Niagara Falls, Ontario/New York [1950]	Intra-basin from Niagara River by New York State Power Authority and Ontario Power Generation	Hydropower	Approved under BWT/Niagara Treaty
St. Lawrence River [1952]	Moses-Saunders Dam	Hydropower	Approved under BWT
Niagara Falls, New York [1961]	Hepco and Pansy Remedial Works	Remedial works	Approved under BWT
London, Ontario [1967]	Intra-basin from Lake Huron watershed	Drinking water	Approved by Province of Ontario
Raisin River, Ontario [1968]	Intra-basin from St. Lawrence River watershed by Raisin River Conservation Authority	Remedial works	Approved under BWT
Detroit, Michigan [1975]	Intra-basin from Lake Huron watershed	Drinking water	Approved by State of Michigan
St. Lawrence River [1975]	Toussaint Causeway	Navigation	Approved under BWT
Pleasant Prairie, Wisconsin [1990]	Inter-basin out from Lake Michigan watershed	Drinking water	Approved under GLC
Michigan [1993]	Mud Creek Irrigation Project	Irrigation	Approved under GLC
Haldimand, Ontario [1997]	Intra-basin from Lake Ontario to Lake Erie watershed	Drinking water	Approved by Province of Ontario
Akron, Ohio [1998]	Inter-basin out from and into Lake Erie watershed	Drinking water	Approved under US law
New Berlin, Wisconsin [2009]	Diversion out of Lake Michigan watershed by City of New Berlin	Drinking water	Approved under GLC
Genesee County, Michigan [2009]	Consumptive Use from Lake Huron watershed by Genesee County Drain Commission	Drinking water	Approved under GLC
Thetford Mines, Quebec [2009]	Diversion with Consumptive Use into Lake Ontario by Town of Thetford Mines	Drinking water	Approved under GLC
York Region, Ontario [2010]	Intra-basin from Lake Ontario watershed to Lake Huron watershed by The Regional Municipality of York	Drinking water	Approved under GLC

Source: From several sources compiled by author.

While water takings and diversions have historically been larger and were proposed for hydroelectricity and navigation purposes, the characteristics of water takings and diversions have evolved. The 1909 Boundary Waters Treaty provided a mechanism for each federal government to protect their waters from being effected by activities taking place on

the other side of the border. Bi-national commitments were previously made in fear of large bulk water takings and diversions, the spotlight on where controls were needed shifted to smaller ones such as those proposed for drinking water, which gradually became more prominent (Laserre, 2007, pp. 156-7). Because issues such as the provision of drinking water were considered local matters under their jurisdiction, this change also raised the profile of subnational governments within the intergovernmental framework.

2.2.2 The subnational arena

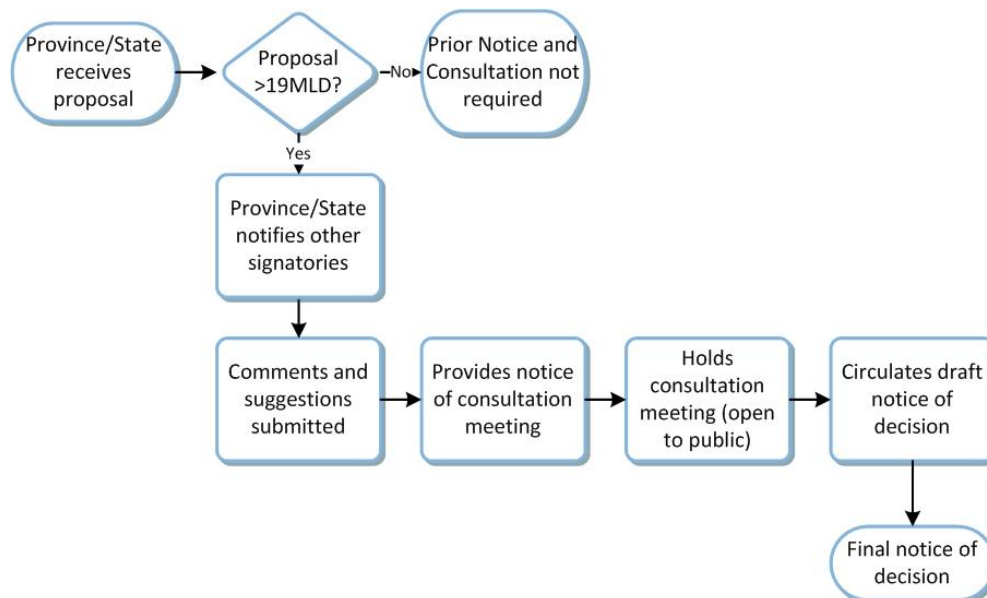
The Canadian federal government has jurisdiction over boundary waters because their constitutional responsibility is over international relations. The provinces have control over waters that are considered non-boundary, such as diversions within the Great Lakes-St. Lawrence River Basin. Until the early 1980s, before development of the 1985 Charter, the provinces and states relied on litigation and federal intervention to manage diversion issues in the Great Lakes Basin (Heinmiller, 2007, p. 659). Johns and Thorn (forthcoming, pp. 13-6) explain why subnational engagement varies in the Great Lakes-St. Lawrence River Basin in water quantity versus water quality and how they have been able to take action more definitively on water quantity. Protecting their economic interests related to riparian access to the Great Lakes has been a primary motivator for subnational jurisdictions in the Basin to develop agreements to counteract external threats while no equivalent threat has developed for water quality. Further, both the Canadian and US Constitutions provide for subnational participation in water quantity issues as granted by natural resource sections but are not as explicit for water quality issues. The final factor in explaining how subnational governments have advanced water quantity management further is that the state of intergovernmental

relations allowed them to, meaning there was willingness from the federal governments to allow subnational governments to lead on these issues.

As a result of this capacity development in subnational governments and concerns about proposals to divert large quantities of water out of the Basin, the 1985 Charter was signed by all ten Great Lakes states and provinces (Heinmiller, 2007, p. 660). Having a signed agreement formalized the provincial-state level relationship within the Great Lakes-St. Lawrence River Basin intergovernmental framework.

The 1985 Charter requires a province or state to provide “Prior Notice and Consultation” with the other states or provinces before allowing a diversion or consumptive use of water within their jurisdiction that is greater than 19 million litres per day. This process under the 1985 Charter has been characterized as mainly an exercise to exchange information in an effort to alert the other signatories of a project (Heinmiller, 2007, p. 668). Figure 7 illustrates the Prior Notice and Consultation process under the 1985 Charter. The permitting jurisdiction of a proposed diversion under the 1985 Charter is responsible for initiating the Prior Notice and Consultation process to allow other jurisdictions at the state and provincial level within the Basin to comment and object to the proposal. However, the permitting jurisdiction would make the final decision.

PRIOR NOTICE AND CONSULTATION PROCESS UNDER THE 1985 GREAT LAKES CHARTER



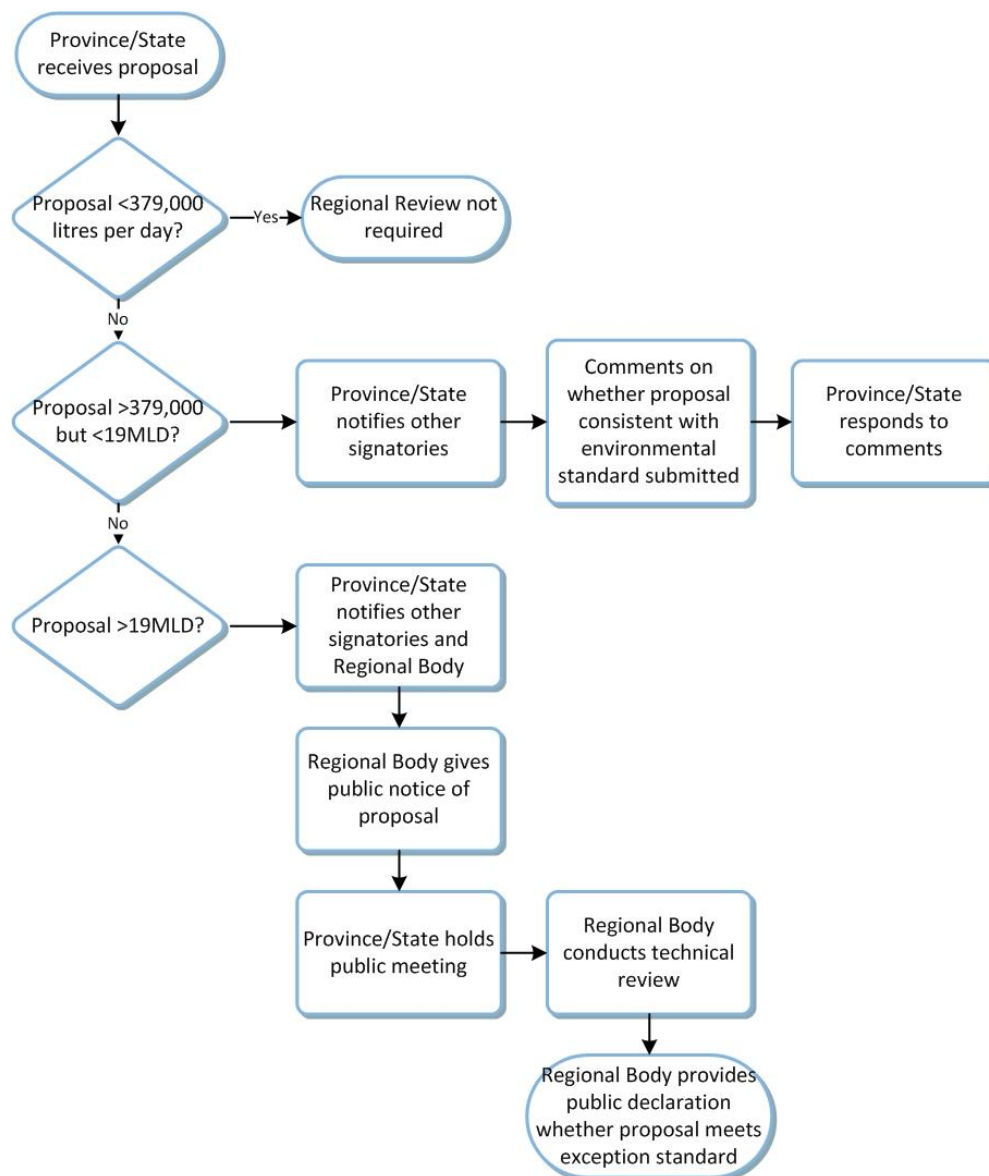
Source: (Ontario Ministry of Natural Resources, 2005b)

**Figure 7: Process Flow Chart of
Prior Notice and Consultation Process under the 1985 Great Lakes Charter**

An increase in capacity within subnational governments to develop policies related to Great Lakes-related subject matters, such as water quantity issues and transboundary policy efforts, led to the development and signing of the Annex to the 1985 Charter by the US states and Canadian provinces in 2001 (Johns, 2010, p. 69). The Annex was also prompted by great opposition to a water taking permit issued in 1998 to the Nova Group Inc. – an Ontario company that was proposing to ship Great Lakes water in bulk overseas (Environmental Commissioner of Ontario, 2005, p. 65). The Annex resulted in the signing of the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement in 2005. A compact mirroring the 2005 Agreement was signed at the same time in the US to strengthen cooperation among the states. The compact did not include the Canadian provinces as the US Constitution limits the inclusion of foreign parties in compacts (Johns & Thorn, forthcoming, p. 10).

The 2005 Agreement was signed on December 13, 2005 by the eight US states and two Canadian provinces in the Great Lakes-St. Lawrence River Basin. The 2005 Agreement prohibits water takings and transfers above a specified threshold unless it meets an exception standard as decided in a “joint, consensus-based review ” (Ontario Ministry of Natural Resources, 2005a, p. 2) by the Regional Body that is created by the Agreement (Figure 8). However, until all signatories implemented commitments made in the 2005 Agreement through domestic legislation, the 1985 Charter remained in effect. Ontario was the last signatory to proclaim implementing legislation and regulations, which occurred in January 2015 (see Chapter 3).

REGIONAL REVIEW
UNDER THE 2005 GREAT LAKES-ST. LAWRENCE RIVER BASIN SUSTAINABLE WATER RESOURCES
AGREEMENT



Source: (Ontario Ministry of Natural Resources, 2005b)

Figure 8: Process Flow Chart of Regional Review under the 2005 Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement

The 2005 Agreement set out to strengthen protection of the Great Lakes by banning diversions to the entire Great Lakes-St. Lawrence River Basin, extending the scope to include all basin waters and considering cumulative impacts of smaller scale diversions

(Ontario Ministry of Natural Resources, 2005a, p. 1). With the additional requirement to implement commitments made in the 2005 Agreement through domestic legislation and regulation (Ontario Ministry of Natural Resources, 2005a, p. 2), the US states and Canadian provinces recognized the need to regulate diversions that were different from those usually considered historically.

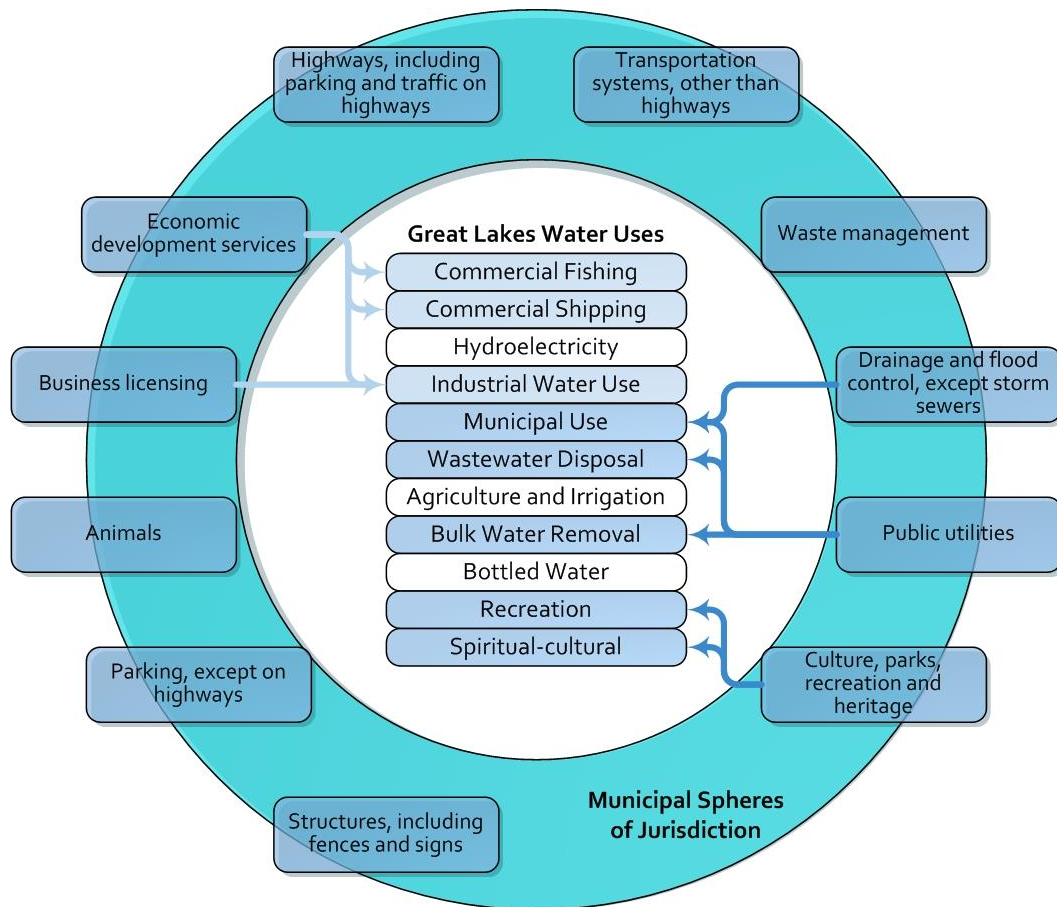
More direct involvement of subnational governments in policy development, such as the 2005 Agreement, resulted in a more comprehensive regulatory framework in the Great Lakes-St. Lawrence River Basin. Prior to agreements at the subnational level such as the 1985 Charter and the 2005 Agreement, a proposed diversion would be assessed individually on whether it will have an impact on waters on the other side of the border under the 1909 Boundary Waters Treaty. With the 2005 Agreement, impacts of proposals which may be smaller in scale and therefore may not impact levels and flows would need to be assessed in a cumulative manner (Ontario Ministry of Natural Resources, 2005a, p. 1). In addition to assessing cumulative impacts, the Great Lakes states and provinces introduced an environmental standard to which all exceptions to the ban on diversions must meet or exceed along with stronger conservation and science (Ontario Ministry of Natural Resources, 2005a, p. 2). Not only did the regulatory framework in the Great Lakes-St. Lawrence River Basin become more comprehensive, the subnational governments gave these commitments more teeth than previously seen in good-faith agreements, which resulted in policy failure such as the Nova Group incident in 1998.

Unlike previous agreements that were made in good faith such as the 1985 Charter, the subnational signatories were required to integrate requirements into domestic law. This integration of bi-national commitments into domestic laws has a cascading effect, especially on local governments in Canada, which are heavily regulated by the provinces.

2.2.3 The local perspective

With large urban areas within the Great Lakes-St. Lawrence River Basin and so many uses that support the economic vitality of municipalities, municipalities have high stakes in the protection of this valuable resource. Despite the spatial concentration of problems and potential for solutions around urban areas, Canada's approach to urban policy has been described as disjointed and its engagement with municipal problems as lagging, which draws attention to the need to improve this area of intergovernmental interaction (Bradford, 2004, pp. 40-41). Improving intergovernmental relations will help minimize implementation gaps whereby local governments do not fully commit to achieving policy goals that were imposed onto them by higher levels of government (Morison & Brown, 2010, p. 212). Given their spheres of jurisdiction, Ontario municipalities have reason to be interested in policies related to the use of the Great Lakes. Figure 9 illustrates the connections between municipal spheres of jurisdiction and water uses in the Great Lakes.

CONNECTIONS BETWEEN MUNICIPAL SPHERES OF JURISDICTION AND WATER USES IN CANADA



Sources: (Johns, Sproule-Jones, & Heinmiller, 2008)
& *Municipal Act, 2001, s.11*

Figure 9: Diagram of Municipal Spheres of Jurisdiction and Water Uses in Canada

The municipal spheres of jurisdiction granted by the *Municipal Act, 2001* are listed on the outer circle of Figure 9. Direct connections to water uses (listed in the centre of the circle) are represented with darker lines while indirect connections are shown with lighter lines. For example, the use of the Great Lakes for recreational purposes has a direct connection with the municipal sphere of jurisdiction of culture, parks, recreation and heritage. As an example of indirect connection, municipalities may have an interest in water uses such as commercial fishing and shipping as these activities may contribute to local economic development.

Formal agreements essentially ignore the importance of local governments and establish the governing structures in the Great Lakes-St. Lawrence River Basin to include only the federal, provincial and state governments although local governments are at the centre of many Great Lakes issues (Valiante, 2007, p. 1062). The negotiation of the Great Lakes Water Quality Agreement is a case in point. While municipalities were not directly involved in the Agreement's development, they were needed to carry out the local work required to implement its commitments (Johns, 2010, p. 69). This arrangement introduced municipalities directly into the Great Lakes-St. Lawrence River Basin intergovernmental framework. The municipal role was further recognized in section 1 of Article 4 of the Great Lakes Water Quality Agreement re-negotiated in 2012, which explicitly states that parties will work with municipalities to develop and implement programs related to the Agreement. The 2012 Great Lakes Water Quality Agreement also established a Great Lakes Executive Committee that includes municipal representation (Johns & Thorn, forthcoming, p. 9).

In general, municipal governments in Canada have emerged as a partner in intergovernmental collaboration (Sancton, 2009, p. 18). Within the Great Lakes context, the formation of the Great Lakes and St. Lawrence Cities Initiative in 2003 signaled the growing engagement of local governments (Johns, 2010, p. 69). Commitments made by the Great Lakes states and provinces in the 1985 Charter and 2005 Agreement provide an opportunity to examine how municipalities are involved within the Great Lakes intergovernmental framework in practice. The commitments prompt intergovernmental processes which require interaction on at least two levels – between local government and state or provincial government as well as among state and provincial governments. Because proposals must first or simultaneously meet domestic requirements and then international requirements, proposals made under the 1985 Charter and 2005 Agreement provide case

studies of the inner workings of intergovernmental relations in the Great Lakes-St. Lawrence River Basin, particularly through the lens of water diversion approvals.

2.3 The Municipal Role in the Great Lakes-St. Lawrence River Basin

The role of municipalities has evolved over time and their emergence as a partner requires a change in provincial direction. This change would require moving away the historical position provided by the Canadian Constitution whereby municipalities are merely subordinates to the provinces. Ontario started in this direction by delegating spheres of jurisdiction to municipalities through the *Municipal Act, 2001*. Municipal responsibility has developed further as the Province of Ontario has become more involved in Great Lakes issues. The increase in provincial involvement in the management of Great Lakes issues is evidenced by subnational agreements signed by the two Canadian provinces and eight US states in the Great Lakes-St. Lawrence River Basin. Unlike good faith agreements such as the 1985 Charter, the 2005 Agreement included a requirement to integrate bi-national commitments into domestic laws. Because local governments are heavily regulated by the provinces in Canada, this integration has implications for municipalities.

Ontario municipalities are delegated authority from the Province to directly use and manage the Great Lakes but have only recently become more involved and are only beginning to be more formally recognized in development of policy agreements. Municipalities should have an interest in protecting the Great Lakes-St. Lawrence River Basin as it serves as a necessary resource to provide services to their residents. This is especially true in the provision of drinking water. If the Great Lakes are important to municipalities and they have reason to do more, what role might they have in the

intergovernmental framework within the Great Lakes-St. Lawrence River Basin? The next chapter will describe how the regulation of bulk water transfers has a direct relation to providing drinking water and examine how the regulatory framework for bulk water transfers in Ontario offers municipalities a role. Best practices for municipal involvement in this framework will also be discussed.

Chapter 3: Bulk Water Transfer Regulation in Ontario

In one of the first systematic studies of policy implementation dating back to 1973, it was shown that successful implementation of policy statements into action requires linkages and cooperation between an extremely large number of actors, which the authors termed 'complexity of joint action' (Jordan, 1999, p. 70). A number of research studies have analysed this joint action in different contexts and provide a number of recommendations. Hartig, Zarull, Heidtke, & Shah (1998) discuss principles such as wide stakeholder engagement, which contribute to successful implementation of ecosystem-based management. Morison & Brown (2010) give advice on how to avoid presumptions that cause environmental planning programs to fail by designing policies to suit the capacity of those implementing them. Friedman & Foster (2011) suggest best practices for successful complex, cross-boundary collaboration such as legal codification of the mission. McLaughlin & Krantzberg (2011) describe preconditions for successful public policy implementation such as perfect and adequate communication and coordination. These best practices, presumptions, preconditions and principles are helpful in examining intergovernmental relations, particularly related to municipal involvement, which is an area where attention is lacking (see Chapter 2).

The ability of multiple levels of government to collaborate to address public policy problems can be referred to as intergovernmental policy capacity. Inwood, Johns and O'Reilly (2011, pp. 14-21) found that determinants of this ability include ideas, institutions, actors, relations and relationships. While the authors explored this concept from the

national-subnational perspective, the concept provides a framework to examine the intergovernmental policy capacity involving municipalities as well.

Both the research and management policies for the Great Lakes-St. Lawrence River Basin have been met with criticism. Over twenty years ago, Caldwell (1994, p. 27) described that those responsible for administering its management as being fragmented and their policies as linear; Great Lakes-St. Lawrence River Basin management addressed single issues and ignored many others even though the Great Lakes-St. Lawrence River Basin is regarded as an ecosystem. Grant (2008, pp. 173-6) was especially critical of the fragmented approach to regulating bulk water exports in the Great Lakes. Flaherty, Pacheco-Vega and Isaac-Renton (2011) highlight knowledge gaps that exist on groundwater and water quality in the Great Lakes Basin. On the other hand, because researchers and policy makers have placed a higher priority on transboundary water quantity issues over water quality issues (Flaherty, Pacheco-Vega, & Isaac-Renton, 2011, p. 926), the intergovernmental framework is well-established and ideal for examining linkages and cooperation between actors within this framework, especially from the municipal perspective.

As described in Chapter 2, despite the historical control the provinces have had over municipalities, they are emerging as a partner and have taken action on problems that are seemingly outside their jurisdiction. Municipalities should have an interest in protecting the Great Lakes-St. Lawrence River Basin as it serves as a necessary resource to provide services to their residents. This is especially true in the provision of drinking water. If the Great Lakes are important to municipalities and they have reason to do more, what role might they have in the intergovernmental framework within the Great Lakes-St. Lawrence River Basin? This chapter examines this issue by considering bulk water transfers for municipalities, specifically intra-basin transfers. The chapter outlines the intergovernmental

and legal framework for bulk water transfer in the Great Lakes-St. Lawrence River Basin and what role municipalities should have within this framework as suggested by best practices and principles for collaboration.

3.1 Legal Frameworks

The public outcry about a water taking permit being issued in 1998 to the Nova Group Inc. – an Ontario company that was proposing to ship Great Lakes water in bulk overseas (Environmental Commissioner of Ontario, 2005, p. 65) was a reflection of public dissatisfaction or concern with The Great Lakes Charter (“1985 Charter”). This concern about bulk water exports was accompanied by concerns about proposed diversions and growing water use in the Great Lakes-St. Lawrence River Basin. A deficiency of the 1985 Charter, signaled by public and political concern, was that it did not provide enough protection against impending bulk water exports. To remedy this, its eight signatories signed The Great Lakes Charter Annex: A Supplementary Agreement to The Great Lakes Charter (“2001 Annex”) in 2001. The 2001 Annex outlined principles for implementing agreements with a development timeline of three years.

The result of commitments made in the 2001 Annex was the Great Lakes-St. Lawrence River Basin Sustainable Water Resources (“2005 Agreement”), which was discussed in Chapter 2. The 2005 Agreement committed its signatories to:

- banning diversions with strict exception rules for rare cases;
- adhering to new environmental standards to manage proposed water uses;
- using improved science and information in its decision-making;
- developing and implementing water conservation programs; and,

- conducting cumulative impact assessments at least every five years to inform the future protection of the Great Lakes-St. Lawrence River Basin.

Ontario's work in implementing these commitments is summarized in Table 3.

TABLE 3: ONTARIO'S IMPLEMENTATION OF 2005 AGREEMENT COMMITMENTS

Commitment in 2015 Agreement	Status of Ontario's Implementation
Ban new or increased transfers of water out of the Great Lakes–St. Lawrence River Basin with strictly regulated exceptions	<ul style="list-style-type: none"> • Through the <i>Ontario Water Resources Act</i>, out-of-basin transfers have been banned since 1999
Develop and implement water conservation and efficiency goals, objectives, and programs in each jurisdiction, based on Basin-wide goals and objectives	<ul style="list-style-type: none"> • Provincial goals and objectives for water conservation and efficiency finalized in 2012 • Existing programs in place under a variety of legislation and other initiatives
Strengthen information and science related to Great Lakes water and water use to support sound decision-making	<ul style="list-style-type: none"> • Information on water takings is reported each year to water-use data repository • First cumulative impacts assessment under the Agreement in conjunction with other parties was completed in 2013
Manage water takings based on the provisions outlined in the Agreement	<ul style="list-style-type: none"> • Ontario's existing Permit to Take Water program under the <i>Ontario Water Resources Act</i> generally meets or exceeds Agreement standards • Regulatory amendments expected in January 2015 would fully align Ontario's program with provisions of the Agreement
Regulate new or increased transfers of water from one Great Lake watershed to another (intra-basin transfers) based on the standards of the Agreement	<ul style="list-style-type: none"> • Ontario passed legislation in 2007, amending the <i>Ontario Water Resources Act</i>, to enable regulation of intra-basin transfers • Regulatory amendments took effect January 2015 implementing requirements for intra-basin transfers

Source: (Ontario Ministry of the Environment, 2014)

Aligning with Friedman & Foster's recommendations (2011, p. 24) that a legally codified mission assists the signatories in setting priorities for cross-boundary collaborations, Article 102 of the 2005 Agreement commits signatories "to adopt and implement Measures that may be required to give effect to the commitments". The term 'Measures' is defined as "any legislation, law, regulation, directive, requirement, guideline, program, policy, administrative practice or other procedure". Legal codification gives parties

the legitimacy and authorization for decision making and subsequent action (Friedman & Foster, 2011, p. 25). As a result of the requirement to implement commitments through domestic legislation, this legitimacy and authorization is carried forward into Ontario's regulatory framework.

Article 203 of the 2005 Agreement provides a Decision-making Standard that parties to the Agreement must use to regulate and manage water takings and consumptive uses.

The criteria apply to new or increased water takings and consumptive uses, stipulating that:

- 1) All water is returned to Great Lake watershed from which it is taken, less an allowance for consumptive use;
- 2) There will be no significant individual or cumulative adverse impacts;
- 3) Conservation measures will be used;
- 4) All applicable laws are met including the Boundary Waters Treaty where it applies; and,
- 5) The proposed use is considered reasonable by:
 - a) Providing efficient use of water, avoiding or minimizing waste of water;
 - b) Making efficient use of existing water supplies;
 - c) Balancing between economic development, social development and environmental protection;
 - d) Considering the supply potential of the water source in terms of quantity, quality, and reliability and safe yield of hydrologically interconnected water sources;
 - e) Mitigating or avoiding any foreseeable adverse impacts to other uses of water or to the quantity or quality of the waters and water dependent natural resources of the Basin; and,
 - f) Restoring hydrologic conditions and functions of the source watershed.

For any intra-basin transfer of 379,000 litres per day or more, it would need to be demonstrated that the Exception Standard provided by section 4 of Article 201 has been met. The Exception Standard requires that any intra-basin transfer proposal:

- a) Demonstrate that efficient use of existing water supplies cannot avoid the transfer;
- b) Be limited to reasonable amounts;
- c) Return water to Great Lake watershed from which it is taken, less an allowance for consumptive use, where feasible. Additionally, no surface water or groundwater from outside the Great Lakes-St. Lawrence River Basin may be used to complement returned water unless the system is one that combines water from inside and outside of the Basin and is treated to meet all water quality standards and prevent the introduction of invasive species;
- d) Not cause significant individual or cumulative impacts on water quantity and quality;
- e) Use feasible, environmentally sound conservation measures;

- f) Comply with applicable laws and agreements; and,
- g) Meet all applicable criteria in Article 201, including demonstrating that there are no feasible alternatives.

Table 4 summarizes the requirements and decision making process for water takings, consumptive use and intra-basin transfers in Ontario as a result of implementing commitments made in the 2005 Agreement. Municipalities would be defined as an applicant in the 2005 Agreement. As such, the role of municipalities in the decision-making process outlined in the 2005 Agreement is minimal. Throughout the decision making process, the applicant is consulted with by the province or state in which it resides. The 2005 Agreement also stipulates what information municipalities must provide to the province or state to bring forward for review by the other jurisdictions. The portion of decision-making that involves the states and provinces in the Great Lakes-St. Lawrence River Basin is detailed in Chapter 2.

TABLE 4: ONTARIO'S LEGISLATIVE REGIME FOR WATER TAKINGS UNDER THE 2005 AGREEMENT

Trigger	Requirements	Ontario's Decision Making Process
Water takings up to 19 million litres per day	Decision-Making Standard	At Ontario's discretion
Water takings more than 19 million litres	Decision-Making Standard	Ontario must provide notice to other Parties and an opportunity to comment before making a decision
New or increased intra-basin transfers of 379,000 litres or more per day, with less than 19 million litres per day consumptive use	Exception Standard (water may be returned to Great Lake watershed other than source watershed)	Ontario must provide notice to other Parties before making a decision
New or increased intra-basin transfers of 379,000 litres or more per day, with 19 million litres or more consumptive use per day	Exception Standard	Ontario must initiate the Regional Review process for a decision from the other Parties

Source: (Ontario Ministry of Natural Resources, 2005b)

The legal instruments that regulate water takings in Ontario are Permits To Take Water, which are issued under the *Ontario Water Resources Act* by the Ontario Ministry of

the Environment and Climate Change. The *Ontario Water Resources Act* was amended in 2007 to include the following purpose statement: “to provide for the conservation, protection and management of Ontario’s waters and for their efficient and sustainable use, in order to promote Ontario’s long-term environmental, social and economic well-being” as per section 0.1. While the Boundary Waters Treaty and 1985 Charter have had effect in Ontario since their inception, Ontario has regulated water takings further with its own provincial regulation since 1999. Although public outcry led to the cancellation of the permit that was granted to the Nova Group, this regulation was passed to prohibit bulk water transfers out of the Basin (Environmental Commissioner of Ontario, 2005, p. 65). A summary of the timeline related to regulation of bulk water transfers in Ontario is shown in Figure 10.

TIMELINE OF BULK WATER TRANSFER REGULATION IN ONTARIO

1900s	1980s	1990s	2000s	2015 and beyond
Boundary Waters Treaty May 5, 1909 Established the International Joint Commission and set the basic principles for guiding boundary water relations between Canada and the United States	Enacted the International Boundary Waters Treaty Act 1911 Prohibits the bulk removal of water from boundary waters, including the Great Lakes	Great Lakes Charter February 11, 1985 Good faith agreement intended to protect and conserve waters of entire Great Lakes Basin	Passed O. Reg. 285/99 Water Taking and Transfer April 1999 Regulation under the Ontario Water Resources Act to set out review requirements for proposed water takings	Great Lakes Charter Annex June 18, 2001 under the Ontario Water Resources Act Passed O. Reg. 387/04 Water Taking and Transfer Regulation 2004 Regulation under the Ontario Water Resources Act to prohibit large water transfers out of the Great Lakes Basin Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement December 5, 2005 Good faith agreement signed by eight states and two provinces committing to incorporate terms into domestic laws Adopted water conservation and efficiency goals November 8, 2012 Adopted water conservation and efficiency goals and objectives as committed to under 2005 Agreement Amended O. Reg. 387/04 Water Taking and Transfer January 1, 2015 Passed O. Reg. 255/14 to amend 387/04 to implement regulatory requirements for intra-basin transfers Safeguarding and Sustaining Ontario's Water Act, 2007 receives Royal Assent June 4, 2007 Incorporated principles from 2005 Agreement into Ontario law through the Ontario Water Resources Act Technical Bulletin March 16, 2009 Provided interim direction to municipalities planning water and wastewater projects to ensure intra-basin transfers

Figure 10: Timeline of Bulk Water Transfer Regulation in Ontario

In June 2007, as required by the 2005 Agreement, Ontario incorporated principles from the Agreement into domestic law by amending the *Ontario Water Resources Act* with Bill 198 – Safeguarding and Sustaining Ontario's Water Act, 2007. Sections relating the bulk water transfers, however, would not come into force until proclamation by the Lieutenant Governor. In November 2014, public notice was given for implementing regulations with an effective date of January 2015. Proclamation was issued in January 2015 through publication in the Ontario Gazette. Prior to this, however, there was a need to manage bulk

water transfers while regulations were being formed. As a result, in the absence of implementing regulations, the Province provided direction to municipalities by other means.

In March 2009, the Ministry of the Environment issued a technical bulletin that directed municipalities to ensure water and wastewater projects involving intra-basin transfers were consistent with the 2005 Agreement until supporting regulations came into effect. While the Municipal Engineers Association Municipal Environmental Assessment process sets out minimum requirements, the technical bulletin recommended additional steps for municipalities completing a class environmental assessment for water and wastewater projects. Projects that trigger requirements under the 2005 Agreement or the 1985 Charter would be considered complex and, as such, technical consultation with the Ministry of the Environment was recommended (Ontario Ministry of the Environment, 2009, p. 2). Additionally, the technical bulletin suggested that a project considering an intra-basin transfer should undergo greater analysis in selection of the preferred solution and more consultation for a total of three opportunities for public input (Ontario Ministry of the Environment, 2009, pp. 2-3). The five phases for this process are required for those projects classified as a Schedule C undertaking under the Municipal Engineers Association Municipal Environmental Assessment process, which is considered to be a more complex project. The technical bulletin also reiterates that a class environmental assessment could be elevated to an individual environmental assessment. The technical bulletin also provided direction on requirements under the 1985 Charter, advising that proponents contact the Ontario Ministry of Natural Resources regarding requirements for the Prior Notice and Consultation process (Ontario Ministry of the Environment, 2009, p. 2).

The legal framework for bulk water transfers in Ontario, along with clearly stated goals and objectives provided by both the bi-national agreement and implementing

legislation, necessitates involvement from municipalities. Implementing bi-national commitments made in the 2005 Agreement that are fairly prescriptive through domestic legislation essentially forces municipalities to be involved as they are subject to provincial legislation. For example, changes to regulations governing water takings and water conservation and efficiency programming directly affect municipalities. Despite bi-national commitments being fairly prescriptive with legislated requirements that municipalities must ultimately meet, the Ontario legislative framework remains uncertain with respect to how implementing regulations will be operationalized and enforced.

3.1.1 Relevance of bulk water transfers to municipalities

Ontario's updated water taking and transfer regulation that took effect January 2015 allows a baseline to be established before new requirements from the 2005 Agreement are triggered (see Table 4). The requirements apply to new or increased intra-basin transfers and consumptive uses. In the context of municipal servicing, an intra-basin transfer of 379,000 litres per day or more would be equivalent to providing drinking water to a population of 800 people. This means that if a drinking water system spans over two watersheds within the Basin, water that is transferred over the watershed line constitutes an intra-basin transfer. For example, new requirements will be triggered if the population serviced by the intra-basin transfer grows by 800 people and water demand increases by 379,000 litres per day or more. The municipality must apply for a new Permit To Take Water and Ontario must provide notice to other Parties before making a decision. Consumptive use of 19 million litres per day is equivalent to providing drinking water to 330,000 people (Ontario Ministry of the Environment, 2014). An example of this case is a municipality that grows by 330,000 people and requires an increase in its water taking. The municipality

must apply for a new Permit To Take Water and Ontario must provide notice to other Parties and an opportunity to comment before making a decision.

The 2005 Agreement introduces decision-making criteria and processes for water takings, consumptive uses and intra-basin transfers that will have direct effects on municipalities responsible for providing water and wastewater services to growing populations. These new processes add a layer of complexity to how municipalities do business. Municipalities in Ontario are restricted in how they do business in terms of financing for operations and capital infrastructure as well as planning processes. These restrictions have resulted in a number of issues that municipalities must contend with when planning and financing municipal infrastructure.

In an attempt to make municipal officials more accountable to their constituents, Ontario municipalities were required to reduce their reliance on provincial transfer payments (Siegel, 2009, p. 51). As a result, there has been a shift from conditional grants from the Province to more reliance on property tax and other sources of self-reliant revenue (Siegel, 2009, p. 63). To fund the services that they provide, Ontario municipalities are limited to property taxes, development charges, licensing and user fees (Valiante, 2007, p. 1075). In addition to legislated requirements, municipalities are required to meet “unfunded mandates”; that is, they must meet a provincial standard in service delivery but are not provided any provincial support (Siegel, 2009, p. 42). An example of this situation would be the growth plans introduced by the Province of Ontario in 2005.

Ontario’s long-term growth plan, called *Places to Grow*, consists of the *Places to Grow Act, 2005* and regional growth plans for the area wrapping around western Lake Ontario and Northern Ontario. These growth plans provide guidance on land development, resource management and public investments (Ontario Ministry of Municipal Affairs and Housing,

2013b). As a result of the Province's growth plans, some municipalities will be limited in growth while others will be directed to grow (Siegel, 2009, p. 44). Currently, Ontario's growth plans provide population projections to the year 2041. To maximize investments for accommodating this projected growth, municipalities need to plan far in advance. A lot of resources are invested in long-term planning exercises, which include activities such as modelling and environmental assessments, well in advance of building infrastructure. The looming infrastructure deficit (Siegel, 2009, pp. 61-2) is another reason to invest in infrastructure that will last into the future.

Water and wastewater servicing are required to be self-funding, meaning rates charged to users must cover the cost of operations (Siegel, 2009, p. 56). Canadian municipalities in general are able to cover their expenses but much of the literature warns that there is a growing infrastructure deficit (Siegel, 2009, p. 62). Although municipalities cannot operate with a deficit, they are allowed to borrow funds to build capital (Siegel, 2009, p. 49). Growing municipalities can take advantage of development charges as a way to offset the high cost of infrastructure required to service growth in a timely manner (Siegel, 2002, p. 46). The use of development charges supports the principle that growth should pay for growth; however, development charges remain contentious for some.

The contention with development charges comes from the development community, which views the charges as onerous, forcing them to lower their profits or charge their homebuyers higher prices (Siegel, 2002, p. 46). Municipalities must further contend with the development community in challenges to their decision making. Despite engaging in planning exercises to direct development and control projected servicing needs, the Ontario Municipal Board provides a potential challenge to municipalities when it decides in favour of developers regardless of the municipalities' stance (Siegel, 2009, p. 40). Municipalities

must carefully balance their needs and remain attractive to developers to create homes in their communities to accommodate growth.

The combination of Ontario's growth plans and a changing bulk water transfer regulation regime puts those municipalities straddling watershed boundaries and those with large water takings in a precarious situation. Changes to the bulk water transfer regulatory regime have the potential to affect service delivery models and to put municipalities at a loss with their investments in infrastructure that has already been built to support and continue long-standing delivery models. A change in the municipal service model could mean a loss from abandoned infrastructure or a shift in direction for infrastructure projects underway. This scenario provides a prime example for studying the intergovernmental relationships involving municipalities within the Great Lakes-St. Lawrence River Basin.

Although municipalities were not directly involved in the negotiation of the 2005 Agreement with the other Great Lakes-St. Lawrence River Basin jurisdictions, the bi-national commitments may have the potential to directly impact municipalities in Ontario. Implementing bi-national commitments that are fairly prescriptive through domestic legislation essentially forces municipalities to be involved as they are subject to provincial legislation. As discussed in Chapter 2, improving intergovernmental relations and developing approaches that are sensitive to local needs will help minimize the potential for an implementation gap. The difficulty in producing shared visions or guiding principles, however, has been noted as a problem in the body of literature related to policy development involving multiple levels of government (Inwood, Johns, & O'Reilly, 2011, p. 418). Despite this, the literature does suggest some best practices that will help common goals and objectives to be developed for cross-boundary collaboration.

3.2 Common Goals and Objectives should be Developed

It is important that collaborations that cross jurisdictional boundaries are legally codified through a formal document such as a treaty, memorandum of understanding or agreement. It is recommended that goals and objectives are formalized through legal codification or having them in writing helps to establish and clearly communicate them (Friedman & Foster, 2011, p. 30). Legal codification signals the importance of an issue and clarifies expectations (Friedman & Foster, 2011, p. 24). By clearly outlining expectations, legal codification helps with identifying objectives, setting priorities, developing a work plan, and establishing performance measures to gauge whether goals are being achieved (Friedman & Foster, 2011, p. 24; Hartig, Zarull, Heidtke, & Shah, 1998, p. 49). The signing of the 2005 Agreement institutionalized its goals and objectives at the provincial-state level and allowed for equal representation of its signatories in this cross-boundary collaboration (Friedman & Foster, 2011, p. 23). The commitment to implement domestic legislation in the 2005 Agreement, therefore, gave legitimacy and authority to the Province of Ontario. The signing of the 2005 Agreement also demonstrated the commitment and support from top leaders in the Great Lakes for a common vision, which should be reflected throughout the process from planning to implementation (Hartig, Zarull, Heidtke, & Shah, 1998, p. 48). Given this, the implementing legislation in Ontario, which provides the legal framework for bulk water transfers, should also reflect a common vision.

It must be recognized that local governments act within their own environment of mandates and resources, which inform their decisions to fulfill intergovernmental policy goals (May & Burby, 1996, p. 176; Imperial, 1999, p. 452). Imperial (1999, p. 459) argues that any review process, which should be done when implementation deficits occur, should ensure the goals of each party are considered. Alternatively, Morison and Brown (2010, p.

211) contend that successful implementation of an intergovernmental program requires all parties to be committed to its objectives and it should not be presumed that all parties have the same priorities. To this end, policies should be designed with those that will be implementing the policy in mind. Jointly defining environmental management policy objectives would allow the capacity and ability of participants to meet fundamental goals to be taken into consideration (Morison & Brown, 2010, p. 213). If those responsible for implementing programs that achieve policy objectives are involved in defining those objectives, in theory they would better reflect what is possible to implement from their perspective.

Policy problems are usually defined around how goals and objectives will be achieved. Research, however, suggests that environmental policy making should be interactive whereby rules are modified while policies are being implemented; essentially creating moving targets (Fowler & Hartmann, 2002, pp. 164-5). This perspective further supports Bradford's recommendation (2004, p. 42) that policies be tailored to suit the varying needs of local governments as they are being implemented. Furthermore, organizational characteristics of the target audience of policies should inform their design and implementation of the policy should be able to adapt (Morison & Brown, 2010, p. 213). For example, this proposition suggests that policy design and implementation should include an understanding of what would act as an incentive or disincentive for participants' involvement. With respect to municipalities, without a guarantee that additional investments will pay off in the long run, municipalities are more likely to focus their resources on areas that provide a clear return on investment that aligns with the four-year terms of municipal councils. This situation is reflective of Jordan's argument (1999) that implementation

deficits in a multi-jurisdictional situation will support the autonomy each party likely wants to maintain.

3.3 Wide Stakeholder Engagement

Another important goal for success in multilevel policy implementation is wide engagement of relevant stakeholders. Research suggests that those individuals with connections to a broad network of people with various knowledge of and insight into the subject area should be selected to lead cross-boundary collaboration. These leaders need to be willing to bring a wide range of experts on board as participants to address environmental issues, which is a complex subject area requiring diverse expertise (Friedman & Foster, 2011, p. 25). Furthermore, this leadership should have the skills and ability to gather those that can provide insight and to strengthen and build those relationships (Friedman & Foster, 2011, p. 30). There must be a willingness and ability in the leaders to create a broad network to address complex issues because intergovernmental collaboration spans multiple jurisdictions (Friedman & Foster, 2011, p. 30). Because local governments lack the capacity to engage in international negotiations, it is important to link local and federal stakeholders in an effort to advance movement on an issue (Friedman & Foster, 2011, p. 25). This need was echoed by municipal employees interviewed for this study (municipal employee A, interview, May 14, 2014; municipal employee B, interview, July 23, 2014). The lack of adequate communication among, and coordination of, the various agencies involved in Great Lakes issues was described by McLaughlin and Krantzberg (2011, p. 394) as a deficit in the implementation of the Great Lakes Water Quality Agreement. Coordination requires leadership and if done well, helps participants move initiatives forward by facilitating adequate communication or resolving potential competing policy objectives.

Mutual trust between partners and shared willingness to tackle common problems is a necessity for intergovernmental policies to be successful in meeting intended policy goals rather than demanding cooperation through legislation (May & Burby, 1996, p. 196). This trust or social capital that enables participants to forge relationships results in a connected leadership that is able to drive initiatives forward (Friedman & Foster, 2011, p. 29). As stressed in Friedman and Foster's research (2011), building trust and establishing relationships among stakeholders is essential to move forward with collaborations. For successful implementation of ecosystem based management, stakeholder engagement must be broad-based to establish goals, set priorities, action plans, secure commitments, and monitor progress (Hartig, Zarull, Heidtke, & Shah, 1998, pp. 47-8). Furthermore, it is important for all to be involved from the beginning. In the case of Remedial Action Plans under the Great Lakes Water Quality Agreement, for example, a framework that fosters a sense of ownership by all participants was a critical factor for broad acceptance (Hartig, Zarull, Heidtke, & Shah, 1998, p. 65). This framework provided representation for multiple interests and leveraged other policies and programs to drive activities to meet objectives. Successful efforts were found where stakeholders were equal partners and played an active role in the development and implementation of the plan.

The consultation framework in Ontario provides parties affected by the regulation of bulk water transfers to provide input largely through the Environmental Registry. The *Environmental Bill of Rights, 1993* has been in force since 1994 providing Ontario's public with a right to participate in government decisions relating to environmental issues. Before the Province of Ontario can make decisions on policies, legislation, regulations and regulatory instruments that relate to environmentally significant proposals from ministries subject to the Act, they must meet minimum levels of public participation stipulated in Part II

of the Act. The Act establishes the Environmental Registry, which is an online database and the vehicle for consultation for the majority of proposals.

To engage key stakeholders in the development of the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement, the Province of Ontario established the Annex Advisory Panel in December 2004. The panel was then repurposed to be the Agreement Advisory Panel after the agreement was signed to continue engagement during implementation of the 2005 Agreement. As of June 2005, 55 organizations were represented on the Agreement Advisory Panel of which four can be identified as representing municipal interests - three large municipalities (City of Toronto, Waterloo Region and York Region) and the Association of Municipalities of Ontario (Ontario Ministry of Natural Resources, 2005c).

The Environmental Registry, panels, and working groups provide municipalities with opportunities to provide input into the Province's policy development process. However, municipalities are not given any special status as other non-governmental stakeholders, who have interest in the activities of government, also provide input in the same ways. Another way municipalities may be involved in the policy-making process that might give them a little more clout is through municipal associations.

3.3.1 Municipal representation at the regional level

As Siegel (2009, pp. 22-3) described, the problems Ontario municipalities face throughout the province are unique and vary. Those in the Greater Toronto Area and other relatively large municipalities are experiencing rapid growth while smaller municipalities and rural areas are seeing declining populations. Similar to the latter situation is northern Ontario, which is faced with disadvantages that come with their geography and climate in

addition to declining populations. As a result, the greatest strength of the Association of Municipalities of Ontario – their mandate to represent all municipalities – is also their greatest weakness (Siegel, 2009, p. 46). The make-up of Ontario may prevent any one municipal association from providing satisfactory representation to its membership but each municipal association provides purposeful representation for municipalities. Table 5 summarizes the purpose and membership for major municipal advocates in Ontario (see Appendix D for membership).

TABLE 5: SUMMARY OF MUNICIPAL ADVOCATES

Municipal Advocate	Purpose	Membership
Association of Municipalities Ontario	To promote municipalities as an essential component of the political system in Ontario and Canada	419 Ontario member municipalities
Federation of Canadian Municipalities	To act as a national, united voice for municipalities throughout Canada in an effort to influence federal policies and programs to help build sustainable communities	316 Ontario member municipalities
Regional Public Works Commissioners of Ontario	To add value to public works service delivery by focusing on strategic and emerging issues facing the industry	16 upper and single tier Ontario member municipalities
Ontario Municipal Water Association	To be the voice of Ontario's public water supply authorities as well as water users on policy, legislative and regulatory issues related to providing safe sustainable drinking water	175 members, includes public utilities providing representation to 176 municipalities
Great Lakes and St. Lawrence Cities Initiative	To advance the protection and restoration of the Great Lakes and St. Lawrence River by working with coalition of U.S. and Canadian mayors and other local officials	114 Canadian and US member municipalities in the Great Lakes-St. Lawrence River Basin

Sources: (Association of Municipalities of Ontario, 2013a; Federation of Canadian Municipalities, 2015c; Regional Public Works Commissioners of Ontario, n.d.a; Ontario Municipal Water Association, 2013a)

Organizations that represent municipal interests, such as the Association of Municipalities of Ontario, the Federation of Canadian Municipalities, and the Great Lakes-St. Lawrence Cities Initiative, are one way that local governments can be included in intergovernmental policy-making processes (Valiante, 2007, p. 1083). Additionally, there are a number of industry groups that may engage in policy development that address more

specific needs, such as the Regional Public Works Commissioners of Ontario and the Ontario Municipal Water Association. These organizations, especially those that have signed memorandums with the provincial or federal government, offer an avenue for municipalities to be engaged in the Great Lakes-St. Lawrence River Basin framework. Some of the main organizations that provide opportunities for municipalities to engage in intergovernmental policy processes are briefly explained below.

Association of Municipalities of Ontario

The Association of Municipalities of Ontario has a mandate to represent all municipalities and currently has a roster of 419 members (see Figure D1). The purpose of the Association of Municipalities of Ontario is to support and enhance strong and effective municipal government in Ontario and to promote municipalities as an essential component of the political system in Ontario and Canada (Association of Municipalities of Ontario, 2013a). Accordingly, the Association of Municipalities of Ontario was characterized by one key informant as political and more suitable for those municipal representatives in political roles within the organization (municipal employee A, interview, May 14, 2014).

Beginning in 2001, the Association of Municipalities of Ontario has maintained a memorandum of understanding with the Province of Ontario through the Ministry of Municipal Affairs and Housing. The memorandum of understanding commits the Province to consult with municipalities whenever regulatory changes with an impact on municipal servicing and budgets are being proposed. The memorandum of understanding also contains a protocol that requires Ontario to consult on federal-provincial matters that may also have implications for municipalities (Association of Municipalities of Ontario, 2013a) prior to making policy decisions that affect them (Siegel, 2009, p. 46). The Province

engaged the Association of Municipalities of Ontario in June 2005 prior to the signing of the 2005 Agreement. Subsequently, targeted consultations were held with municipalities on implementation of the 2005 Agreement. The Association of Municipalities of Ontario also provided formal responses to Environmental Registry postings related to implementation of the 2005 Agreement.

Federation of Canadian Municipalities

Representing 95.13 per cent of Ontario's population, 316 municipalities are members of the Federation of Canadian Municipalities (see Figure D2). The Federation of Canadian Municipalities summarizes its activities as listen, unite and influence. It acts as a national voice for municipalities throughout Canada in an effort to influence federal policies and programs to help build sustainable communities (Federation of Canadian Municipalities, 2015c). Recently, the Federation of Canadian Municipalities signed a new Memorandum of Understanding with Foreign Affairs, Trade and Development Canada for greater collaboration between the Government of Canada and Canadian municipalities with respect to international development (Federation of Canadian Municipalities, 2015a). According to the Federation of Canadian Municipalities' Policy Statement on Environmental Issues and Sustainable Development, it advocates for the Government of Canada to limit the export of Canadian water. With respect to international agreements on water use and water quality, the policy statement advocates for municipalities to be considered as partners in determining goals and priorities. Further, the Federation of Canadian Municipalities believes that municipalities must be formally engaged in related decision-making processes (Federation of Canadian Municipalities, 2014).

Regional Public Works Commissioners of Ontario

Sixteen large single tier or upper-tier municipalities with populations greater than 100,000, representing about 80 per cent of the population in Ontario, form the Regional Public Works Commissioners of Ontario (see Figure D3). The Regional Public Works Commissioners of Ontario's mission is to add value to public works service delivery by focusing on strategic and emerging issues facing the industry with activities such as advocating with other levels of government, sharing information including best practices, and collaborating with other key industry organizations and associations (Regional Public Works Commissioners of Ontario, n.d.a). While not explicitly stated in its Charter, advocacy work within this association includes promoting policies and regulations that protect the Great Lakes (municipal employee A, interview, May 14, 2014).

Ontario Municipal Water Association

The 175 members in the Ontario Municipal Water Association, which includes public utilities, provide representation to 176 municipalities (see Figure D4). The Ontario Municipal Water Association's mission is to be the voice of Ontario's public water supply authorities as well as water users on policy, legislative and regulatory issues related to providing safe sustainable drinking water (Ontario Municipal Water Association, 2013a). The Ontario Municipal Water Association is listed as a participant on the Agreement Advisory Panel described above (Ontario Ministry of Natural Resources, 2005c).

Great Lakes and St. Lawrence Cities Initiative

The Great Lakes and St. Lawrence Cities Initiative represents approximately 17 million Canadian and U.S. residents in the Great Lakes and St. Lawrence River Basin (Great

Lakes and St. Lawrence Cities Initiative, 2014, p. 8). Its membership includes mayors and other local officials from 114 municipalities throughout the Basin with 54 municipalities of varying sizes located in Ontario mostly along the shorelines (see Figure D5). As a coalition of U.S. and Canadian mayors and other local officials, the Great Lakes and St. Lawrence Cities Initiative aims to advance the protection and restoration of the Great Lakes and St. Lawrence River.

The Great Lakes and St. Lawrence Cities Initiative has worked with the Province of Ontario to produce a memorandum of cooperation to facilitate collaboration between municipalities and Ontario. The memorandum of cooperation is signed by the Ministers of Environment and Climate Change, Natural Resources and Forestry and Agriculture, Food and Rural Affairs on behalf of the Province. As a result, the Great Lakes and St. Lawrence Cities Initiative was invited early to policy development processes relating to the Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem to provide feedback as well as learn what is moving forward (municipal association, interview, February 23, 2015). The Great Lakes and St. Lawrence Cities Initiative is the only municipal coalition that functions bi-nationally as well as the only remaining non-governmental organization that functions bi-nationally on issues specific to the Great Lakes-St. Lawrence River Basin (municipal association, interview, February 23, 2015).

Some of the municipal associations in Ontario have made great strides in being recognized as a prominent stakeholder by signing memorandums of cooperation or understanding with various provincial and federal ministries. The make-up of Ontario, however, may prevent any one municipal association from providing fair representation to its membership but each municipal association provides purposeful representation for municipalities. Maps in Appendix D illustrate the membership for each municipal association

outlined above. Associations with wider scopes of work, such as the Association of Municipalities of Ontario and the Federation of Canadian Municipalities, tend to have a wider membership including the majority of municipal bodies and covering much of the population in Ontario. Those municipal advocates with a more specific purpose tend to have a membership much less than the total count of Ontario municipalities. In the case of the Great Lakes and St. Lawrence Cities Initiative, which is the only municipal advocate for Great Lakes issues specifically, membership tends to concentrate on the shoreline of the Great Lakes. The overall wide spread participation in these municipal associations signals the interest of municipalities to be engaged in policy development.

3.4 Recognition of the Municipal Role

As a result of the bi-national requirement to implement Great Lakes Basin management commitments through domestic legislation, Ontario's regulatory framework and policy processes express and codify its practices, principles and protocols for collaboration. Because municipalities in Ontario fall under provincial jurisdiction and use the Great Lakes as a resource to fulfill their responsibilities, they are reliant on provincial practices or the advocacy of municipal associations to be integrated into policy decisions that relate to management and use. At the same time, while the Canadian Constitution sees municipalities as creatures of the provinces, municipalities may view themselves as creatures of local voters (Morison & Brown, 2010, p. 211). This perspective was confirmed by a municipal councillor (interview, February 23, 2015), who stated that municipal efforts to protect their Great Lakes shoreline are largely responsive to local constituent desires. Another key informant observed that although local government and local politicians are in a unique position of being closest to the people and issues at hand, it is usually provincial and

federal representatives that are given respect and attention in relation to taking action to resolve regional issues (municipal employee A, interview, May 14, 2014). Given the tension between provincially driven processes and individual municipal desires to meet constituent needs, provincial policies and practices that do not recognize the importance of municipalities and their knowledge of local issues are likely to fail (Morison & Brown, 2010, p. 211). The principles and best practices for collaborative environmental policy implementation discussed in this chapter, therefore, present a particularly difficult situation for municipalities needing bulk water transfers. The principles suggest collaboration and mutual engagement between interests. Yet, the intergovernmental and legislative frameworks for bulk water transfers established in Ontario may not be able to provide adequate municipal representation in decision-making forums and the province and federal governments always have authority in the Great Lakes management system. In the next chapter, the thesis examines how this challenge evolves in a specific case of bulk water transfers.

Chapter 4: Municipal Involvement in the Great Lakes-St. Lawrence River Basin: The Case of York Region

Because Ontario municipalities are delegated authority from the Province to directly use and manage the Great Lakes-St. Lawrence River Basin, they have reason to be engaged in policy development and act as a partner within this intergovernmental framework. Despite this, municipalities were not directly involved in the negotiation of the Great Lakes-St. Lawrence River Sustainable Water Resources Agreement (“2005 Agreement”). Moreover, the legal framework for bulk water transfers in Ontario, and clearly stated goals and objectives provided by both the bi-national agreement and implementing legislation, necessitates involvement from municipalities in Ontario. Chapter 3 demonstrated that implementing best practices, avoiding presumptions, establishing preconditions and abiding by principles for successful cross-boundary collaboration in the intergovernmental framework for bulk water transfers in Ontario, individual municipalities have an opportunity to act as a partner. The intergovernmental and legislative frameworks for bulk water transfers established in Ontario, however, may not be able to provide adequate municipal representation in decision-making forums with the provincial and federal governments.

The lack of focus on the interaction between parties is reflected in the literature on environmental policy as the effects of organizational structure and behaviour on integrated management programs have historically been ignored (Imperial, 1999, p. 452; Morison & Brown, 2010, p. 213). It can be argued that comprehensive management policies can result in a wider range of coordination issues and jurisdictional conflict, especially since non-governmental stakeholders tend to be viewed as partners in this setting (Imperial, 1999, p.

450). Friedman and Foster (2011, p. 7) suggest key factors that influence successful cross-boundary collaboration include a formal understanding of the mission, the institutional and organizational framework, participation from the right actors and capacity of those involved.

Integrated management involves both the consideration of using science to design effective policies and of the governance of such matters involving multiple stakeholders (Imperial, 1999, p. 461). Furthermore, governance refers to a comprehensive process while government refers to an institution (Caldwell, 1994, p. 26). Governance refers to the broader work performed by not just conventional government but non-governmental institutions as well. Although municipalities are not legally considered conventional government, municipalities can and do come across as quasi-government or non-government institutions (Caldwell, 1994, p. 26). Chapter 2 illustrated how municipalities have emerged as a partner and have taken action on problems that are seemingly outside their jurisdiction. As an example, protecting the bi-national waters of the Great Lakes will help local communities thrive.

If it is important for municipalities to care about protecting the Great Lakes-St. Lawrence River Basin and they are expected to act as a partner in doing so, the question that follows is whether the intergovernmental framework allows them to fulfill this role in practice? This chapter examines whether intergovernmental relations in the Great Lakes-St. Lawrence River Basin hinder or facilitate effective municipal participation as a partner in the implementation of bi-national commitments in Ontario, and more specifically, in bulk water transfer regulations. The bulk water transfer framework is evaluated for how well it implements best practices, avoids presumptions, establishes preconditions and abides by principles for successful cross-boundary collaboration as suggested by the body of literature and discussed in Chapter 3. Some best practices for collaboration across jurisdictions

include legal codification of the mission, developing a common vision, goals and objectives, designing policies to suit the capacity of those implementing them, continuous communication and coordination, and wide stakeholder engagement.

While the intergovernmental framework in the Great Lakes-St. Lawrence River Basin theoretically promotes municipalities to act partners, a number of barriers exist for greater municipal involvement in Great Lakes-St. Lawrence River Basin management. A case study of York Region's proposal for a bulk water transfer within the Great Lakes-St. Lawrence River Basin provides an in-depth analysis of the opportunities municipalities have within this framework as well as the constraints. The case study shows some best practices and principles for successful cross-boundary collaboration at work. The case study also highlights, however, some of the barriers and illustrates the conundrum municipalities find themselves in when trying to act as a partner with the Province who is also responsible for regulating them.

4.1 Case Study: York Region's Intra-basin Transfer Proposal for Drinking Water

The Regional Municipality of York ("York Region") is an upper-tier municipal government in the Greater Toronto Area (Figure 11). York Region is responsible for the provision of drinking water to its nine local municipalities – Town of Aurora, Town of East Gwillimbury, Town of Georgina, Township of King, City of Markham, Town of Newmarket, Town of Richmond Hill, City of Vaughan and Town of Whitchurch-Stouffville. The local municipalities in turn distribute the drinking water to over 1.1 million residents.

YORK REGION IN THE GREATER TORONTO AREA



Source: (The Regional Municipality of York, 2010a)

Figure 11: Map of York Region in the Greater Toronto Area

In 2008, York Region submitted a proposal for an intra-basin bulk water transfer. York Region's experience with the intra-basin transfer proposal for drinking water provides an example of a municipality working within their own mandate and resources. The proposal was considered under the The Great Lakes Charter: Principles for the Management of Great Lakes Water Resources ("1985 Charter") while commitments made in the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement ("2005 Agreement") were still being implemented in Ontario. At the direction of the province, the proposal was considered under the 1985 Charter but had to meet the spirit of the 2005 Agreement because implementation was underway. This provided an opportunity for York Region and the Province to collaborate and determine the best way to navigate through the bi-national consultation process required for intra-basin transfers. A successful outcome would mean

that York Region would be able to meet its objective of obtaining drinking water while the Province fulfilled its bi-national commitments to sustain water quantities of the Great Lakes.

York Region's intra-basin transfer proposal experience illustrates how a municipality operates within the provincial framework. York Region's intra-basin transfer proposal for drinking water provides an example of how a municipality can act as a partner in the interactions at the local level as well as the bi-national level and drive processes forward. York Region's proposal also illustrates how municipalities are restricted within the provincial framework. Through the provincial planning framework, historical involvement, and water taking regulation, York Region's water and wastewater servicing model is greatly influenced by the Province. York Region's history and experience with water taking is illustrative of how much provincial jurisdiction over municipal institutions remains prominent in Ontario.

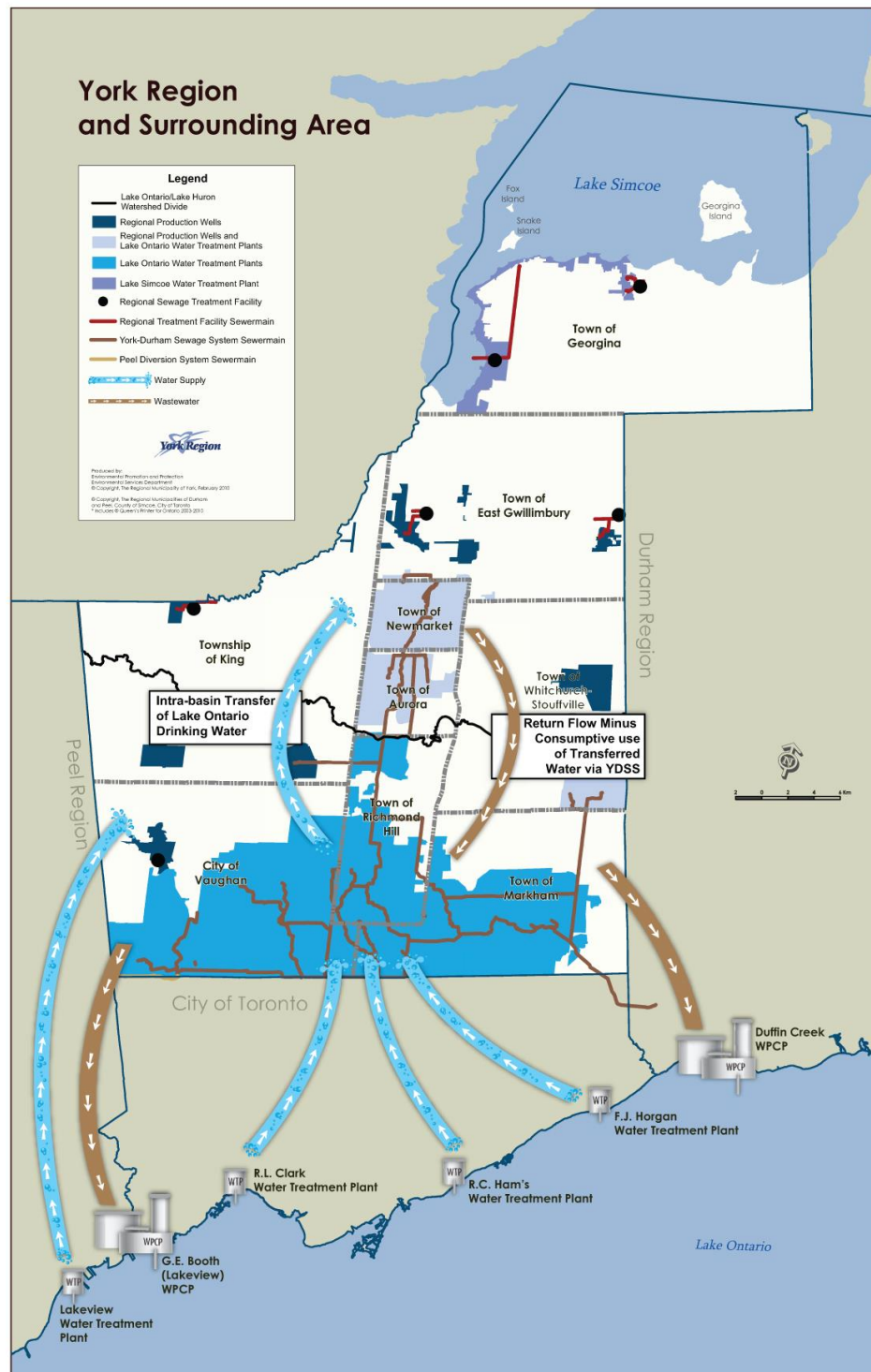
4.1.1 York Region's water and wastewater servicing model

Where and how York Region grows is limited by the *Oak Ridges Moraine Conservation Act, 2001*, the *Greenbelt Act, 2005*, and the *Places to Grow Act, 2005*. The Oak Ridges Moraine, running through the middle of York Region in an east-west direction, is a significant groundwater recharge area that is protected through legislation. This physiographic boundary provides the dividing line between the Lake Ontario and Lake Huron watersheds. With this environmentally protected land, York Region's ability to accommodate growth is effectively restricted to 31 per cent of the land within York Region (The Regional Municipality of York, 2010a, p. 7). Issues with land available for growth are compounded by Ontario's growth plan.

This provincial planning initiative, *Places to Grow*, requires York Region to accommodate 1.5 million people and 800,000 jobs by the year 2031. *Places to Grow*

requires a minimum of 40 percent of this growth to be in the form of intensification; therefore, a portion of this projected growth can be accommodated in existing developed areas (The Regional Municipality of York, 2010a, p. 49). In York Region, existing built-up areas form an inverted “T” and spans over two Great Lakes watersheds. While Ontario’s growth plan is a relatively new initiative with the first growth plan being introduced in 2006, the Province’s influence on how York Region provides services to its residents dates further back. As a result of this influence as well as other factors described below, York Region provides services to its population largely with Lake Ontario water and wastewater treatment (Figure 12).

YORK REGION'S WATER AND WASTEWATER SERVICING MODEL



Source: (The Regional Municipality of York, 2010a)

Figure 12: Map Scheme of Lake Ontario Drinking Water Supply to York Region

The York-Durham Sewage System was built by the Province of Ontario following a 1965 recommendation that responded to concerns that the assimilative capacities of the Humber, Don and Rouge River watersheds for receiving treated wastewater from a number of small wastewater treatment plants could be exceeded (The Regional Municipality of York, 2010a, p. 6). The York-Durham Sewage System conveys wastewater to the Duffin Creek Water Pollution Control Plant in the City of Pickering on the Lake Ontario shoreline. The responsibility of providing wastewater services to York and Durham Regions through this servicing model was transferred to the Regions in 1997.

Drinking water has been supplied to the southern parts of York Region since 1974 through a water supply agreement with the City of Toronto, which was complemented by another agreement with Peel Region in 2001 (The Regional Municipality of York, 2010a, p. 4). This Lake Ontario-based water supply was extended into the Towns of Aurora and Newmarket, over the Lake Ontario and Lake Huron watershed line, as the groundwater supply became limited in its sustainability to meet the growing demand. Through its Permit To Take Water program, the Ministry of the Environment and Climate Change has limited the annual daily average taking from the aquifer in this area (The Regional Municipality of York, 2010a, p. 19). As a result of the limitations of the groundwater supply in this area, future supply of drinking water would need to be piped in; however, options are limited.

Within the Lake Huron watershed, York Region sources a small portion of its drinking water from Lake Simcoe to serve communities in the Town of Georgina. However, the capacity of Lake Simcoe is constrained by the Lake Simcoe Protection Plan. The Province introduced the Lake Simcoe Protection Plan in June 2009 with the objective of protecting and restoring the water quality and ecological integrity of the Lake Simcoe watershed. Phosphorus loading caps have been in place for sewage treatment plants in the Lake

Simcoe watershed since the 1980s (Ontario Ministry of the Environment, 2010a, p. 20). While municipalities have been able to reduce their phosphorus loads by adopting new technology despite population growth, reliance on today's technology for further reductions is costly and would not reduce phosphorus loadings to the desired level (Ontario Ministry of the Environment, 2010a, pp. 21-24). The limited receiving capacity of Lake Simcoe decreases its viability as a source for additional drinking water as sewage treatment plants are restricted in returning this water back to its source in the form of treated effluent (The Regional Municipality of York, 2010a, p. 20).

Because York Region straddles the Lake Ontario and Lake Huron watershed line, the drinking water that is sourced from Lake Ontario via the City of Toronto and Peel Region and that supplies the Towns of Aurora and Newmarket constitutes an intra-basin transfer under the amended *Ontario Water Resources Act*. To accommodate the growth projected by *Places to Grow* to the year 2031 in these communities, York Region expected and projected it was necessary for this intra-basin volume to reach 105 million litres per day, triggering requirements under the 1985 Charter while the 2005 Agreement was still being implemented.

4.1.2 Bi-national consultation process

As outlined in Chapters 2 and 3, bulk water transfer proposals that trigger the 1985 Charter or 2005 Agreement must meet both domestic and bi-national requirements. In this case, the proposal was an intra-basin transfer that was being considered under the 1985 Charter but had to meet the spirit of the 2005 Agreement because implementation was underway. To meet requirements under the provincial regulatory framework, York Region submitted a Permit To Take Water application under the *Ontario Water Resources Act* for its

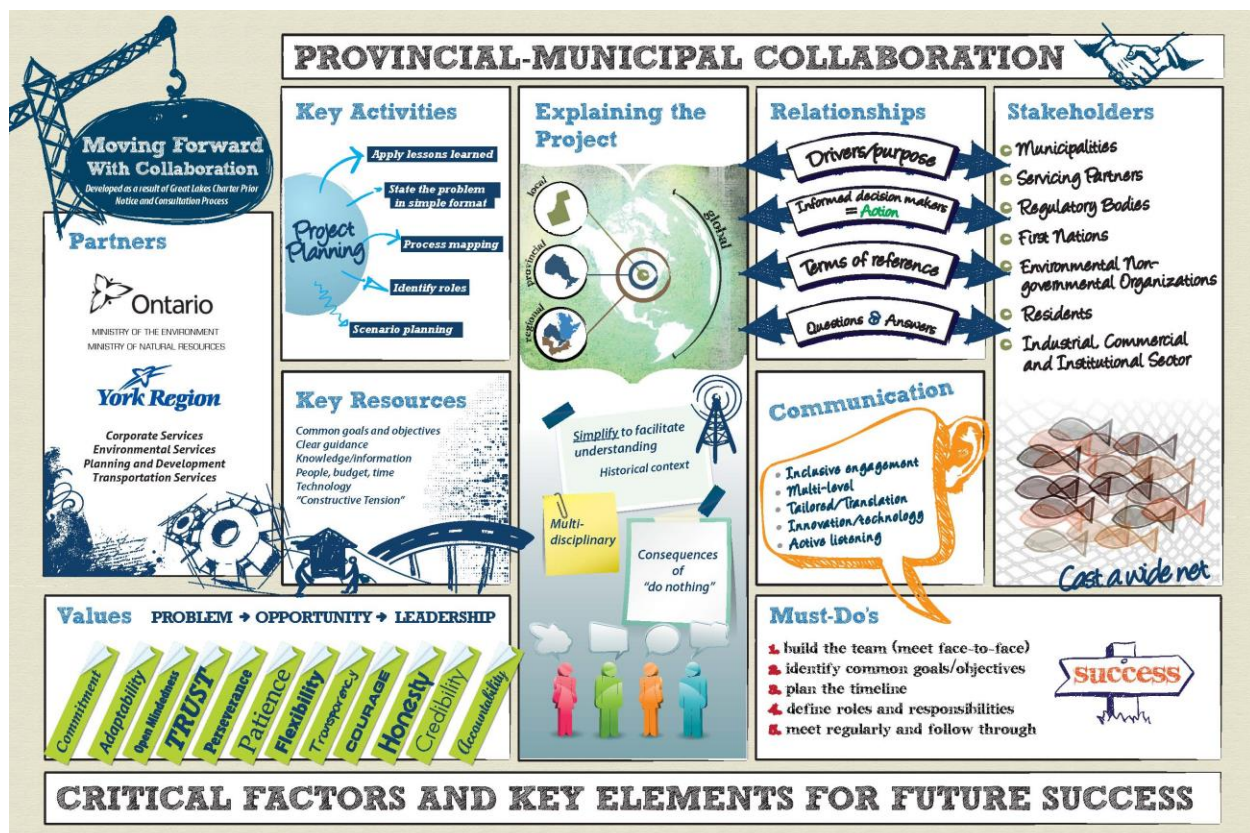
intra-basin transfer proposal in December 2008. York Region's Permit To Take Water application was returned by the Ministry of the Environment in December 2010 although there were no objections from 1985 Charter signatories to York Region's proposal, including the Province of Ontario. The proposal successfully underwent Prior Notice and Consultation under the 1985 Charter and met bi-national requirements. How York Region's intra-basin transfer will be regulated through the provincial framework remains outstanding at the time of writing.

After almost a year of discussions, in November 2009, it was decided that York Region's proposal would undergo bi-national consultation under the 1985 Charter (The Regional Municipality of York, 2010c). As required under the 1985 Charter, the Region's proposal underwent bi-national consultation, which was initiated April 9, 2010 and concluded on June 14, 2010. York Region, along with staff from the Ministries of the Environment and Natural Resources conducted a lessons learned workshop in November 2010. The purpose of the workshop was to "reflect on the successful working relationships that developed through a collaborative effort to consult with provincial, national and bi-national stakeholders" (The Regional Municipality of York, 2010b, p. 2). Developing good working relationships and maintaining effective communication were identified as key success factors in the bi-national consultation portion of this proposal (The Regional Municipality of York, 2010b, p. 2). Lessons learned were gathered according to the following elements: the process; stakeholder consultation; and collaboration (The Regional Municipality of York, 2010b, p. 4). The workshop outcomes were summarized in a poster (Figure 13).

According to the lessons learned report York Region (2010b) developed, the bi-national consultation process that was undertaken for York Region's intra-basin transfer

proposal demonstrated best practices for municipal partnership in the intergovernmental framework as recommended by literature on cross-boundary collaboration: resources were dedicated; common goals and objectives were acknowledged; and broad based stakeholder involvement was achieved; and participants remained flexible resulting in an adaptable process. Despite demonstrating best practices and successfully completing the bi-national consultation with other Great Lakes- St. Lawrence River Basin jurisdictions, Ontario was not able to provide York Region a satisfactory decision within the provincial regulatory framework.

YORK REGION'S CRITICAL FACTORS AND KEY ELEMENTS FOR FUTURE SUCCESS OF PROVINCIAL-MUNICIPAL COLLABORATION



Source: (The Regional Municipality of York, 2010b)

Figure 13: York Region's Lessons Learned Workshop Poster Summary

As a party to the 1985 Charter, it is the Province who officially consults with other Great Lakes jurisdictions regarding a proposal for an intra-basin transfer. York Region provided resources necessary to facilitate comprehensive consultations as it was very important for them to have a successful consultation process. Once the Province agreed to move forward with Prior Notice and Consultation under the 1985 Charter, momentum was maintained with a temporary staff resource at York Region. To move this project file forward on York Region's behalf, the work load of this temporary full-time position was dedicated to this endeavour. For both informal and formal collaboration for cross-boundary issues, it is recommended to have staff dedicated to the initiative to encourage progress (Friedman & Foster, 2011, p. 30). York Region was able to provide resources at the right time, which provided the prerequisite for successful application of the Prior Notice and Consultation requirement of the 1985 Charter (McLaughlin & Krantzberg, 2011, p. 392). People, budget and time were key resources for collaboration in the York Region proposal.

The consultation plan had to be designed to meet a number of conditions. There was a moratorium on travel for government workers on both sides of the border following an economic downturn in 2008. This restriction prompted an innovative approach to holding consultations via web meetings that provided the same effect as face-to-face meetings. To ensure success with this approach, a consultant with respected skills and abilities to strengthen relationships was used (Friedman & Foster, 2011, p. 30). These skills and abilities helped tailor and simplify information that enabled stakeholders to understand York Region's unique position: namely, that York Region is an upper-tier municipality, subject to Ontario's comprehensive planning framework, that does not border a Great Lake but works with its neighbouring municipalities to source drinking water from Lake Ontario. As a result of this unique position, York Region needed to transfer drinking water from one Great Lake

watershed to another. It was also necessary to explain the planning structure in Ontario to the other jurisdictions in the Great Lakes-St. Lawrence River Basin.

Another area that literature suggests is needed for successful collaboration is that the information needed and its interpretation should be agreed upon. Information needs might include defining educational needs for stakeholders to achieve a common understanding of problems, causes and potential solutions (Hartig, Zarull, Heidtke, & Shah, 1998, p. 49). For the York Region proposal, it was recognized that the project needed to be explained in terms of spatial context – where York Region was located and how their proposal fit into the provincial and Great Lakes-St. Lawrence River Basin frameworks – as well as from a multi-disciplinary perspective. Historical and provincial context was provided to further the understanding of why an intra-basin transfer was needed and consequences of “do nothing” were illustrated. Furthermore, simplicity facilitated understanding. To ensure all stakeholders understood why an intra-basin transfer was necessary to secure drinking water for future growth, consultations were held to tell the story.

In moving towards agreed upon, clearly defined objectives, tasks to be performed by each participant should be specified, in complete detail and perfect sequence (McLaughlin & Krantzberg, 2011, p. 393). To this end, York Region and provincial staff worked together to develop a detailed action plan from preparing for stakeholder consultations to responding to feedback from these consultations. This detailed plan provided a clear path forward and was ultimately observed in the York Region intra-basin transfer proposal that these steps to ‘identify common goals and objectives’ and to ‘plan the timeline’ were ‘must do’s’. Common goals and objectives were also acknowledged as a key resource in this case study.

Consideration of intra-basin transfer proposals for drinking water requires engagement from Canadian provinces and US states as well as municipalities. Because

local, subnational, and federal actors offer different merits, ensuring the right mix of participants by planning ahead and asking which stakeholders would be most appropriate is a necessary step (Friedman & Foster, 2011, p. 30). Furthermore, these stakeholders need to be involved from the beginning to develop a common vision for moving forward (Hartig, Zarull, Heidtke, & Shah, 1998, pp. 47-8). In terms of stakeholders, a 'wide net' was 'cast' for consultations on the proposal. The group of stakeholders to be consulted was expanded beyond what was required by the 1985 Charter and included a stakeholder group established in Ontario to advise on implementation of the 2005 Agreement. While perfect communication among and coordination of York Region and provincial agencies was not a precondition in implementation of this policy (McLaughlin & Krantzberg, 2011, p. 394), meeting regularly was a necessity for the collaboration on this proposal and contributed to the successful collaboration for the bi-national consultation on this proposal.

Being flexible enables an environment for participants to focus on the most pressing issues, allowing collaboration to take a direction that has the most participant buy-in (Friedman & Foster, 2011, p. 30). The literature indicates that flexibility in participants' mindsets for setting up the process and subsequently in adjusting the process is foundational for successful collaboration. Regular review and feedback loops allow for adjustments to ensure that the plan stays on track and that objectives are achieved within established timeframes (Hartig, Zarull, Heidtke, & Shah, 1998, p. 50). Flexibility provides a pre-emptive defence against situations where externalities may have a constraining effect (McLaughlin & Krantzberg, 2011, p. 391). Flexibility that allows for understanding how municipalities function also helps prevent policies from being rigidly formed where municipalities are viewed as creatures of the state and expected to comply as such (Morison & Brown, 2010, p. 211). The lessons learned workshop for the York Region proposal

identified core values that were necessary for success. Values identified that speak to fostering a successful collaborative environment include adaptability, open mindedness, and flexibility. Adaptability and open mindedness in this proposal referred to the ability to make changes during the process and to anticipate uncertainties. Flexibility was explicitly identified as a core value for the stakeholder consultation and collaboration elements of the proposal.

Feedback received from the other Great Lakes-St. Lawrence River Basin jurisdictions during the bi-national consultation was positive. Further, no jurisdiction objected to the proposal. The absence of objections would be considered a success under the Prior Notice and Consultation requirement of the 1985 Charter, described in Chapter 2, where the Province is required to provide an opportunity to the other signatories to comment prior to providing a decision on the proposal. However, the Province could not provide their decision on this proposal with a regulatory instrument recognized by the provincial legal framework. It was the Province's position that until sections in the *Ontario Water Resources Act* regulating intra-basin transfers came into force, York Region's application for an increase in their intra-basin transfer amount could not be considered.

4.1.3 Regulation of intra-basin transfers under the *Ontario Water Resources Act*

When York Region identified the need for an intra-basin transfer, regulations for bulk water transfers that would fully implement bi-national commitments from the 2005 Agreement had not yet been filed in Ontario. Therefore, it was not yet known how the regulation of bulk water transfers in Ontario would be operationalized. This void was a cause for concern for York Region. Significant capital investments in approved water and

wastewater infrastructure had been made by York Region and its servicing partners to provide future Lake Ontario based drinking water supply and wastewater treatment to York Region (The Regional Municipality of York, 2010a, pp. 2-6). To secure a drinking water source for its growing population and to benefit from investments already made, York Region needed certainty that its investments would be protected. York Region attempted to use the provincial framework already in place by submitting a Permit To Take Water application to initiate the Prior Notice and Consultation process under the 1985 Charter. As described above, the Prior Notice and Consultation was successfully carried out. York Region's objective of obtaining certainty within the provincial regulatory framework amid pending regulations, however, was not fulfilled.

Although there were no objections from 1985 Charter signatories to York Region's proposal, York Region's Permit To Take Water application was returned by the Ministry of the Environment in December 2010. The rationale for the application being returned was that they did not have a regulatory mechanism to provide York Region with a Permit To Take Water. In the Province's letter dated December 23, 2010 returning York Region's Permit To Take Water application, they provide:

Your application for an increase to York Region's intra-basin transfer cannot be considered by the Director until sections 34.5 to 34.11 of the Ontario Water Resources Act (OWRA) are in force. These provisions give the Director the authority to regulate new or increased transfers of water between Great Lake watersheds. Those sections of the OWRA cannot be proclaimed until the MOE has consulted on regulations that will assist in implementing these provisions, and such regulations are made. As a result, we consider your application to be premature and are returning it and closing the file. We anticipate York Region re-submitting the application once the new regulations are acclaimed. (Ontario Ministry of the Environment, 2010b)

It was the Province's position that because the Province had yet to file regulations that would give them an instrument to regulate bulk water transfers, they could not provide

York Region with an approval for the intra-basin transfer. In this sense, the Province of Ontario was unable to provide York Region with the certainty it needed. York Region, however, believed the Province was able to provide them this certainty as York Region's legal interpretation of the *Ontario Water Resources Act* differed from that of the Province's. In York Region's letter responding to the return of their Permit To Take Water application, they state,

While York Region has chosen not to appeal the MOE's decision to the Environmental Review Tribunal, the Region maintains its long-held position that the MOE already has jurisdiction to issue a standalone PTTW to York Region under existing provisions of the *Ontario Water Resources Act* (OWRA). York Region views its water distribution network, which transfers drinking water from the Lake Ontario watershed to the Lake Huron watershed, as a "structure or works constructed for the diversion or storage of water", and therefore can be defined as a "water taking" under the OWRA [subsection 1(7)]. York Region's water distribution network is crucial infrastructure that has been authorized by the MOE following completion of many environmental assessment processes. (The Regional Municipality of York, 2011)

Despite best efforts to influence the implementation and operationalization of bulk water transfer regulations in Ontario, the York Region intra-basin transfer proposal shows the Province's ultimate authority over municipalities in Ontario. Although York Region's proposal met all of the bi-national requirements, the provincial framework resulted in an unsatisfactory situation for York Region. York Region had two options: appeal the Province's decision to the Environmental Review Tribunal or wait until the Province was ready to implement bulk water transfer regulations within the provincial framework. At the time of writing, with implementing regulations recently acclaimed in January 2015, York Region still does not know how the Province will regulate its intra-basin transfer.

In this cross-boundary collaboration, York Region shared goals and objectives related to regulating bulk water transfers in the Great Lakes-St. Lawrence River Basin, dedicated resources to the endeavor, and remained engaged. By doing so, York Region acted as a

partner in the bi-national framework but, ultimately, remained a subordinate within the provincial-municipal framework. The York Region case therefore illustrates the need for approaches that better integrate municipalities in the Basin and provincial decision-making so that they can truly emerge as a partner. Although the collaboration provided many best practices for future proposals, the York Region case also illustrated some of the barriers to municipalities having greater involvement in the Great Lakes-St. Lawrence River Basin and acting as partners in collaborations with the provincial and federal governments. The next section outlines some of these barriers and draws on interview data to reinforce some of these barriers.

4.2 Barriers to Municipalities acting as Partners

The York Region case demonstrated the ability of a municipality to act as a partner with Ontario in the intergovernmental framework for bulk water transfers at the provincial-state level. However, the context of the York Region case, along with observations and experiences from key informants, highlight a number of barriers for collaboration. The organizational capacity and culture of municipalities may not be conducive to participating as a partner in the Great Lakes-St. Lawrence River Basin. This inability to participate is compounded when municipalities have differing priorities and may not see their connection to the Basin, especially if they do not border a shoreline. Moreover, the mechanisms in place to engage municipalities do not necessarily treat them as partners. Instead, they hold the same status as the wide range of stakeholders in the Basin. Lastly, the lack of coordination in the Basin hinders municipalities from collectively addressing Basin issues and measuring results Basin-wide.

4.2.1 Organizational capacity and culture

Building capacity among local governments should be an active part of intergovernmental program design (Morison & Brown, 2010, p. 213). Capacity and commitment are improved as best practices are shared. As described by four key informant interviews, sharing best practices as a form of municipal capacity building appears to occur in the Great Lakes-St. Lawrence River Basin. Networking and building relationships among municipalities to build capacity was a common theme in the key informant interviews. It was noted that information sharing relationships were pursued with other municipalities either individually or through municipal associations. Key informants explained that knowledge sharing was taking place between individual municipalities on an as-needed-basis, and also through larger forums such as municipal associations. It was noted that smaller municipalities may have a greater need to leverage the knowledge, resources and/or advocacy of municipal associations. Furthermore, the capacity and culture of individual municipalities may not be conducive to being a partner in the intergovernmental framework within the Great Lakes-St. Lawrence River Basin.

Another principle that is important for successful implementation of eco-system based management is the commitment of top leaders (Hartig, Zarull, Heidtke, & Shah, 1998, p. 47). Within the Great Lakes context, the formation of the Great Lakes and St. Lawrence Cities Initiative in 2003 signaled the growing engagement of local governments (Johns, 2010, p. 69). As top leaders for municipalities would include the politicians elected to oversee administration of the municipality's affairs, it is perceived that membership in the Great Lakes and St. Lawrence Cities Initiative signals a municipality's commitment as a steward of the Great Lakes (municipal association, interview, February 23, 2015). The Great

Lakes and St. Lawrence Cities Initiative is an example of taking advantage of capacity that exists within other municipalities. The Great Lakes and St. Lawrence Cities Initiative draws on the political standing of its members and its members draw on the strength of the collaborative. The Great Lakes and St. Lawrence Cities Initiative points to council resolutions that are passed by its members to promote its agenda, while members can point to the organization's resolutions as a way to promote collective municipal goals and strengthen municipal capacity (municipal councillor, interview, February 23, 2015).

Lack of experience and technical knowledge and skills at the provincial level may also undermine the Province's ability to engage municipalities in the intergovernmental framework. For example, in the York Region intra-basin transfer proposal, a key informant noted the reluctance of provincial staff to initiate the Prior Notice and Consultation under the 1985 Great Lakes Charter given their relatively low experience with the process and knowledge about the implications (municipal employee A, interview, May 14, 2014). Additionally, shifting political priorities appeared to cause a delay in filing implementing regulations, representing a constraint that created an acute deficit in policy implementation (McLaughlin & Krantzberg, 2011, p. 392). The Ontario Ministry of the Environment and Climate Change was led by five different ministers and experienced a shift in its mandate since signing the 2005 Agreement to filing implementing regulations in December 2014. These changes created uncertainty and challenged the momentum of policy development to address bulk water transfers in Ontario and to meet bi-national commitments.

The Province made partial attempts to jointly define policy objectives by consulting with municipalities on the implementation of commitments made in the 2005 Agreement. Morison and Brown (2010) suggest that organizational capacity and characteristics should be considered in policy design to allow them to adapt to the needs of municipalities during

implementation. However, the Province had a vision of how bulk water transfer regulations would be implemented according to the fairly prescriptive bi-national commitments made in the 2005 Agreement. As a result, many of the discussions on the development of bulk water transfer regulations that took place between municipalities and the Province revolved around how the proposed implementation conflicted with municipal planning processes and resourcing. The connection between municipal servicing and related planning processes and intra-basin transfers was not well understood by the Province. Further, the York Region case study illustrated this lack of understanding of how municipalities function and their role in relation to bulk water transfer regulations in Ontario.

The engagement of a single municipality is dependent on two factors: values of the individual attending and capacity and culture of the organization. Without a requirement to participate, the level of participation and commitment to follow through with action is really dependent upon the values of the individual within the municipality tasked to engage in the process and not necessarily tied to the values or priorities of the organization. To effectively follow development of and maintain momentum on issues that span many years, a municipality may need to rely on the ability of their employees to retain a file if they move to another position or maintain well documented notes if they move to another organization (former provincial agency employee, interview, March 17, 2015). Also, even if the engaged individual is willing to follow through and take action, there could be a lack of political will within the organization and, therefore, no opportunity for that issue to move up on the priority list for that municipality (municipal employee A, interview, May 14, 2014). If the lack of political will within municipalities is widespread within the 409 Ontario municipalities within the Great Lakes-St. Lawrence River Basin, the ability of municipalities to mobilize to address an issue will be limited. The inability for municipalities to mobilize on an issue may

also stem from the fact that municipalities may view themselves as creatures of local voters and respond to local constituent desires. In the case of York Region, although from a municipal servicing standpoint, they are engaged in and act on Great Lakes-related issues, their political representatives, however, are not members of the Great Lakes-St. Lawrence Cities Initiative. Local desires are not uniform throughout Ontario and result in differing priorities among municipalities.

4.2.2 Differing priorities and limited resources

Municipalities have a very direct relationship with the Great Lakes. The role of municipalities as being stewards of the Great Lakes was explicitly noted in two key informant interviews. Municipalities were also described as ‘front-line’, ‘on-the-ground’ and ‘grass-roots’. Their operations and policies can affect the Great Lakes both positively and negatively (municipal association, interview, February 23, 2015). They are also the ones directly benefiting and directly being impacted by the quality of the Great Lakes (municipal employee A, interview, May 14, 2014). When asked specifically about what role municipalities have to play, all key informants described their role in varying degrees but all indicated there was an active role: rallying and identifying issues (municipal employee A, interview, May 14, 2014), providing input (municipal employee B, interview, July 23, 2014; municipal association, interview, February 23, 2015), sharing best practices and knowledge (municipal councillor, interview, February 23, 2015; academic, interview, March 16, 2015) and implementing policies (former provincial agency employee, interview, March 17, 2015; provincial employee, interview, April 17, 2015). However, it cannot be presumed that all municipalities are committed to sustainability principles (Morison & Brown, 2010, p. 211) and that their primary goals and objectives specifically relate to improved Great Lakes

quality. Municipalities may see a more pressing need to allocate their available resources to other issues.

When asked about goals in relation to the Great Lakes, one municipal employee highlighted the fact that their organization's goals may not directly relate to the Great Lakes (municipal employee A, interview, May 14, 2014). However, municipalities do have a role in being a steward of the environment and designing and maintaining assets in a manner that the environment is protected (municipal employee A, interview, May 14, 2014). Many municipalities in the Great Lakes-St. Lawrence River Basin may not view themselves as a Great Lakes municipality if they don't border a lake. Another municipal employee stressed the need for municipalities that are inland within the Great Lakes-St. Lawrence River Basin to be more engaged in its protection and management (municipal employee B, interview, July 23, 2014). The *Municipal Act, 2001* allows municipalities to provide a service that it considers necessary or desirable for the public. Involvement in Great Lakes policy development and resource management may not necessarily be viewed as such from the municipality's perspective, especially if they do not border a Great Lake. It was noted, however, that there appears to be more awareness among large municipalities that are growing (former provincial employee, interview, March 18, 2015). On the other hand, it was highlighted as a disconnect that inland municipalities are not as engaged as those that border a Great Lake even though the majority of Ontario lies within the basin (municipal employee B, interview, July 23, 2014). As a result, municipalities may have other areas of engagement that take priority over larger basin-wide needs including the regulation of bulk water transfers.

York Region and the Province worked together to develop common goals and objectives for their collaboration in the York Region intra-basin transfer proposal. Further,

York Region was able to dedicate resources to the endeavor and remained engaged. However, it can be argued that the initial priority was not to successfully collaborate with the Province or the other Great Lakes-St. Lawrence River Basin jurisdictions but to secure drinking water for their residents. This observation supports the suggestion that the primary driver behind municipalities acting as a partner and providing resources for a Great Lakes-St. Lawrence River Basin issue will often be a function of whether it benefits service delivery to its residents and communities.

Being so close to the community and its issues, municipalities interact with a large number of stakeholders. Not only do they deal with the provincial and federal governments, they also maintain relationships with associations, community groups, and other municipalities. For example, the two-tier system aims to maximize resources through economies of scale while providing tailored municipal services. For one upper-tier municipality, this relationship is described as unique and liaison and improvement in the relationship must occur in various ways (municipal employee A, interview, May 14, 2014). This service model adds a layer of complexity to the multitude of stakeholders municipalities must manage. Because servicing responsibilities are divided among the two tiers in the *Municipal Act, 2001*, the Province interacts with each tier in a different manner. The ability of municipalities to work together was mentioned several times in three of the key informant interviews conducted for this study. This need for municipal to municipal collaboration was expressed both in terms of municipal operations and partnering to take advantage of economies of scale and in terms of having more political clout in advocating the municipal position.

It was noted by one key informant that it is important to engage community members in understanding the work municipalities do and the benefits that may be realized as a

result. The goal of such engagement is for the community to be an advocate for the municipality rather than an opponent, including the case of water infrastructure (municipal employee A, interview, May 14, 2014). For example, local community groups in the Lake Simcoe sub-watershed act as advocates for York Region's Lake Ontario servicing model as it alleviates stress on the smaller lake. Developing relationships with stakeholders was acknowledged as an activity that requires resources, specifically in terms of time. Investing time in an activity requires either human resources to be re-allocated from another activity or additional human resources to be secured requiring additional funding. Municipalities are limited in their sources of revenue and may not be able to allocate funding for environmental management after providing basic services (Morison & Brown, 2010, p. 212). Municipalities may view the spheres of jurisdiction that have been delegated to them as core services that must be delivered before any other activities are given resources. As noted above, in the York Region example, it was providing water servicing to the growing population that was the first and foremost priority. It was mainly because of this need and the intergovernmental framework for the Great Lakes-St. Lawrence River Basin that required them to make strong efforts to work and partner with the Province to meet bi-national requirements.

The municipal employees interviewed emphasized that the lack of engagement from municipalities, especially smaller municipalities, is largely due to the lack of resources and ability to provide input (municipal employee B, interview, July 23, 2014; municipal employee A, interview, May 14, 2014). A common perspective is that larger municipalities may have more resources to allocate after providing core services while the smaller municipalities may not. For example, while the intergovernmental framework may provide adequate opportunities to provide input, the municipality must send a representative to participate

(municipal employee B, interview, July 23, 2014), which can be a high burden for a small municipality with few staff. Likewise, organizations like the Federation of Canadian Municipalities provide grant programs, which would require resources to consider and apply for (municipal employee A, interview, May 14, 2014). To take advantage of opportunities to take part in the Great Lakes intergovernmental processes, human resources will need to be dedicated at the very least.

The lack of fiscal autonomy has also been recognized as a barrier for municipalities to solve local problems (Slack and Bird, 2008; Valiante, 2007). A lack of financial resources and political autonomy will continue to prevent active participation from municipalities until they gain greater fiscal autonomy (Valiante, 2007, pp. 1083-4). Resources should not be constrained overall and should be made available in sufficient quantities and combination at each stage of policy development and implementation (McLaughlin & Krantzberg, 2011, p. 392). With limited resources, municipalities may not be able to allocate enough resources to remain engaged, maintain momentum and encourage longevity for successful implementation. For example, nine years passed between the signing of the 2005 Agreement, to the bi-national commitments being fully integrated into domestic regulations in Ontario. While the technical bulletin provided by the Province in 2009 provided a series of recommendations, it was noted that the work a proponent completed in adherence with the technical bulletin may possibly be used to demonstrate compliance with regulations once they come into force. This lack of direction and void in regulations offers very little incentive for municipalities to become more engaged and proactive in this intergovernmental framework. Furthermore, the operationalization of these regulations remains outstanding, which extends the nine year timeframe.

4.2.3 Wide range of stakeholders

After the 2005 Agreement was signed by the Great Lakes-St. Lawrence River Basin jurisdictions, Ontario municipalities raised concerns about how implementation of the 2005 Agreement will affect long term municipal service plans. In response to these concerns, the Province directly engaged municipalities in development of the regulatory framework starting in February 2007. A Municipal Sector Working Group was created in October 2008 and consulted with over the period of November 2008 to March 2009. Eight municipalities – Cities of Hamilton, London, Mississauga and Toronto, Peel, Waterloo and York Regions and Town of Collingwood), and five municipal associations – Association of Municipalities of Ontario, Canadian Water and Wastewater Association, Ontario Municipal Water Association and the Great Lakes-St. Lawrence Cities Initiative were invited to participate on the working group based on their involvement in the Agreement Advisory Panel described in Chapter 3. The 17 attendees of the working group meetings represented seven municipalities and two municipal associations.

While municipalities were in effect consulted on the technical bulletin through the Agreement Advisory Panel and the Municipal Sector Working Group, this consultation was constrained by its limited representation of municipal interests. In his 2008/2009 Annual Report Supplement, the Environmental Commissioner of Ontario expressed its disappointment in the Ontario Ministry of the Environment's approach with posting the technical bulletin on the Environmental Registry as an information notice, bypassing full public notice and comment (Environmental Commissioner of Ontario, 2009, pp. 5-6), which would include all municipalities in Ontario.

Of the nine comments received on the proposed regulations to implement commitments made in the 2005 Agreement made available online, four were related to

municipal water takings. Twenty-one comments were received in total (Ontario Ministry of the Environment, 2014). Table 6 summarizes the number of comments received on proposals posted on the Environmental Registry and representation of the comments submitted.

TABLE 6: REPRESENTATION OF COMMENTS RECEIVED ON ENVIRONMENTAL REGISTRY

Posting	Comments Received	Representation
012-1607: Regulatory amendments to support implementation of the Great Lakes–St. Lawrence River Basin Sustainable Water Resources Agreement (April 24, 2014)	21 submissions: <ul style="list-style-type: none"> • 12 in writing • 9 online 	<ul style="list-style-type: none"> • municipal (4 online)
010-6350: Stewardship – Leadership – Accountability. Managing Ontario’s Water Resources for Future Generations (August 5, 2009)	61 submissions: <ul style="list-style-type: none"> • 44 in writing • 17 online (14 displayed) 	<ul style="list-style-type: none"> • environmental non-government organizations (15) • industry (14) • municipal (13) • others (4) • conservation authorities (3) • non-government organizations (3) • private individuals (3) • recreation (2) • waterpower (2) • agriculture (1) • forestry (1)
010-6002: Technical Bulletin- Environmental Assessment Direction for Municipal Water and Wastewater Projects Proposing an Intra- Basin Transfer (March 16, 2009)	N/A – Information Notice	
010-0163: Bill 198 - Safeguarding and Sustaining Ontario's Water Act, 2007 (April 3, 2007)	155 submissions: <ul style="list-style-type: none"> • 30 in writing • 125 online 	<ul style="list-style-type: none"> • others (118) • industry (16) • non-government organizations (10) • municipal (6) • agriculture (2) • conservation authorities (2) • academia (1)

Posting	Comments Received	Representation
AA07E0001: Proposed Legislative Amendments to the Ontario Water Resources Act (January 9, 2007)	27 submissions: <ul style="list-style-type: none"> • 27 in writing • 0 online 	<ul style="list-style-type: none"> • non-government organizations (10) • industry (6) • municipal (6) • agriculture (2) • others (2) • conservation authorities (1)
PB04E6018: Great Lakes Basin Sustainable Water Resources Agreement and Great Lakes Basin Water Resources Compact (Agreements to implement the Great Lakes Charter Annex) [June 30, 2005]	312 submissions: <ul style="list-style-type: none"> • 312 in writing • 0 online 	

Source: Environmental Registry

National and subnational governments have recognized the difficulty in obtaining compliance with prescriptive policies from local governments, sometimes referred to as an “implementation gap,” leading to a shift towards more flexible arrangements with local governments (May & Burby, 1996, p. 172). May & Burby (1996, pp. 173-4) explain that municipalities are more interested in implementing intergovernmental policies that are cooperative. Further, cooperative policies also increase municipalities’ ability to achieve policy goals. In the re-negotiation of the 1987 Great Lakes Water Quality Agreement, an Advisory Committee was established allowing states and provinces to provide input into the formation and revision of draft text (Johns & Thorn, forthcoming, p. 9). In the case of the 2005 Agreement, the Agreement Advisory Panel provided an opportunity for stakeholders to provide input but it was ultimately the Province’s decision whether to bring those comments to the bi-national table.

Municipalities were provided with some opportunities to be represented and involved in development and implementation of bi-national commitments related to bulk water transfers. Municipalities along with numerous non-governmental stakeholders who have

interest in the environment-related activities of government are provided a number of mechanisms to provide input. However, overall municipal representation in the policy development process for bulk water transfer regulations appears minimal, as evidenced by participation in the Agreement Advisory Panel and responses to the Environmental Registry outlined above. The minimal municipal representation on the Agreement Advisory Panel and dependence on associations for representation is reflective of the situation with respect to engagement in the implementation of bulk water transfer regulations in Ontario.

Ontario was an advocate for more environmental protection in the bi-national commitments. While Ontario was able to make gains at the bi-national stage, the Province found itself in a paradoxical position at the subnational level. The Province wanted to lead by example in their implementation of commitments made in the 2005 Agreement but had to do so in a manner that allowed Ontario to remain economically competitive with the other Great Lakes jurisdictions. Having environmental protection measures in place that are stricter than other Great Lakes jurisdictions may make Ontario less attractive to industry. This issue resulted in long drawn out process that created a high level of uncertainty for municipalities and other organizations affected by the commitments. Additionally, the multi-jurisdictional nature of the Basin can be challenging with ten different political and governmental make-ups trying to reach consensus (provincial employee, interview, April 17, 2015). Nine years had passed before implementation regulations for bulk water transfers were filed, which was the final piece for Ontario to implement bi-national commitments made in the 2005 Agreement. Even as the regulations have taken effect, there remains uncertainty on how those regulations will be enforced.

Opportunities for municipalities to participate in Ontario environmental policy-making, such as the Environmental Registry, are passive. When policy ideas are posted on the

Environmental Registry, Ontario is often looking for feedback on policies that have already been developed and written in the form of legislation or regulation. Further, aside from invitations to participate in working groups or advisory panels, the Environmental Registry is the one primary mechanism that municipalities are encouraged to participate in policy development. However, this process does not recognize all municipalities as partners. Instead, they are given the same status as any other member in the community. This undermines the suggestion that municipalities have a partnership role in bi-national commitments related to the Great Lakes-St. Lawrence River Basin.

4.2.4 Lack of coordination

This thesis has examined the intergovernmental framework in the Great Lakes-St. Lawrence River Basin through a water quantity lens but the problem of water quality and quantity must be considered from an ecosystem perspective. This is evident by the effect climate change has had on the Great Lakes where low water levels have affected the protection of wetlands and forests (Price, 2002, p. 146). Much of the attention for the Great Lakes has been placed on the shoreline, affecting municipalities in the near-shore area. Yet, the majority of municipalities in the Great Lakes-St. Lawrence River Basin are inland; only 144 of the 409 Ontario municipalities in the Basin lie on the shoreline of a Great Lake (see Appendix C).

Slightly different perspectives were brought forward by key informants on how this attention might change but they all converge on a similar idea: Inland municipalities upstream of the Great Lakes could be better engaged and their effects better understood (municipal employee B, interview, July 23, 2014). The whole range of industry activities upstream need to be considered for how they are impacting water quality (municipal

employee A, interview, May 14, 2014). Best practices on providing sustainable municipal services could be shared more widely, especially with small municipalities with fewer resources, to get everyone on the same page (municipal councillor, interview, February 23, 2015). Stormwater and non-point sources could be studied and subject to more regulatory controls (municipal association, interview, February 23, 2015). There is a need to better manage the Great Lakes-St. Lawrence River Basin as an ecosystem, which is dependent on coordinating all the necessary stakeholders and leadership to involve and mobilize them.

One key informant stated that there is a need to better coordinate and leverage the wealth of knowledge and expertise as well as passion for protection of the Great Lakes-St. Lawrence River Basin that exist among stakeholders including the public, academics, and engineers (municipal employee A, interview, May 14, 2014). There also appears to be a need to remain consistent and constant in engaging stakeholders on Great Lakes issues as it was noted that interest has historically ebbed and flowed in the Great Lakes-St. Lawrence River Basin (academic, interview, March 16, 2015; former provincial employee, interview, March 18, 2015). Adding to this need are the large number of small municipal bodies that may benefit from more intergovernmental interactions and achieving economies of scale by forming partnerships with other municipalities (municipal employee A, interview, May 14, 2014). To address these needs for coordination, subnational governments are well suited to play multiple roles including facilitator, conduit and agents of change (Friedman & Foster, 2011, p. 26). For example, one key informant highlighted that coordination at the provincial level has helped to ensure consistency across source protection plans (former provincial agency employee, interview, March 17, 2015). Accordingly, key informants for this study look to the leadership of the provincial and federal governments to overcome this challenge and provide overarching coordination.

Key informants emphasized the need to share best practices among municipalities (municipal councillor, interview, February 23, 2015) as well as across the Basin in general and to communicate these best practices in a more systematic and simplified way (municipal employee A, interview, May 14, 2014). Source protection committees in Ontario are an example of regional activities to share knowledge and address issues on a watershed basis. These committees are set up to develop policies and plans that look at governing permitted activities that may impact source water. Although this is more of an interaction with conservation authorities, it is an example of a regionally coordinated activity (municipal employee A, interview, May 14, 2014). The work that is being done with source water protection is an indication of how the Province is shifting their focus from municipalities, who are easy to regulate with existing instruments, to planning activities, representing a more proactive and preventative approach (municipal association, interview, February 23, 2015). On the other hand, Great Lakes are boundary waters shared with another nation raising the question whether the federal government is better suited to provide overarching coordination for the Great Lakes-St. Lawrence River Basin.

One interviewee suggested that the federal government needs to provide more resources to protect the Great Lakes since it is a major transportation corridor and the burden cannot be placed solely on the provincial government (municipal employee B, interview, July 23, 2014). Further, stakeholders need the national and international perspective that the federal government is able to provide to sort through bi-national issues that are impacting the Great Lakes-St. Lawrence River Basin, in terms of both quality and quantity issues. The federal government can “take that global lens but the real actions need to be taken by municipalities” (municipal employee A, interview, May 14, 2014). As suggested by the body of literature, some municipalities recognize their ability to make

positive impacts in the Great Lakes-St. Lawrence River Basin, but clearly there are limits to what they can accomplish independently. Not only do municipalities need to be engaged at a wider scale, measures are needed to gauge how effective municipalities are in collectively meeting objectives.

Indicators to measure progress and results are required to achieve successful implementation of ecosystem-based management. After actions are implemented, monitoring results are evaluated against objectives and indicators to measure and sustain progress (Hartig, Zarull, Heidtke, & Shah, 1998, p. 50). For this, municipal employees interviewed stressed the importance that municipalities work together for a coordinated approach to any issue related to the Great Lakes-St. Lawrence River Basin. The challenge to be addressed is how to coordinate and gain enough support and momentum from both sides of the border to make real progress in resolving a specific Basin-wide problem (municipal employee A, interview, May 14, 2014). Because problems within the Great Lakes-St. Lawrence River Basin tend to cover a large area, it would be difficult to measure progress at the municipal level (municipal employee B, interview, July 23, 2014). Key informants acknowledged that actions of a single municipality may have great local impacts but may not have a positive net effect on the bi-national issue.

4.3 The Municipal Collaborator-Subordinate Paradox

Municipalities are encouraged to act as partners and share responsibility in protection of the Great Lakes-St. Lawrence River Basin, however, when they do, as the York Region case study illustrates, municipalities may not fulfill their own objectives. With municipalities as Constitutional subordinates under the provinces in Canada, it may appear that it is possible for Ontario to attain the precondition for perfect policy implementation

where Ontario as the authority can require and acquire perfect compliance (McLaughlin & Krantzberg, 2011, p. 394). There is a presumption that local governments are creatures of the state and the lack of recognition of their importance as local experts causes policies to fail (Morison & Brown, 2010, p. 211). National and subnational governments have recognized the difficulty in obtaining compliance from local governments with prescriptive policies and have shifted toward more flexible arrangements (May & Burby, 1996, p. 172).

While municipalities in Canada can be seen as a central partner in intergovernmental collaboration (Sancton, 2009, p. 18), a dichotomy also exists, as they remain a regulated institution. On the one hand, as one municipal employee described, there is the mechanical interaction with the regulator through approvals and permits, which is the majority of interactions. On the other hand, municipalities are strategically in conversation with the regulators about the Great Lakes water quality (municipal employee A, interview, May 14, 2014). Municipalities, therefore, tread a fine line with the provincial and federal governments, remaining compliant subordinates while pushing the boundaries of and advocating for collaboration.

A major function one municipal employee oversaw was remaining engaged on behalf of its municipality in policy development by monitoring emerging policies related to municipal water, wastewater and waste management services. The objective of this was to engage in a manner to influence provincial and federal policy development so that resulting regulations are reflective of how municipalities operate and therefore simple to comply with. It was also acknowledged that although the regulators are willing and actively interested in collaborating with municipalities, they have a multitude of other stakeholders that they must maintain relationships with, including political leaders and other industries. However, if the municipality is able to successfully build trust with the Province, they may be able to

overcome the barrier of competing with other stakeholders (municipal employee A, interview, May 14, 2014). This trust is necessary for the Province to work with municipalities to resolve complex issues.

It is perceived that the Province understands the importance of municipalities but continues to view them as a group that needs to be regulated (municipal association, interview, February 23, 2015). The example given by an interviewee was the proposed Great Lakes Protection Act, which allows the Province to compel municipalities to act on an issue it has deemed to be a priority. The direction could extend to what should be done, when it should be done and how it should be done. The key informant also highlighted that this approach continues despite municipalities investing more in the Great Lakes than any other level of government when considering their limited resources.

While municipalities can be considered a principal actor in the Great Lakes-St. Lawrence River Basin and want to be treated like a partner by the provincial and federal governments, they are also regulated and bound by provincial decisions even though they don't wish to be treated as such (municipal association, interview, February 23, 2015). The regulated partner and collaborator-subordinate paradox was referenced by two key informant interviews. The challenge lies in municipalities trying to take a leadership role while building trust with the regulator. Municipalities can be innovative in how services are delivered and depart from traditional approaches but they need to convince the Province that provincial policy objectives are still being met (municipal employee A, interview, May 14, 2014).

4.4 The Provincial-Municipal Partnership has Limits

York Region's history and experience with water taking is illustrative of how much provincial jurisdiction over municipal institutions remains prominent in Ontario. York Region's preferred water and wastewater servicing model, which has been shaped by the province, resulted in the need for an intra-basin transfer proposal under the 1985 Charter. At the direction of the province, the proposal would be considered under the 1985 Charter but had to meet the spirit of the 2005 Agreement because implementation was underway. This provided an opportunity for York Region and the Province to collaborate and negotiate the best way to navigate through the bi-national consultation process required for intra-basin transfers. York Region acted as a partner in the bi-national framework but, ultimately, remained a subordinate within the provincial-municipal framework. The context of the York Region case, along with observations and experiences from key informants, highlight a number of barriers for provincial-municipal collaboration in Great Lakes issues.

Priorities differ for municipalities according to the immediate needs of their residents and their perception of what municipal servicing entails. Whether municipalities allocate resources to protecting the Great Lakes-St. Lawrence River Basin may depend on how closely these match their own service obligations and requirements. With limited resources, it may be difficult for municipalities to dedicate human resources to engage with the intergovernmental framework and associated processes. Geographic location of municipalities is a major factor in this too, as it appears shoreline municipalities are more engaged, especially since that is where the focus of Great Lakes-St. Lawrence River Basin water quality policies tends to be.

Individual and organizational capacity is another potential barrier to wider municipal involvement in Great Lakes-St. Lawrence River Basin issues. Without a requirement to

participate, the level of participation and commitment to follow through with action is really dependent upon the values of the individual in a municipality tasked to engage with the process and not necessarily tied to the values or priorities of the organization as a whole. Further, even if an individual is engaged and willing to follow through and take action, there could be a lack of political will within the organization and, therefore, no opportunity for that issue to move up on the priority list for that municipality.

Finally, a lack of overall coordination and differing thoughts on who should lead cross-boundary collaboration in the Great Lakes-St. Lawrence River Basin act as barriers for greater municipal involvement. Actions of a single municipality may have great local impacts but may not have a positive net effect on the bi-national issue. Federal, provincial and state governments are relied on to act as facilitator of collaboration at the ecosystem scale, conduit for sharing municipal best practices and agents of change.

Chapter 5: Conclusions and Recommendations

Interactions between the US and Canada in the Great Lakes-St. Lawrence River Basin can be attributed to various bi-national agreements, requirements and expectations. The 1909 Boundary Waters Treaty, signed by the national governments in both countries, was the result of an increasing need at the time for a permanent bi-national institution to investigate and report on issues related to the use of boundary and transboundary waters. The need to regulate water shared by the two countries evolved from large-scale water uses to smaller, numerous proposals. Because these proposals related to subnational jurisdictions, agreements were signed by the eight US states and two Canadian provinces in the Great Lakes-St. Lawrence River Basin. Eventually, the subnational governments committed to integrating bi-national commitments into domestic law through the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement. This integration of bi-national commitments into domestic laws has a cascading effect, especially on local governments in Canada, which are heavily regulated by the provinces.

Although municipalities are not directly involved by way of negotiating or signing these agreements, Ontario municipalities have reason to be interested in policies related to the use of the Great Lakes given their spheres of jurisdiction. For example, those agreements that regulate water takings and diversions affect them directly because of the necessity of this resource to meet their responsibility over public utilities. Changes to the bulk water transfer regulatory regime have the potential to affect service delivery models and to put municipalities at a loss with their investments. In this thesis, the case of York Region's bulk water transfer application provided a prime example of the complexity of the

intergovernmental processes within the Great Lakes-St. Lawrence River Basin. Through a review of the literature on the intergovernmental framework in the Great Lakes-St. Lawrence River Basin, a case study of municipal involvement, and interviews with experienced key informants, this thesis set out to examine how well municipalities are integrated into the various intergovernmental processes in the Basin.

5.1 Findings

The signing of the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement and related domestic legislation legally codified this cross-boundary collaboration to regulate bulk water transfers and demonstrated commitment and support from top leaders in the Great Lakes-St. Lawrence River Basin. Goals were therefore institutionalized, helping to identify objectives, set priorities, develop a work plan, and establish performance measures (Friedman & Foster, 2011, p. 24; Hartig, Zarull, Heidtke, & Shah, 1998, p. 49). The signing of the 2005 Agreement also demonstrates the commitment and support from top leaders in the Great Lakes for a common vision (Hartig, Zarull, Heidtke, & Shah, 1998, p. 48). While the legislative framework provides the Province with equal representation and authority alongside their subnational counterparts in the US and Canada, it does not explicitly recognize the standing of municipalities in Ontario.

Despite a lack of formal recognition of municipalities as a partner in the Great Lakes-St. Lawrence River Basin through bi-national agreements, municipalities should have an interest to actively protect the Basin and act as a partner by engaging in policy development and collaborating with other stakeholders in the Great Lakes-St. Lawrence River Basin to resolve Basin-wide issues. This is because Ontario municipalities are delegated authority from the Province to directly use and manage the Great Lakes-St. Lawrence River Basin. To

this end, the overall municipal representation on Basin issues can be more comprehensive in terms of engagement. Municipalities look to the federal and provincial governments to provide overarching coordination of municipalities, to engage them, and to help them work collectively to address Basin-wide issues.

5.1.1 Ontario municipalities should have an interest in actively protecting the Great Lakes-St. Lawrence River Basin

Municipalities fall under provincial constitutional power and only exist as legal entities under provincial legislation. The provinces' control is illustrated in how municipal structures have vastly changed since the mid-1960s from introducing upper-tier municipalities to amalgamating lower-tier municipalities into single-tier municipalities. However, a loosening of provincial authority was signaled by the departure from express authority toward spheres of jurisdiction in the delegation of responsibilities from the Province of Ontario to municipalities. While spheres of jurisdiction give municipalities more flexibility in the types of servicing it provides, provincial legislative frameworks, program policies and financial decisions continue to restrict municipal choice and actions. Despite these restrictions, municipalities have become more empowered to provide services their residents require, which has allowed the role of municipalities to evolve.

Although municipalities are not recognized by the Canadian Constitution as an order of government, they often act as such (Stevenson & Gilbert, 2005, p. 544) and exemplify the right to local self-government (Magnusson, 2005, p. 6). Local communities have the necessary knowledge and networks to solve local problems (Bradford, 2004, p. 44). Additionally, a redefinition of problems can highlight the potential for seemingly non-local issues to have real local implications (Pralle, 2006, pp. 172-3). As a result, municipalities

may be affected by non-local issues but have also have demonstrated and realized tangible benefits from taking local actions that produce benefits locally and globally (Gore, 2010, pp. 34-5). While the rationale behind actions varies, overall, municipalities realize that there are tangible benefits to taking action locally that has broader benefits. The formation of the Great Lakes and St. Lawrence Cities Initiative in 2003, for example, signaled the growing engagement of local governments in Great Lakes issues (Johns, 2010, p. 69).

Municipal key informants interviewed for this study who represented municipalities highlighted the interest and investments that went towards working with other levels of government to resolve issues in the Great Lakes-St. Lawrence River Basin. Further, the case study of York Region's intra-basin transfer proposal provides an example of the strong interest a municipality may have in successfully collaborating with other stakeholders in the Great Lakes-St. Lawrence River Basin. York Region also made great investments in its preferred service model to meet provincial growth demands and needed a successful Prior Notice and Consultation under the 1985 Great Lakes Charter to secure sufficient water capacity. The case study illustrates how a municipality can have a pivotal role in the interactions at the local level as well as the bi-national level, with York Region investing the necessary resources to hold innovative consultations.

5.1.2 Overall municipal representation can be more comprehensive

Municipalities along with other non-governmental stakeholders who have interest in the activities of government are provided mechanisms to provide input, such as the Environmental Registry, panels, and working groups. However, the nature of these opportunities is passive whereby they provide feedback on policies that have already been formed or are just invited to participate.

The engagement of a single municipality is dependent on two factors: values of the individual attending and capacity and culture of the organization. Without a requirement to participate, the level of participation and commitment to follow through with action is really dependent upon the values of the individual in a municipality tasked to engage with the process and not necessarily tied to the values or priorities of the organization. Further, even if the engaged individual is willing to follow through and take action, there could be a lack of political will within the organization and, therefore, no opportunity for that issue to move up on the priority list for that municipality (municipal employee A, interview, May 14, 2014). The inability for municipalities to mobilize on an issue may stem from the fact that municipalities may view themselves as creatures of local voters and respond to local constituent desires. It remains to be seen what could be done if an issue received buy-in from all municipalities and was given resources (academic, interview, March 16, 2015). Local desires, however, are not uniform throughout Ontario and result in differing priorities among municipalities.

Another way municipalities may be involved in the policy-making process is through municipal associations (Valiante, 2007, p. 1083). Some of the municipal associations in Ontario have made great strides in being recognized as a stakeholder by signing memorandums of cooperation or understanding with various provincial and federal ministries. Unfortunately, no single municipal association would be able to simultaneously represent all the needs of every municipality because the problems faced by municipalities are unique and vary throughout Ontario (Siegel, 2009, pp. 22-3). The make-up of Ontario may prevent any one municipal association from providing fair representation to its membership but each municipal association provides purposeful representation for municipalities.

Associations with wider scopes of work, such as the Association of Municipalities of Ontario and the Federation of Canadian Municipalities, tend to have a wider membership including the majority of municipal bodies and covering much of the population in Ontario. Those municipal advocates with a more specific purpose tend to have a membership much less than the total count of Ontario municipalities. In the case of the Great Lakes and St. Lawrence Cities Initiative, which is the only municipal advocate for Great Lakes issues specifically, membership tends to concentrate on the shoreline of the Great Lakes. In view of this, key informants suggested that inland municipalities could be more engaged. Municipalities, however, may see a more pressing need to allocate their limited resources to other issues than engagement in the intergovernmental framework for the Basin. For example, while the intergovernmental framework may provide adequate opportunities to provide input, the municipality must send a representative to participate (municipal employee B, interview, July 23, 2014), which can be a high burden for a small municipality with few staff.

It cannot be presumed that all municipalities are committed to sustainability principles (Morison & Brown, 2010, p. 211). Municipalities may see a more pressing need to allocate their available resources to other issues. The lack of fiscal autonomy has been recognized as a barrier for municipalities to genuinely solving any problems (Slack and Bird, 2008; Valiante, 2007). The consequential lack of resources will continue to prevent active participation from municipalities until they gain greater fiscal autonomy (Valiante, 2007, pp. 1083-4). Because municipalities are limited in their sources of revenue, they may not be able to allocate funding for environmental management after providing basic services (Morison & Brown, 2010, p. 212). Municipalities may view the spheres of jurisdiction that have been delegated to them as core services that must be delivered before any other

activities are given resources. Although the intergovernmental framework in the Great Lakes-St. Lawrence River Basin appears to offer municipalities opportunities to have a pivotal role in its protection, Ontario municipalities remain restricted by the province's municipal framework in terms of autonomy and by its own political will in terms of resources.

5.1.3 Federal and provincial governments are expected to provide overall coordination

Much of the attention for the Great Lakes has been placed on the shoreline, affecting municipalities in the near-shore area. Yet, the majority of municipalities in the Great Lakes-St. Lawrence River Basin are inland; only 144 of the 409 Ontario municipalities in the Basin lie on the shoreline of a Great Lake. Key informants highlighted the need to better manage the Great Lakes-St. Lawrence River Basin as an ecosystem by considering and perhaps regulating upstream impacts. Federal, provincial and state governments are relied on to act as facilitator of collaboration at the ecosystem scale, conduit for sharing municipal best practices and agents of change.

Those individuals leading intergovernmental collaborations need to have the willingness and ability to create a broad network to address complex issues because intergovernmental collaboration spans multiple jurisdictions (Friedman & Foster, 2011, p. 30). This is a potential gap in the Great Lakes-St. Lawrence River Basin as key informants emphasized the need to share best practices among municipalities for servicing and to communicate these best practices in a more systematic and simplified way. Networking and building relationships among municipalities to build capacity was a common theme in the key informant interviews. As a form of municipal capacity building, sharing best practices to provide sustainable servicing appears to occur in the Great Lakes-St. Lawrence River Basin

and was described by four key informant interviews. More coordination of this practice among and widespread buy-in from municipalities is needed to achieve a greater impact in the Basin. It is necessary to evaluate efforts against objectives and indicators to measure and sustain progress (Hartig, Zarull, Heidtke, & Shah, 1998, p. 50). Key informants acknowledged that actions of a single municipality may have great local impacts but may not affect the global issue.

Because local governments lack the capacity to address international boundaries, it is important to link local and federal participants in an effort to promote movement on an issue (Friedman & Foster, 2011, p. 25). Subnational governments are well suited to play multiple roles including facilitator, conduit and agents of change (Friedman & Foster, 2011, p. 26). The lack of adequate communication among, and coordination of, the various elements or agencies involved was described by McLaughlin and Krantzberg (2011, p. 394) as a deficit in the implementation of the Great Lakes Water Quality Agreement. The Great Lakes-St. Lawrence River Basin stands to benefit from greater coordination.

5.1.4 Ontario municipalities need to resolve paradox of being a regulated partner

The presumption that local governments are creatures of the state and the lack of recognition of their importance as local experts causes policies to fail (Morison & Brown, 2010, p. 211). Policies need to be developed to recognize that local government and local politicians are in a unique position of being closest to the people and issues at hand. One-size-fits all policy approaches for municipal governments must be replaced with a policy lens that is sensitive to diverse needs and capacities of the variety of municipalities (Bradford, 2004, p. 42). Having recognized that it is difficult to obtain compliance with prescriptive

policies, national and subnational governments have shifted toward more flexible arrangements with local government (May & Burby, 1996, p. 172). While municipalities in Canada can be seen as an emerging partner in intergovernmental collaboration (Sancton, 2009, p. 18), a dichotomy forms for municipalities when they want to act as partners because they will always remain a regulated industry.

York Region had a pivotal role in the interactions at the local level as well as the bi-national level related to its intra-basin transfer proposal, specifically by investing the necessary resources to hold innovative consultations. Despite these efforts, the outcome of the consultations was not reflective of the success of their actions but a function of provincial authority. York Region acted as a partner in the bi-national framework but, ultimately, remained a subordinate within the provincial-municipal framework. Thus, the paradox of municipalities as partners and leaders was revealed – they can engage collaboratively, but the outcomes of those collaborations ultimately sit with the province. Further research is required to investigate how municipalities can overcome being seen as subjects who need to be regulated and truly emerge as a partner in the Great Lakes-St. Lawrence River Basin.

Future research should investigate how the ability to engage in policy development and collaborate with other stakeholders in the Great Lakes-St. Lawrence River Basin to resolve Basin-wide issues will vary according to the size and available resources of a municipality. Accordingly, it should also be explored how municipalities might act as partners within the constraints of their resources and the Canadian constitutional framework.

Although this thesis argues that municipalities should have an interest in protecting the Great Lakes-St. Lawrence River Basin as it serves as a necessary resource to provide services to their residents. The drivers for municipalities to pursue engagement as a partner

need to be understood. Further investigation is required into whether municipalities are interested in acting as partners to protect the Basin or would rather defer to the Province. Provincial barriers to engaging municipal engagement should be studied further.

More formal engagement of municipalities in the Great Lakes-St. Lawrence River Basin by the Province appears to be forthcoming with the re-negotiated 2012 Great Lakes Water Quality Agreement and the proposed Great Lakes Protection Act, which was introduced in February 2015. The Province promises that the proposed Act will strengthen Great Lakes protection by establishing and maintaining monitoring and reporting programs, setting targets, reviewing its strategy every six years and creating more opportunities for involvement (Ontario Ministry of the Environment and Climate Change, 2015).

Geographically-focused initiatives will help develop and implement policies to address priority issues. In developing geographically-focused initiatives, a number of stakeholders are to be engaged including municipalities. Further, a Great Lakes Guardians Council will be established to improve collaboration and coordinate actions. Invited partners would include municipal representatives.

Appendices

Appendix A: Interview Guide

Information about Organization

- How long have you worked in this organization?
- How long have you worked in this position?
- What are the main responsibilities of your position?
- Describe to me what a typical day in your work entails.
- Tell me about the role your organization plays with respect to the Great Lakes. What are some of its goals?

Involvement and Interaction with Government Stakeholders in the Great Lakes Basin

- What interactions does your organization have with the government with respect to the Great Lakes?
 - What about ... (• federal, • provincial, • state, • municipal, • ENGO, • NGO, etc.), do you interact with them in any activities that relate to the Great Lakes Basin?
 - How would you describe these interactions?
- In your view, what role do local government play in the Great Lakes Basin issues?
 - How do they participate?
 - When do they get involved?
 - What do they offer?
- Describe your involvement with the regulation of bulk water transfer in the Great Lakes Basin.

Implementation of Bi-national Commitments regarding the Great Lakes Basin

- In your view, how have bi-national commitments made in the 2005 Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement been implemented in Ontario?
 - What commitments do you believe remain outstanding?

Strengths and Challenges with Current Intergovernmental Framework

- What do you like most about how intergovernmental interactions currently take place?
- With respect to implementing policies that protect the Great Lakes, tell me what you find challenging with current relationships with government stakeholders.

Appendix B: Ontario Ministry of Municipal Affairs and Housing Restructuring Maps

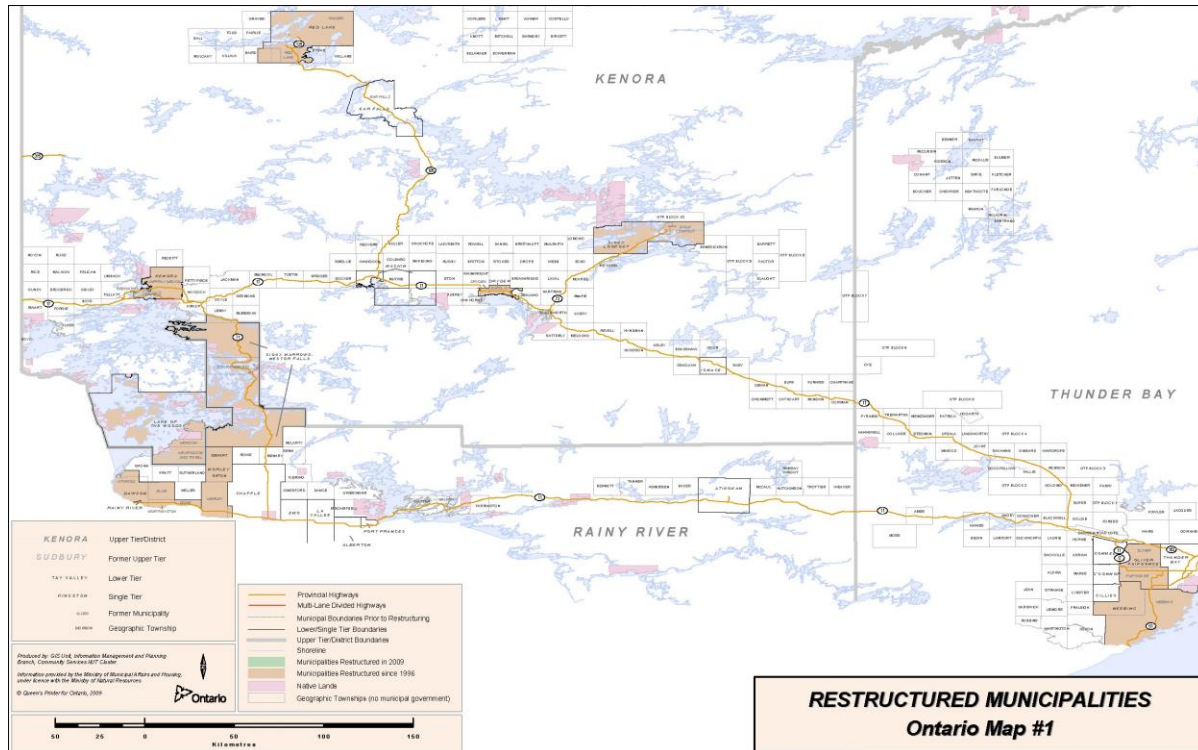


Figure B1: Ontario Restructured Municipalities Map #1

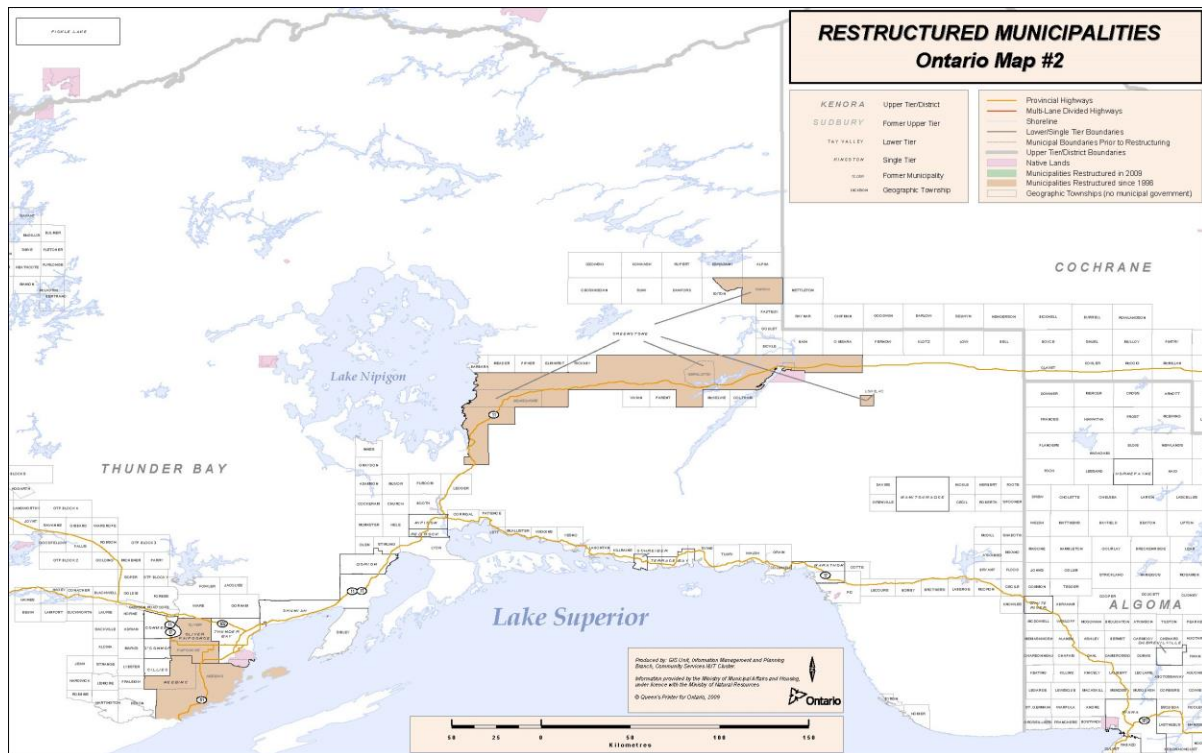


Figure B2: Ontario Restructured Municipalities Map #2

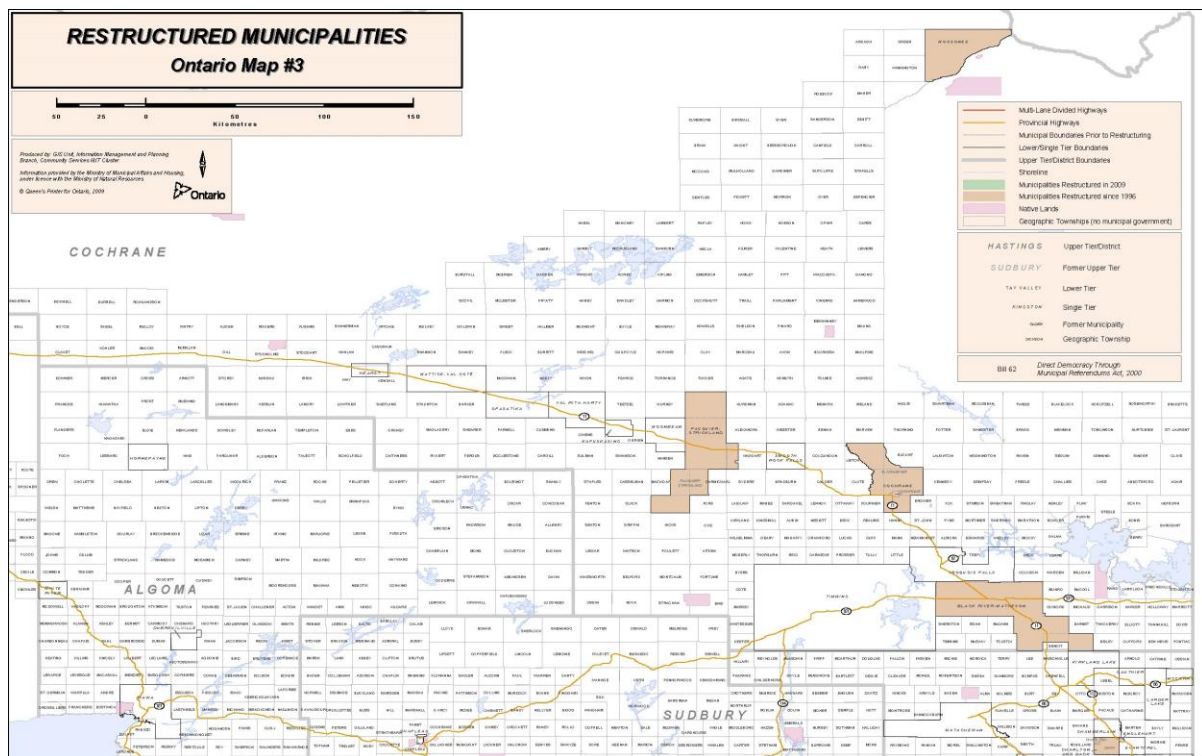


Figure B3: Ontario Restructured Municipalities Map #3

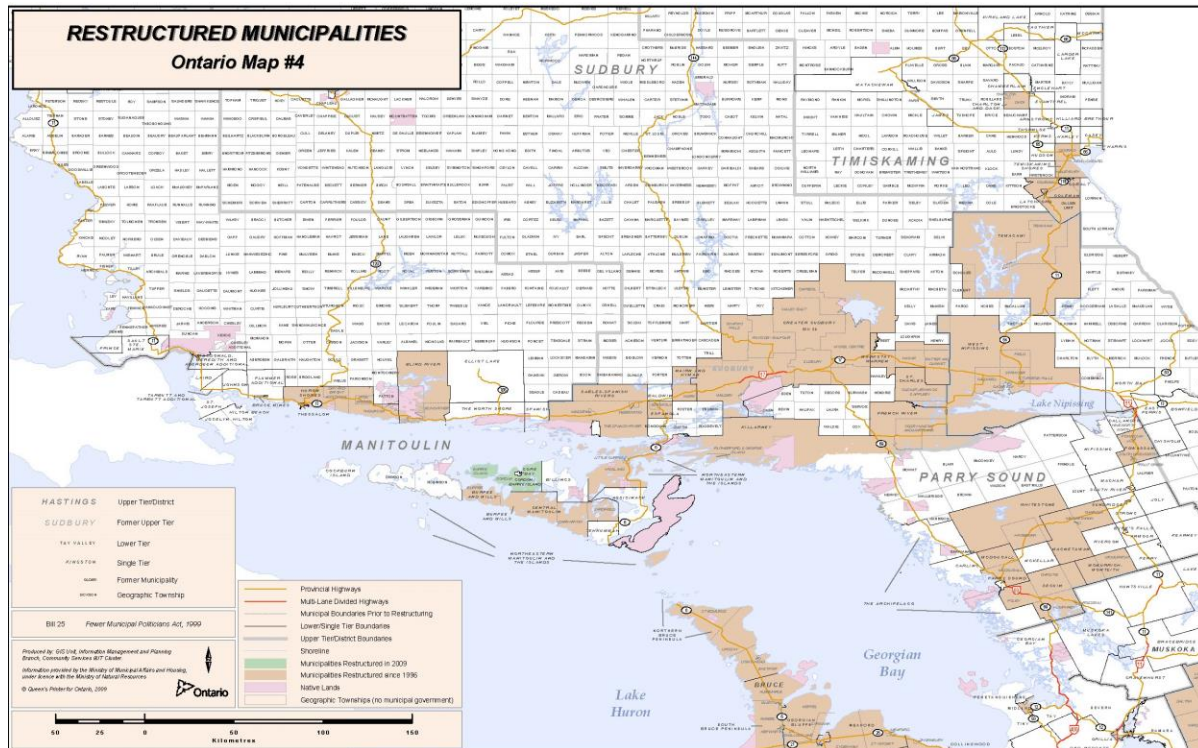


Figure B4: Ontario Restructured Municipalities Map #4

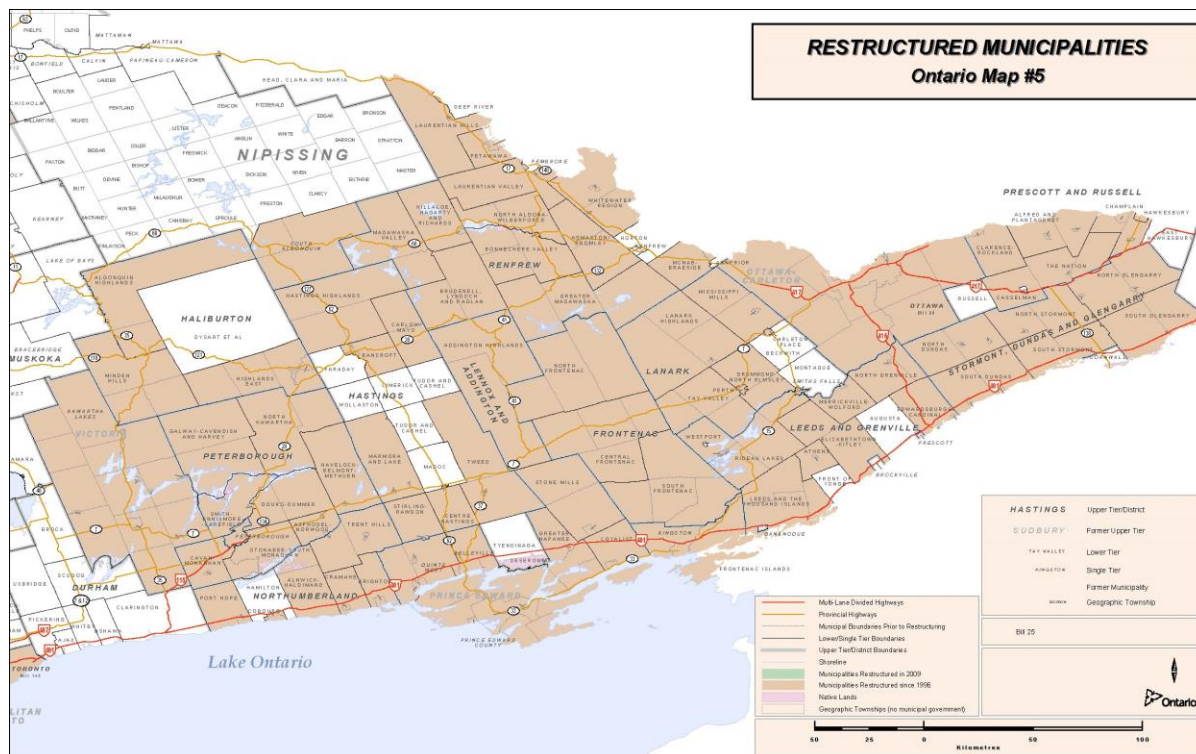


Figure B5: Ontario Restructured Municipalities Map #5

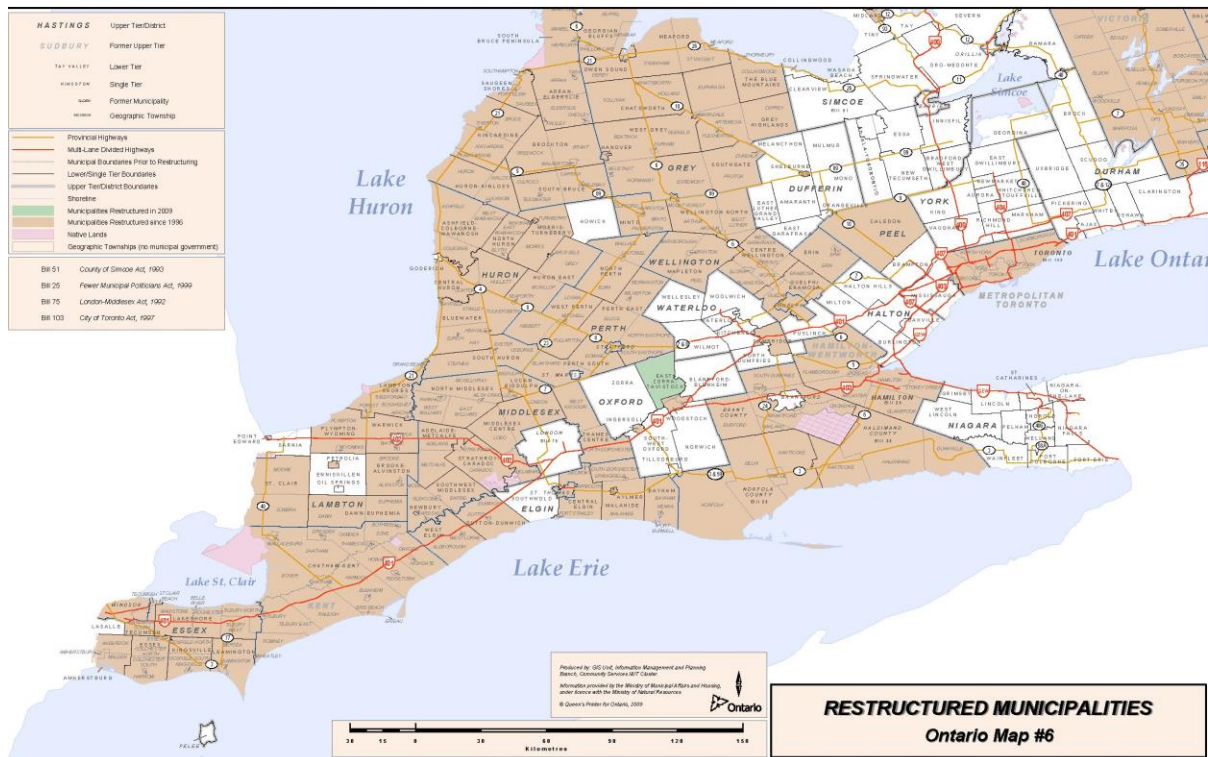


Figure B6: Ontario Restructured Municipalities Map #6

Appendix C: List of Municipalities

Table C1: List of Ontario Municipalities

Geographic Area	Municipality	Tier	In Basin	On Shoreline	FCM	AMO	GLSLCI	RPWCO	OMWA
Algoma	Blind River, Town of	Single	Yes	Yes		Yes			
	Bruce Mines, Town of	Single	Yes	Yes		Yes			
	Dubreuilville, Township of	Single	Yes			Yes			
	Elliot Lake, City of	Single	Yes			Yes			Yes
	Hilton Beach, Village of	Single	Yes	Yes		Yes			
	Hilton, Township of	Single	Yes	Yes	Yes	Yes			
	Hornepayne, Township of	Single				Yes			Yes
	Huron Shores, Municipality of	Single	Yes	Yes		Yes			
	Jocelyn, Township of	Single	Yes	Yes					
	Johnson, Township of	Single	Yes	Yes		Yes			
	Laird, Township of	Single	Yes	Yes		Yes			
	Macdonald, Meredith and Aberdeen Additional, Township of	Single	Yes	Yes					
	Plummer Additional, Township of	Single	Yes	Yes		Yes			
	Prince, Township of	Single	Yes	Yes					
	Sault Ste. Marie, City of	Single	Yes	Yes	Yes	Yes	Yes		Yes
	Spanish, Town of	Single	Yes	Yes		Yes			
	St. Joseph, Township of	Single	Yes	Yes		Yes			
	Tarbutt and Tarbutt Additional, Township of	Single	Yes	Yes					
	The North Shore, Township of	Single	Yes	Yes		Yes			
	Thessalon, Town of	Single	Yes	Yes		Yes			
	Wawa, Municipality of	Single	Yes	Yes	Yes	Yes			Yes
	White River, Township of	Single	Yes		Yes	Yes			Yes
Brant	Brant, County of	Single	Yes			Yes			Yes
	Brantford, City of	Single	Yes		Yes	Yes			

Geographic Area	Municipality	Tier	In Basin	On Shoreline	FCM	AMO	GLSLCI	RPWCO	OMWA
Bruce	Bruce, County of	Upper	Yes	Yes	Yes	Yes	Yes		
	Arran-Elderslie, Municipality of	Lower	Yes		Yes	Yes			Yes
	Brockton, Municipality of	Lower	Yes		Yes	Yes			Yes
	Huron-Kinloss, Township of	Lower	Yes	Yes	Yes	Yes	Yes		Yes
	Kincardine, Municipality of	Lower	Yes	Yes	Yes	Yes	Yes		Yes
	Northern Bruce Peninsula, Municipality of	Lower	Yes	Yes	Yes	Yes			Yes
	Saugeen Shores, Town of	Lower	Yes	Yes	Yes	Yes	Yes		
	South Bruce Peninsula, Town of	Lower	Yes	Yes	Yes	Yes	Yes		
	South Bruce, Municipality of	Lower	Yes		Yes	Yes			Yes
Chatham-Kent	Chatham-Kent, Municipality of	Single	Yes	Yes	Yes	Yes	Yes		Yes
Cochrane	Black River-Matheson, Township of	Single				Yes			
	Cochrane, Town of	Single			Yes	Yes			Yes
	Fauquier-Strickland, Township of	Single				Yes			
	Hearst, Town of	Single			Yes	Yes			
	Iroquois Falls, Town of	Single			Yes	Yes			Yes
	Kapuskasing, Town of	Single			Yes	Yes			Yes
	Mattice-Val Côté, Township of	Single			Yes				
	Moonbeam, Township of	Single				Yes			
	Moosonee, Town of	Single			Yes	Yes			
	Opasatika, Township of	Single				Yes			
	Smooth Rock Falls, Town of	Single			Yes	Yes			
	Timmins, City of	Single			Yes	Yes			Yes
	Val Rita-Harty, Township of	Single			Yes	Yes			

Geographic Area	Municipality	Tier	In Basin	On Shoreline	FCM	AMO	GLSLCI	RPWCO	OMWA
Dufferin	Dufferin, County of	Upper	Yes			Yes			
	Amaranth, Township of	Lower	Yes			Yes			
	East Garafraxa, Township of	Lower	Yes			Yes			
	Grand Valley, Town of	Lower	Yes			Yes			
	Melancthon, Township of	Lower	Yes			Yes			
	Mono, Town of	Lower	Yes			Yes			
	Mulmur, Township of	Lower	Yes			Yes			
	Orangeville, Town of	Lower	Yes		Yes	Yes			Yes
	Shelburne, Town of	Lower	Yes			Yes			Yes
Durham	Durham, Regional Municipality of	Upper	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Ajax, Town of	Lower	Yes	Yes	Yes	Yes	Yes		
	Brock, Township of	Lower	Yes		Yes	Yes			
	Clarington, Municipality of	Lower	Yes	Yes	Yes	Yes			
	Oshawa, City of	Lower	Yes	Yes	Yes	Yes	Yes		
	Pickering, City of	Lower	Yes	Yes	Yes	Yes	Yes		
	Scugog, Township of	Lower	Yes		Yes	Yes			
	Uxbridge, Township of	Lower	Yes		Yes	Yes			
	Whitby, Town of	Lower	Yes	Yes	Yes	Yes			
Elgin	Elgin, County of	Upper	Yes	Yes	Yes	Yes			
	St. Thomas, City of	Single	Yes			Yes			Yes
	Aylmer, Town of	Lower	Yes		Yes	Yes			Yes
	Bayham, Municipality of	Lower	Yes	Yes	Yes	Yes			Yes
	Central Elgin, Municipality of	Lower	Yes	Yes	Yes	Yes			Yes
	Dutton/Dunwich, Municipality of	Lower	Yes	Yes	Yes	Yes			Yes
	Malahide, Township of	Lower	Yes	Yes	Yes	Yes			Yes
	Southwold, Township of	Lower	Yes	Yes	Yes	Yes			Yes
	West Elgin, Municipality of	Lower	Yes	Yes	Yes	Yes			

Geographic Area	Municipality	Tier	In Basin	On Shoreline	FCM	AMO	GLSLCI	RPWCO	OMWA
Essex	Essex, County of	Upper	Yes	Yes	Yes	Yes	Yes		Yes
	Pelee, Township of	Single		Yes	Yes	Yes			Yes
	Windsor, City of	Single	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Amherstburg, Town of	Lower	Yes	Yes	Yes	Yes			
	Essex, Town of	Lower	Yes	Yes	Yes	Yes			Yes
	Kingsville, Town of	Lower	Yes	Yes	Yes	Yes	Yes		Yes
	Lakeshore, Town of	Lower	Yes	Yes	Yes	Yes			Yes
	LaSalle, Town of	Lower	Yes	Yes	Yes	Yes			Yes
	Leamington, Municipality of	Lower	Yes	Yes	Yes	Yes	Yes		Yes
	Tecumseh, Town of	Lower	Yes	Yes	Yes	Yes	Yes		Yes
Frontenac	Frontenac, County of	Upper	Yes	Yes	Yes	Yes			
	Kingston, City of	Single	Yes	Yes	Yes	Yes	Yes		Yes
	Central Frontenac, Township of	Lower	Yes		Yes	Yes			
	Frontenac Islands, Township of	Lower	Yes	Yes	Yes	Yes			
	North Frontenac, Township of	Lower	Yes		Yes	Yes			
	South Frontenac, Township of	Lower	Yes		Yes	Yes			
Grey	Grey, County of	Upper	Yes	Yes	Yes	Yes			
	Chatsworth, Township of	Lower	Yes		Yes	Yes			Yes
	Georgian Bluffs, Township of	Lower	Yes	Yes	Yes	Yes			
	Grey Highlands, Municipality of	Lower	Yes		Yes	Yes			Yes
	Hanover, Town of	Lower	Yes		Yes	Yes			
	Meaford, Municipality of	Lower	Yes	Yes	Yes	Yes			Yes
	Owen Sound, City of	Lower	Yes	Yes	Yes	Yes			
	Southgate, Township of	Lower	Yes		Yes	Yes			
	The Blue Mountains, Town of	Lower	Yes	Yes	Yes	Yes	Yes		
	West Grey, Municipality of	Lower	Yes		Yes	Yes			
Haldimand	Haldimand County	Single	Yes	Yes		Yes		Yes	

Geographic Area	Municipality	Tier	In Basin	On Shoreline	FCM	AMO	GLSLCI	RPWCO	OMWA
Haliburton	Haliburton, County of	Upper	Yes			Yes			
	Algonquin Highlands, Township of	Lower	Yes			Yes			
	Dysart, Dudley, Harcourt, Guilford, Harburn, Bruton, Havelock, Eyre and Clyde, United Townships of	Lower	Yes			Yes			
	Highlands East, Municipality of	Lower	Yes			Yes			
	Minden Hills, Township of	Lower	Yes			Yes			
Halton	Halton, Regional Municipality of	Upper	Yes	Yes	Yes	Yes	Yes	Yes	
	Burlington, City of	Lower	Yes	Yes	Yes	Yes			
	Halton Hills, Town of	Lower	Yes		Yes	Yes			
	Milton, Town of	Lower	Yes		Yes	Yes			
	Oakville, Town of	Lower	Yes	Yes	Yes	Yes			
Hamilton	Hamilton, City of	Single	Yes	Yes	Yes	Yes	Yes	Yes	

Geographic Area	Municipality	Tier	In Basin	On Shoreline	FCM	AMO	GLSLCI	RPWCO	OMWA
Hastings	Hastings, County of	Upper	Yes	Yes	Yes	Yes			
	Belleville, City of	Single	Yes		Yes	Yes	Yes		Yes
	Quinte West, City of	Single	Yes	Yes	Yes	Yes			Yes
	Bancroft, Town of	Lower	Yes		Yes	Yes			Yes
	Carlow/Mayo, Township of	Lower	Yes		Yes	Yes			
	Centre Hastings, Municipality of	Lower	Yes		Yes	Yes			Yes
	Deseronto, Town of	Lower	Yes		Yes	Yes			Yes
	Faraday, Township of	Lower	Yes		Yes	Yes			
	Hastings Highlands, Municipality of	Lower	Yes		Yes	Yes			
	Limerick, Township of	Lower	Yes		Yes	Yes			
	Madoc, Township of	Lower	Yes		Yes	Yes			
	Marmora and Lake, Municipality of	Lower	Yes		Yes	Yes			Yes
	Stirling-Rawdon, Township of	Lower	Yes		Yes	Yes			
	Tudor and Cashel, Township of	Lower	Yes		Yes	Yes			
	Tweed, Municipality of	Lower	Yes		Yes	Yes			
	Tyendinaga, Township of	Lower	Yes		Yes	Yes			
	Wollaston, Township of	Lower	Yes		Yes	Yes			
Huron	Huron, County of	Upper	Yes	Yes	Yes	Yes	Yes		
	Ashfield-Colborne-Wawanosh, Township of	Lower	Yes	Yes	Yes	Yes	Yes		
	Bluewater, Municipality of	Lower	Yes	Yes	Yes	Yes			Yes
	Central Huron, Municipality of	Lower	Yes	Yes	Yes	Yes	Yes		Yes
	Goderich, Town of	Lower	Yes	Yes	Yes	Yes	Yes		Yes
	Howick, Township of	Lower	Yes		Yes	Yes			
	Huron East, Municipality of	Lower	Yes		Yes	Yes			Yes
	Morris-Turnberry, Municipality of	Lower	Yes		Yes	Yes			Yes
	North Huron, Township of	Lower	Yes		Yes	Yes			Yes
	South Huron, Municipality of	Lower	Yes	Yes	Yes	Yes			Yes
Kawartha Lakes	Kawartha Lakes, City of	Single	Yes		Yes	Yes			

Geographic Area	Municipality	Tier	In Basin	On Shoreline	FCM	AMO	GLSLCI	RPWCO	OMWA
Kenora	Dryden, City of	Single			Yes	Yes			
	Ear Falls, Township of	Single			Yes	Yes			Yes
	Ignace, Township of	Single			Yes	Yes			Yes
	Kenora, City of	Single			Yes	Yes			Yes
	Machin, Township of	Single				Yes			
	Pickle Lake, Township of	Single			Yes	Yes			
	Red Lake, Municipality of	Single			Yes	Yes			
	Sioux Lookout, Municipality of	Single			Yes	Yes			
	Sioux Narrows-Nestor Falls, Township of	Single			Yes	Yes			
Lambton	Lambton, County of	Upper	Yes	Yes	Yes	Yes	Yes		
	Brooke-Alvinston, Municipality of	Lower	Yes		Yes	Yes			
	Dawn-Euphemia, Township of	Lower	Yes		Yes	Yes			
	Enniskillen, Township of	Lower	Yes		Yes	Yes			Yes
	Lambton Shores, Municipality of	Lower	Yes	Yes	Yes	Yes			Yes
	Oil Springs, Village of	Lower	Yes		Yes	Yes			
	Petrolia, Town of	Lower	Yes		Yes	Yes			Yes
	Plympton-Wyoming, Town of	Lower	Yes	Yes	Yes	Yes			Yes
	Point Edward, Village of	Lower	Yes	Yes	Yes	Yes			Yes
	Sarnia, City of	Lower	Yes	Yes	Yes		Yes		Yes
	St. Clair, Township of	Lower	Yes	Yes	Yes	Yes	Yes		Yes
	Warwick, Township of	Lower	Yes		Yes	Yes			Yes

Geographic Area	Municipality	Tier	In Basin	On Shoreline	FCM	AMO	GLSLCI	RPWCO	OMWA
Lanark	Smiths Falls, Town of	Single	Yes		Yes	Yes			Yes
	Lanark, County of	Upper	Yes		Yes	Yes			
	Beckwith, Township of	Lower	Yes		Yes	Yes			
	Carleton Place, Town of	Lower	Yes		Yes	Yes			Yes
	Drummond/North Elmsley, Township of	Lower	Yes		Yes	Yes			
	Lanark Highlands, Township of	Lower	Yes		Yes	Yes			
	Mississippi Mills, Town of	Lower	Yes		Yes	Yes			Yes
	Montague, Township of	Lower	Yes		Yes	Yes			Yes
	Perth, Town of	Lower	Yes		Yes	Yes			Yes
	Tay Valley, Township of	Lower	Yes		Yes	Yes			
Leeds and Grenville	Brockville, City of	Single	Yes	Yes	Yes	Yes			
	Gananoque, Town of	Single	Yes	Yes	Yes	Yes			Yes
	Prescott, Town of	Single	Yes	Yes	Yes	Yes			Yes
	Leeds and Grenville, United Counties of	Upper	Yes		Yes	Yes			
	Athens, Township of	Lower	Yes		Yes				
	Augusta, Township of	Lower	Yes	Yes	Yes	Yes			
	Edwardsburgh/Cardinal, Township of	Lower	Yes	Yes	Yes	Yes			Yes
	Elizabethtown-Kitley, Township of	Lower	Yes	Yes	Yes	Yes			
	Front of Yonge, Township of	Lower	Yes	Yes	Yes	Yes			
	Leeds and the Thousand Islands, Township of	Lower	Yes	Yes	Yes	Yes			
	Merrickville-Wolford, Village of	Lower	Yes		Yes	Yes			
	North Grenville, Municipality of	Lower	Yes		Yes	Yes			
	Rideau Lakes, Township of	Lower	Yes		Yes	Yes			
	Westport, Village of	Lower	Yes		Yes	Yes			Yes
Lennox and Addington	Lennox and Addington, County of	Upper	Yes	Yes		Yes			
	Addington Highlands, Township of	Lower	Yes						
	Greater Napanee, Town of	Lower	Yes	Yes	Yes	Yes			Yes
	Loyalist, Township of	Lower	Yes	Yes		Yes			Yes
	Stone Mills, Township of	Lower	Yes		Yes	Yes			

Geographic Area	Municipality	Tier	In Basin	On Shoreline	FCM	AMO	GLSLCI	RPWCO	OMWA
Manitoulin	Assiginack, Township of	Single	Yes	Yes		Yes			
	Billings, Township of	Single	Yes	Yes	Yes	Yes			
	Burpee and Mills, Township of	Single	Yes	Yes		Yes			
	Central Manitoulin, Municipality of	Single	Yes	Yes		Yes			
	Cockburn Island, Township of	Single	Yes	Yes					
	Gordon/Barrie Island, Municipality of	Single	Yes	Yes		Yes			
	Gore Bay, Town of	Single	Yes	Yes					
	Northeastern Manitoulin and The Islands, Town of	Single	Yes	Yes	Yes	Yes			
	Tehkummah, Township of	Single	Yes	Yes		Yes			
Middlesex	London, City of	Single	Yes		Yes	Yes		Yes	Yes
	Middlesex, County of	Upper	Yes		Yes	Yes			
	Adelaide-Metcalf, Township of	Lower	Yes		Yes	Yes			
	Lucan Biddulph, Township of	Lower	Yes		Yes	Yes			Yes
	Middlesex Centre, Municipality of	Lower	Yes		Yes	Yes			Yes
	Newbury, Village of	Lower	Yes		Yes				
	North Middlesex, Municipality of	Lower	Yes		Yes	Yes			Yes
	Southwest Middlesex, Municipality of	Lower	Yes		Yes	Yes			
	Strathroy-Caradoc, Township of	Lower	Yes		Yes	Yes			Yes
	Thames Centre, Municipality of	Lower	Yes		Yes	Yes			
Muskoka	Muskoka, District Municipality of	Upper	Yes	Yes		Yes		Yes	
	Bracebridge, Town of	Lower	Yes		Yes	Yes			
	Georgian Bay, Township of	Lower	Yes	Yes		Yes	Yes		
	Gravenhurst, Town of	Lower	Yes			Yes			
	Huntsville, Town of	Lower	Yes		Yes	Yes			
	Lake of Bays, Township of	Lower	Yes			Yes			Yes
	Muskoka Lakes, Township of	Lower	Yes		Yes	Yes			

Geographic Area	Municipality	Tier	In Basin	On Shoreline	FCM	AMO	GLSLCI	RPWCO	OMWA
Niagara	Niagara, Regional Municipality of	Upper	Yes	Yes	Yes	Yes	Yes	Yes	
	Fort Erie, Town of	Lower	Yes	Yes	Yes	Yes			
	Grimsby, Town of	Lower	Yes	Yes	Yes	Yes			Yes
	Lincoln, Town of	Lower	Yes	Yes	Yes	Yes			Yes
	Niagara Falls, City of	Lower	Yes	Yes	Yes	Yes	Yes		
	Niagara-on-the-Lake, Town of	Lower	Yes	Yes	Yes	Yes			
	Pelham, Town of	Lower	Yes		Yes	Yes			Yes
	Port Colborne, City of	Lower	Yes	Yes	Yes	Yes	Yes		
	St. Catharines, City of	Lower	Yes	Yes	Yes	Yes	Yes		
	Thorold, City of	Lower	Yes		Yes	Yes			Yes
	Wainfleet, Township of	Lower	Yes	Yes	Yes	Yes	Yes		
	Welland, City of	Lower	Yes		Yes	Yes	Yes		
	West Lincoln, Township of	Lower	Yes		Yes	Yes			Yes
Nipissing	Bonfield, Township of	Single	Yes		Yes	Yes			
	Calvin, Municipality of	Single	Yes			Yes			
	Chisholm, Township of	Single	Yes		Yes	Yes			
	East Ferris, Municipality of	Single	Yes		Yes	Yes			
	Mattawa, Town of	Single	Yes			Yes			
	Mattawan, Township of	Single	Yes		Yes	Yes			
	North Bay, City of	Single	Yes		Yes	Yes			
	Papineau-Cameron, Township of	Single	Yes			Yes			
	South Algonquin, Township of	Single	Yes			Yes			
	Temagami, Municipality of	Single	Yes		Yes	Yes			Yes
	West Nipissing, Municipality of	Single	Yes			Yes			Yes
Norfolk	Norfolk County	Single	Yes	Yes		Yes		Yes	

Geographic Area	Municipality	Tier	In Basin	On Shoreline	FCM	AMO	GLSLCI	RPWCO	OMWA
Northumberland	Northumberland, County of	Upper	Yes	Yes	Yes	Yes			
	Alnwick/Haldimand, Township of	Lower	Yes	Yes	Yes	Yes			Yes
	Brighton, Municipality of	Lower	Yes	Yes	Yes	Yes			Yes
	Cobourg, Town of	Lower	Yes	Yes	Yes	Yes	Yes		Yes
	Cramahe, Township of	Lower	Yes	Yes	Yes	Yes			
	Hamilton, Township of	Lower	Yes	Yes	Yes	Yes			Yes
	Port Hope, Municipality of	Lower	Yes	Yes	Yes	Yes	Yes		Yes
	Trent Hills, Municipality of	Lower	Yes		Yes	Yes			Yes
Ottawa	Ottawa, City of	Single	Yes		Yes	Yes		Yes	Yes
Oxford	Oxford, County of	Upper	Yes			Yes			Yes
	Blandford-Blenheim, Township of	Lower	Yes			Yes			
	East Zorra-Tavistock, Township of	Lower	Yes			Yes			
	Ingersoll, Town of	Lower	Yes			Yes			
	Norwich, Township of	Lower	Yes			Yes			
	South-West Oxford, Township of	Lower	Yes			Yes			
	Tillsonburg, Town of	Lower	Yes		Yes	Yes			Yes
	Woodstock, City of	Lower	Yes			Yes			Yes
	Zorra, Township of	Lower	Yes			Yes			

Geographic Area	Municipality	Tier	In Basin	On Shoreline	FCM	AMO	GLSLCI	RPWCO	OMWA
Parry Sound	Armour, Township of	Single	Yes			Yes			
	Burk's Falls, Village of	Single	Yes		Yes	Yes			Yes
	Callander, Municipality of	Single	Yes		Yes	Yes			Yes
	Carling, Township of	Single	Yes	Yes	Yes	Yes	Yes		
	Joly, Township of	Single	Yes			Yes			
	Kearney, Town of	Single	Yes		Yes	Yes			
	Machar, Township of	Single	Yes			Yes			
	Magnetawan, Municipality of	Single	Yes		Yes	Yes			
	McDougall, Municipality of	Single	Yes		Yes	Yes			Yes
	McKellar, Township of	Single	Yes			Yes			
	McMurrich/Monteith, Township of	Single	Yes						
	Nipissing, Township of	Single	Yes			Yes			
	Parry Sound, Town of	Single	Yes		Yes	Yes	Yes		Yes
	Perry, Township of	Single	Yes			Yes			
	Powassan, Municipality of	Single	Yes			Yes			
	Ryerson, Township of	Single	Yes			Yes			
	Seguin, Township of	Single	Yes		Yes	Yes			
	South River, Village of	Single	Yes			Yes			
	Strong, Township of	Single	Yes			Yes			
	Sundridge, Village of	Single	Yes		Yes	Yes			
	The Archipelago, Township of	Single	Yes	Yes	Yes	Yes	Yes		
	Whitestone, Municipality of	Single	Yes		Yes	Yes			
Peel	Peel, Regional Municipality of	Upper	Yes	Yes	Yes	Yes	Yes	Yes	
	Brampton, City of	Lower	Yes		Yes	Yes			
	Caledon, Town of	Lower	Yes		Yes	Yes			
	Mississauga, City of	Lower	Yes	Yes	Yes	Yes	Yes		

Geographic Area	Municipality	Tier	In Basin	On Shoreline	FCM	AMO	GLSLCI	RPWCO	OMWA
Perth	Perth, County of	Upper	Yes			Yes			
	St. Marys, Town of	Single	Yes		Yes	Yes			Yes
	Stratford, City of	Single	Yes		Yes	Yes			Yes
	North Perth, Municipality of	Lower	Yes		Yes	Yes			Yes
	Perth East, Township of	Lower	Yes			Yes			Yes
	Perth South, Township of	Lower	Yes			Yes			Yes
	West Perth, Municipality of	Lower	Yes			Yes			
Peterborough	Peterborough, City of	Single	Yes		Yes	Yes			Yes
	Peterborough, County of	Upper	Yes		Yes	Yes			
	Asphodel-Norwood, Township of	Lower	Yes		Yes	Yes			
	Cavan Monaghan, Township of	Lower	Yes		Yes	Yes			
	Douro-Dummer, Township of	Lower	Yes		Yes	Yes			
	Havelock-Belmont-Methuen, Township of	Lower	Yes		Yes	Yes			Yes
	North Kawartha, Township of	Lower	Yes		Yes	Yes			
	Otonabee-South Monaghan, Township of	Lower	Yes		Yes	Yes			Yes
	Selwyn, Township of	Lower	Yes		Yes	Yes			Yes
	Trent Lakes, Municipality of	Lower	Yes		Yes				Yes
Prescott and Russell	Prescott and Russell, United Counties of	Upper	Yes		Yes	Yes			
	Alfred and Plantagenet, Township of	Lower	Yes		Yes	Yes			Yes
	Casselman, Village of	Lower	Yes		Yes	Yes			Yes
	Champlain, Township of	Lower	Yes			Yes			
	Clarence-Rockland, City of	Lower	Yes		Yes	Yes			Yes
	East Hawkesbury, Township of	Lower	Yes		Yes	Yes			
	Hawkesbury, Town of	Lower	Yes		Yes	Yes			
	Russell, Township of	Lower	Yes		Yes	Yes			Yes
	The Nation Municipality	Lower	Yes		Yes	Yes			Yes
Prince Edward	Prince Edward, County of	Single	Yes	Yes	Yes	Yes			Yes

Geographic Area	Municipality	Tier	In Basin	On Shoreline	FCM	AMO	GLSLCI	RPWCO	OMWA
Rainy River	Alberton, Township of	Single			Yes	Yes			
	Atikokan, Town of	Single			Yes	Yes			
	Chapple, Township of	Single				Yes			Yes
	Dawson, Township of	Single							
	Emo, Township of	Single			Yes	Yes			Yes
	Fort Frances, Town of	Single			Yes	Yes			Yes
	La Vallee, Township of	Single				Yes			
	Lake of the Woods, Township of	Single							
	Morley, Township of	Single				Yes			
	Rainy River, Town of	Single				Yes			Yes
Renfrew	Pembroke, City of	Single	Yes			Yes			
	Renfrew, County of	Upper	Yes		Yes	Yes			
	Admaston/Bromley, Township of	Lower	Yes		Yes	Yes			
	Arnprior, Town of	Lower	Yes		Yes	Yes			
	Bonnechere Valley, Township of	Lower	Yes		Yes	Yes			Yes
	Brudenell, Lyndoch and Raglan, Township of	Lower	Yes		Yes	Yes			
	Deep River, Town of	Lower	Yes		Yes	Yes			
	Greater Madawaska, Township of	Lower	Yes		Yes	Yes			
	Head, Clara and Maria, Township of	Lower	Yes		Yes	Yes			
	Horton, Township of	Lower	Yes			Yes			
	Killaloe, Hagarty and Richards, Township of	Lower	Yes		Yes	Yes			Yes
	Laurentian Hills, Town of	Lower	Yes		Yes	Yes			
	Laurentian Valley, Township of	Lower	Yes		Yes	Yes			Yes
	Madawaska Valley, Township of	Lower	Yes		Yes	Yes			Yes
	McNab/Braeside, Township of	Lower	Yes		Yes	Yes			
	North Algona Wilberforce, Township of	Lower	Yes		Yes	Yes			
	Petawawa, Town of	Lower	Yes		Yes	Yes			
	Renfrew, Town of	Lower	Yes		Yes	Yes			Yes

Geographic Area	Municipality	Tier	In Basin	On Shoreline	FCM	AMO	GLSLCI	RPWCO	OMWA
	Whitewater Region, Township of	Lower	Yes		Yes	Yes			
Simcoe	Barrie, City of	Single	Yes		Yes	Yes			Yes
	Orillia, City of	Single	Yes			Yes			Yes
	Simcoe, County of	Upper	Yes	Yes	Yes	Yes			
	Adjala-Tosorontio, Township of	Lower	Yes		Yes	Yes			
	Bradford West Gwillimbury, Town of	Lower	Yes		Yes	Yes			Yes
	Clearview, Township of	Lower	Yes		Yes	Yes			Yes
	Collingwood, Town of	Lower	Yes	Yes	Yes	Yes	Yes		Yes
	Essa, Township of	Lower	Yes		Yes	Yes			
	Innisfil, Town of	Lower	Yes		Yes	Yes			Yes
	Midland, Town of	Lower	Yes	Yes	Yes	Yes	Yes		Yes
	New Tecumseth, Town of	Lower	Yes		Yes	Yes			Yes
	Oro-Medonte, Township of	Lower	Yes		Yes	Yes			Yes
	Penetanguishene, Town of	Lower	Yes	Yes	Yes	Yes	Yes		
	Ramara, Township of	Lower	Yes		Yes	Yes			Yes
	Severn, Township of	Lower	Yes	Yes	Yes	Yes			
	Springwater, Township of	Lower	Yes		Yes	Yes			Yes
	Tay, Township of	Lower	Yes	Yes	Yes	Yes	Yes		
	Tiny, Township of	Lower	Yes	Yes	Yes	Yes	Yes		Yes
	Wasaga Beach, Town of	Lower	Yes	Yes	Yes	Yes	Yes		Yes
Stormont, Dundas and Glengarry	Cornwall, City of	Single	Yes	Yes	Yes	Yes	Yes		Yes
	Stormont, Dundas and Glengarry, United Counties of	Upper	Yes	Yes		Yes			
	North Dundas, Township of	Lower	Yes			Yes			
	North Glengarry, Township of	Lower	Yes			Yes			Yes
	North Stormont, Township of	Lower	Yes			Yes			
	South Dundas, Township of	Lower	Yes	Yes		Yes			Yes
	South Glengarry, Township of	Lower	Yes	Yes		Yes			Yes
	South Stormont, Township of	Lower	Yes	Yes		Yes			Yes

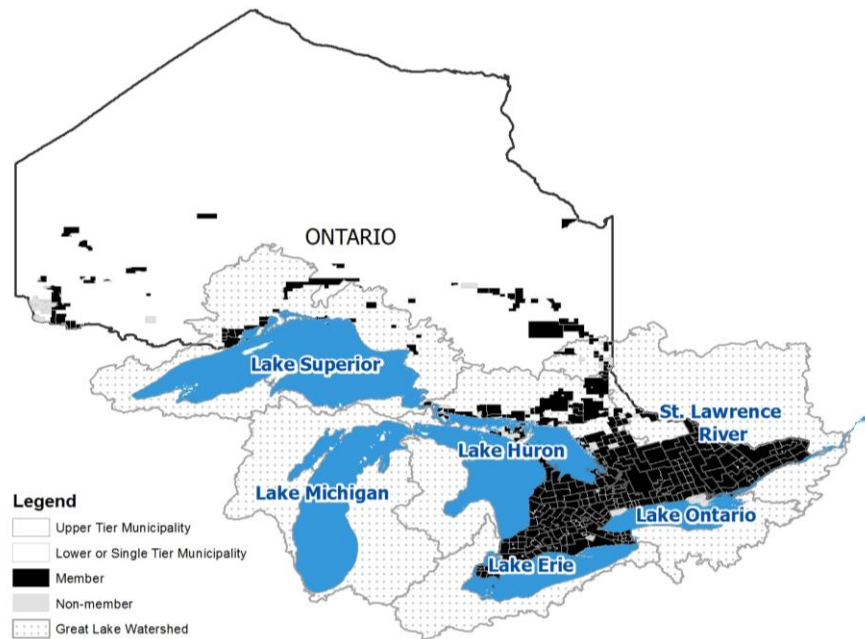
Geographic Area	Municipality	Tier	In Basin	On Shoreline	FCM	AMO	GLSLCI	RPWCO	OMWA
Sudbury	Baldwin, Township of	Single	Yes						
	Chapleau, Township of	Single			Yes	Yes			Yes
	Espanola, Town of	Single	Yes			Yes			Yes
	French River, Municipality of	Single	Yes		Yes	Yes			
	Greater Sudbury, City of	Single	Yes		Yes	Yes		Yes	Yes
	Killarney, Municipality of	Single	Yes	Yes	Yes	Yes			
	Markstay-Warren, Municipality of	Single	Yes			Yes			Yes
	Nairn and Hyman, Township of	Single	Yes			Yes			
	Sables-Spanish Rivers, Township of	Single	Yes	Yes		Yes			
	St.-Charles, Municipality of	Single	Yes			Yes			
Thunder Bay	Conmee, Township of	Single	Yes			Yes			
	Dorion, Township of	Single	Yes	Yes	Yes	Yes			
	Gillies, Township of	Single	Yes			Yes			
	Greenstone, Municipality of	Single	Yes		Yes	Yes			Yes
	Manitouwadge, Township of	Single	Yes		Yes	Yes			
	Marathon, Town of	Single	Yes	Yes		Yes			
	Neebing, Municipality of	Single	Yes	Yes	Yes	Yes			
	Nipigon, Township of	Single	Yes	Yes	Yes	Yes	Yes		Yes
	O'Connor, Township of	Single	Yes			Yes			
	Oliver Paipoonge, Municipality of	Single	Yes		Yes	Yes			
	Red Rock, Township of	Single	Yes	Yes	Yes	Yes			Yes
	Schreiber, Township of	Single	Yes	Yes	Yes	Yes			Yes
	Shuniah, Municipality of	Single	Yes	Yes	Yes	Yes	Yes		
	Terrace Bay, Township of	Single	Yes	Yes	Yes	Yes	Yes		Yes
	Thunder Bay, City of	Single	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Geographic Area	Municipality	Tier	In Basin	On Shoreline	FCM	AMO	GLSLCI	RPWCO	OMWA
Timiskaming	Armstrong, Township of	Single	Yes			Yes			Yes
	Brethour, Township of	Single	Yes						
	Casey, Township of	Single	Yes						
	Chamberlain, Township of	Single	Yes			Yes			
	Charlton and Dack, Municipality of	Single	Yes			Yes			
	Cobalt, Town of	Single	Yes			Yes			
	Coleman, Township of	Single	Yes		Yes	Yes			
	Englehart, Town of	Single	Yes			Yes			
	Evanturel, Township of	Single	Yes			Yes			
	Gauthier, Township of	Single	Yes						
	Harley, Township of	Single	Yes			Yes			
	Harris, Township of	Single	Yes			Yes			
	Hilliard, Township of	Single	Yes						
	Hudson, Township of	Single	Yes						
	James, Township of	Single	Yes						
	Kerns, Township of	Single	Yes						
	Kirkland Lake, Town of	Single	Yes		Yes	Yes			Yes
	Larder Lake, Township of	Single	Yes			Yes			Yes
	Latchford, Town of	Single	Yes			Yes			
	Matachewan, Township of	Single	Yes		Yes	Yes			
	McGarry, Township of	Single	Yes		Yes	Yes			
	Temiskaming Shores, City of	Single	Yes			Yes			Yes
	Thornloe, Village of	Single	Yes						
Toronto	Toronto, City of	Single	Yes	Yes	Yes		Yes	Yes	

Geographic Area	Municipality	Tier	In Basin	On Shoreline	FCM	AMO	GLSLCI	RPWCO	OMWA
Waterloo	Waterloo, Regional Municipality of	Upper	Yes		Yes	Yes		Yes	Yes
	Cambridge, City of	Lower	Yes		Yes	Yes			
	Kitchener, City of	Lower	Yes		Yes	Yes			
	North Dumfries, Township of	Lower	Yes		Yes	Yes			
	Waterloo, City of	Lower	Yes		Yes	Yes			
	Wellesley, Township of	Lower	Yes		Yes	Yes			
	Wilmot, Township of	Lower	Yes		Yes	Yes			
	Woolwich, Township of	Lower	Yes		Yes	Yes			Yes
Wellington	Guelph, City of	Single	Yes		Yes	Yes			Yes
	Wellington, County of	Upper	Yes		Yes	Yes			
	Centre Wellington, Township of	Lower	Yes		Yes	Yes			
	Erin, Town of	Lower	Yes		Yes	Yes			
	Guelph/Eramosa, Township of	Lower	Yes		Yes	Yes			Yes
	Mapleton, Township of	Lower	Yes		Yes	Yes			Yes
	Minto, Town of	Lower	Yes		Yes	Yes			Yes
	Puslinch, Township of	Lower	Yes		Yes	Yes			
	Wellington North, Township of	Lower	Yes		Yes	Yes			Yes
York	York, Regional Municipality of	Upper	Yes		Yes	Yes		Yes	Yes
	Aurora, Town of	Lower	Yes		Yes	Yes			Yes
	East Gwillimbury, Town of	Lower	Yes		Yes	Yes			Yes
	Georgina, Town of	Lower	Yes		Yes	Yes			Yes
	King, Township of	Lower	Yes		Yes	Yes			Yes
	Markham, City of	Lower	Yes		Yes	Yes			Yes
	Newmarket, Town of	Lower	Yes		Yes	Yes			
	Richmond Hill, Town of	Lower	Yes		Yes	Yes			Yes
	Vaughan, City of	Lower	Yes		Yes	Yes			Yes
	Whitchurch-Stouffville, Town of	Lower	Yes		Yes	Yes			Yes

Appendix D: Ontario Municipal Association Membership Maps

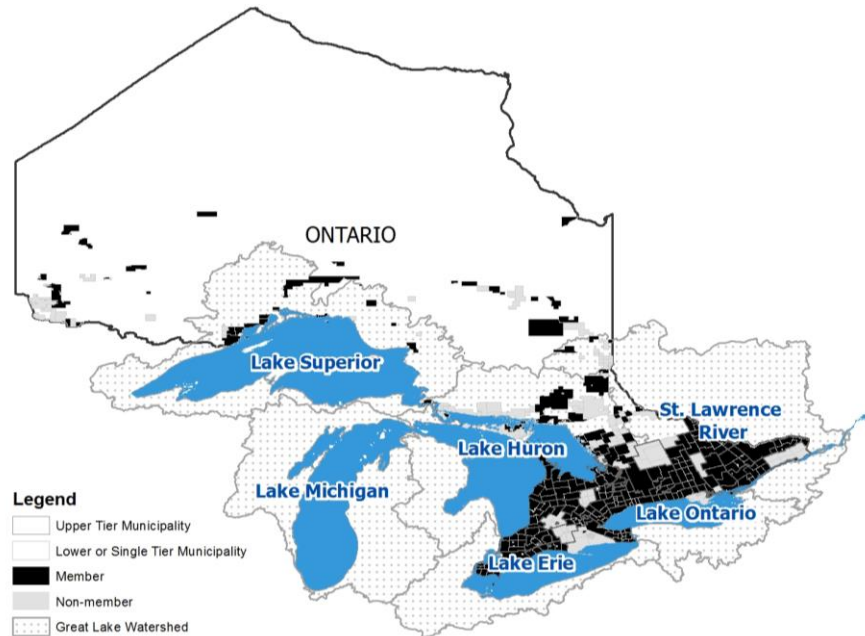
ASSOCIATION OF MUNICIPALITIES OF ONTARIO MEMBERSHIP



Sources: (Association of Municipalities of Ontario, 2013b; Ontario Ministry of Municipal Affairs and Housing, 2012a)

Figure D1: Map of Association of Municipalities of Ontario Membership

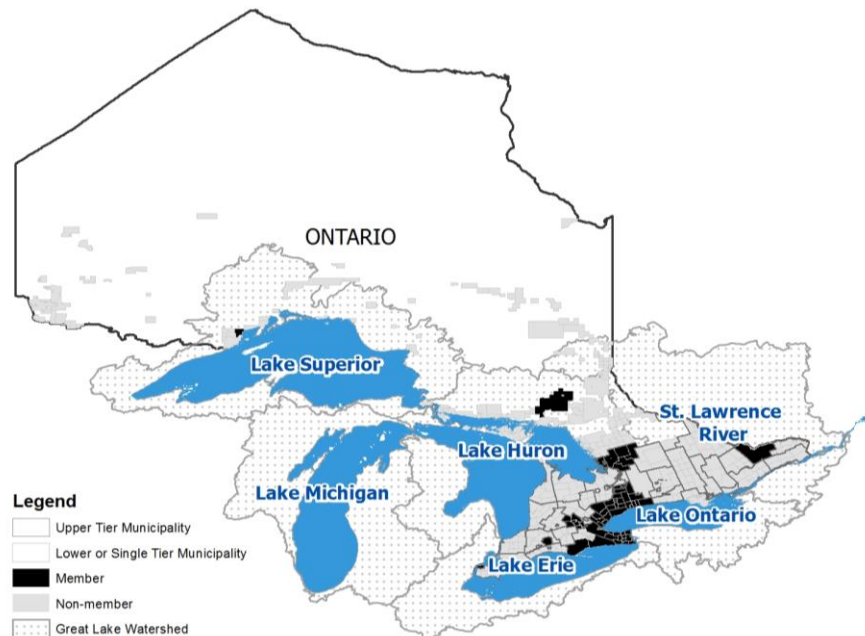
FEDERATION OF CANADIAN MUNICIPALITIES MEMBERSHIP IN ONTARIO



Sources: (Federation of Canadian Municipalities, 2015b; Ontario Ministry of Municipal Affairs and Housing, 2012a)

Figure D2: Map of Federation of Canadian Municipalities Membership in Ontario

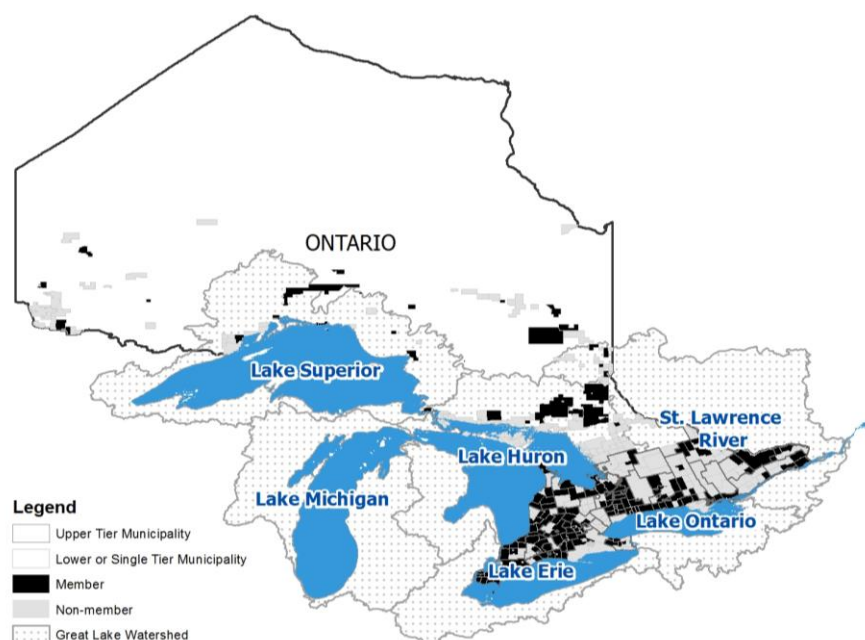
REGIONAL PUBLIC WORKS COMMISSIONERS OF ONTARIO MEMBERSHIP



Source: (Regional Public Works Commissioners of Ontario, n.d.b; Ontario Ministry of Municipal Affairs and Housing, 2012a)

Figure D3: Map of Regional Public Works Commissioners of Ontario Membership

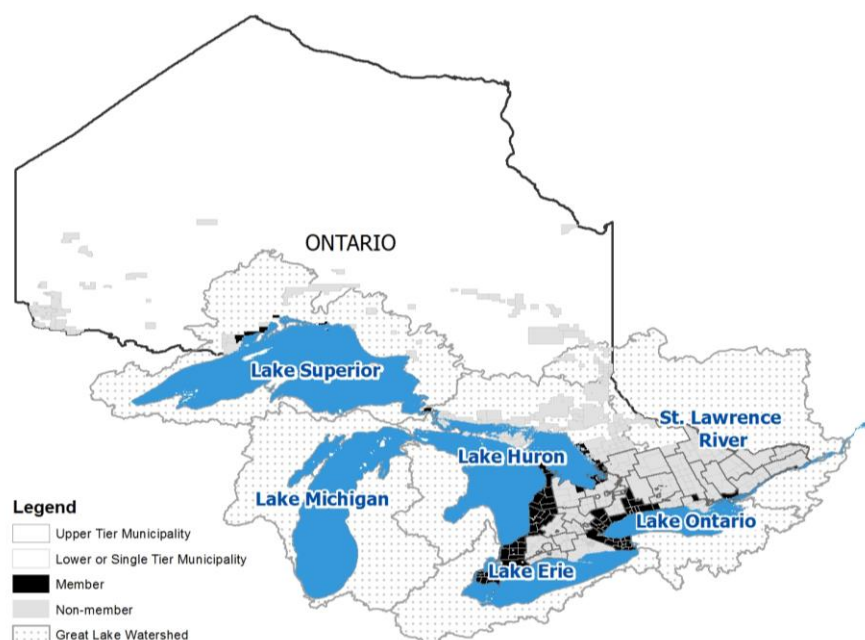
ONTARIO MUNICIPAL WATER ASSOCIATION MEMBERSHIP



Source: (Ontario Ministry of Municipal Affairs and Housing, 2012a;
Ontario Municipal Water Association, 2013b)

Figure D4: Map of Ontario Municipal Water Association Membership

GREAT LAKES AND ST. LAWRENCE CITIES INITIATIVE MEMBERSHIP IN ONTARIO



Source: (Great Lakes and St. Lawrence Cities Initiative, n.d.;
Ontario Ministry of Municipal Affairs and Housing, 2012a)

Figure D5: Map of Great Lakes and St. Lawrence Cities Initiative Membership in Ontario

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