



**Practising Shared Water
Governance in Canada:
A Primer**

UBC PROGRAM ON WATER GOVERNANCE

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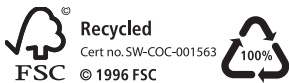
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INTRODUCTION

When you turn on the tap in Canada, you expect water to flow, and you expect that water to be clean. When you go to a river to fish or swim, you expect that water also to be abundant and safe. And whether you use water to grow crops, generate power, flush out waste, or for another industrial or commercial purpose, you have similar expectations of water's availability and quality.

In Canada, governments have historically had the sole responsibility for making the decisions that will lead to these results and meet these public expectations. Yet the convergence of a number of trends—greater public expectation of participation, diminished government resources, the realization that expertise is found in many quarters, the increasing complexity of coordinating different levels of government, industries and nonprofit bodies—point to a new way of making decisions about resources such as water, involving a much broader spectrum of groups beyond bureaucrats. While this phenomenon is known by a variety of names, this Primer uses the term “shared governance” to describe it.

This Primer examines some of the benefits and pitfalls of this new way of making decisions about water, identifies five key characteristics of shared water governance, and provides some practical lessons for governments interested in designing new shared (or delegated) governance structures.¹

The document is addressed particularly to water managers and policy-makers, as well as those participating in shared water governance initiatives. It is divided into five main sections. Section 1 defines water governance and lists five key characteristics of shared water governance: delegation, rescaling, participation, collaboration, and science-based decision-making. Section 2 discusses the range of forms that shared water governance can take and presents a brief overview of the trend towards the use of more shared water governance in Canada and internationally.

¹ The Primer is based on the report by Linda Nowlan and Karen Bakker (2007), *Delegating Water Governance: Issues and Challenges in the BC Context*. Program on Water Governance, University of British Columbia.

Section 3 explores the advantages and disadvantages of this approach to governance, while Section 4 examines water governance in action in Canada and looks at how the five characteristics play out in four examples of shared water governance in Canada: British Columbia's water management plans, Alberta's Watershed and Planning Advisory Councils, Ontario's Source Protection Committees, and Quebec's watershed organizations. These examples paint a picture of the current state of practice in Canada.

Section 5 explores lessons that may be derived from the foregoing Canadian examples, and Section 6 concludes with a consideration of two keys to successful sharing approaches.

1. SHARED WATER GOVERNANCE BODIES

1.1 Water governance defined

Water governance is the range of political, organizational, and administrative processes through which communities articulate their interests, their input is absorbed, decisions are made and implemented, and decision makers are held accountable in the development and management of water resources and delivery of water services. It is distinct from water management, which is the operational, on-the-ground activity to regulate water and impose conditions on its use:

Simply put, water governance refers to the decision-making process we follow, whereas water management refers to the operational approaches we adopt. Governance refers to how we make decisions and who gets to decide; management refers to the models, principles and information we use to make those decisions (Bakker, 2007).

Water governance has undergone dramatic changes in Canada over the past decade, characterized by three key trends: the introduction of new shared governance management models, often but not always based on watershed boundaries; legislative and policy reform setting higher standards for drinking water supply; and greater citizen involvement in decision-making over water management.

These changes have occurred for several reasons:

- A shift in the view of the role and mandate of governments, sometimes associated with a lack of confidence in the unilateral actions of public institutions;
- New legal requirements (particularly with respect to First Nations, and also mandated by a new generation of environmental laws);
- Awareness of the expertise available outside of government, particularly in the context of decreased government resources;
- New approaches to participation; acknowledgement

of the need to incorporate a range of values and perspectives in order to secure political legitimacy and successful water management outcomes;

- Increased emphasis on integrated management of environmental issues (with respect to water, particularly nonpoint source pollution, water quality management, coastal estuary protection, and protection of aquatic species);
- Increased acceptance of the need to integrate land use planning and water resources management at a watershed scale;
- Concern over pressures on both water resources and supply related to anthropogenic climate change, driving improved water conservation and management, particularly in areas of high rates of population growth;
- A growing appreciation by water managers that they can no longer manage water resources and watersheds in isolation of other relevant interests.

1.2 Shared water governance defined

Shared (or devolved or delegated or collaborative) water governance may be broadly defined as the involvement of non-state actors in decision-making for water management. Shared governance is defined by the Alberta Water Council as a structure where both government and other stakeholders share responsibility for the development and delivery of policy, planning, and programs or services, but where government retains legislative accountability (AWC, 2008a).

Water governance has undergone a rescaling in the last decade. Frequently – but not always – this rescaling includes a shift towards watersheds (where a watershed is defined as an area of land draining into a common body of water such as a lake, river, or ocean) as governance scales. Many experts agree that shared water governance is best practised at the watershed level. This means coordinating and delegating within watersheds and involving stakeholders and decentralized authorities (Ranhir, 2007; Lubell, 2004; Kemper, Blomquist,

& Dinar, 2007). It is important to note, though, that new governance scales—like watersheds—can involve both scaling up as well as scaling down. Bringing together municipalities to work in a watershed group is an example of scaling up, whereas the devolution of water governance from provinces to watershed-based groups is an example of scaling down. The examples in this document—and the majority of approaches adopted in Canada to date—involve both scaling up and scaling down.

1.3 Key characteristics of shared water governance

Shared water governance often comprises these five key characteristics:

- Delegation by government of water governance to a council, committee, or basin organization;
- Rescaling decision-making, often but not always, to the watershed scale;
- Greater participation by a wide variety of non-state actors;
- Collaborative decision-making processes, often emphasizing consensus and trust-building;
- Science-based decision-making, often requiring extensive fact-finding.

2. SHARED WATER GOVERNANCE: A GROWING TREND

2.1 Forms of shared water governance

Shared water governance bodies occur in many forms, and these bodies often vary according to their duration (short- versus long-term) and decision-making power (advisory versus authoritative). The four most common types of shared water governance are these:

- Collaborative engagement processes (short-term, advisory). These processes employ techniques for conflict resolution among diverse stakeholders, and usually consist of project-specific planning exercises of relatively limited duration. Techniques include collaborative learning, conflict resolution, and mediation. BC's water management planning processes are an example.
- Collaborative panels (short-term, authoritative). These are usually short-term (one to two years), expert-dominated, problem-focused governmental initiatives, intended to supply specific inputs into policy reform. Collaborative panels are characterized by more limited consultation than other types of delegated water governance partnerships. British Columbia's Drinking Water Review Panel is an example.
- Collaborative watershed advisory processes (long-term, advisory). These involve a range of governmental and non-governmental stakeholders over a relatively long period (e.g., five years or more). Typically, these partnerships provide a forum in which information is shared and management actions are discussed and negotiated, but formal government agencies retain decision-making power. Partnerships are thus intended to complement (and perhaps transform) rather than replace traditional governmental activity. Alberta's Watershed Planning and Advisory Councils are an example.
- Collaborative agencies (long-term, authoritative). These are formalized bodies with implementation power for water management decisions. A range of governmental and private

stakeholder groups are typically represented. Autonomous and requiring large budgets, this type of delegated water governance partnership is rare. Ontario's source protection committees are an example.

2.2 International comparison of shared water governance experiences

The trend toward shared water governance is present in numerous countries, including European Union member states, Australia, New Zealand, and the United States. Many countries are experiencing the same trends as Canada: the demand for more involvement in decision-making by a wide array of sectors and interests, downsizing of government, increasing complexity of water management, growing competition for water and conflict among competing users, mounting threats to water quality and quantity exacerbated by the effects of climate change, and improved scientific understanding of the interactions between different parts of the water cycle.

Europe, Australia, and the United States in particular face water governance challenges similar to Canada. Each of these federations contains competing interests, multiple levels of government, and serious water problems. Each is moving closer to shared governance.

The European Union (EU) has been a leader in coordinating laws and policies among a divergent group of countries with vastly different landscapes and cultures. The EU Water Framework Directive mandates the creation of local watershed councils (including transboundary watersheds) for all rivers within the European Union. The Directive applies to groundwater, inland surface waters, transitional waters, and coastal waters. The overall objective of the Directive is to achieve "good status" of all water bodies in the EU member states and associated states by 2015. "Good status" means both "good ecological status" and "good chemical status" (EU 2006).

The Australian National Water Initiative (NWI) is a national agreement between the states, territories, and federal government on common principles and objectives to manage water at the catchment level.² In determining how to implement the Initiative, each Australian state and

territory operates under a unique set of institutional arrangements. States have constitutional authority over water management, while the Commonwealth exercises power through grants or funding incentives for implementation (Thompson, 2006). The Murray-Darling Basin Authority (MDBA), created by the federal *Water Act* 2007, is the strongest shared governance organization yet in the well-known Murray-Darling Basin – the largest integrated catchment management region in the world, covering an area of over one million square kilometers. For the first time, one agency is now responsible for the integrated management of water across the Basin. A Ministerial Council, Basin Officials Committee (representing all states involved) and the Basin Community Committee all work with MDBA. The Authority is crafting a Basin Plan that will set a long-term sustainable limit on the use of both surface and groundwater in the Basin, with the goal of maximizing environmental, economic and social values (MDBA, 2008).

In the United States, shared water governance is evident from the myriad watershed councils, associations, or alliances that have engaged in public education and watershed protection for the past 30 to 50 years (National Research Council, 1999). The Connecticut River Watershed Council, one of America’s earliest watershed associations, first convened in 1952. The concept has taken root nation-wide, and the US Environmental Protection Agency (EPA) supports watershed planning and maintains a central clearing house of information in its Office of Wetlands, Oceans, and Watersheds. The EPA recognizes that watershed plans are one method of meeting US federal Clean Water Act obligations to reduce nonpoint source water quality impairment. The EPA’s watershed planning guide notes, “One of the key characteristics of the watershed planning process is that it is participatory” (EPA, 2008). The EPA also has a “Surf Your Watershed” website to help citizens connect with watershed groups in their community.³

² The full Intergovernmental Agreement on a National Water Initiative is available at: <http://www.nwc.gov.au/resources/documents/Intergovernmental-Agreement-on-a-national-water-initiative.pdf>

³ <http://cfpub.epa.gov/surf/locate/index.cfm>

2.3 Shared water governance in Canada: A brief overview

Water governance has been shared in Canada for many years among different government agencies with decision-making authority over water and which must coordinate their efforts.

The constitutional responsibility for water belongs primarily to the provinces; it is shared with the federal government based on federal responsibilities for fisheries, navigation, and other integral issues. Local governments also have a key role as water providers and land use planners. Aboriginal groups have water rights that have yet to be fully defined. So, for example, on the same river: a provincial regulator might issue water licenses and enforce pollution control laws, a federal regulator might monitor habitat protection for fisheries and ensure that navigation is unimpeded, a municipal regulator might enforce local land use plans and bylaws affecting flood control and riparian cover, and an Aboriginal group might practise traditional activities like fishing according to their guaranteed constitutional rights. The involvement of numerous levels of government leads to fragmentation of governance; in turn, the resulting need for better coordination can be a driver for developing shared water governance bodies at the local scale.

Growing recognition has emerged regarding the need for shared water governance in Canada. At the federal level, one of the pillars of the 1987 Federal Water Policy was “integrated planning at the watershed level” based on watersheds as the preferred spatial unit for water management. Experts believe that the federal government could take a stronger role to promote an integrated watershed approach to governance, which “brings together the authorities responsible for making water management decisions with all the interests that depend on that water” (Morin & Cantin, 2009).

Provinces too have espoused the watershed approach, often for many years. Local level management has been a feature of water governance in Western provinces in the form of irrigation districts since the 1930s, and in Ontario in the form of Conservation Authorities (CAs) based on watershed boundaries, established by law in 1946. Few provinces have implemented a comprehensive watershed regulatory and policy

approach to both water quality and quantity, which integrates surface water, groundwater, and land management. Arguably Ontario is the only province that has fully instituted a province-wide shared governance program; it is perhaps the prime innovator in this arena through the recent passage of the *Clean Water Act* (2006) authorizing the creation of multi-stakeholder source protection authorities to prepare plans to protect municipal drinking water sources.

Throughout the country, shared water governance is in its formative stages. The laws and policies of the four provincial case study processes discussed in this document are all less than a decade old.⁴ Table 1 shows which provinces have adopted a systematic approach through a law or policy to creating shared water governance bodies.

Shared governance is not the same as the watershed approach⁵ or watershed management, which is also a growing trend in Canada (Brandes & Jackson, forthcoming). The water policies of most provinces are based at least in part on watersheds as a way to organize activities like drinking water source protection or community stewardship activities. Examples of provincial watershed-based planning initiatives include:

- Nova Scotia’s examination of watershed management as part of the development of a provincial water strategy;⁶
- Prince Edward Island’s Watershed Management Fund to support community groups engaged in watershed planning;⁷ and
- New Brunswick’s Watershed Protected Area Designation

⁴ Though the array of provincial laws and policies which sets the rules for establishing shared governance bodies is relatively recent, most provinces have one or more shared water governance bodies of long-standing duration, like the Prairie Provinces Water Board, formed in 1948.

⁵ For more information on the difference between shared governance and the watershed approach see Sabatier’s *Swimming Upstream: Collaborative approaches to watershed management* (2005).

⁶ See the presentations and report of the 2009 workshop “Wading In: Watershed Management in Nova Scotia”: http://annapolisriver.ca/projects_wading_in.php

⁷ See PEI Ministry of Environment, Energy and Forestry’s Watershed Management Fund: <http://www.gov.pe.ca/eef/index.php3?number=1015820&lang=E>

Table 1. Provincial Shared Water Governance in Canada

Province	Year	Law/Policy	Water Governance Body	
			Name	Number (established by law or policy)
British Columbia	2004	<i>Water Act</i> , Part IV (law)	Water Management Planning Committees (WMPCs)	1
	2008	Living Water Smart (policy)		
Alberta	2003	Water for Life (policy)	Watershed and Planning Advisory Councils (WPACs)	10
Saskatchewan	2003	Saskatchewan Watershed and Aquifer Planning Model (policy)	Watershed Advisory Committees Technical Committees	n/a*
Manitoba	1959	<i>Watershed Conservation Districts Act</i> (now <i>Conservation Districts Act</i> , enacted 1987) (law)	Conservation Districts (CDs)	18
Ontario	2003	Manitoba Water Strategy (policy)	Conservation Authorities (CAs) Source Protection Committees (SPCs)	38 19
	2006	<i>Water Protection Act</i> (law)		
	1946	<i>Conservation Authorities Act</i> (law)		
Quebec	2006	<i>Clean Water Act</i> (law)	Watershed Organisations	33 (to grow to 40 by end of 2011)
	2002	Politique nationale de l'eau (policy)		
	2009	<i>An Act to Affirm the Collective Nature of Water Resources and Provide for Increased Water Resource Protection</i>		

* Policy establishes them based on areas in need. Hurlbert et al found approximately a dozen WACs in 2009 (125).

Order, which requires setback zones for 30 designated watersheds, part of the government's long-term Watershed Protection Program.⁸

However, not all of these watershed initiatives integrate shared governance.

⁸ See New Brunswick Department of the Environment and Local Government's *Understanding the Law: A Guide to New Brunswick's Watershed Protected Designation Order*: <http://www.gnb.ca/0009/0371/0004/watershed-e.pdf>

3. WHY (OR WHY NOT) ADOPT SHARED GOVERNANCE?

3.1 Advantages of shared water governance

Two common drivers behind the creation of shared governance bodies are to improve water management and to involve a wider variety of voices and perspectives in the decision-making process.

Management can be improved by incorporating different viewpoints into the preparation of a water or watershed management plan, rather than imposing a plan in a “top-down” manner, which may provoke conflict and subsequently limit the effectiveness of implementation. When citizens have a role in decision-making, they have a stronger interest in ensuring that the decision reflects their interests, and they have stronger buy-in to final decisions as a result.

Better access to information can also improve management; people who live in a watershed are often the best equipped to identify water issues and solutions. The Ontario government puts it this way: “Local communities are best positioned to decide what protective measures are needed and how best to carry them out. A key focus of the legislation is the production of locally developed, science-based drinking water source protection assessment reports and source protection plans” (Ontario MOE, 2008a).

The possible advantages of delegated water governance include these:

- access to “local” expertise which can improve the quality of decision-making;
- the ability to adapt regulatory programs to meet local conditions;
- empowerment of stakeholders (particularly those traditionally marginalized);
- reinforcement of “social trust” between stakeholders, and reduction of conflict over competing uses;

- greater cooperation in information-sharing;
- greater political legitimacy (and thus enforceability) of water management planning outcomes; and
- more positive outcomes that have the “buy-in” and support of influential interests.

3.2 Disadvantages of shared water governance

Shared water governance partnerships are not always appropriate. Shared governance takes longer and costs more than the “top-down” approach. It is not the best choice for water decisions that are urgent, like dealing with droughts, shortages, or health emergencies.

The following are some possible disadvantages:

- A focus on local environmental interests may exclude regional or national environmental concerns.
- Emphasis on consensus may lead to politically workable solutions, rather than environmentally optimal solutions.
- Unequal representation of stakeholders may develop at the local level.
- Long-term sustainability may be undermined by large amounts of volunteer time required (“burnout”).
- There may be greater overall costs and more time required to produce outcomes such as water use or watershed plans.

The relative importance and impact of these advantages and disadvantages will vary from one watershed to the next. In examining whether or not to initiate a shared water governance process, these factors should be carefully weighed. When a shared water governance process has been established, different strategies can be used to maximize the advantages and minimize the disadvantages. These issues are explored in greater detail in Section 4 of this document, which looks at four examples of shared water governance from across Canada.

4. SHARED WATER GOVERNANCE IN ACTION: FOUR EXAMPLES FROM CANADA

In this section, four Canadian examples (Alberta, Ontario, Quebec, and British Columbia) are used to explore the five common characteristics of shared water governance initiatives defined in Section 3: delegation, rescaling, participation, collaborative decision-making, and science-based decision-making. The four case studies, outlined in Table 2 (see page 23), are from the most populous provinces in Canada and are examples of province-wide laws and policies that establish the basis for shared water governance bodies. The studies are representative of approaches to shared water governance in Canada.⁹

Shared water governance in Canada is practised in a variety of forms, as these four examples demonstrate. In all the examples, the provinces have designed the initiatives to capitalize on the advantages of shared governance: focusing on local conditions and using local knowledge, involving a greater range of people in the decisions, and building a common frame of understanding of the issues at stake. All the examples have also grappled with the disadvantages, such as the different levels of power and authority among the participants, and the time and money needed to achieve results.

Three out of the four provinces are guided by an overall water strategy, with Ontario the exception. The approach in Ontario has been to focus resources on development of particular program areas, such as drinking water and source water protection and, most recently, conservation. It remains to be seen whether Ontario will develop an overall water strategy which knits together the disparate program areas.

⁹ See also O.M. Brandes & S. Jackson (forthcoming), *Watershed Governance Technical Backgrounder*, POLIS Project on Ecological Governance, Victoria, BC. This Primer does not discuss the many Canadian examples of shared governance bodies for particular bodies of water or geographic areas such as the Great Lakes Binational Executive Committee, the Lake Winnipeg Stewardship Board, and the Okanagan Basin Water Board.

4.1 Delegation

4.1.1 Required by statute

One of the hallmarks of shared water governance is shared decision-making by a governance body, composed of representatives from different sectors, governments, or groups. Delegation of a water planning function or a decision-making power to a shared governance body may be required by a law or policy or may be a voluntary or discretionary decision. Two of the four provincial examples have a statutory requirement for delegation: Ontario and Quebec. The other provinces use a more discretionary or voluntary approach. BC gives the Minister of the Environment broad discretion on when to initiate a water management planning process. Alberta's WPACs are an outgrowth of the provincial Water for Life policy and are not required by law.

4.1.2 Number of delegated bodies

All the case studies involve provinces with very large geographic territories and diverse water supplies and management challenges, yet the number of shared water governance bodies established by a province-wide law or policy substantially varies among the four case studies. BC to date has only one pilot project Water Management Planning Committee (WMPC).¹⁰ Alberta currently has ten Watershed Planning Advisory Councils (WPACs) with one under development, Ontario has 19 Source Protection Committees (SPCs), and Quebec now has thirty-three and by 2011 will have forty basin organizations.

¹⁰ BC does have many other examples of water governance partnerships created under laws other than the *BC Water Act*, such as the Okanagan Basin Water Board and the Columbia Basin Trust. The province also has informal partnerships not created under any statutory authority, such as those in the Nicola and Cowichan Valleys. The full range of BC water governance partnerships is catalogued in Nowlan and Bakker (2007). See Nowlan and Bakker (2007), *Delegating Water Governance: Issues and Challenges in the BC Context*. Program on Water Governance, University of British Columbia.

4.1.3 Purpose of delegation, and tasks for shared governance bodies

In each of these examples, the shared governance bodies are designed to achieve specific outcomes, as Table 2 demonstrates:

- In BC, WMPCs are designed to address three broad categories of water conflict or degradation.
- In Alberta, WPACs are meant to build long-term partnerships that examine watershed issues, make recommendations to the appropriate water and land use decision-making authorities, and undertake actions to benefit Alberta's watersheds.
- In Ontario, the SPCs focus on drinking water source protection as the *Clean Water Act* is limited to municipal residential supplies of drinking water.
- In Quebec, the mission of watershed or basin organizations is to develop and update a water master plan and facilitate and monitor its implementation.

One key function for these groups is to prepare watershed management plans or other types of water plans that are then submitted to the relevant provincial ministry for approval. This responsibility is granted to all four of the case study examples, as shown in Table 2.

Table 2. Purpose and Main Tasks of Shared Water Governance Bodies in BC, Alberta, Ontario, and Quebec

	Purpose	Main Tasks
BC Water Management Plan Committees (WMPCs)	<p>To address or prevent: (a) conflicts between water users, (b) conflicts between water users and instream flow requirements, or (c) risks to water quality.</p> <p><i>Water Act, s. 62(1).</i></p>	Develops a water management plan for the area designated by the Order-in-Council.
Alberta Watershed Planning and Advisory Committees (WPACs)	<p>To engage governments, stakeholders, other partnerships, and the public in watershed assessment and watershed management planning, considering existing land and resource management planning processes and decision-making authorities.</p> <p>“Water for Life” website.</p>	Responsible for watershed assessment and watershed management planning.
Ontario Source Protection Committees (SPCs)	<p>To achieve the Act’s purpose: to protect existing and future sources of drinking water.</p> <p><i>Clean Water Act, 2006, c. 22, s. 1.</i></p>	Prepares assessment reports and source protection plans.
Quebec Watershed Organizations	<p>To achieve the goal of integrated water resource management, reflecting sustainable development principles.</p> <p><i>An Act to Affirm the Collective Nature of Water Resources and Provide for Increased Water Resource Protection, 2009, R.S.Q. c. C-6.2, s. 13.</i></p>	Develops a water master plan.

4.2 The choice of scale: Watersheds, regions, or other boundaries?

4.2.1 Watershed or other boundary

Each of the four case study provinces refers to watersheds in their water policies, though the shared water governance bodies are not necessarily aligned to watershed boundaries, as Table 3 illustrates. In BC, the most recent iteration of provincial policy, Living Water Smart (BC Ministry of the Environment, 2008) commits the government to “support communities to do watershed management planning in priority areas”; the province’s pilot project in the Township of Langley is organized according to municipal boundaries.¹¹ Alberta’s Water for Life (Alberta Environment, 2003) identifies three tiers of “partnerships” for managing watersheds: the Alberta Water Council, the Watershed Planning and Advisory Councils, and more local watershed stewardship groups. Ontario’s Source Protection Planning Committees use similar but not identical boundaries to the province’s conservation authorities, which were designed to cover watershed areas. Integrated watershed management, carried out by basin organizations, is a major component of the 2002 Quebec Water Policy and the new provincial water law.

4.2.2 Geographic coverage

British Columbia has not defined specific geographical areas of the province for shared governance and refers in the Living Water Smart policy to doing watershed management planning in “priority areas.” The other three provinces have identified where shared water governance bodies will be formed: in Alberta, WPACs will be created in “major watersheds” throughout the province; in Ontario, source protection regions coincide with

¹¹ Part 4 of the BC *Water Act*, [RSBC 1996] c. 483 details the Water Management Planning process and does not require that plans be made specifically for watersheds. Rather, s. 62 of the Act provides that a water management plan may be designated for “any delineation of the area that adequately describes it including, for example, name, map, plan, legal description, reference to a stream, reference to an aquifer or other geological formation or part of one, depth or other dimension, or by any combination of methods.”

Table 3. Scale of Operations of Shared Water Governance Bodies in BC, Alberta, Ontario, and Quebec

	Boundary	Geographic Coverage
BC Water Management Plan Committees (WMPCs)	<p><i>No set scale</i></p> <p>The geographic boundary for the Langley WMP pilot project is the Township's municipal boundaries.</p>	<p><i>Priority areas</i></p> <p>One WMP area exists for one small municipality in the Lower Mainland of BC.</p>
Alberta Watershed Planning and Advisory Committees (WPACs)	<p><i>Major river basins</i></p> <p>WPACs are formed on the basis of Alberta's major river basins, as defined under the Water (Ministerial) Regulation, AB Reg 205/98. Several of the larger major river basins have been further split into smaller units for management purposes.</p>	<p><i>Major watersheds</i></p> <p>WPACs are mainly in the south of the province.</p>
Ontario Source Protection Committees (SPCs)	<p><i>Watersheds</i></p> <p>Source protection areas are largely based on the same watershed boundaries as Conservation Authorities where they exist, though some areas are grouped together to form larger SP areas. There are 19 source protection planning areas.</p>	<p><i>Conservation Area (CA) boundaries</i></p> <p>Currently, 38 CAs exist, covering watersheds in which 90% of the Ontario population lives. Two new source protection areas have been established in northern Ontario where no CA previously existed.</p>
Quebec Watershed Organizations	<p><i>Hydrologic units</i></p> <p>The Quebec act provides that the Minister can set up watershed organizations based on hydrologic units, including watersheds, subwatersheds, and groups of watersheds, for all or part of the territory of Quebec on the basis of such criteria as s.13 (2).</p>	<p><i>Priority watersheds</i></p> <p>Watershed organizations cover the southern half of province.</p>

conservation authority boundaries for the most part; and Quebec has chosen to set up watershed organizations in priority watersheds, based on environmental issues such as pollution, source protection, and conflicts over use, and the need to make strategic choices due to limited public funding.

4.3 Participation

The issues of who participates, how participants are recruited, and how they make decisions are central to the topic of shared governance.

4.3.1 Required by law or policy

In three of the four case studies, either a law or policy requires broad-based participation in the shared governance bodies. British Columbia is the exception. The *BC Water Act* sets out an open-ended process whereby the minister may, by order, establish the process for developing a water management plan for a designated area. There are no specific requirements for the process in BC, and no multi-stakeholder body must be formed. The terms of reference for a proposed water management plan must include a process for public and stakeholder consultation.

4.3.2 Categories of participants defined by statute or policy

Two of the provinces examined in this document, Ontario and Quebec, define by law the sectors to be involved in shared water governance partnerships.

Ontario specifies the composition of a SPC in regulations that were subject to detailed public review and commentary through the Environmental Bill of Rights and Environmental Registry procedures. One-third of the members must reflect the interests of the municipalities that are located in the source protection area, one-third must reflect the interests of the agricultural, commercial, or industrial sectors of the source protection area's economy, and one-third must be persons appointed to reflect other interests including, in particular, environmental, health, and other interests of the general public.¹² In addition, the regulation requires Indian Band Council members to

¹²Source Protection Committees, O. Reg. 288/07, (*Clean Water Act*, 2006), s. 2.

be appointed if a source protection area or source protection region includes any part of a band's reserve, under the conditions set out in the regulation.¹³

The Quebec law provides that watershed organizations shall have "balanced representation" composed of "users and of stakeholders from such sectors as the government, Native, municipal, economic, environmental, agricultural and community sectors."¹⁴ Both Ontario and Quebec clearly require environmental voices to be heard at the shared decision-making table.

The other two provinces, BC and Alberta, give the government discretion to decide who sits at the table. BC's current *Water Act* is silent on this issue. The Minister has the discretion when making the initial order for the preparation of the plan to say who will be responsible for this task and can also require the establishment of a technical advisory committee. In the Langley pilot project, the committee consists of representatives from two provincial agencies and the local government. In contrast, in Alberta the composition of the WPACs depends on the community, and who steps forward to participate. Neither Alberta's *Water Act* nor its Water for Life Strategy specifies who should be included on its shared governance partnerships, though the intent is for broad cross-sectoral representation. The government's website describes WPACs as multi-stakeholder, non-profit organizations that bring public and private sector stakeholders and individuals in a watershed together to assess the conditions of their watershed and to develop a plan and activities to address watershed issues.

A related issue concerns whether to limit membership or keep it open. BC's process limits membership to those persons designated by the Minister. An "open-door" policy is in effect at the Bow River Basin Council and in other WPACs in the province of Alberta. A more structured approach is taken with the composition of the Ontario Source Protection Committees. A regulation governing their appointment process, composition and decision-making authority has been passed under the *Clean Water Act*.¹⁵

¹³ Source Protection Committees, O. Reg. 288/07, (*Clean Water Act*, 2006), s. 6.

¹⁴ Section 13 (3) (a).

4.4 Collaborative decision-making processes

4.4.1 Consensus decision-making process

Shared water governance bodies often use consensus decision-making procedures. An advantage of the consensus approach is that governmental and nongovernmental stakeholders participate as equals. However, if consensus alone is used for decisions, stalemates may result and action prevented, and/or preserving consensus may become more important than realizing water management goals.

In Alberta, the government urges WPACs to use consensus. In an Action Plan to implement the Water for Life strategy, the government notes that councils will be successful if they are inclusive and strive for consensus.¹⁶

Ontario has this variation on the consensus model in its regulation:

The committee shall ensure that the rules of procedure contain the following rules:

1. The business of the committee shall be carried out at meetings of the committee at which a quorum is present.
2. The committee shall attempt to make decisions by consensus among the members.
3. If the chair determines that reasonable efforts have been made to achieve consensus but the committee has been unable to

¹⁵ Source Protection Committees, O. Reg.288/07.

¹⁶ The other conditions noted as necessary for success include:

- » Provide a constructive platform for meaningful dialogue, information exchange, and making recommendations to governments, stakeholders and the public that result in improved watershed management.
- » Prepare, implement, review, and adjust watershed management plans in an ongoing adaptive management cycle required for long-term sustainable management of Alberta's watersheds.
- » Gain support from municipal, Aboriginal, provincial and federal governments, industry, non-government organizations and the public to address specific issues and to prepare and implement watershed management plans.
- » Have objectives that are measurable, lead to actions, and improve watershed management over time.
- » Operate under the requirements for success identified for the overall partnership framework.

make a decision by consensus, the decision may be made by a vote of two-thirds of the members present, not counting the chair.

4. The chair shall not vote.¹⁷

The BC and Quebec laws do not refer to consensus.

4.4.2 Authority to implement defined by statute

Likely the most important legal issue with respect to shared governance is to clearly define the relative authority, responsibility, and accountability of each group that participates in water governance. Promising community or stewardship groups a greater say in decisions should not lead to false expectations of an equal voice or veto power. The province must balance its duties as the primary legal guardian of the water resource, while recognizing the rights and responsibilities of First Nations, which require meaningful consultation and accommodation; local governments, which supply drinking water and wastewater services, and which make land use decisions; the federal government, which protects fish and borders, among other matters; and the public, which ultimately relies on and consumes the water.

In all provinces, recommendations from shared governance bodies are just that: recommendations that the government is free to decide whether or not to adopt. The fact that the government has sought advice means it is very likely to act on the advice but it is not legally bound to do so.

If legislation does not require its preparation, the legal effect of a water or watershed management plan produced by a shared governance body is uncertain. The Alberta Water Council notes the challenge that multi-stakeholder organizations face when they try to implement plans or policies in areas in which they have no authority; the Council gives the example of a WPAC recommending the protection of an important wetland habitat as part of a watershed management plan when it does not have authority over the land to achieve that objective (Alberta Water Council, 2008b).

¹⁷ Source Protection Committees Regulation, O. Reg. 288/07, s. 14 (2).

In all cases, the ultimate decision-making authority remains with the province, as Table 4 shows. The plans have no legal authority until they are approved by the Cabinet or a Minister.

**Table 4. Provincial Oversight of Shared Water Governance
Bodies in BC, Alberta, Ontario, and Quebec**

	Division of Authority
BC Water Management Plan Committees (WMPCs)	The Minister and Cabinet must approve all or part of the WMP by a two-step approval process; implementation proceeds from regulation. Section 64 of the <i>Water Act</i> requires the water management plan to first be submitted to the Minister of the Environment, who reviews it and then sends it to Cabinet (the Lieutenant Governor in Council) who has the authority to approve all or part of the plan.
Alberta Watershed Planning and Advisory Committees (WPACs)	WPACs develop plans for the watershed, which must be approved by the Ministry, and WPACs implement plans under Ministry directive. In Alberta, s. 11 (1) of the <i>Water Act</i> states that the Lieutenant Governor in Council may approve a water management plan or part of a water management plan, subject to any terms and conditions that the Lieutenant Governor in Council considers appropriate. (WPACs are not mentioned in the Act).
Ontario Source Protection Committees (SPCs)	Ontario’s procedure for approval of the plans is the most elaborate. The SP authority publishes the plan before approval. The <i>Clean Water Act</i> , s. 22-36, offers additional opportunities for public and local government comment after the publication, allows the Minister to appoint a hearing officer to hold a hearing for “the purpose of receiving representations respecting the proposed source protection plan, or any matter relating to the proposed source protection plan,” at his or her option, and then gives the Minister of the Environment the power to approve the plan, require it or be amended or resubmitted.
Quebec Watershed Organizations	Each “master” watershed plan must be approved by the Minister of Sustainable Development, Environment and Parks pursuant to s. 15 of the <i>Act to Affirm the Collective Nature of Water Resources and Provide for Increased Water Resource Protection</i> , 2009.

4.4.3 Aboriginal water rights

Aboriginal rights to water are a significant issue that will affect new shared governance models in Canada. There are several aspects to this issue:

- treaty negotiations and completed treaties that may affect water allocations;
- the legal duty of provincial governments to consult in good faith with First Nations about decisions that may impact the First Nation's interests in land before the First Nations have proven title or rights; and
- as yet unresolved Aboriginal rights and title to water. Aboriginal rights are those rights held by Aboriginal peoples that relate to activities that are an element of a practice, custom, or tradition, integral to that Aboriginal group's distinctive culture. Aboriginal title is a separate Aboriginal right to the land.

Proceeding with new governance models needs to be carefully done, fulfilling the duties of consultation and accommodation. In fact, most provinces have explicit policies to guide decision-makers under the relevant water laws.¹⁸

4.5 Science-based decisions

4.5.1 Requirement to base decisions on science

No one should dispute the need to base water management decisions on sound science. Participatory and distributed governance approaches may increase the quantity and quality of the scientific information underpinning decisions, as many processes start by compiling all sources of information, then identify data gaps and commission research to fill gaps. Water partnerships also increase all participants' scientific knowledge, as regulators are obliged to translate data into plain language.

¹⁸ Ontario's *Clean Water Act* contains a typical type of this provision in s. 82: "For greater certainty, nothing in this Act shall be construed so as to abrogate or derogate from the protection provided for the existing aboriginal and treaty rights of the aboriginal peoples of Canada as recognized and affirmed in section 35 of the *Constitution Act, 1982*."

Each of the governance bodies in the case studies gathered existing scientific and technical information as a key part of their duties. In some cases, new studies were commissioned. In British Columbia, the Langley WMPC drew on the numerous water studies prepared for the Township. In Alberta, WPACs typically commission scientific studies. The Bow River Basin Council is the WPAC for the Bow Basin and has completed a State of the Bow River Basin Report, the first phase of the Bow Basin Watershed Management Plan: Water Quality, and a strategic assessment to provide information to map future priorities.

The laws in both Ontario and Quebec contain detailed requirements for the content of source protection and master water plans. In both these cases, the plans must consider specific scientific topics. The Quebec law provides that the content of a master plan for water will be prescribed by rules, and will include:

- the state of waters and water-dependent natural resources;
- the identification of water uses and an assessment of their effects;
- an inventory of zones of ecological interest and of ecologically fragile or degraded zones;
- measures to protect and restore the qualitative or quantitative status of waters;
- an evaluation of the economic and financial means required to implement the plan; and
- conditions for developing, updating, and monitoring the implementation of the plan.

5. LESSONS ABOUT SHARED WATER GOVERNANCE

In this section, we explore some lessons about shared governance that we can learn from the four examples (Alberta, BC, Ontario, and Quebec) discussed in Section 4. The “lessons learnt” are organized by our five themes of shared governance: delegation, rescaling, participation, collaborative and science-based decision-making. The lessons outlined here closely resemble the most frequently mentioned factors of success in one of the largest studies to date of delegated water governance partnerships in the United States: sustainable funding, effective leadership and management, interpersonal trust amongst participants, and committed, cooperative participants (Leach & Pelkey, 2001).

5.1 Lessons about delegation

5.1.1 Legal basis for delegation

The benefits of a legally-defined process are clarity and accountability. A law that defines the responsibilities of shared water governance bodies, outlines their composition and specifies what topics a watershed plan should cover can improve water governance. The role of the different levels of government in these processes needs to be clearly outlined in this law, and a commitment made to take the partnership’s recommendations forward for implementation; otherwise, distrust is the result. Ontario and Quebec follow this approach, while BC and Alberta policies are more discretionary and less constrained by law.

5.1.2 Funding and financial sustainability

A common problem for water governance bodies is financial sustainability. Without ongoing secure financial support, water partnerships are unlikely to survive. Unfunded mandates may result in water governance partnerships acting as “forums for inaction.” The most common funding source is general government revenue, usually from provincial coffers.

Table 5. Funding of Shared Water Governance Bodies in BC, Alberta, Ontario, and Quebec

	Funding
BC Water Management Plan Committees (WMPCs)	The province contributed \$300,000 for the preparation of the pilot plan. The WMP is to operate in a revenue-neutral manner.
Alberta Watershed Planning and Advisory Committees (WPACs)	Provincial funding, combined with private, federal, and municipal contributions, amounts to an <i>anticipated</i> \$81 million to be allocated to all three partnership groups including the WPACs, over 10 years.
Ontario Source Protection Committees (SPCs)	The province provides funding support for source protection committees.
Quebec Watershed Organizations	Provincial base funding and technical support is provided for watershed organizations in the priority watersheds, with annual grants of \$65,000.

Devolution is difficult without stable and continual government funding. The most common institutional problems of a statistical snapshot of 118 watershed council groups surveyed in the United States were inadequate attention or funding paid to the resource (Kenney, 2001). The report from the Rosenberg Forum in Alberta in 2006 which reviewed Alberta’s Water for Life strategy reinforced this point:

A review of world water initiatives confirms the quality and competitive advantages accruing from Alberta’s Water for Life strategy but reinforces the need for robust and sufficient fiscal investment support to match the timescale of the strategy. There are numerous examples in the world of well-designed strategic plans that have failed because of inadequate organizational and fiscal support. Most similar state level strategies fail to deliver on all but short-term objectives due mainly to conflicts in priorities of participating agencies. Those few strategies that have succeeded have all gone beyond standard budgeting and appropriation approaches to make long cycle fiscal commitments, supported by legislative instruments to secure the funding. (Advisory Committee of the Rosenberg International Forum, 2007, emphasis original)

Guaranteed financial support for new governance processes may be a barrier to greater devolved governance. The creation of bodies that require both direct financial support for the processes and implementation of the plans, as well as indirect support through devoting staff time to participate in and enforce the plans, will have considerable financial implications. In a period of cutbacks, and in the absence of a crisis such as Walkerton or a major drought, increasing spending on decision-making procedures for water may not be at the top of a government's list of priorities.

Ontario is widely regarded as having an advanced shared governance system, and many steps in the evolution of Ontario's *Clean Water Act* have been concerned with financial sustainability, since the Act requires municipalities to participate in source protection planning and implementation. The province has provided funds to municipalities to assist with these goals, through a Drinking Water Advisory Panel and Drinking Water Stewardship Program. The Panel addressed affordability for municipalities for instituting source protection programs, such as where municipal water systems may already be financially unsustainable, and where a municipality did not have the ability to generate "water related revenue" to offset source protection costs, for example, in a community dominated by private wells not covered by water charges. In that situation, additional support from the province might be justified.

Though the costs and time required to develop shared governance arrangements seems significant, the costs of not acting can also be high. In Walkerton, the Commission of Inquiry's budget exceeded \$10 million, and the amount of damages paid in civil compensation to victims to date is over \$65 million. The costs of health care treatment for the thousands who became ill from the tainted water has not been tallied, and no cost can be attached to the seven human lives that were lost. Though this example is thankfully a very rare one in Canada, the economic costs of inaction on water are all too common. The costs to businesses and farms who face water scarcity, to First Nations and commercial fishermen who cannot rely on freshwater fish, and to recreational users who cannot practise their favourite sport are difficult to calculate, but are real and significant.

5.2 Lessons about rescaling

To keep the process manageable, many shared governance bodies are designed to plan for a relatively small geographical area.

In the British Columbia example, the pilot WMP used the Township's boundaries as its geographical boundaries. In contrast, the Fraser Basin Council (FBC) (a shared governance body formed in 1997 but without the Water Management Area designation) has a large geographic scope. The area covered by the FBC is the entire geographical area drained by the 1400-kilometre-long Fraser River, which includes 13 main watersheds, and covers about 240,000 square kilometres, or roughly one-quarter of the province. Preparing a watershed management plan for an area this huge is not practicable. Keeping the scope manageable, however, can also be challenging, as sources of and solutions to problems within the governance scale are often found outside of the mandate's boundaries. Boundary selection can therefore be a constant "push and pull" between the administrative necessity of restricting size and the reality that administrative boundaries can neglect myriad factors influencing the waters within them.

Another technique to keep the process manageable is to set time limits to achieve the objectives. In Ontario, a source protection plan must be submitted within five years after the date of appointment of the first chair of the committee.¹⁹

A government may wish to consider a number of factors when deciding which communities, if any, should be delegated additional powers over water, such as:

- population density;
- resource and water uses;
- degree of water stress, overuse, or overallocation;
- threats to water and the aquatic environment;
- existence of conflicts over water;

¹⁹ *Clean Water Act, 2006*. Ontario Regulation 287/07 s. 19.

- willingness of the community to assume a greater role in decision-making;
- availability of committed representative from all stakeholder groups to participate in new governance models.

Canada's diverse geography encompasses wide variations in water resources, population, cultural, and legal systems. In the Maritimes in particular, a lack of funding coupled with a large number of communities and a relatively small population spread over a large geographical area, make it challenging to set up a province-wide system for shared water governance.

5.3 Lessons about participation

The benefits of increased public participation are considerable. Public participation can legitimize policy, minimize or avoid conflicts, and help overcome administrative and legal challenges.

There are drawbacks to greater participation as well. Participation is time-consuming. For governments, it is also expensive, involves a possible loss of control, depending on who participates, and can distort public views. For citizens, participation may be difficult if they are the only ones unpaid to attend meetings, they can suffer from information overload, there is no guarantee of influence in the final decision, and decisions can be politicized. Participants, especially volunteers, are prone to burnout if their expectations about the process are too high, the pace is too slow, or results are hard to see.

5.3.1 *Maintaining volunteer commitment to shared governance*

Methods to maintain volunteer commitment should be considered when designing a partnership.

Research confirms common sense that participants will have greater incentive to participate if they see a direct relationship between their participation and concrete policy outcomes, and decline if they perceive their input to be advisory or largely ceremonial (Ansell & Gash, 2007).

Government participants can be overloaded if too many partnerships are created. In an era of declining resources for environmental and scientific staff, imposing yet another set of meetings and reporting obligations on overburdened staff can be counterproductive. This problem has been noted in US and Australian policy literature. In Oregon, a state with a long history of active watershed councils, agency staff has had 5 or 10 watershed councils within their jurisdiction, consuming enormous amounts of staff time (Margerum, 2007).

To obtain committed participants, one factor to consider is the imbalance between paid government and industry representatives and usually unpaid NGO or stewardship group representatives. A common concern in collaborative decision-making models is that the non-state actors must volunteer their time to sit at a decision-making table with salaried government and industry representatives. One of the models in this Primer has addressed this issue: Regulations require reimbursement of expenses incurred by members of Ontario's new source protection committees and an honorarium of \$2500/year will be paid for those who are not municipal employees and those who do not receive payment from their employer to attend.

5.3.2 Ensuring environmental representation

It is important to ensure that under-resourced environmental and community stewardship groups participate. One of the findings from a statistical snapshot of US watershed partnerships was that only 53% of the groups featured a member from an environmental organization (Kenney, 2001).

If a major reason for shared water governance bodies is to improve environmental quality in a particular watershed or river basin, this is one group of stakeholders that should not be omitted; yet this does happen, as these examples from BC and Alberta demonstrate. The Bow River Basin Council, as the WPAC for the Bow River Basin in Alberta, lists many members from federal, provincial, and local governments and from industry groups such as TransAlta, the Canadian Association of Petroleum Producers, and the Urban Development Institute, but few representatives from environmental groups. Similarly, in BC, in the case of the Township of Langley, the only example in BC to date of this process, the Ministerial order directed the Township to establish

a steering committee whose only mandatory representatives were from the Township and the environment and agriculture ministries. The role laid out for other key stakeholders such as First Nations, watershed stewardship groups and industrial interests was limited to public consultation. The limited core group may have contributed to the difficulties of obtaining public acceptance of the plan.²⁰

In contrast, both Ontario and Quebec clearly require environmental voices to be heard at the shared decision-making table, and other provinces may decide to specify whose voices should be included in shared governance.

5.4 Lessons about collaborative decision-making

5.4.1 *Maintaining government accountability*

If the issues that the partnership will address and the tasks that it will perform are not clearly defined, the government runs the risk of perception of abdication of responsibility, especially since local processes may pay too much deference to powerful interests (e.g., there is a common perception that land developers exercise a greater degree of power in local government). Complete local control is likely inappropriate for a vital public resource like water.

One way to maintain accountability is to include formal enforcement mechanisms for the decisions of a shared governance body. In Ontario, source protection plans need to be given effect not only by the Minister but by a municipal council who may be affected by the plan. Some aspects of these plans can be appealed. Property owners who are required to establish risk management plans to address significant risks may appeal measures in the plan to the Environmental Review Tribunal. In addition, implementation instruments, such as by-laws, risk management plans or orders can all be appealed.

Concerns with the Alberta system have been raised by some environmental NGOs, who have remarked on the lack of implementation

²⁰ When first submitted, it was rejected by the local town council due to vociferous opposition from farmers in particular who objected to proposed metering of their wells. The metering recommendation was subsequently dropped from the draft plan.

obligations: “The government has failed to make any commitment that these watershed plans will play a role in the day-to-day decisions of government ministries” (Pembina Institute et al., 2007); a renewed strategy should include “a watershed plan implementation strategy that outlines relative authority, responsibility and legal or policy tools for plan implementation” (Environmental Law Centre, 2007).

Effective leadership in shared water governance can be enhanced by setting clear parameters for a collaborative process, supporting the process both financially and with human resources, and undertaking to implement the recommendations from the process while retaining the ultimate authority on whether or not to implement.

5.4.2 Significant time and resources needed for success in collaboration

The reformed Ontario, Alberta, and Quebec water laws and policies emphasize shared governance. A lengthy process of policy development and public consultation occurred in each of these provinces before the changes were made. Numerous steps were taken in each province on the issue of delegation of decision-making power. Ontario’s reforms started in 2000 after Walkerton, and key pieces of the new regulatory and policy approach came into force in July 2007. Alberta’s Strategy took eight years to develop, and the province has made a commitment to review the Strategy at regular intervals. Quebec’s Water Policy was adopted in 2002, and the legislation authorizing the watershed organizations was passed in 2009. The financial and human resources devoted to consultation and policy development were significant in all these cases.

The key lessons from the experience of these provinces on devolved water governance are threefold:

- the importance of a comprehensive consultation process;
- the substantial time and resources needed for such consultations; and
- the benefit of focusing consultations on specific water outcomes.

Undertaking such comprehensive consultation prior to adoption and implementation is an important means of gaining political legitimacy from affected users. Consultation with experts, regulators, users, and

members of the public also improves the model that is eventually adopted, as a wider range of knowledge is incorporated and more parts of the public feel ownership of the end result.

5.4.3 Respecting Aboriginal rights

Aboriginal water rights and treaty rights continue to evolve. Policy makers need to be cognizant of the changing landscape and engage Aboriginal leaders in policy reform at the earliest possible stage.

Failing to recognize Aboriginal rights related to water and to the duty to meaningfully consult and accommodate aboriginal rights can lead to litigation,²¹ and can also make shared governance initiatives difficult to implement. The response of the Union of BC Indian Chiefs to the BC Water Act Modernization Discussion Paper illustrates the pitfalls of inadequate consultation.²²

²¹ *Tsuu' Tina First Nation v. Alberta*, 2008 ABQB547. The Tsuu' Tina First Nation and the Samson Cree First Nation sued the Alberta government alleging failure to consult and accommodate their Aboriginal and treaty rights on the South Saskatchewan River Basin Water Management Plan.

²² A March 2010 BCUIC resolution "strongly demands that the prior, superior, and un-extinguished water rights of the First Nations of British Columbia must be addressed and given priority before the Province proceeds with legislative and policy change such as in WAM. Further, the UBCIC Chiefs Council firmly asserts that WAM does not constitute consultation with First Nations, and the engagement which is contemplated in WAM has an impossibly short timeframe for meaningful input and legal standards."

5.5 Lessons about science-based decision-making

Despite the emphasis on science-based decision-making, setting up a shared watershed governance body does not necessarily lead to better environmental conditions. The literature from the United States questions whether environmental quality, ecosystem health, water availability, and cleanliness will improve through collaborative efforts (Sabatier et al., 2005). There is some evidence that one of main benefits of these programs is the “feel good” factor – that studies sometimes measure the satisfaction of participants rather than on-the-ground improvements (Kenney, 2001). Similarly, formation of these bodies may be perceived to “shift the definition of success from one of an improvement in environmental conditions to one of reduced social conflict” (Singleton, 2002). A number of authors note the difficulties of measuring success due to an absence of baseline data and imperfect information on causal links between a council’s efforts and environmental improvement. Shared governance bodies need to ensure that the scientific information that is collected is given sufficient weight in the decision-making process.

In Ontario, the *Clean Water Act* requires Source Protection Committees to first map surface water intake protection zones and wellhead protection areas for existing and planned municipal drinking water systems, and then examine existing and potential threats to these sources. Next, the committees must develop science-based assessment reports, whose mandatory content is prescribed by law, regulation, and technical rules, and then finally they will set out the actions necessary to reduce or eliminate the threats in source protection plans, which again are defined by detailed requirements.

Climate change is an often neglected issue in water governance although there is no doubt its importance will grow in the coming years as the effects of climate change will have major impacts on water management in all the provinces. Experts predict warmer temperatures, wetter winters, and less snowpack. There will likely be more frequent extreme events, such as droughts, avalanches, and floods. The full effects are unknown, and new water governance models will need to account for the potentially significant effects of climate change. This is an issue where sharing expertise from all levels of government, as well as private

industry and the academic and nonprofit sectors will be critical in protecting the resource.

British Columbia's Living Water Smart plan includes a number of actions related to the impacts of climate change on water, including commitments to use "new approaches" to water management to address the impacts from a changing water cycle, increased drought risk and other climate change impacts; and using climate change adaptation strategies as one of the conditions for receiving provincial infrastructure funding. One of these commitments may involve shared governance bodies: the province promises to develop community strategies to recognize the importance of riparian zones in adapting to climate change.

6. CONCLUSION: KEYS TO SUCCESSFUL SHARING

In addition to the lessons from the four case studies summarized in the previous section, there are two more keys to success when designing shared water governance bodies: deciding when to use this approach, and which issues to refer to a new body.

6.1 When should water governance be shared?

The first decision is to recognize when it is not appropriate to use shared governance. Collaborative decision-making is invariably more expensive and time-consuming than the single government decision-maker model, making this more complex process inappropriate for routine, simple, or urgent decisions.

The second point for governments to understand is that not all of the factors of success outlined in section 5 can be provided or managed by governments, even where governments initiate the shared governance process. The absence of any of the key factors of success may jeopardize the partnership's chances of success.

Governments need to carefully consider when to create these shared governance bodies, how to maximize the factors of success, and how to minimize the barriers and pitfalls. There are many general guidance documents on this topic, both American, such as the US EPA's Watershed Planning Handbook (2008), a study of 14 case studies of collaborative groups in the Pacific region (Huntington & Sommarstrom, 2000) and source books reflecting several decades of knowledge (Kenney et al., 2000), and increasingly in Canada as well (Nowlan & Bakker, 2007; Brandes & Curran, 2009; Bakker, 2007).

6.2 Which issues should be delegated to a water governance body?

In making the decision on which topics to delegate, each province must address protection of the overall public interest in the water resource. Decisions on water law and policy reform need to strike a balance between giving weight to local and regional interests and the broader provincial public interest in water sustainability.

There are no hard rules about how to achieve this balance. All provinces continue to grapple with these questions. For example, Alberta has decided that multi-stakeholder partnerships are essential to water governance, and is still working on the relationship of these partnership bodies to government regulators. Its *Water Act* does not give the partnerships any statutory authority. In contrast, Ontario's *Clean Water Act* sets out an elaborate regulatory structure for source protection committees. Some of the early strengths noted for the Quebec approach are that municipalities within the 33 priority watersheds show better compliance with new ground water source protection legislation; partnerships between municipalities and regional government are enhanced to improve source water protection; and the watershed organizations have been a good forum for dealing with land use conflicts, such as in agriculture vs. well protection (Sylvestre & Rodriguez, 2008).

The province should retain decision-making authority in certain areas in order to provide a level playing field across the province and avoid the problem of jurisdictions using lower standards to attract business, ensure there is no undue influence from a local powerful interest, and most importantly, to maintain its duty to protect public and environmental health as trustee of the water resource.

Approvals and allocations in general are statutory decisions that should not be assumed by a multisectoral body. Appropriate areas for provincial standards are:

- water quality;
- water quantity;
- aquatic species protection;

- enforcement and compliance.

Distribution of power between different levels of government and multi-stakeholder groups (which may or may not include government representatives) may be appropriate for a number of other topics, depending on the region, the nature of the water issues, the concerns of the stakeholders and other factors. Other potential functions that could be addressed by shared water governance bodies include:

- recommending funding for restoration or water improvement projects;
- proposing local water protection, conservation, recycling or reuse bylaws;
- developing solutions for difficult problems such as nonpoint source pollution and the control of urban runoff, agricultural practices reform, or integrated land and water use planning; and
- non-regulatory activities, such as public education and landowner contact stewardship programs.

All these functions could be undertaken by any of the four shared water governance body examples discussed in this document.

It may be effective to use collaborative processes for complex policy questions that affect multiple, interdependent interests, where all the diverse parties affected have compelling reasons to engage with one another in a search for a joint policy or program outcome, and where sufficient time and resources are available to support the process. These complex policy questions in water governance include allocation between different uses, implementation of conservation obligations, and the use of economic instruments in water management. Comprehensive water plans are a prime example of this type of complex policy question, and all four of the provinces in this document have tasked their shared water governance bodies with the preparation of this type of plan, whether it is called a water management plan (BC), watershed management plan (Quebec), source protection plan (Ontario), or master plan for water (Quebec).

If the decision is made to form a shared water governance body in Canada, several recommendations can be made regarding the process:

- The approach should be designed to be collaborative, to foster trust and a culture of cooperation, and to decrease uncertainty through analysis and deliberation over the full range of best available scientific evidence. It should build on the successes of the provinces that have clearly defined the form of new bodies and the types of scientific evidence they require, such as Ontario and Quebec.
- Sustainability – of funding and sufficient time commitments – is critical. The process must be maintained until the decision process has fully occurred. This may take several years, as the foregoing cases of Alberta, Ontario, and Quebec all demonstrate.
- The participation of stakeholders and the collaborative process must be perceived to be representative and fair in order for the process to be credible and legitimate over the long term. This also assists with the prevention of conflicts escalating to other venues; consequently, provinces may want to define what “balanced representation” means to them, as both Ontario and Quebec have done.
- Finding the right mix of participants can increase the body’s chances of success. The provinces that define categories and proportionate share of membership are attempting to address this issue. Persuading major tenure holders that it is in their interest to participate is a challenge. Other challenges include accommodating non-local interests, such as migrating species like salmon and preservation of biodiversity, and ensuring adequate representation from environmental interests.
- Many of the concerns raised by a subgroup of the Alberta Water Council about shared water governance, common to all the bodies described in this document, need to be addressed at the design stage. There is a high cost to volunteers to get involved in these plans and partnerships. Some people believe government responsibilities have been offloaded onto volunteers and funding may not be adequate; there is often funding for specific projects, but not for day-to-day operations (AWC, 2008a; AWC, 2008b).

- Aboriginal rights are a critical element of shared water governance. One example of a single body initiated by an Aboriginal community that might provide lessons for other areas in Canada is in Nova Scotia. The Bras d'Or Lakes Collaborative Environmental Planning Initiative works to restore the watershed and is governed by a steering committee of representatives from the federal, provincial, municipal, and Mi'kmaq governments, academia, industry, and NGO communities.
- The successful application of principles of good governance²³, applied to the watershed partnership, will lead to better outcomes.

Shared water governance works best when governments are committed to educate and empower citizens; build trust, and help build collective wisdom. Involving a greater range of groups in water governance can harness a wider range of resources including local government participation, industry support, volunteers, and others, resulting in more comprehensive management compared to sole reliance on senior governments, which have been cutting budgets and staff over the last ten years.

The benefits will only outweigh the disadvantages in those cases where resources – financial and otherwise – are guaranteed and sustainable over the long term. Given the serious state of Canada's water resources, as evidenced by growing scarcity (Schindler & Donahue, 2006), more conflict and more litigation over water rights, and mounting signs of ecological stress, the need for shared water governance bodies seems clear. Specifically, they have the potential to:

- capitalize on the energy that exists in favour of this form of governance;
- build on strengths of most innovative processes;
- recognize the need for structures that require different levels of government to communicate;

²³ The Federation of Canadian Municipalities' handbook offers a range of good governance principles that are also applicable to wider water governance issues at: <http://www.powi.ca/pdfs/governance/goodgovernance.pdf>

- recognize the need to combine scientific, traditional, and local knowledge and synthesize and disseminate these types of knowledge.

Each of the four provinces used for illustration has adopted a system of shared governance for water, and all the other provinces are interested in similar innovations. Yet a national dialogue and sharing of experiences has yet to occur. What is the role of the federal government in shared water governance bodies? What is the place for local governments? How can Aboriginal rights be protected and First Nations governments be involved in these new bodies? Where are the most successful examples of multi-stakeholder water governance bodies in Canada, and what are the keys to their success?

This Primer is an initial first step in beginning a national dialogue. The practice of shared water governance in Canada is in its infancy, and jurisdictions experimenting with this approach have much to learn from one another. The authors are optimistic that this document can act as a catalyst for a productive exchange between people across the country committed to doing a better job of protecting the vital resource of fresh water.

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