

From: maya stano ***PERSONAL IDENTIFIERS REMOVED***
Sent: Thursday, March 10, 2011 12:54 PM
To: Living Water Smart ENV:EX
Cc: John Roe; Deborah Curran; elc
Subject: Submission on Water Act Modernization / Water Sustainability Act Policy Proposal

Hello,

I am pleased to submit the attached letter in response to the call for comments on the Water Act Modernization process / Water Sustainability Act Policy Proposal. If you have any questions, please feel free to contact me at ~~***PERSONAL IDENTIFIERS REMOVED***~~

Kind regards,
PERSONAL IDENTIFIERS REMOVED

March 10, 2011

Water Act Modernization
Ministry of Environment
Water Stewardship Division
PO Box 9362, Stn Prov Govt
Victoria, BC V8W 9M2
livingwatersmart@gov.bc.ca

Re: Submission for the Water Act Modernization Process

This submission is made in response to the latest call for comments in the BC Water Act Modernization (WAM) process. It is submitted on behalf of **Veins of Life Watershed Society** by the Environmental Law Clinic at the University of Victoria.

The focus of this submission is on provincial water governance arrangements. These were identified as one of the four primary goals of the WAM process.¹ The importance of effective water governance arrangements for BC is highlighted by the diverse hydrological and geographical setting within which the province is situated. This diversity results in unique regional water issues, challenges and opportunities. Unfortunately, the current water governance framework has often focused on crisis management rather than proactive management of water resources throughout the province. There are several reasons for this state of affairs. Management along political boundaries rather than watershed boundaries has severed the natural connection between downstream and upstream activities. This has led to fragmented decision-making between neighbouring jurisdictions.² In addition, increasing weather unpredictability and frequency of extreme events caused by climate change is making the fragmented decision-making framework less effective in responding to short- and long-term watershed conditions.³ This inability to address localized conditions is exasperated by degrading environmental health in some watersheds that further weakens important ecosystem regulatory functions. Therefore, the province needs water governance reform that will provide for long-term sustainability of water resources.

¹ Online: Living Water Smart <<http://livingwatersmart.ca/water-act/>>.

² Recognized in BC Ministry of Environment, *British Columbia's Water Act Modernization: Technical Report* (Victoria: Government of British Columbia, 2011) at 25.

³ This is also recognized in BC Ministry of Environment, *British Columbia's Water Act Modernization: Technical Report* (Victoria: Government of British Columbia, 2011) at 22: "Climate change projections indicate droughts and floods will become more frequent in many areas of BC."

“Increasingly, watersheds are becoming the preferred spatial unit for water resource planning. It is an approach that makes sense at any scale of planning.”⁴

The most logical choice of management unit for new water governance arrangements are watersheds or groups of watersheds.⁵ These units are bound by natural geographical and hydrological limits within which the fundamental processes of the hydrological cycle operate. They are therefore the appropriate units within which to address cumulative impacts on water resources. The coordination of decision-making within watershed units coupled with the incorporation of local community knowledge can provide flexible and efficient water governance arrangements for the province.

The Gorge Waterway Watershed (the “Gorge”) illustrates the need for, and benefits of, a strong watershed governance framework in BC. The Gorge is an important watershed on Vancouver Island with a long and rich history. Traditionally used as a First Nation spiritual place and fishing area, it continues today to support an array of recreational and commercial uses.⁶ Valuable ecosystems exist throughout the watershed, including critical spawning streams, mud flats, eelgrass beds, and year-round bird and shellfish habitat.⁷ Unfortunately pollution in the watershed has increased significantly over the years due to urbanization. In addition, the overlapping jurisdiction of numerous regulatory agencies has led to disjointed and ultimately inadequate environmental management.⁸ This has triggered various volunteer-run initiatives, including pollution-reduction efforts and the development of management plans for specific areas.⁹ However, the long-term sustainability of water resources within the watershed cannot rely solely on volunteer efforts. A strong governance structure is needed to guide and coordinate water management. Therefore, the Gorge is an ideal candidate for early watershed governance reform in BC.

The following sections outline key elements of successful watershed governance arrangements that would address current issues and provide for long-term sustainable water management in the Gorge. These elements were identified based on a review of literature describing the strengths and weaknesses of different watershed governance arrangements.¹⁰ Examples of successful integration of these key elements are provided based on legal research into existing watershed authority models both within Canada and internationally.¹¹

⁴ Environment Canada, *Federal Water Policy* (Ottawa: Government of Canada, 1987).

⁵ Other common terms used to describe a watershed include ‘drainage basin’ or ‘catchment area’.

⁶ The Gorge Waterway Watershed encompasses Victoria Harbour starting at Ogden Point, through the Inner Victoria Harbour, Selkirk Waters, Gorge Waterway, Portage Inlet, to the top of Craigflower Creek, Colquitz Creek and includes associated drainage areas and tributaries.

⁷ Online: Capital Regional District <<http://www.crd.bc.ca/watersheds/protection/gorgewaterway/facts.htm>>.

⁸ The watershed is covered by a plethora of regulatory agencies including: SongHees Nation, Esquimalt Nation, City of Victoria, Township of Esquimalt, Town of View Royal, District of Saanich, District of Langford, District of Highlands, District of Central Saanich, City of Colwood, District of Langford, and Highlands District.

⁹ The Gorge Waterway Initiative, a volunteer run organization, developed the Cecelia Ravine Management Plan: online <<http://gorgewaterway.ca/plans-strategies/index.htm>>.

¹⁰ Key documents that were reviewed are listed in **Attachment A**.

¹¹ The different watershed governance arrangements reviewed for this submission are listed in **Attachment B**.

A list of key recommendations identified from this research is provided towards the end of this submission (Section 5). These recommendations flow from the following key elements of successful watershed governance:

- ❖ Legislative recognition;
- ❖ Clear mandate;
- ❖ Accountable governance structure; and,
- ❖ Transparent roles and responsibilities.

Although this submission is focused on the Gorge Waterway, the elements of successful watershed governance described herein are equally applicable to other watersheds across the province. Therefore it is imperative that a modernized *Water Act* incorporate these recommendations to achieve effective and successful devolved watershed governance for the province.

The Makings of a Strong Watershed Authority

“The crisis is one of water governance, essentially caused by the ways in which we mismanage water.”¹²

Numerous jurisdictions worldwide have recognized the value in managing water on a watershed basis and have adopted unique watershed governance models to achieve this goal. Within BC itself, a number of shared governance approaches have been piloted. However, the lack of a common provincial framework has resulted in a patchwork of different models and a challenging task for new communities interested in adopting watershed-level governance as a proactive governance strategy. Therefore, the WAM process offers an important opportunity to enact clear legislation that provides for local management and protection of important water resources by way of regulated watershed authorities. This is recognized by the Provincial government in its claim to be looking for “ways to be more collaborative, flexible and adaptive” to respond to increasing demands and pressures on water resources.¹³ However, new legislation does not need to be enacted in a vacuum, but rather can draw from existing watershed governance models. This opportunity to apply leading thoughts and practices from other jurisdictions has also been recognized by the provincial government.¹⁴ The following sections outline some key elements of successful watershed governance models coupled with examples of how these have been implemented both within and outside Canada.

¹² United Nations, *Water for People Water for Life* (Paris: United Nations Educational Scientific and Cultural Organization, 2003) at 4.

¹³ BC Ministry of Environment, *British Columbia’s Water Act Modernization: Technical Report* (Victoria: Government of British Columbia, 2011) at 26.

¹⁴ BC Ministry of Environment, *British Columbia’s Water Act Modernization: Technical Report* (Victoria: Government of British Columbia, 2011) at 30.

1. Legislative Recognition

As mentioned above, the current lack of comprehensive watershed governance legislation in BC has resulted in a patchwork of different governance approaches and inadequate support for new watershed authorities.¹⁵ The importance of using legislation to establish watershed authorities is evidenced by the Bulgarian experience. There, the lack of a sufficient legislative basis for the watershed councils placed a heavy burden on the voluntary efforts of the board members and limited the councils to working as advocacy groups rather than as representative forums for local stakeholders.¹⁶ This, coupled with the recognition that locally led processes are bound to fail if participants come to believe they lack the power to design and implement solutions locally,¹⁷ supports the establishment of legislated watershed governance authorities. Legislation should also provide for central coordination of the local authorities.¹⁸ For example, the successful Saskatchewan structure enables local deliberate experimentation (by regional Watershed Associations) supported by central coordination (i.e., the province-wide Watershed Authority).¹⁹

2. Clear Mandate

“A sustainable future requires that we begin to manage the whole system, including both human activity and the physical watershed, with the goal of maintaining ecosystem processes and functions.”²⁰

Watershed governance authorities have been confronted with a variety of issues including over-allocation, low flows, conservation, riparian and aquatic ecosystem protection, agricultural water use, pollution, groundwater extraction, riparian protection, and other competing water uses.²¹ Therefore, it is imperative that watershed governance authorities have clearly outlined purposes or mandates to help guide their activities. This approach was adopted by the Murray-Darling Basin Authority and the Chesapeake Bay Commission where the clearly defined mandates proved to be important guides to ensure the effective carrying out of activities.

¹⁵ Linda Nowlan and Craig Orr, *Brief on BC Water Act Reform* (Vancouver: Watershed Watch Salmon Society, 2010) at 11.

¹⁶ Evgenii Dainov et al., *Bulgaria: Creating a watershed council along Varbitsa River* (Bulgaria: Global Water Partnership) online: Global Water Partnership <<http://www.gwptoolbox.org/images/stories/cases/en/cs%20142%20bulgaria.pdf>>.

¹⁷ Rob de Loe and Reid Kreutzwiser, “Challenging the Status Quo: The Evolution of Water Governance in Canada” in Karen Brakker, ed, *Eau Canada: The Future of Canada’s Water* (Vancouver: UBC Press, 2007) at 99.

¹⁸ Oliver Brandes et al., *At a Watershed: Ecological Governance and Sustainable Water Management in Canada* (Victoria: University of Victoria POLIS Project on Ecological Governance, 2005) at iii: “local powers must also be “nested” within higher level institutions that hold them accountable, coordinate with other local institutions, and participate in broader collective actions.”

¹⁹ Online: Saskatchewan Watershed Authority <<http://www.swa.ca/>>.

²⁰ Oliver Brandes et al., *At a Watershed: Ecological Governance and Sustainable Water Management in Canada* (Victoria: University of Victoria POLIS Project on Ecological Governance, 2005) at 15.

²¹ Linda Nowlan and Craig Orr, *Brief on BC Water Act Reform* (Vancouver: Watershed Watch Salmon Society, 2010) at 11.

The following table provides some examples of mandates for different watershed authorities:

Watershed Governance Authority	Mandate / Purpose
Columbia Basin Trust	<p>“The purpose of the corporation is to invest, spend and otherwise manage the regional allocation and the corporation's other assets, including any assets that may be transferred to it, for the ongoing economic, environmental and social benefit of the region including, without limitation, for</p> <ul style="list-style-type: none"> (a) the social well being of the residents of the region, (b) the preservation, protection and enhancement of the environment of the region, (c) the economic development of the region, and (d) any other prescribed purposes.”²²
Okanagan Basin Water Board	<p>Tasked with identifying and resolving critical water issues at the scale of the Okanagan watershed.²³</p>
Ontario Conservation Authorities	<p>“The objects of an authority are to establish and undertake, in the area over which it has jurisdiction, a program designed to further the conservation, restoration, development and management of natural resources other than gas, oil, coal and minerals.”²⁴</p>
Mackenzie River Basin Board	<p>Parties are committed to “managing the water resources in a manner consistent with the maintenance of the ecological integrity of the aquatic ecosystem”.²⁵</p>

As indicated in the above table, mandates are generally quite broad to allow the watershed authority to address a range of different issues.

²² *Columbia Basin Trust Act*, RSBC 1996, c. 53, s.4(1).

²³ Online: Okanagan Basin Water Board <<http://www.obwb.ca/about/>>.

²⁴ *Conservation Authorities Act*, R.S.O. 1990, c. C.27, s.20(1).

²⁵ Mackenzie River Basin Transboundary Waters Master Agreement (July 24, 1997) at 3 online: <<http://www.mrbba.ca/uploads/files/general/19//mackenzie-river-basin-transboundary-waters-master-agreement.pdf>>.

“Smarter regulation sets goals and lets implementing organizations and agencies determine the best way to meet those goals.”²⁶

Clear provincial targets are also useful to guide watershed authorities in addressing matters of provincial water interest, such as minimum in-stream flows for each watershed.²⁷ For example, the European Union (EU) Water Framework Directive has set a broad goal of holistically protecting the environment to a high degree,²⁸ and a specific target of “good ecological status” in all catchments by 2015, both in quantity and quality.²⁹ Similarly, the Columbia Basin Trust recently announced its plan to partner with local governments to attempt to reduce community water use across the Basin by 20% by 2015.³⁰ These types of targets are useful for encouraging and motivating watershed authorities to act in a progressive manner that meets the public goals expressed in the reformed *Water Act*.

3. Accountable Governance Structure

Watershed authorities must have clear governance structures to ensure that they are effective at implementing their mandates. To this end, questions of jurisdiction, membership, rule and decision making, and support must be clearly outlined in legislation. These matters are discussed in detail in the following sections.

3.1 Jurisdiction

As the name suggests, a watershed authority’s jurisdiction should be defined by watershed boundaries. This has already been recognized in BC where the Okanagan Basin Water Board’s jurisdiction is defined by the borders of the Okanagan basin rather than by political boundaries.³¹ Innovative approaches have also been adopted in many other jurisdictions. For example, in Ontario where Conservation Authorities generally consist of two or more municipalities, the legislation recognizes potential difficulties arising from limiting the authority’s jurisdiction solely to watershed boundaries, especially where municipal boundaries extend beyond watershed boundaries. Therefore, where a Conservation Authority member municipality is only partly located within the watershed, the Lieutenant Governor in Council “*may include the whole or that part of the municipality in the area over which the authority has jurisdiction*”.³²

²⁶ Sarah Jordaan, Carla Stevens and David B. Brooks, “Removing Institutional Barriers to Water Soft Paths: Challenges and Opportunities” in David B. Brooks, Oliver M. Brandes and Stephen Gurman, eds., *Making the Most of the Water We Have: The Soft Approach to Water Management* (London: Earthscan, 2009) at 158

²⁷ In-stream flows “describe the quantity, timing, and quality of water flows required to sustain freshwater and estuarine ecosystems and the human livelihoods and well-being that depend on these ecosystems”: Brisbane Declaration (proclaimed at the 10th International River Symposium and International Environmental Flows Conference, held in Brisbane, Australia, on 3-6 September 2007).

²⁸ Conservation Ontario, *Integrated Watershed Management: Navigating Ontario’s Future* (Newmarket: Conservation Ontario, 2010) at 29.

²⁹ Online: Water Information System for Europe <http://ec.europa.eu/environment/water/water-framework/pdf/water_note2_cleaning_up.pdf>.

³⁰ Online: Columbia Basin Trust <www.cbt.org/About_Us/>.

³¹ Online: Okanagan Basin Water Board <<http://www.obwb.ca/about/>>.

³² *Conservation Authorities Act*, R.S.O. 1990, c. C.27, s.3(2)

The EU Water Framework Directive has also adopted innovative approaches to river basin management. River basins are defined broadly as “*the area of land from which all surface run-off flows through a sequence of streams, rivers and, possibly, lakes into the sea at a single river mouth, estuary or delta*”.³³ The river basin management units include not only surface water, but also associated groundwater and coastal waters.³⁴ In addition, problems associated with small basins are recognized by allowing smaller river basins to be combined “*with larger river basins or joined with neighbouring small basins to form individual river basin districts where appropriate*”.³⁵ Provisions such as these should be considered for adoption in the modernized *Water Act*.

3.2 Board Membership

There are various considerations to bear in mind when regulating watershed authority board membership. Some key issues are discussed herein.

Representation and diverse membership on the watershed authority board is important for ensuring accountability and transparency. For example, in Quebec, watershed organizations must have a balanced representation of government, First Nation, municipal, economic, environmental, and agricultural and community sectors.³⁶ Similarly, in Ontario, Source Protection Committees must consist of equal representation from (i) municipalities, (ii) agricultural, commercial or industrial sectors, and (iii) environmental, health and other interests of the general public.³⁷ Membership on the Okanagan Basin Water Board has been opened up to include members from specific associations: one member each from the Okanagan Nation Alliance, Water Supply Association of BC, and the Okanagan Water Stewardship Council.³⁸ An interesting limitation has been placed on these members in that they can vote on all matters except financial decisions.³⁹ This allows for increased representation of local interests on the Board, while leaving financial matters to those members representing the main funders.

Adequate local representation is also imperative to achieve the goals of the local community. A useful approach adopted in the Columbia Basin Trust requires all Directors to reside in the Columbia Basin.⁴⁰

³³ European Union, “Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy” at Article 2(13).

³⁴ European Union, “Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy” at Article 2(15).

³⁵ European Union, “Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy” at Article 3(1).

³⁶ *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, Section 13 (3) (a).

³⁷ *Source Protection Committees*, O. Reg. 288/07, (Clean Water Act, 2006), s. 6.

³⁸ Okanagan Basin Water Board Supplementary Letters Patent, clause 7b (2006): online: <http://www.obwb.ca/fileadmin/docs/supplementary_letters_patent.pdf>.

³⁹ This limitation was established by joint regional district resolution when they agreed to the addition of new Directors through the “Proposal to enhance the Effectiveness of the OBWB” (2005): Okanagan Basin Water Board, “Governance Manual” (Okanagan, 2010) at 5: online: <http://www.obwb.ca/fileadmin/docs/obwb_governance_manual.pdf>.

⁴⁰ *Columbia Basin Trust Act*, RSBC 1996, c. 53, ss.1, 5(1), 6(1): “qualified individual” means an individual who is resident in the region.

However, legislative amendments adopted in 2003 somewhat reduced the strength of the local voice in the Columbia Basin Trust. These amendments increased the ratio of provincially appointed Board members to locally appointed representatives from one third to one half. As such, local community representatives lost their power to assert majority control in the case of disagreement with provincial representatives.⁴¹ Conversely, the number of Ontario Conservation Authority Board members from a particular jurisdiction reflects that jurisdiction's population size.⁴² In addition, all members of a particular board must be residents "*in a participating municipality in which the authority has jurisdiction*".⁴³ This approach provides greater assurance of adequate local representation.

Individual board members should also have sufficient expertise to deal with the complex issues associated with watershed governance. For example, in the Murray-Darling Basin Authority members must have significant expertise in fields such as water resource management, hydrology, freshwater ecology, resource economics, irrigated agriculture, public sector governance and financial management.⁴⁴ To ensure an open process, all members should not be required to have specialized expertise; however, the collective expertise of the board must be adequate to effectively carry out its mandate.

To maintain public support for the watershed governance authority, it is important that the legislation clearly sets out terms for the individual Board members. Under the Columbia Basin Trust Act, the Lieutenant Governor in Council is afforded considerable discretion in setting director's terms of office and terms of conditions of the appointment. In addition, unique appointment terms can be set for each director.⁴⁵ This approach is undesirable because it makes Board membership uncertain and has the potential to advantage certain board members or sectors over others. The Okanagan Basin Water Board sets out much clearer terms for directors, whose positions are for one year.⁴⁶ Although these seem to be relatively short terms, Directors can be reappointed for additional terms.⁴⁷ However, right to reappointment is established by practice rather than by law, and there is therefore room for improvement in the regulation of this board.⁴⁸ An interesting approach has been adopted in Saskatchewan where the terms of Board members are set by the agency that has appointed the specific

⁴¹ HANSARD: 2003 Legislative Session: 4th Session, 37th Parliament, November 4, 2003, Morning Sitting, Volume 18, Number 1, Second Reading of Bills, Columbia Basin Trust Amendment Act, 2003 (Bill 79) as per J. MacPhail.

⁴² *Conservation Authorities Act*, R.S.O. 1990, c. C.27, s.2.

⁴³ *Conservation Authorities Act*, R.S.O. 1990, c. C.27, s.14(3).

⁴⁴ *Australia Water Act 2007*, Act No. 137 of 2007, ss.178(2)(a), (3).

⁴⁵ *Columbia Basin Trust Act*, RSBC 1996, c. 53, s.8.1.

Section 8.1 was added by 2003-87-2 effective January 15, 2004 (BC Reg 2/2004).

⁴⁶ Okanagan Basin Water Board Supplementary Letters Patent, clause 7a: online <http://www.obwb.ca/fileadmin/docs/supplementary_letters_patent.pdf>.

⁴⁷ Okanagan Basin Water Board, "Governance Manual" (Okanagan, March 2010) at 5: online <http://www.obwb.ca/fileadmin/docs/obwb_governance_manual.pdf>.

⁴⁸ Okanagan Basin Water Board, "Governance Manual" (Okanagan, March 2010) at 5: online: <http://www.obwb.ca/fileadmin/docs/obwb_governance_manual.pdf>.

member.⁴⁹ This ensures that the agency representative remains the most appropriate person to be representing the agency's interests.

3.3 Rule-making Powers

To be effective, watershed governance authorities must be empowered to enact regulations that apply within their jurisdictions. For example, Ontario Conservation Authorities are empowered to enact various types of regulations subject to Ministry approval. Possible regulated matters include the use and diversion of water in surface water bodies, the requirement of Conservation Authority permission if the control of flooding or pollution would be affected by a particular development, and the appointment of enforcement officers.⁵⁰ The importance of enforcement is also recognized in Australia, where the Murray-Darling Basin Authority has been empowered to monitor compliance.⁵¹ More locally, the Okanagan Water Board is empowered to tax and to pass bylaws.⁵²

As discussed further below in Section 4.2, the development of watershed management plans is an integral role for most watershed authorities. However, once plans have been developed, the watershed authority must also be empowered to enact rules or regulations for plan implementation. This is evidenced by the experience in the Cowichan Valley, where an extensive yet costly water use management plan has been developed, but implementation remains uncertain as the plan is not formally recognized as a legislated water management plan under Part 4 of the existing *Water Act*.⁵³ Conversely, Australia's Murray-Darling Basin Authority is empowered to "*provide for limits on the quantity of water that may be taken from the Basin water resources as a whole and from the water resources of each water resource plan area.*"⁵⁴ This power ensures that adequate water quantities are protected, which is an important component of effectively carrying out the plan goals and objectives.

3.4 Decision Making

Watershed governance is an immense challenge due to the wide range of water uses, users and needs within a specific watershed. Therefore, it is imperative that decision-making processes be clearly outlined from the outset. Various approaches that have been adopted in different jurisdictions are summarized in the following table.

⁴⁹ *Watershed Associations Act*, R.S.S. 1978, c. W-11, s.12: "Every member of the board shall hold office during the pleasure of the agency by which he was appointed".

⁵⁰ *Conservation Authorities Act*, R.S.O. 1990, c. C.27, s.28(1).

⁵¹ *Australia Water Act 2007*, Act No. 137 of 2007, s.223.

⁵² BC Ministry of Environment, *British Columbia's Water Act Modernization: Technical Report* (Victoria: Government of British Columbia, 2011) at 82.

⁵³ Nowlan and Bakker, *Delegating Water Governance: Issues and Challenges in the BC Context* (Vancouver: University of British Columbia Program on Water Governance, 2007) at 52-54.

⁵⁴ *Australia Water Act 2007*, Act No. 137 of 2007, s.19(2).

Watershed Governance Authority	Decision Making Process
Okanagan Basin Water Board	Strives for consensus decisions and Directors have equal-weighted votes. ⁵⁵
Prairie Provinces Water Board	Requires consensus-based decision-making, except for major decisions that require unanimity. ⁵⁶
Mackenzie River Water Board	Acknowledges the importance of incorporating traditional knowledge in decision making. ⁵⁷
Ontario Conservation Authorities	Clear and simple decision making: each member has a vote and all votes are by majority vote. ⁵⁸

As indicated in the above table, the preferred method of decision-making is by way of consensus. This is especially important for watershed authorities since they are largely governed by community members who are often neighbours and therefore efforts must be made to maintain long-term relationships. However, it is important to have a clear process in place should consensus be unattainable on a particular issue or else the process will stall and important decisions not be made.

3.5 Funding & Support

Adequate financial resources must be in place to ensure that watershed authorities have sufficient capacity to undertake their responsibilities and achieve their mandates. This was recognized in a review of watershed council groups surveyed in the United States in which the most common institutional problem identified was inadequate funding.⁵⁹ Similarly, in BC, the success of the Salmon River Watershed Roundtable is wholly dependent on the continued voluntary efforts and contributions from land owners, agencies, industry and First Nations.⁶⁰ This raises concerns regarding the long-term effectiveness of the watershed roundtable.

In 2004, the Ontario government provided \$12.5 million to enable Conservation Authorities across the province to begin technical studies relating to source protection planning.⁶¹ However, innovative approaches can be adopted for ensuring a more continuous source of funding that is not dependent on inconsistent annual grants. For example, the Okanagan Basin Water Board is funded through annual

⁵⁵ Online: Okanagan Basin Water Board <<http://www.obwb.ca/about/>>.

⁵⁶ Online: Prairie Provinces Water Board <<http://www.ppwb.ca/>>.

⁵⁷ Online: Mackenzie River Basin Board <<http://www.mrbba.ca/information/39/index.html>>.

⁵⁸ *Conservation Authorities Act*, R.S.O. 1990, c. C.27, ss.16(1),(3).

⁵⁹ D.S. Kenney, *Overview of Observed Trends in Western Watershed Initiatives* (Riverside, California: University of California Water Resources Center, 2001) Report No. 101.

⁶⁰ Online: Salmon River Watershed Roundtable <http://www.srwr.ca/about_us.php>.

⁶¹ Ontario, *Investing in Source Protection Planning* (Toronto: Queen's Printer for Ontario, 2004).

property tax assessments on lands within the Okanagan Basin watershed.⁶² The most effective method for ensuring adequate long-term funding is by way of legislating funding powers. This is recognized in Saskatchewan where the legislation provides that the Minister may enter into agreements with the board providing for both financial and technical assistance.⁶³ Similarly, in France, the “*Agences de l’Eau*” (Water Agencies) are in charge of collecting the water charges that finance their activities, which makes allows them to be financially autonomous.⁶⁴

It is also imperative that technical support be secured for watershed authorities. This includes skilled staff, mapping tools, and tools to conduct baseline studies and environmental monitoring. A useful method for ensuring that funds are available to cover these expenses is by way of empowering the authority to charge for services. For example, Ontario Conservation Authorities are empowered to hire employees and charge service fees.⁶⁵ Similarly, Saskatchewan Watershed Associations can require payment for administrative costs from member agencies.⁶⁶

4. Transparent Roles & Responsibilities

Watershed authorities have a variety of roles and responsibilities. These must be clearly defined to ensure effective governance. Some key roles and responsibilities are discussed in the following sections.

4.1 Public Outreach & Disclosure

One of the key underlying purposes of watershed authorities is to empower communities with the management of their local water resources. This is of primary importance because experience has shown that people take more responsibility for their actions if they have helped to determine the issues and associated solutions.⁶⁷ Therefore, adequate public participation in watershed governance is imperative to balance the needs and interests of different groups. This also recognizes the value of local residents as a strategic resource.

Various approaches have been adopted to encourage public participation. The EU Water Framework Directive encourages public participation by requiring states to publish a timetable and work program for the development of river basin management plans. This timetable must include a description of the consultation measures to be taken at least three years before the beginning of the period to which the plan refers.⁶⁸ In addition, draft copies of the river basin management plan must be distributed to the public at least one year before the plan comes into force, and the public must be allowed six months to

⁶² BC Ministry of Environment, *British Columbia’s Water Act Modernization: Technical Report* (Victoria: Government of British Columbia, 2011) at 82.

⁶³ *Watershed Associations Act*, R.S.S. 1978, c. W-11, s.31.

⁶⁴ Online: Agence de l’eau Rhône-Méditerranée et Corse <<http://www.eaurmc.fr/the-rhone-mediterranean-and-corsica-water-agency/water-management-in-france.html>>.

⁶⁵ *Conservation Authorities Act*, R.S.O. 1990, c. C.27, ss.18(1), 21(1)(m.1).

⁶⁶ *Watershed Associations Act*, R.S.S. 1978, c. W-11, s.24.

⁶⁷ Online: Living Water Smart <<http://www.livingwatersmart.ca/water-act/governance.html>>.

⁶⁸ European Union, “Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy” at Article 14(1)(a).

comment on the plan.⁶⁹ This ensures that the public has sufficient time to adequately engage in the planning process. In addition, to avoid an overload of information to review, significant water management issues in the river basin must be identified at least two years before the plan comes into force.⁷⁰ This allows public participants to focus their attention on significant issues. This approach has been adopted by the Bulgarian Varbitsa Watershed Council, which is required to establish a hierarchy of problems affecting the watershed.⁷¹ Finally, complex technical language could dissuade extensive public involvement. Therefore, plain language instruments should be used wherever possible. For example, Australia's Murray-Darling Basin Authority must prepare a plain English summary of the proposed Basin plan when seeking input on the plan development.⁷² In addition, all comments received on the proposed plan must be published on the Basin Authority's website.⁷³

Public participation is often time consuming, which can become rather costly when time is donated on a volunteer basis. This is recognized in Ontario where multi-stakeholder committee participants are reimbursed under the *Clean Water Act* if they are not paid by an employer to attend.⁷⁴

Closely related to public participation is a transparent process. This can be achieved in a variety of ways. The Columbia Basin Trust promotes public participation by way of requiring board meetings to be open to the public.⁷⁵ Annual reporting is also a useful method for achieving a transparent process. This was previously required of the Columbia Basin Trust Board; the removal of this obligation by legislative amendment in 2003 makes that process more vulnerable to concerns of inadequate transparency.⁷⁶ Annual reporting remains an effective tool to support transparency for other agencies including the Okanagan Basin Water Board, the Mackenzie River Basin Board, and the Murray-Darling Basin Authority.⁷⁷

⁶⁹ European Union, "Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy" at Article 14(2).

⁷⁰ European Union, "Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy" at Article 14(1)(b).

⁷¹ Evgenii Dainov et al., *Bulgaria: Creating a watershed council along Varbitsa River* (Bulgaria: Global Water Partnership) online: Global Water Partnership <<http://www.gwptoolbox.org/images/stories/cases/en/cs%20142%20bulgaria.pdf>>.

⁷² *Australia Water Act 2007*, Act No. 137 of 2007, s.43(2).

⁷³ *Australia Water Act 2007*, Act No. 137 of 2007, s.43(8).

⁷⁴ Linda Nowlan and Karen Bakker, *Practicing Shared Water Governance in Canada: A Primer* (Vancouver: University of British Columbia Program on Water Governance, 2010) at 39: "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."

⁷⁵ *Columbia Basin Trust Act*, RSBC 1996, c. 53, s.10(2).

⁷⁶ *Columbia Basin Trust Act*, RSBC 1996, c. 53, Section 28 before repealed by 2003-87-9 effective January 15, 2004 (BC Reg 2/2004).

⁷⁷ Okanagan Basin Water Board, *Governance Manual* (Okanagan: Okanagan Basin Water Board, 2010) at 17: online <http://www.obwb.ca/fileadmin/docs/obwb_governance_manual.pdf>; Annual reports available online:

<http://www.obwb.ca/annual_reports/>;

Mackenzie River Basin Board's Communication Committee is responsible for preparing annual reports: online <<http://www.mrbcb.ca/information/15/index.html>>;

State of the Watershed reports are also useful tools for informing the public of the current level of sustainability within their community. In Saskatchewan, the provincial Watershed Authority has begun producing a regular State of the Watershed report that serves as a benchmark tool for assessing watershed health. This is used for source water protection and quantifying water supplies in the province. Similarly, the Fraser Basin Council produces State of the Fraser Basin Reports,⁷⁸ and the Mackenzie River Basin Board prepares State of the Aquatic Ecosystem Reports.⁷⁹

Finally, watershed authorities should be required to undergo regular independent audits. This helps build public confidence in the governance process.⁸⁰ An example of mandated audit is provided in Australia, where the National Water Commission is empowered to audit the implementation of the basin plan and associated water resources plans. These audits must be completed on a regular basis (every five years).⁸¹ In Saskatchewan, audits are required of the board accounts; this supports public confidence that funds are being appropriately allocated.⁸² Additional use of audits could be to evaluate how well watershed authorities are meeting provincial goals and targets.

4.2 Planning ahead – the development of a watershed plan

At the outset of new watershed governance implementation, the most important role of watershed authorities is the development and carrying out of watershed-wide management plans. However, where legislation does not mandate plan development, the legal effect of the plan is uncertain. This challenge has been recognized by the Alberta Water Council based on their observation of multi-stakeholder organizations.⁸³ As such, numerous jurisdictions clearly empower watershed authorities with plan development. For example, Quebec's watershed organizations are mandated to develop a water management master plan for watersheds.⁸⁴ The BC government has also recognized the importance of developing watershed plans stating that it will “*support communities to do watershed management planning in priority areas*”.⁸⁵ Therefore, providing legislative backing for the development of these plans is within the scope of existing government commitments.

An important related question to address in legislation is the question of primacy; namely whether other land use plans and decisions must be consistent with watershed plans or simply be guided by them. A

Australia Water Act 2007, Act No. 137 of 2007, s.214.

⁷⁸ Online: Fraser Basin Council <<http://www.fraserbasin.bc.ca/publications/indicators.html>>.

⁷⁹ State of the Fraser Basin Reports available: online <<http://www.fraserbasin.bc.ca/publications/indicators.html>>; Mackenzie River Basin Board State of the Aquatic Ecosystem Reports: online <<http://www.mrbba.ca/information/15/index.html>>.

⁸⁰ Oliver Brandes and Deborah Curran, *Setting a New Course in British Columbia: Water Governance Reform Options and Opportunities* (Victoria: University of Victoria POLIS Project on Ecological Governance, 2009) at 6.

⁸¹ *Australia Water Act 2007*, Act No. 137 of 2007, ss. 87-88.

⁸² *Watershed Associations Act*, R.S.S. 1978, c. W-11, s.20.

⁸³ Linda Nowlan and Karen Bakker, *Practising Shared Water Governance in Canada: A Primer* (Vancouver: University of British Columbia Program on Water Governance, 2010) at 29.

⁸⁴ Online: Regroupement des organismes de bassins versants du Québec <<http://www.robvq.qc.ca/apercu/english>>.

⁸⁵ BC Ministry of Environment, *Living Water Smart Book* (Victoria: Government of BC, 2008) at 51: online <<http://www.livingwatersmart.ca/book/>>.

proactive approach has been adopted for the Columbia Basin Management Plan. Decision makers under the *Water Act* are required to consider this important plan when issuing water licences in the region.⁸⁶ In Australia, the importance of watershed plans is also recognized; the basin plan developed by the Murray-Darling Basin Authority is given significant legal weight by recognizing it as a legislative instrument.⁸⁷ In Ontario, Source Protection Plans are afforded primacy over official plans, zoning by-laws and policy statements issued under the Planning Act.⁸⁸

“[T]o safeguard the watershed, managers must identify and understand the necessary ‘green infrastructure’ first, and then look at what activities can take place around the essential green infrastructure. Then we look at the human needs, and think of ways to meet them that are consistent with maintaining ecosystem integrity.”⁸⁹

To develop a realistic watershed plan it is important to have a clear understanding of the watershed’s existing environmental conditions. This is generally accomplished by way of mapping and baseline studies to understand existing environmental conditions and identify potential environmental health threats. For example, Ontario Source Protection Committees are required to map surface water intake and wellhead protection areas to identify potential and existing threats.⁹⁰ Similarly, EU member states must complete an analysis of the characteristics of all the river basins located within their territories within a set time period of four years.⁹¹ The EU Water Framework Directive goes further in also requiring “a review of the impact of human activity on the status of surface waters and on groundwater”.⁹²

Finally, an economic analysis of water use within each river basin must also be completed.⁹³ This allows for a rational discussion on the cost-effectiveness of the various possible measures.⁹⁴

It is imperative that the development of plans be given top priority upon the creation of new watershed authorities. A useful technique for ensuring this is accomplished in due time is to set time-limits for plan

⁸⁶ BC Ministry of Environment, *British Columbia’s Water Act Modernization: Technical Report* (Victoria: Government of British Columbia, 2011) at 81.

⁸⁷ *Australia Water Act 2007*, Act No. 137 of 2007, s.33.

⁸⁸ *Clean Water Act*, 2006, S.O. 2006, c. 22, s.39(2).

⁸⁹ Oliver Brandes et al., *At a Watershed: Ecological Governance and Sustainable Water Management in Canada* (Victoria: University of Victoria POLIS Project on Ecological Governance, 2005) at 17.

⁹⁰ *Clean Water Act*, 2006, S.O. 2006, c. 22, s.8(4).

⁹¹ European Union, “Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy” at Article 5(1).

⁹² European Union, “Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy” at Article 5(1).

⁹³ European Union, “Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy” at Article 5(1), Annex III: information requirements for economic analysis.

⁹⁴ Conservation Ontario, *Integrated Watershed Management: Navigating Ontario’s Future* (Newmarket: Conservation Ontario, 2010) at 30.

development.⁹⁵ This approach has been adopted in Ontario where source protection plans must be submitted within five years of the date of appointment of the first committee chair.⁹⁶

Developing an effective plan entails setting short term targets to achieve long term goals. Therefore, both short- and long-term timelines should be considered. This was initially recognized in the regulation of the Columbia Basin Trust, which used to require both short- and long-term management plans. However amendments introduced in 2003 eliminated the requirement for short-term plans, which put the actual attainment of the long-term goals into jeopardy.⁹⁷ A more proactive approach has been adopted by the Salmon River Watershed Roundtable which developed a “*consensus-based watershed sustainability plan with a 20-200 year perspective toward a health watershed in the future*”.⁹⁸ The associated Watershed Recovery Plan outlines key watershed planning activities for a 1 to 30 year timeframe.⁹⁹

To achieve the long-term goals and maintain relevance in an ever-changing world, an adaptive management approach is necessary for short-term plans. In other words, “*plans and policies should be continually modified to respond to ecological, economic and social feedback through an ongoing process of informed “trial and error”*.”¹⁰⁰ The Prairie Provinces Water Board has recognized the importance of adaptive management by requiring that water quality objectives for river reaches be reviewed at least every 5 years.¹⁰¹ Ongoing reviews of watershed management plans also support an adaptive management process. The need for regular plan reviews is well recognized in the EU Water Framework Directive which provides that plans are to be reviewed and updated every six years.¹⁰² Adequate public input is also important at the plan review stage. This is acknowledged in the Columbia Basin Management Plan, where directors must solicit input on the proposed amendments from residents of the region before enacting any major amendments to the plan.¹⁰³ Similarly, a public comment period of 3 months is required for any reviews of the Murray-Darling Basin Authority’s Basin Plan.¹⁰⁴ This plan

⁹⁵ Note: These time-limits must still provide adequate time for public consultation (as discussed in Section 4.1 above) and to carry out environmental baseline studies.

⁹⁶ Linda Nowlan and Karen Bakker, *Practising Shared Water Governance in Canada: A Primer* (Vancouver: University of British Columbia Program on Water Governance, 2010) at 27; *Clean Water Act*, 2006. Ontario Regulation 287/07 s. 19.

⁹⁷ *Columbia Basin Trust Act*, RSBC 1996, c. 53: Section 15(7) to (11) before repealed by 2003-87-6 effective January 15, 2004 (BC Reg 2/2004).

⁹⁸ Online: Salmon River Watershed Roundtable <http://www.srwr.ca/about_us.php>;

This plan was based on Environment Canada’s Ecosystem Objectives Framework for watershed planning: online <http://www.srwr.ca/Watershed_Planning_Activity.php>.

⁹⁹ Online: Salmon River Watershed Roundtable <http://www.srwr.ca/Watershed_Planning_Activity.php>.

¹⁰⁰ Oliver Brandes et al., *At a Watershed: Ecological Governance and Sustainable Water Management in Canada* (Victoria: University of Victoria POLIS Project on Ecological Governance, 2005) at iii.

¹⁰¹ Prairie Provinces Water Board Master Agreement on Apportionment (1969), Schedule E (Water Quality Agreement) s.6: online <<http://www.ppwb.ca/information/115/index.html>>.

¹⁰² European Union, “Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy” at Article 13(7).

¹⁰³ *Columbia Basin Trust Act*, RSBC 1996, c. 53, s.15(3).

¹⁰⁴ *Australia Water Act 2007*, Act No. 137 of 2007, s.51(7).

must also be based on observed impacts of the initial plan.¹⁰⁵ These approaches support a feedback process that allows institutional change in light of new information; an essential element of adaptive management.¹⁰⁶

4.3 Ongoing Environmental Monitoring

“Monitoring should be used to determine whether the chosen strategies are meeting performance criteria and whether goals, objectives or operations need to be adjusted to ensure targets are being met on an ongoing basis.”¹⁰⁷

Environmental monitoring provides a clear picture of ecosystem health and vulnerabilities; when it is done on a consistent ongoing basis, important trends can be identified. The immense value of ongoing environmental monitoring is recognized in several jurisdictions where watershed authorities are empowered to carry out these activities. For example, the Okanagan Basin Water Board is monitoring water quantities to determine the overall water balance in the basin.¹⁰⁸ Based on this work, this Board provides science-based information on local water resources to government decision makers and water managers for use in sustainable long-term planning.¹⁰⁹ Ontario Conservation Authorities are also empowered to study and investigate the watershed, which necessitates ongoing environmental monitoring.¹¹⁰ Under the EU Water Framework Directive, environmental monitoring results are used to assess the overall state of water quality. For example, the status of surface water is “*determined by the poorer of its ecological status and its chemical status*”.¹¹¹ Water temperature is also a very important monitoring requirement because the Directive characterizes heat as a type of pollution.¹¹² Similarly, Australia’s Murray–Darling Basin Authority assesses water quality monitoring data variability and trends to guide management actions along River Murray and the lower reaches of its tributaries and storages.¹¹³ As such, environmental monitoring supports important adaptive management processes.

4.4 Other Programs, Powers, and Responsibilities

Watershed authorities generally offer a variety of programs to local communities. These programs are often carried out by committees comprised of both board members and non-board members representing specific interests. The importance of committees is well recognized by the Fraser Basin

¹⁰⁵ *Australia Water Act 2007*, Act No. 137 of 2007, s.49A,

¹⁰⁶ David Lewis Feldman, *Water Policy for Sustainable Development* (Baltimore: The John Hopkins University Press, 2007) at 4.

¹⁰⁷ Sarah Jordaan, Carla Stevens and David B. Brooks, “Removing Institutional Barriers to Water Soft Paths: Challenges and Opportunities” in David B. Brooks, Oliver M. Brandes and Stephen Gurman, eds., *Making the Most of the Water We Have: The Soft Approach to Water Management* (London: Earthscan, 2009) at 159.

¹⁰⁸ Online: Okanagan Basin Water Board <<http://www.obwb.ca/about/>>.

¹⁰⁹ Online: Okanagan Basin Water Board <<http://www.obwb.ca/about/>>.

¹¹⁰ *Conservation Authorities Act*, R.S.O. 1990, c. C.27, s.21(1)(a).

¹¹¹ European Union, “Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy” at Article 2(17).

¹¹² European Union, “Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy” at Article 2(31).

¹¹³ Online: Murray-Darling Basin Authority <<http://www.mdba.gov.au/about/>>.

Council which undertakes all of its business through standing and task committees.¹¹⁴ Therefore, legislation must empower watershed governance authorities to strike committees as they deem appropriate. The following table provides some examples of effective committees implemented by various watershed authorities.

Watershed Governance Authority	Committee
Chesapeake Bay Commission	<u>Citizens Advisory Committee</u> : Includes individuals and organizations with a variety of interests, including conservation, business, industry, agriculture, recreation, seafood, and development. ¹¹⁵
Prairie Provinces Water Board	The Board has three permanent standing committees that assist in technical work, such as data analysis and provide advice to the Board: <ol style="list-style-type: none"> (1) Committee on <u>Hydrology</u> (studies questions related to the quantity of water in streams and reviews apportionable flow calculations); (2) Committee on <u>Water Quality</u> (coordinates water quality monitoring program); and, (3) Committee on <u>Groundwater</u> (deals with questions and studies related to the use and the quality of groundwater).¹¹⁶
Mackenzie River Water Board	Four main committees: <ol style="list-style-type: none"> (1) <u>Operations committee</u> (works on bylaws and budget); (2) <u>State of the aquatic ecosystem report committee</u> (information management); (3) <u>Communications committee</u> (communication strategy); and (4) <u>Technical committee</u> (undertakes investigations).¹¹⁷
Okanagan Basin Water Board	<u>Okanagan Water Stewardship Council</u> to provide high-level technical advice from a wide range of local experts. This Council meets regularly to discuss water concerns, and provide policy recommendation to the Board. ¹¹⁸

The range of programs that can be offered depends on the powers that have been granted to the specific watershed authority. Numerous jurisdictions, including Ontario and Saskatchewan, have instilled broad powers on their watershed authorities.¹¹⁹ This ensures strong local decision-making and flexible management. Some specific powers that support effective watershed governance are listed in the following table.

¹¹⁴ Online: Fraser Basin Council <http://www.fraserbasin.bc.ca/about_us/board.html>.

¹¹⁵ Online: Chesapeake Bay Commission <<http://www.chesbay.state.va.us/>>.

¹¹⁶ Online: Prairie Provinces Water Board <<http://www.ppwb.ca/map/71/index.html>>.

¹¹⁷ Online: Mackenzie River Water Board <<http://www.mrbba.ca/information/15/index.html>>.

¹¹⁸ Online: Okanagan Basin Water Board <<http://www.obwb.ca/history/>>.

¹¹⁹ *Watershed Associations Act*, R.S.S. 1978, c. W-11, ss.21(1), 22(1).

Power / Responsibility	Watershed Governance Authority
Environmental protection activities	<p>Ontario Conservation Authorities are empowered to carry out a variety of environmental protection activities including the control of surface water flows, the planting of trees, etc.¹²⁰</p> <p>The Okanagan Basin Water Board is responsible for running an aquatic weed control program.¹²¹</p> <p>The Salmon River Watershed Roundtable has completed various watershed restoration activities.¹²²</p> <p>The Murray–Darling Basin Authority operates a Native Fish Strategy program aimed to restore native fish populations in the Basin back to 60% of their estimated pre-European settlement levels within 50 years.¹²³</p>
Assessment of health data	<p>The Bulgarian Varbitsa Watershed Council is responsible for systemizing health figures within the watershed to help identify health threats to the local population.¹²⁴</p>
Facilitating water trading	<p>The Australian Murray-Darling Basin Authority is responsible for the facilitation of water trading across the basin based on the watershed-wide plan.¹²⁵</p>
Sewage treatment	<p>The Okanagan Basin Water Board runs a Sewage Facilities Grant Program to support the upgrading or replacement of sewage facilities. The goal of the program is to reduce nutrient input to lakes from wastewater discharges.¹²⁶</p>
Right to purchase and own land	<p>Ontario Conservation Authorities are empowered “to acquire by purchase, lease or otherwise and to expropriate any land that it may require”.¹²⁷</p> <p>Similar provisions are provided for Saskatchewan Watershed Associations and Australia’s Murray-Darling Basin Authority.¹²⁸</p>

In addition, watershed authorities may be empowered to manage water allocation, regulation of water quality standards (beyond provincial standards), restoration initiatives, source protection and

¹²⁰ *Conservation Authorities Act*, R.S.O. 1990, c. C.27, ss.21(1)(f), (j), (m.1).

¹²¹ Okanagan Basin Water Board, *Supplementary Letters Patent* at 4: online <http://www.obwb.ca/fileadmin/docs/supplementary_letters_patent.pdf>.

¹²² BC Ministry of Environment, *British Columbia’s Water Act Modernization: Technical Report* (Victoria: Government of British Columbia, 2011) at 82.

¹²³ Online: Murray-Darling Basin Authority <<http://www.mdba.gov.au/programs/nativefishstrategy>>.

¹²⁴ Evgenii Dainov et al., *Bulgaria: Creating a watershed council along Varbitsa River* (Bulgaria: Global Water Partnership) online: Global Water Partnership <<http://www.gwptoolbox.org/images/stories/cases/en/cs%20142%20bulgaria.pdf>>.

¹²⁵ *Australia Water Act 2007*, Act No. 137 of 2007, s.26.

¹²⁶ Okanagan Basin Water Board, *Brochure* at 2: online <http://www.obwb.ca/fileadmin/docs/obwb_brochure.pdf>.

¹²⁷ *Conservation Authorities Act*, R.S.O. 1990, c. C.27, s.21(1)(c).

¹²⁸ *Watershed Associations Act*, R.S.S. 1978, c. W-11, ss.21(1), 22(1); *Australia Water Act 2007*, Act No. 137 of 2007, s.173(2)(a).

sustainable infrastructure programs.¹²⁹ The power to enact these types of programs forms an important part of a strong watershed governance authority.

5. Key Recommendations

The following list provides a summary of key recommendations for regulatory provisions that will support strong watershed governance arrangements in BC under a modernized *Water Act*:

Watershed authorities – legal basis & mandates

- ❖ Legislate watershed authorities across the province. These watershed authorities should be supported by a central coordinating body that is also governed by clear legislation.
- ❖ Enact legislation setting out broad mandates for watershed authorities coupled with clear targets for ecosystem protection and restoration.
- ❖ Include in legislation the ability of watershed authorities to strike committees as they see fit.
- ❖ Enact legislation providing watershed authorities with broad powers to achieve ecosystem protection and restoration and to adequately address local concerns.

Jurisdiction

- ❖ Develop legislation providing for the jurisdiction of watershed authorities to follow watershed boundaries rather than political boundaries, and providing for flexibility to combine small watershed where appropriate to achieve more holistic governance.
- ❖ Enact legislation establishing minimum provincial goals, such as in-stream flows, that provide a framework within which watershed authorities operate.

Membership

- ❖ Include in legislation establishing watershed authority board membership from government, First Nation, industry and community sectors.
- ❖ Enact regulatory provisions requiring all board members to be residents within the watershed and a greater proportion of local community members than provincial government representatives.
- ❖ Enact regulatory provisions setting out clear terms for board members (i.e., terms not subject to the discretion of the provincial government).

¹²⁹ Oliver Brandes and Deborah Curran, *Setting a New Course in British Columbia: Water Governance Reform Options and Opportunities* (Victoria: University of Victoria POLIS Project on Ecological Governance, 2009) at 6.

Rule-making & Decision-making

- ❖ Create legislation empowering watershed authorities to enact a broad range of by-laws and regulations to carry out their mandates and implement watershed plans.
- ❖ Establish the legislative basis outlining clear decision-making processes for watershed authorities.

Funding & Support

- ❖ Enshrine in legislation means for providing a secure and continuous source of funding and technical support for watershed authorities.
- ❖ Enable through legislation watershed authorities to charge for services.

Transparency & Public Involvement

- ❖ Require watershed authorities through legislation to publish timelines of public consultation measures.
- ❖ Establish adequate time limits for public review and comment of watershed plans.
- ❖ Require watershed authority meetings to be open to the public.
- ❖ Mandate preparation of annual reports and state of the watershed reports.
- ❖ Enable participant funding through legislation.

Watershed Plans

- ❖ Enact legislation mandating the development of detailed short- and long-term watershed management plans within set time limits and providing for adaptive management processes.
- ❖ Mandate through legislation watershed management plans as legal instruments.
- ❖ Create priority through legislation of watershed management plans over other provincial water and land use plans.
- ❖ Establish watershed authorities' monitoring responsibilities, including baseline studies, ongoing environmental quality monitoring, and assessment of human impacts on surface water and groundwater resources.
- ❖ Enshrine legislative reviews of watershed plans on a regular basis with public consultation.

Application of the Strong Watershed Authority Framework

The application of the key recommendations outlined above would greatly enhance the overall environmental management of the Gorge Waterway and provide a venue to alleviate current difficulties faced by jurisdictional conflicts and competing stakeholder interests. A legislated watershed authority with a clear mandate would help provide for the development of achievable targets for ecosystem management that support provincial goals such as in-stream flow protection. In addition, empowering the authority with broad powers to carry out its mandate, including rule-making and enforcement powers, would promote effective ecosystem protection and restoration throughout the watershed.

The lack of watershed management in the Gorge has resulted in the creation of community-driven organizations. These volunteer-driven efforts have largely focused on specific areas of the Gorge Waterway Watershed (such as residential properties). A legislated watershed authority would broaden the jurisdictional scope for management and ensure that the watershed as a whole is included in plan development and implementation. Legislated plan requirements would ensure short- and long-term planning, with plan review requirements promoting adaptive management. Legislation would also strengthen the legal weight of watershed plans, particularly if they are accorded primacy over other water and land use plans. Finally, the implementation of the above-mentioned funding recommendations would alleviate the reliance on continued voluntary efforts of local citizens and provide for greater resources to carry out programs that effectively implement the watershed plan goals and objectives.

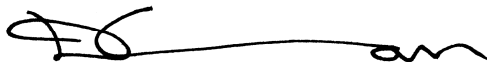
The current absence of a legislated watershed governance structure also raises concerns regarding the lack of representation from all interested stakeholders. A legislated watershed authority would ensure diverse and balanced membership of government, First Nation, industry and community sectors. In addition, legislated public consultation requirements would promote public participation and increase the transparency of the process. Finally, clear legislated decision-making processes would support effective development of plans and programs.

In summary, the WAM process provides the Province of BC with a unique opportunity to establish a robust system of local water governance. This system of governance must be based on watershed boundaries and supported by local decision-making, implementation, and integrated management. To support a strong system of governance, legislative recognition, clear mandate, accountable governance structure and transparent roles and responsibilities must be set out in a modernized *Water Act*. The adoption of these key elements into a basic watershed governance structure will help ensure the long-term viability of important ecosystems and thriving communities throughout the province.

Sincerely,



Maya Stano, P.Eng.



Deborah Curran, Supervising Lawyer

ATTACHMENT A

The following is a list of documents reviewed for this submission to identify key parameters of a strong watershed governance model. It is recommended that the Ministry of Environment consider these reports in legislating watershed authorities for the Province.

Oliver Brandes et al., *At a Watershed: Ecological Governance and Sustainable Water Management in Canada* (Victoria: University of Victoria POLIS Project on Ecological Governance, 2005).

Available online at: <http://www.elc.uvic.ca/press/AtaWatershed.pdf>

Oliver Brandes and Deborah Curran, *Setting a New Course in British Columbia: Water Governance Reform Options and Opportunities* (Victoria: University of Victoria POLIS Project on Ecological Governance, 2009).

Available online at: <http://poliswaterproject.org/sites/default/files/New%20Course.pdf>

Charles Huntington and Sari Sommarstrom, *An evaluation of selected watershed councils in the Pacific Northwest and Northern California* (California: Pacific Rivers Council, 2000).

Available online at: <http://pacificrivers.org/science-research/resources-publications/an-evaluation-of-selected-watershed-councils-in-the-pacific-northwest-and-northern-california>

Giorgio Kallis and Harris Coccossis, *Integrated Evaluation for Sustainable River Basin Governance: Comparison of the Institutional Contexts of five case-studies* (Aegean: University of Aegean Department of Environmental Studies, 2003).

Available online at: http://www.governat.eu/files/files/pb_kallis_comparison_institutional_context.pdf

Christopher Lant, *Watershed Governance in the United States: The Challenges Ahead* (Universities Council On Water Resources Water Resources Update, Issue 126, p. 21-28, November 2003).

Available online at: http://www.ucowr.org/updates/126/126_A3.pdf

Linda Nowlan and Karen Bakker, *Delegating Water Governance: Issues and Challenges in the BC Context* (Vancouver: University of British Columbia Program on Water Governance, 2007).

Available online at: <http://tonydorcey.ca/597/Posts/FBCwatergovernancefinal2.pdf>

Linda Nowlan and Karen Bakker, *Practicing Shared Water Governance in Canada: A Primer* (Vancouver: University of British Columbia Program on Water Governance, 2010).

Available online at: http://www.watergovernance.ca/wp-content/uploads/2010/08/PractisingSharedWaterGovernancePrimer_final1.pdf

Margot Parkes et al., *Ecohealth and Watersheds: Ecosystem approaches to re-integrate water resources management with health and well-being* (Winnipeg, International Institute for Sustainable Development, 2008).

Available online at: http://www.iisd.org/pdf/2008/ecohealth_watersheds.pdf

Peter Rogers and Alan Hall, *Effective Water Governance* (Novum, Sweden: Global Water Partnership, 2003).

Available online at:

http://www.gwptoolbox.org/images/stories/gwplibrary/background/tec_7_english.pdf

Jennifer Wong et al., *Water Conservation Planning Guide for British Columbia's Communities* (Victoria: University of Victoria POLIS Project on Ecological Governance, 2009).

Available online at:

<http://poliswaterproject.org/sites/default/files/Water%20Conservation%20Planning%20Guide%20v1.0.pdf>

ATTACHMENT B

This list sets out the key watershed governance models that were reviewed in depth for this submission:

- BRITISH COLUMBIA
 - **Columbia Basin Trust**
 - Website: <http://www.cbt.org/>
 - Legislation: *Columbia Basin Trust Act*, RSBC 1996, c. 53
 - **Okanagan Basin Water Board**
 - Website: <http://www.obwb.ca/>
 - Legislation: *Municipalities Enabling and Validating Act* (1969)
 - Other: Letters Patent
 - **Salmon River Watershed Roundtable**
 - Website: <http://www.srwr.ca>
 - Legislation: N/A
 - **Fraser Basin Council**
 - Website: <http://www.fraserbasin.bc.ca>
 - Legislation: N/A
- OTHER CANADIAN JURISDICTIONS
 - **Saskatchewan Watershed Associations**
 - Website: <http://www.skassocwatersheds.ca>
 - Legislation: *Watershed Associations Act*, R.S.S. 1978, c. W-11
 - **Ontario Conservation Authorities**
 - Website: <http://www.conservation-ontario.on.ca>
 - Legislation: *Conservation Authorities Act*, R.S.O. 1990, c. C.27
 - **Mackenzie River Basin Board**
 - Website: <http://www.mrbb.ca>
 - Legislation: N/A
 - Agreement: Mackenzie River Basin Trans-boundary Waters Master Agreement
 - **Prairie Provinces Water Board**
 - Website: <http://www.ppwb.ca>
 - Legislation: N/A
 - Agreement: Master Agreement on Apportionment (1969)
- INTERNATIONAL JURISDICTIONS
 - **European Union – River Basin Management**
 - Website: http://ec.europa.eu/environment/water/water-framework/index_en.html
 - Legislation: *Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy* (EU Water Framework Directive)
 - **Australia Murray-Darling Basin Authority**
 - Website: <http://www.mdba.gov.au>
 - Legislation: *Water Act 2007*, Act No. 137 of 2007