



Regional Surface & Ground Water Management & Governance Study



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Executive Summary

In recent years, there have been significant water-related challenges all across the Cowichan Valley. In dry years, low water levels in rivers have impacted salmon populations, reduced the amount of water available for domestic, recreational and ecosystem use, and even threatened closure of industrial operations. Water quality issues are also a concern. This has called for enhanced water governance and management of surface and ground water in the Cowichan region.

In response, the Cowichan Valley Regional District (CVRD) established a Regional Water Management Committee to oversee a Regional Water Management and Governance Study with the goal of developing recommendations for water governance and management in the Cowichan region that address the following six priority areas:

- Governance structure
- Delegated authority
- Oversight
- Coordination
- Reporting
- Funding

To provide input on the development of recommendations to address the issues in the Cowichan, the Committee established a Task Force with representatives from over 55 distinct organizations involved in water governance and management in the Cowichan region. Task Force members were engaged in a facilitated process that was carried out through collaborative workshops and ongoing communications regarding study progress.

To guide the development of recommendations, a working vision was established with the Task Force, as well as a set of governance objectives to address primary problems. Additionally, water governance specialists from across Canada provided suggestions for the Task Force and project team to consider. Collectively, the vision, six priority areas, and a suite of governance criteria guided the identification of opportunities for enhanced water governance and management in the region. The highlight of this guidance was that co-governance with First Nations is a primary condition for success.

Opportunities for enhanced water governance and management include a set of new functions to be carried out to address primary problems (of which most should be carried out at the regional scale), and the formation of a regional entity to carry out the functions. These various alternatives, together with the functions, were evaluated against the governance objectives and criteria, and a preferred approach was identified.

Primary recommendations for enhanced surface and ground water management and governance in the Cowichan region include the following:

- 1. Establish a legislated Regional Water Authority, founded on a principle of co-governance with First Nations, to provide regional coordination for stewardship of surface and ground water resources and regulation of environmental standards in high-risk watersheds.**
- 2. Transition to the Regional Water Authority under CVRD leadership from 2015-2020.**
- 3. Fund the transition to the Regional Water Authority through the establishment of a CVRD watershed protection service (\$860,000 over four years).**
- 4. Under Regional Water Authority leadership, apply whole watershed-thinking and follow a risk-based approach to decision-making and management across the region.**

Introduction



Water is our most important natural resource, and it is foundational to human life. However, our water supplies are finite, and our water resources are confronted with increased pressures associated with population growth, land development, and global phenomena such as climate change. Increasingly, water management has emerged as a critical issue in our communities. In response, over the last few years, the Province of British Columbia (BC) has worked towards the adoption of a new *Water Sustainability Act* to modernize BC's water laws. At the local level, many communities and regions have also renewed their efforts to govern and manage their water resources. The political and social energy around water is positive, but the legislative environment is complex, jurisdictional boundaries are not always clear and are often misaligned to natural biological boundaries, and resources to turn the energy into action are limited.

In the Cowichan Valley region in particular, there have been significant water-related challenges in recent years. The region, defined for the purpose of this study by Cowichan Valley Regional District (CVRD) boundaries, is large and diverse and is comprised of 14 unique watersheds governed under multiple jurisdictions (Figure 1.1). Drier, hotter summers have resulted in low water levels in streams, impacting salmon populations and reducing the amount of water available for domestic and other uses. In the Cowichan River, a Canadian Heritage river, low water levels have threatened closure of the Catalyst Paper Crofton Division pulp and paper mill and salmon have had to be desperately and riskily trucked up the river to spawn. Across the region, increasing residential, recreational and industrial pressures are impacting surface and ground water quality and quantity, and ecosystem health, but these cumulative impacts are neither well understood nor adequately managed. Participating in a variety of ways in decision-making, management and stewardship of the region's watersheds are senior levels of government, nine First Nations, the CVRD, four municipalities, a variety of non-governmental organizations (NGOs), industry, private land owners, and citizens. It is a large and informal network that is challenged to address the complex water issues it faces.

In recent years, multiple NGOs have formed in an effort to provide local leadership for the sustainable governance and management of water resources. However, these organizations do not have any legislated authority to regulate water use or standards within the watersheds, nor do they have a long-term funding source.

Opportunities presented in the *Water Sustainability Act* have increased the energy and interest in local governance and management of water resources, particularly



in regards to delegated authority from the Province. However, the need for a united, regional approach within the Cowichan has been identified in order to realize these opportunities. To address this need, the CVRD Board of Directors established a Regional Water Management Committee (the Committee) to oversee a Regional Water Management and Governance Study (the study). The goal of the study was to develop clear, practical recommendations for the Cowichan region that address six key priority areas:

- | | | |
|------------------------|----------------|-------------|
| ▪ Governance structure | ▪ Coordination | ▪ Reporting |
| ▪ Delegated authority | ▪ Oversight | ▪ Funding |

The purpose of this report is to summarize the process through which the study was conducted, leading up to final recommendations for more effectively and efficiently managing and governing the Cowichan region’s surface and ground water resources.

Watersheds are changing more rapidly now than ever, and water governance thought leaders have stated that water governance needs to change more in the next ten years than it has in the past 100 years. This study represents a significant turning point in the evolution of water governance and management in the Cowichan region.

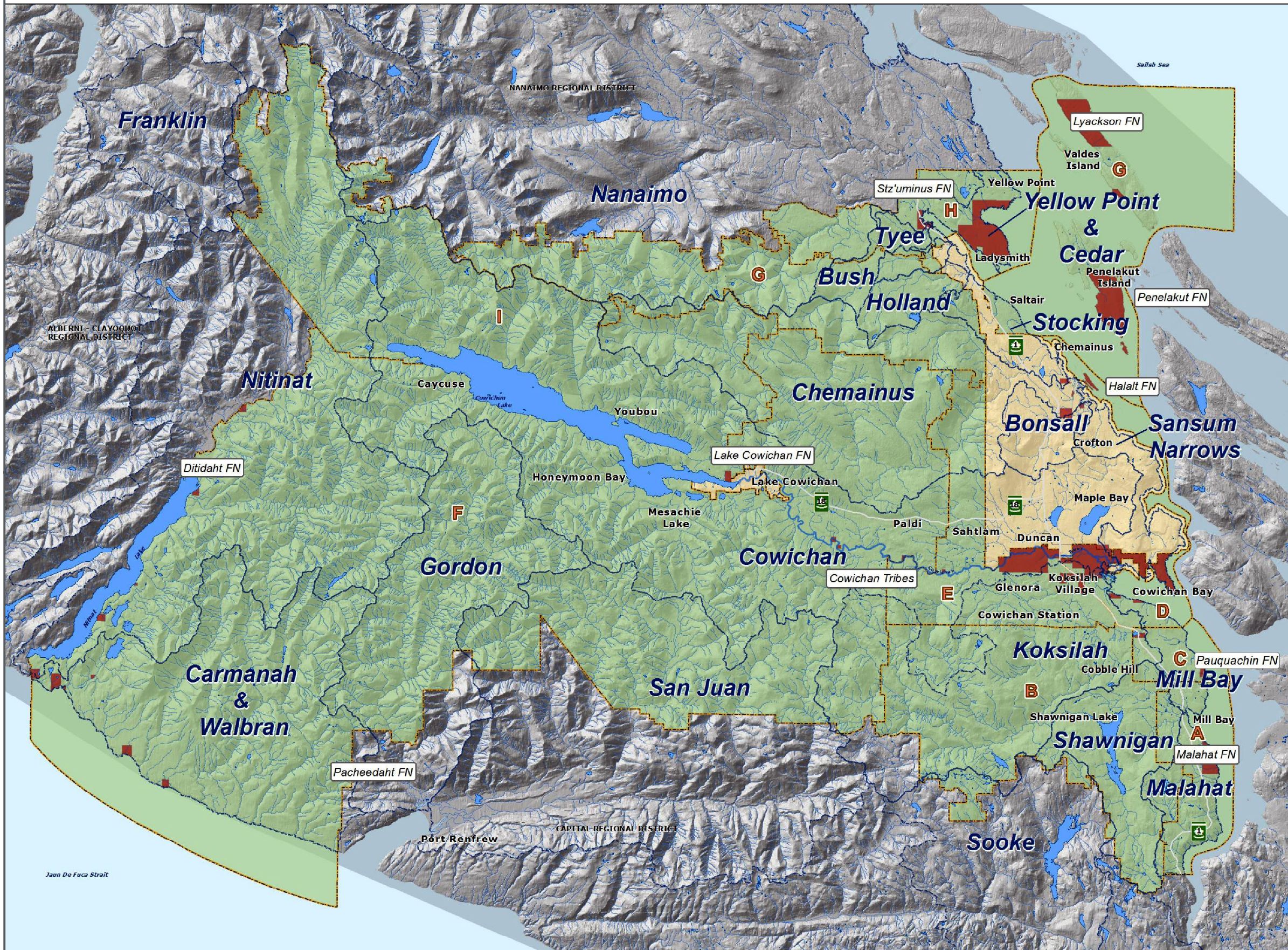


Cowichan Valley Regional District

Surface & Ground Water Management & Governance Study

Watersheds in the Cowichan Valley Regional District (CVRD)

Figure 1.1



Legend

- Electoral Area Boundary
- Cowichan Valley Regional District
- Member Municipality
- First Nation Reserve
- Watershed Boundary Group
- Lake
- Stream
- Highway

Electoral Areas

- A - Mill Bay / Malahat
- B - Shawnigan Lake
- C - Cobble Hill
- D - Cowichan Bay
- E - Cowichan Station / Sahtlam / Glenora
- F - Cowichan Lake South / Skutz Falls
- G - Sahtair / Gulf Islands
- H - North Oyster / Diamond
- I - Youbou / Meade Creek

Coordinate System:

NAD 1983 UTM Zone 10N

Data Sources:

- Graphic image provided by the CVRD, Sept. 2014

Notes:

- Figure is not to scale. For illustrative purposes only.



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Study Process



A diversity of organizations is currently involved in water governance and management in the Cowichan region, and significant progress has been made by many of these organizations over the years to address water issues. Furthermore, it was recognized by the Committee that the long-term success of water governance and management practices would depend on the input and support of those tasked with implementing them and affected by them. Therefore, the Committee established a Task Force of representatives from over 55 distinct organizations to provide input on the development of recommendations for water governance and management to the Committee and finally, the CVRD Board of Directors.

A facilitated process was carried out to ensure that the Task Force was united under a shared purpose and that their diverse interests, concerns and ideas were synthesized and considered in the study outcomes. The anatomy of this facilitated process is illustrated as Figure 2.1 below.

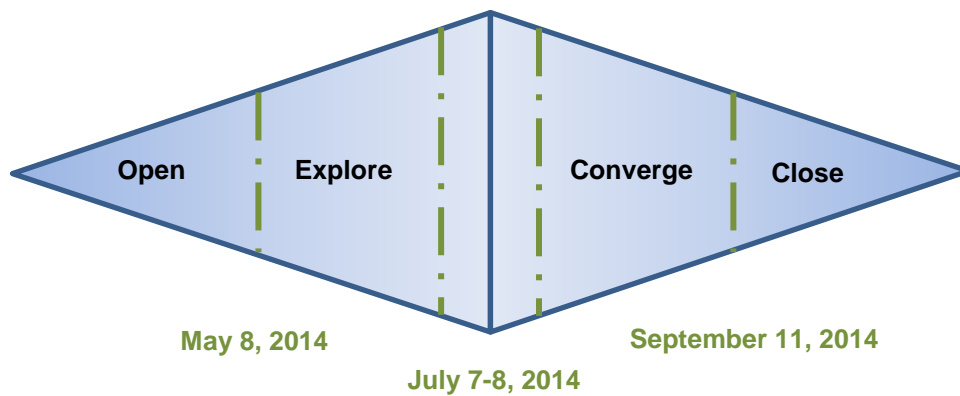


Figure 2.1 Anatomy of the facilitated process

The primary means of soliciting input from the Task Force were three workshops, which were held at the Quw'utsun' Cultural and Conference Centre on traditional Cowichan Tribes territory in Duncan, BC, from May through September, 2014, as shown on Figure 2.1. Each workshop was designed to achieve specific desired outcomes for the purpose of advancing the study. The desired outcomes of each workshop are outlined in Table 2.1 on the following page.

Table 2.1 Desired outcomes of Task Force workshops

Workshop #1 May 9, 2014	Workshop #2 July 7-8, 2014	Workshop #3 September 11, 2014
<ul style="list-style-type: none"> ▪ Complete the inventory of watershed issues and necessary actions ▪ Confirm the vision themes for watershed health ▪ Select process principles for completing this study 	<ul style="list-style-type: none"> ▪ Provide feedback on draft objectives for watershed governance ▪ Learn from and consider recommended governance options for the region based on experiences from other organizations ▪ Discuss and summarize concrete regional governance options to fulfill the objectives ▪ Narrow the governance options to a preferred list 	<ul style="list-style-type: none"> ▪ Provide feedback on key functions for improved regional water governance and management ▪ Review and provide input on potential governance arrangements for the region

Following each workshop, the proceedings and key takeaways were recorded in a dialogue summary and shared with the Task Force. The three dialogue summaries are provided in Appendix A. Task Force members were also invited to share their thoughts and ideas with the project team at any point in the study, and a web page to house study resources was established for Task Force use by researchers at the University of British Columbia (UBC).

As indicated above, a set of **process principles** were agreed upon in the first workshop to guide the conduct of the Task Force and their participation in this study. These process principles are summarized in Appendix B. A summary of report feedback which has been gathered through ongoing dialogue with the Task Force in 2014-2015 is provided in Appendix G.

Current Water Governance & Management Framework



3.1 Overview of Current Framework

Currently, over 55 distinct organizations – different levels of government, First Nations, improvement districts, government agencies, NGOs, and industry – play a role in the governance, management, and stewardship of water resources in the Cowichan. It is a complex network that is highly inter-related and yet decisions and practices that affect shared water resources are often fragmented. This has resulted in the need to examine how water is governed and managed in the Cowichan, and what can be done to improve the coordination of resources and activities, protect the region's watersheds, and ensure effective delivery of water services.

An overview of the current water governance and management framework, including local, regional, provincial, and federal organizations' mandates and responsibilities, is provided in Appendix C.

3.2 Limitations of Current Framework

In advance of the study, a variety of water decision-makers, managers, and stewards gathered from across the region to discuss water-related issues. The discussion highlighted six key drivers – priority areas – for this study, including:

- **Governance structure:** The existing structure does not provide for effective decision-making, accountability, or oversight of local surface and ground water resources.
- **Delegated authority:** Interest has been shown by several organizations in drawing down decision-making powers from senior levels of government, but what authority can and should be sought to more effectively protect local surface and ground water resources is unclear.
- **Oversight:** Jurisdictional overlap and inconsistent forms of accountability between organizations present challenges to effective oversight of decision-makers and water management activities.
- **Reporting:** Reporting requirements and efforts vary across organizations, making accountability for decisions and coordination of efforts and impacts challenging.
- **Coordination:** Overlapping mandates, fragmented decisions, and inconsistent information necessitate a more coordinated approach to governance and management of the region's surface and ground water resources.
- **Funding:** Limited resources, overlapping mandates and competition for funding calls for a cost effective funding model to support enhanced governance and management.

Building on these priority areas, the various issues were identified by the project team and corroborated by the Task Force in the first workshop. Issues have been documented over several decades, both anecdotally and in reports such as the Cowichan Basin Watershed Management Plan. Issues are summarized at a cursory level in Dialogue Summary #1 in Appendix A.

While many issues were identified, they can be traced to four primary problems:

1. Decision-makers lack coordinated mandates, strategies, information, and tools to make informed decisions around water, watershed health and land use.
2. Collective impact on watershed health is not measured, which limits the ability to adapt and improve as a region over time.

3. Regulations and standards that protect water quality, water quantity and ecosystem health are not consistently enforced or enforceable under current law.
4. Local governments, First Nations and NGOs typically do not have adequate long-term funding (and often compete for it) to carry out water governance, management and stewardship activities.

An enhanced water governance and management framework for the Cowichan region must address the priority areas and primary problems. It must also meet specific objectives and best practices criteria, which are discussed in the following section.



Guidance for Enhanced Water Governance & Management



Dialogue with the Task Force was guided by the study's six priority areas and the workshops were designed to yield insights for an enhanced governance and management framework for the Cowichan region, focused on these priority areas. In workshop #1, the Task Force identified actions in response to the issues and provided input on a working vision for the region's watersheds; and in workshop #2, shared governance objectives were set and guidance was provided by invited specialists with experience with water governance and management from across Canada. Additionally, water governance best practices were considered. These collectively comprise the guidance for enhanced water governance and management in the Cowichan region, as discussed in the following sections.

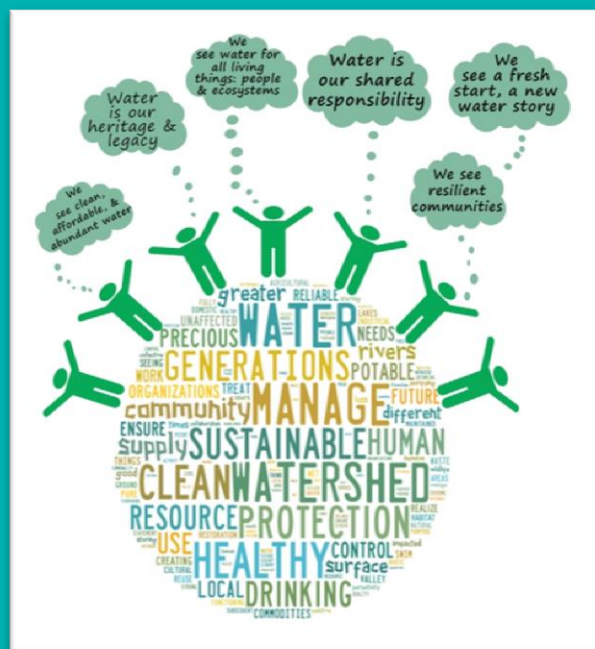
4.1 Vision and Desired Outcomes

A vision for the Cowichan's watersheds is the region's inspired idea for the future. It answers the question: "Where are we going?" It serves as a guide for the region's water governance and management activities, which should be directed at reaching this ideal future state.

Ahead of the workshop, Task Force members had the opportunity to complete a survey on water governance and management in the Cowichan region. One of the survey questions centered on a vision for the region's watersheds and from the responses, a variety of powerful statements were shared regarding the ideal future of the region's watersheds.

Building on the feedback provided from the survey, workshop participants were encouraged to use their own values, visual inspiration, and examples of "water visions" from across BC and internationally, to generate ideas for a vision for Cowichan watersheds. The purpose of this exercise was to highlight the common vision themes that emerged from each individual's contribution, demonstrating that although individual organizations' mandates may be different, they share a common idea of what the future should look like:

Working together as one for healthy watersheds and safe water for life.



Based on the input from the Task Force during the development of the working vision, it was clear that the many individuals and organizations in the region have a shared idea of broad desired outcomes. These include:

<p>Healthy watersheds High water quality, adequate water quantity, and healthy ecosystems</p>	<p>Safe water quality Safe and sufficient drinking water</p>	<p>A sustainable water balance Water for nature, water for people, and water for the economy</p>
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These three desired outcomes reflect the Province of BC’s focus areas of the *Water Sustainability Act*: water quality, water quantity, and ecosystem health. Together, the working vision and the desired outcomes guide the required governance and management activities in the Cowichan region.

4.2 Governance Objectives

In response to the four problem statements, governance objectives were set following input received from the Task Force in workshop #2. These objectives and their corresponding problem statements are outlined below.

<p>Problem Statement #1</p> <p><i>Decision-makers lack a coordinated set of mandates, strategies, mandates, information, and tools to make informed decisions around water, watershed health and land use.</i></p>	<p>Objective #1</p> <p><i>Decision makers are informed and held to account as a result of a clear governance structure for the region.</i></p>
<p>Problem Statement #2</p> <p><i>Our collective impact on watershed health is not measured, which limits our ability to adapt and improve as a region over time.</i></p>	<p>Objective #2</p> <p><i>Our governance model includes monitoring and reporting of cumulative effects for more effective decision-making.</i></p>
<p>Problem Statement #3</p> <p><i>Regulations and environmental standards on private land that protect water quality, quantity and ecosystem health are not consistently enforced or enforceable under current law.</i></p>	<p>Objective #3</p> <p><i>Regulations and environmental standards on private land that protect water quality, water quantity and ecosystem health are effectively enforced.</i></p>
<p>Problem Statement #4</p> <p><i>Local governments, First Nations, and NGOs typically do not have adequate long-term funding (and often compete for it) to carry out water management and stewardship activities.</i></p>	<p>Objective #4</p> <p><i>Decisions and stewardship activities are funded through a sustainable and credible model that builds long-term public confidence.</i></p>

The preferred water governance and management framework for the Cowichan must meet these objectives to the best extent possible over alternatives. Discussion in Section 5.0 outlines the prospect of the preferred model for meeting these objectives.

4.3 Guidance from Specialists

At the second workshop, seven invited specialists shared their experiences in regards to water governance and management from across Canada, and messages for the Task Force and the project team to consider during the development of recommendations for the region. The specialists, their key messages, and overall common messages that were heard, are summarized below.

SPECIALISTS

Oliver Brandes

POLIS Project on Ecological Governance, Victoria, BC

Deborah Curran

University of Victoria Faculty of Law, Victoria, BC

Joe Farwell

Grand River Conservation Authority, Waterloo, ON

Tony Maas

Our Living Waters, Kitchener, ON

Emanuel Machado

Town of Gibsons, BC

Kiely McFarlane

University of British Columbia, Vancouver, BC

Merrell-Ann Phare

Centre for Indigenous Environmental Resources,
Winnipeg, MB

COMMON MESSAGES

- First Nations rights and co-governance must be addressed; it is a primary condition
- Shared vision, objectives and values should guide governance and management activities
- Maximize existing local authority and revitalize it if needed
- Pool the collective watershed knowledge and use it to inform decisions
- Leverage local government authority to generate sustainable funds for water governance and management

Individually, the specialists offered a variety of guiding considerations for the Task Force and project team. These are provided below.

Oliver Brandes:

- Governance: who, how, and accountability for decision-making. Doing the right thing.
- Management: doing things right
- Consider influence versus power
- Collaboration is a tool, it's not the end
- Key winning conditions: First Nations co-governance; a functioning legal framework; and sustainable long-term funding
- Form follows function – different models exist but all are context-specific

Deborah Curran:

- A variety of legislative tools are available to local authorities currently
- Maximize current local and regional authority to regulate land use and to raise funds

Joe Farwell:

- Ontario Conservation Authority functions as part-local government agency, part business
- Sustainable funding is key: taxation and water rates are opportunities
- A separate foundation can raise funds and interface with industry
- A watershed plan can help identify who does what across multiple agencies

Tony Maas:

We can have collective impact through:

- A common agenda
- Shared measurement
- Mutually reinforcing activities
- Continuous communication
- Backbone support

Emanuel Machado:

- Consider nature's role as infrastructure
- Consider the value of your natural capital
- Reconcile your finances with the environment
- Educate and develop partnerships

Kiely McFarlane:

- Consider scale and boundaries
 - Watershed level, sub-watersheds, regions, aquifers?
- Consider participation and representation
 - Non-government and/or government
 - Elected or appointed
 - Advisory or decision-making
- Consider governance capacity and requirements
 - Rules, standards, and tools, and authority to use them
 - Methods / approaches: enforcement, voluntary uptake, or incentives?

Merrell-Ann Phare:

Key conditions for collaborative governance:

- Legal borders
- First Nations rights
- Ethics
- Vision
- Leadership
- House in order
- Knowledge base

The specialists' guidance was complemented by a literature review and case study conducted by Kiely McFarlane of the University of British Columbia, through RES'EAU-WaterNET, a network of collaborative water researchers from across Canada. The literature review and case study document is provided in Appendix D. Three key considerations for governance, as identified in the literature review and case study, include the following:

- **Scale and Boundaries:** It is widely acknowledged that ecological boundaries, such as watersheds and aquifers, do not necessarily follow political or territorial boundaries. Therefore, it is important to consider at what scale – watershed, sub-watershed, aquifer, regional district, municipality, Aboriginal territory, etc. – various decisions and management activities should be carried out. This has practical implications for who is involved in decision-making, who the affected parties are, what ecological resources are to be managed, how services are delivered, and how funds are distributed, among others.
- **Participation and Representation:** There are various points along the spectrum of authority: spectating, influencing, and decision-making. Therefore, it is important to consider who is represented at these points. This has practical implications for the assignment of roles and responsibilities: for example, who makes recommendations to decision-makers; who makes decisions; who carries out management activities in accordance with the decisions; and who enforces those activities. Representatives may be elected or appointed, may represent different scales, and may represent formal or informal organizations.
- **Capacity:** When considering participation and representation, it is also important to consider the capacity and capabilities of organizations to fulfill their roles and responsibilities (both in terms of funding and human resources). Governance reform may create new capacity or require additional capacity, which may lead to exceedance of capacity. Practical considerations include whether to enforce or incentivize various regulations, and whether to mandate roles and responsibilities or to rely on voluntary participation.

4.4 Success Factors

To guide the development of recommendations for the Cowichan region, relevant best practices and considerations were consolidated into the following list of “success factors”. These success factors represent guidance from the specialists; from the POLIS Project on Ecological Governance’s *Blueprint for Water Governance in British Columbia* (January 2014); from the academic community through RES'EAU-

WaterNET; and from the project team's direct experience with organizations such as the Okanagan Basin Water Board and Columbia Basin Trust.

Success factors for an enhanced water governance and management framework for the Cowichan region are listed below.

- Co-governance with First Nations
- Legislated authority
- Support from and partnership with local government
- Sustainable funding
- Legal framework for water(shed) management
- Availability of data and information
- Independent oversight and public reporting
- Continuous learning and capacity building
- Assess cumulative impacts
- Appropriate scale and boundaries
- Appropriate membership and representation at the decision-making level
- Capacity and capability to carry out activities

These success factors form the foundation for the identification of opportunities for enhanced water governance and management, as discussed in the next section. They are also the primary criteria against which the enhanced governance and management framework is evaluated.

Opportunities for Enhanced Water Governance & Management



To address the six priority areas and problems, and following the collective guidance for the study, the following opportunities for enhanced water governance and management were identified:

- A suite of **functions**, which address the question: *“What needs to be done to address the region’s problems and work towards achieving its vision and desired outcomes? At what scale?”*
- Establishment of a **regional water entity** to carry out new regional functions; and
- An **enhanced governance and management framework**, in which the new regional water entity will operate and which addresses the question: *“How should the region structure itself and make decisions in a way that addresses the governance criteria and six priority areas?”*

As stated by POLIS to the Task Force, “form follows function”. The functions and the scale at which they should be carried out are the building blocks of the enhanced governance framework, and these are described in Section 5.1. Working from the functions, the need for a regional water entity is identified and discussed in Section 5.2 and a set of alternative governance arrangements is provided in Section 5.3. Finally, the preferred alternative is detailed in Section 5.4, including membership, roles and responsibilities, and funding.

5.1 Functions

A detailed list of the functions required to address the region’s primary problem areas is presented in Appendix E. For each function, its purpose and scale of execution is provided. These functions have been consolidated as follows:

- **Support coordinated land use planning and resource decisions across the region**
 - Develop and implement a shared Regional Water Strategy to inform decisions and management activities across jurisdictions
 - Create agreements between local and regional authorities to execute decisions and carry out land use planning in accordance with the Regional Water Strategy
 - Develop and implement a risk-based approach to water governance and management across the region
 - Develop and implement a decision-making framework (based on water objectives as defined in the *Water Sustainability Act*) to inform local land use planning and resource decisions in low- and medium-risk watersheds
 - Maintain a regional watershed library and database of scientific data and traditional ecological knowledge to inform decision-making based on cumulative effects
 - Advise the Province on multiple decisions through referral processes including water allocations, waste management (discharge permits), Crown land tenures among others
- **Exercise authority to regulate environmental standards in high-risk watersheds**
 - Set and enforce standards and requirements for decision-making through Water Sustainability Plans in high-risk watersheds
- **Provide oversight and accountability for local land use planning and resource decisions**
 - Monitor and encourage compliance with regional decision-making framework in low- and medium-risk watersheds

- Ensure regulatory compliance with the objectives and standards in the Water Sustainability Plan in high-risk watersheds
- Oversee implementation of Water Sustainability Plans by local watershed boards in high-risk watersheds
- **Report on environmental outcomes and collective impact**
 - Report to the public trends in cumulative effects, water supply and demand, and overall collective impact
 - Report to the public progress on achieving the goals and objectives of the Regional Water Strategy
 - Report to the public on local and regional compliance with decision-making framework in low- and medium-risk watersheds, and compliance with Water Sustainability Plans in high-risk watersheds
- **Establish sustainable funding to recover costs for enhanced water governance and management activities**
 - Establish a watershed protection service to contribute to regional costs

The functions were developed in response to the region’s primary problem areas and they also meet many of the governance objectives and criteria discussed in Section 4.0. In particular, qualitatively, the functions meet the following criteria:

- *Legal framework for water(shed) management (Water Sustainability Plans)*
- *Availability of data and information (scientific data and traditional ecological knowledge)*
- *Independent oversight and public reporting (oversight of decisions and reporting to the public)*
- *Assess cumulative impact (monitor cumulative effects and collective impact of stewardship efforts)*

The remainder of the criteria and the governance objectives are addressed through the formation of a regional water entity and an enhanced regional governance and management framework, as discussed in the following sections.

5.2 Need for Regional Water Entity

As indicated in Appendix E, the majority of the functions should be carried out at a regional scale, particularly to meet the need to address coordination across the region. This necessitates the existence of a regional entity to carry out these functions.

Four regional water entity alternatives were developed to evaluate their potential for effectively carrying out regional functions and meeting relevant governance objectives and criteria. Based on their structure and the mechanisms by which they would be established and funded, some will be more effective than others at carrying out the functions and delivering on the governance objectives and criteria.

An overview of the alternative entities, commentary on their evaluation, and a description of the preferred option are discussed in the following sections. To be clear, these alternatives refer to the regional water entity only (with some comment on its relationship to other organizations) and not to the overall water governance and management framework for the region; this is described in further detail in Section 5.4.

5.2.1 Alternatives

A brief overview of each alternative regional entity and a summary of the primary advantages and disadvantages of each are provided on the following pages. A graphic illustration of alternatives and a qualitative evaluation of the alternatives against the governance objectives and criteria are provided in Appendix F. The evaluation was completed by the project team, and the Task Force and Committee were provided with the opportunity to review and provide input.

ALTERNATIVE #1: INFORMAL COALITION	
<p>Overview</p> <ul style="list-style-type: none"> ▪ Least evolved alternative from the existing framework and the one with the least effort to initiate. ▪ Representatives from First Nations, multiple levels of government, private land owners, industry, the local Health Authority, NGOs, and ideally citizens (with youth representation), would convene to carry out select, non-binding regional functions, and meetings would be led by a rotating Chair. ▪ Members would commit their own separate resources (financial and in-kind). ▪ Government agencies would be accountable to the public. ▪ Examples of coalitions currently exist on more local scales. ▪ This alternative would be strengthened through MOUs between members. 	<p>Advantages</p> <ul style="list-style-type: none"> ▪ Relatively simple to establish <p>Disadvantages</p> <ul style="list-style-type: none"> ▪ No formal decision-making power; rather, members would maximize existing authority. ▪ The capacity for carrying out regional functions in a coordinated fashion would be limited. ▪ Members would likely have to rely on their various disparate (and often competing) sources of funding to participate. ▪ Lines of reporting and accountability would be challenging to trace. ▪ It is not anticipated that any authoritative organization would delegate authority to this entity under the <i>Water Sustainability Act</i>.
ALTERNATIVE #2: COMMISSION OF COWICHAN VALLEY REGIONAL DISTRICT	
<p>Overview</p> <p>In 2007, the CVRD Board of Directors established the Environmental Commission (Bylaw No. 2943, 2007). The Commission consists of 15 representatives of CVRD Directors; the CVRD Economic Development Commission; First Nations; a CVRD Board appointee; as well as citizens, environmental professionals, community groups, and others interest groups. Its mandate (updated in 2010) is currently is to direct and provide input to the Board on environmental issues. The Commission is aided by a service establishment including funds from Environmental Initiatives Bylaw No. 3359,</p>	<p>Advantages</p> <ul style="list-style-type: none"> ▪ This alternative may benefit from the existing establishment of the Environmental Commission and funding through CVRD. ▪ Lines of reporting and accountability would be clear. ▪ There may be reasonable opportunities for delegated authority from the Province under the <i>Water Sustainability Act</i>.

which includes a paraphrased purpose of implementing initiatives to protect the natural environment with consideration to local communities and economies.

- The Environmental Commission would shift into the role of the regional water entity and its responsibilities would be broadened to include the regional functions.
- The Commission would be supported by CVRD staff and advisory sub-committees as required, and it would lead the development of recommendations to the CVRD Board of Directors, where final decision-making and public accountability would remain.
- This alternative would be strengthened through delegated authority from the CVRD Board of Directors and MOUs between CVRD and municipalities, private landowners and industry.

Disadvantages

- Final decision-making would rest with the CVRD Board, which does not address the requirement for co-governance with First Nations
- Evolving the Environmental Commission toward a water-focus entity would ultimately diminish the attention of the region on other environmental matters, such as air quality

ALTERNATIVE #3: REGIONAL WATERSHED BOARD

Overview

- Represents a moderate evolution from the existing governance framework.
- Representatives from First Nations, CVRD, municipalities, private landowners, industry, NGOs, the local Health Authority, and citizens (including youth) would form the Board of Directors, where non-binding decision-making would rest.
- Leading the majority of the regional functions would be dedicated staff, which would be supported by ad-hoc advisory committees and technical specialists as required.
- Funding would be provided from public and private grants and donations
- The Board would report to the public and member organizations.
- Represents a scaled up version of current local watershed boards, such as the Cowichan Watershed Board.
- Model would be strengthened through MOUs between the entity and local authorities.

Advantages

- Opportunities for broad representation and participation at both advisory and (non-binding) decision-making levels.
- Benefits from previous successful models in the Cowichan Valley, including the Cowichan Watershed Board and Shawnigan Basin Authority.

Disadvantages

- Entity would not have authority to regulate; it would be limited to providing recommendations to statutory decision-makers.
- Entity would not have sustainable funding source; it would require contributions from local government, which would limit local government involvement in financial decision-making (potential conflict of interest may be addressed by electing members of the entity's Board of Directors, as is done with school boards in BC, or by vesting financial decision-making authority with an Executive Director, as is done by the Okanagan Basin Water Board).

ALTERNATIVE #4: LEGISLATED REGIONAL WATER AUTHORITY

Overview

- Represents the most significant evolution from the existing governance framework.
- Authority would be established through Letters Patent by the Provincial government
- Represented at the decision-making level (Board of Directors) would be First Nations, CVRD, municipalities, private landowners, industry, NGOs, the local Health Authority, and citizens (including youth).
- Leading the majority of the regional functions would be dedicated staff, which would be supported by ad-hoc advisory committees and technical specialists as required.
- Sustainable funding mechanisms would be outlined in the Letters Patent; potential sources of funding may be taxes, private industry contributions, permit fees, and resource rents.

Advantages

- Opportunities for broad representation and participation at both advisory and decision-making levels.
- Authority would be clearly defined.
- Would provide independent oversight for other statutory decision-makers.

Disadvantages

- Authority that would be granted to this organization by the Province is uncertain, including funding mechanisms.

5.2.2 Preferred Alternative

Based on the advantages and disadvantages presented above, and on the evaluation provided in Appendix F, the preferred regional water entity is Alternative #4, the legislated Regional Water Authority (herein referred to as “the Authority”). The basic structure of this entity is illustrated as Figure 5.1 below.

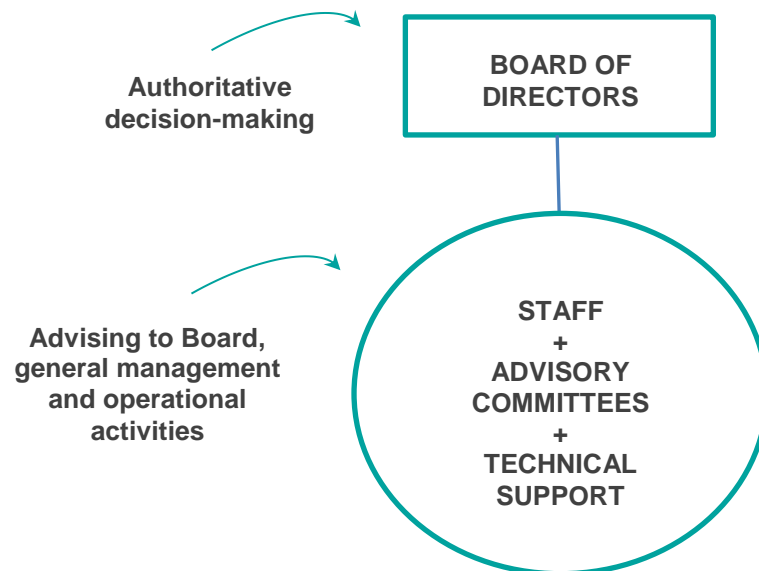


Figure 5.1 Basic structure of legislated Regional Water Authority

The mandate, roles and responsibilities, membership, and funding for this entity are described in the following section. Its place within the broader enhanced regional water governance and management framework is discussed in Section 5.4.

5.3 Regional Water Authority

5.3.1 Mandate, Roles and Responsibilities

The Authority will be responsible for most of the functions previously summarized in Section 5.1 and listed in detail in Appendix E. These translate to the following general mandate, roles and responsibilities for the entity:

Mandate

The overall mandate of the Authority will be to provide regional coordination for stewardship of surface and groundwater resources, and regulation of environmental standards in high-risk watersheds.

Roles and Responsibilities

To fulfill this mandate, the Authority will carry out the following consolidated functions, representing roles and responsibilities:

- Coordinate land use planning and resource decisions across the region
 - Implement a shared Regional Water Strategy to inform decisions and management activities across jurisdictions
 - Implement a risk-based approach to water governance and management at the regional and local levels
 - Develop and a decision-making framework (based on water objectives as defined in the *Water Sustainability Act*) to inform local land use planning and resource decisions in low- and medium-risk watersheds
 - Maintain a regional watershed library and database of scientific data and traditional ecological knowledge to inform decision-making based on cumulative effects
 - Advise the Province on water allocation decisions through a referral process
- Exercise authority to regulate environmental standards in high-risk watersheds
 - Enforce standards and requirements for local decision-making through Water Sustainability Plans in high-risk watersheds
- Provide oversight and accountability for local land use planning and resource decisions
 - Monitor and encourage local compliance with regional decision-making framework in low- and medium-risk watersheds
 - Ensure regulatory compliance with the objectives and standards in the Water Sustainability Plan in high-risk watersheds
 - Oversee implementation of Water Sustainability Plans by local watershed boards in high-risk watersheds

- Report on environmental outcomes and collective impact
 - Report to the public trends in cumulative effects, water supply/demand model and overall collective impact
 - Report to the public progress on achieving the goals and objectives of the Regional Water Strategy
 - Report to the public on local and regional compliance with decision-making framework in low- and medium-risk watersheds, and compliance with Water Sustainability Plans in high-risk watersheds

Member Roles and Responsibilities

Within the Authority, the Board of Directors, an Executive Director, and staff will have various roles and responsibilities in order to fulfill the Authority's overall mandate. These have been identified for clarity as being governance-related (decision-making and accountability) or management-related (acting on and supporting decision-making).

Board of Directors: General decision-making and accountability

- Approve plans, reports and other deliverables developed by staff
- Hold the Executive Director and staff to account
- Be accountable to the public, senior government, and represented member organizations

Executive Director: Administrative decision-making and oversight of staff

- Design allocation of funds for approval by Board
- Oversee management activities carried out by staff
- Report to Board of Directors

Staff: General management

- Develop and implement plans and strategies, and prepare reports for Board approval
- Coordinate monitoring and data collection
- Report to the Board of Directors

5.3.2 Membership and Representation

Essential to the long-term effectiveness and success of the Authority is broad representation at both the decision-making level and the advisory level to other statutory decision-makers. This will support governance that is viewed as credible and legitimate, representing the interests of those affected by decisions.

It is particularly important that decisions around the allocation of funds are seen as legitimate and that they do not place members of the Board in conflict of interest. This necessitates the creation of a position within the organization with the mandate of overseeing administration and operations without Board of Director approval: the Executive Director.

The membership and representation of the Regional Water Authority at the decision-making, advising and staff levels is summarized below.

Board of Directors

The Board of Directors should represent the various interests and actors in the region (those who will be affected by decisions approved by the Board), including:

- First Nations within the Cowichan region
- Cowichan Valley Regional District
- Municipalities within the Cowichan region
- Industry within the Cowichan region
- Private landowners
- Vancouver Island Health Authority
- Citizens, including youth

The region is large and there are many organizations active within it; therefore, sectoral representation may be most practical at the Board level and to limit the number of members (to approximately 15 individuals). In this case, represented sectors would appoint their representative to sit on the Board.

Executive Director

The Executive Director will be responsible for overseeing the organization's overall management and operational activities including a lead role in allocation of funds (approval of fund distribution rests with the Board, as is the case with the Okanagan Basin Water Board). The Executive Director would be appointed by the Authority's Board of Directors.

Staff

Carrying out operational aspects of the regional functions would be dedicated staff members who represent the region. Staff would report to the Executive Director.

Advisory Committees and Technical Support

To support staff and advise the Board of Directors on decisions, advisory committees may be formed on an ad-hoc basis. Membership would suit the individual needs of a given project or program, but may include representation from various levels of government, NGOs, industry, and technical specialists.

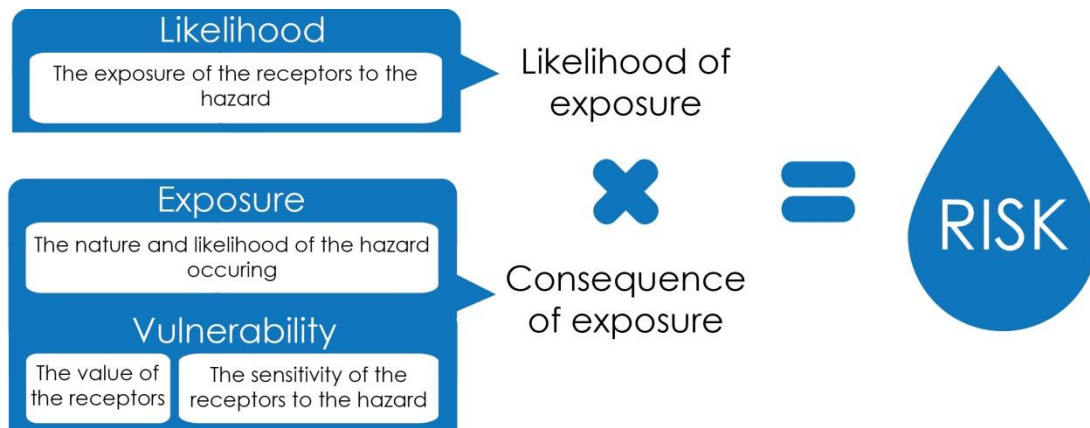
Further details on the membership and representation of the Authority, including decision-making processes (voting, etc.) will be defined in the Terms of Reference for this entity.

The establishment of the Authority represents a key shift towards an enhanced governance and management framework; however, it is one component of the framework and it will fulfill its role in partnership with other regulatory agencies and organizations. This broader enhanced framework is discussed in the following section.

5.4 Enhanced Water Governance and Management Framework

Under the enhanced framework, watersheds will be governed and managed following a **risk-based approach**. It is important to differentiate hazard and risk for the purpose of understanding this framework:

HAZARD	A hazard is something that has the potential to cause harm to a receptor, but does not necessarily do so. With regards to water quality, water quantity and ecosystem health, an example of a potential hazard may be contaminated soil, which may come into contact with people and the environment.
RISK	Risk takes into account the harm that a hazard can actually cause to a receptor. It is a function of the <i>likelihood</i> of exposure of a receptor to the hazard (for example, exposure of a watercourse to contaminated soil); and the <i>consequence</i> of exposure of that receptor to the hazard.



Following this risk-based approach, local governments, private forest land owners, and other statutory decision-makers would use regional policies and a regional decision-making framework based on legislated water objectives to guide their decision-making in *low- and medium-risk* watersheds. However, in *high-risk* watersheds, these decision-makers must comply with the requirements of the watershed's Water Sustainability Plan, which will be developed and implemented through the Regional Water Authority and Local Watershed Boards (building on the success of the watershed boards in the Cowichan and Shawnigan watersheds). This risk-based approach is illustrated on Figure 5.2.

Based on past studies and discussions to date, it is anticipated that relatively few watersheds within the Cowichan region will be high-risk and require a more localized governance framework through a Water Sustainability Plan.

The overall enhanced governance and management framework is provided in Table 5.1

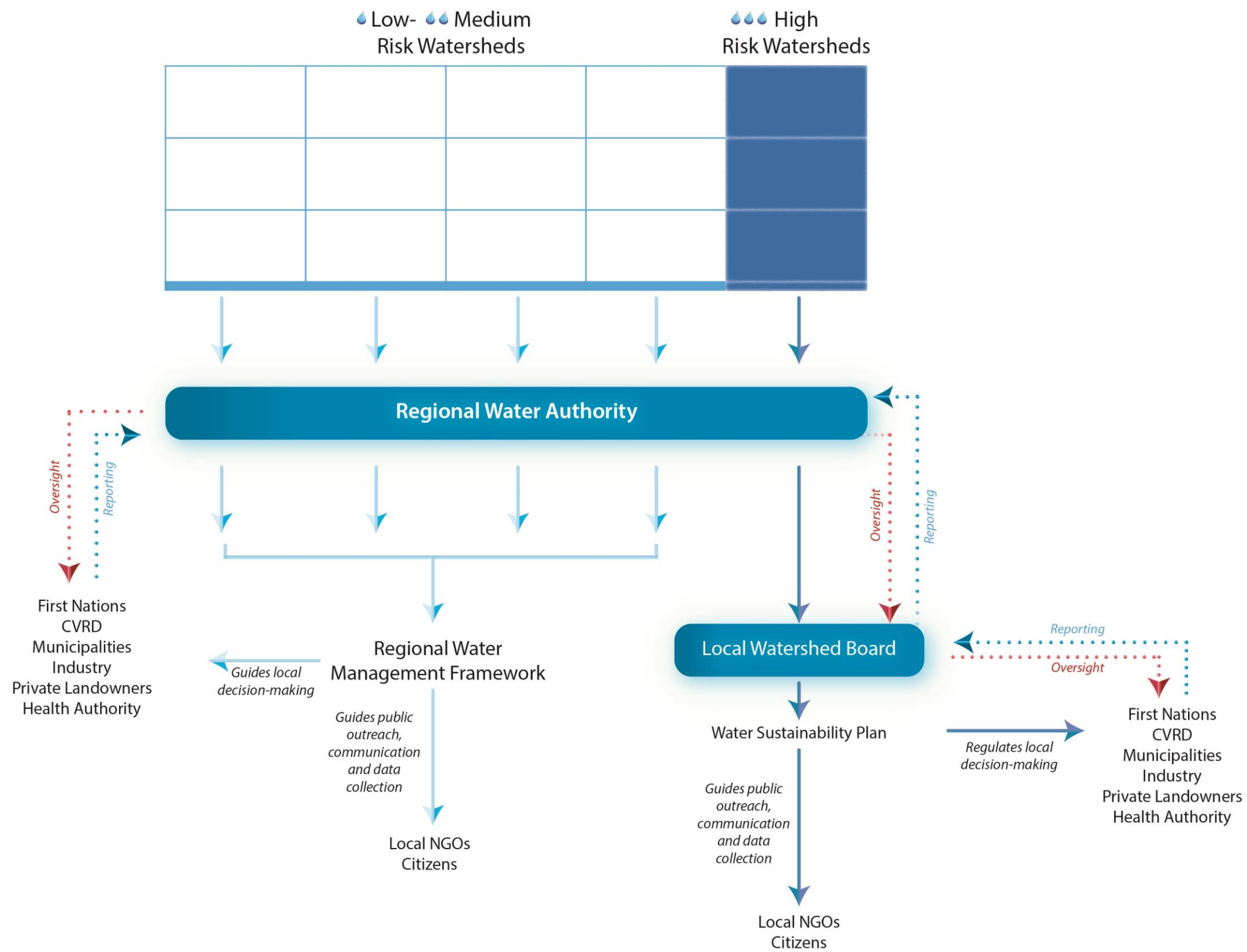


Figure 5.2 Enhanced regional water governance and management framework for the Cowichan region

Table 5.1 Enhanced regional water governance and management framework for the Cowichan region¹

Organization	Mandate	Primary Water-Related Legislation	Jurisdiction	Legislated Rights and Authority	Primary Water-related Interests	Primary Water-Related Responsibilities	Representation and Accountability	Potential Sources of Funding
Regional Water Authority	<ul style="list-style-type: none"> Provide regional coordination for stewardship of surface and groundwater resources Regulate environmental standards in high-risk watersheds. 	<ul style="list-style-type: none"> Letters Patent Water Sustainability Plans 	<ul style="list-style-type: none"> Authority in high-risk watersheds in the Cowichan region Influence in low- and medium-risk watersheds in the Cowichan region 	<ul style="list-style-type: none"> As defined in Letters Patent 	<ul style="list-style-type: none"> Maintenance of water quality, water quantity, and ecosystem health 	<ul style="list-style-type: none"> Implement a Regional Water Strategy to inform decisions and management activities across jurisdictions Develop and a decision-making framework with water objectives to inform local land use planning and resource decisions in low- and medium-risk watersheds Maintain a regional watershed library and database Advise the Province on water allocation decisions Enforce standards and requirements for local decision-making through Water Sustainability Plans Monitor and encourage local compliance with regional decision-making framework Ensure regulatory compliance with the objectives and standards in Water Sustainability Plans Oversee implementation of Water Sustainability Plans by local watershed boards Report to the public trends in effects, water supply/demand model and overall collective impact Report to the public progress on achieving the goals and objectives of the Regional Water Strategy Report to the public on local and regional compliance with decision-making framework in low- and medium-risk watersheds, and compliance with Water Sustainability Plans in high-risk watersheds 	<ul style="list-style-type: none"> Sectoral representation across the region at the Board (decision-making) level Appointed members on the Board Accountable to represented organizations and the Province, and the public 	<ul style="list-style-type: none"> CVRD requisition Public and private donations Senior government contributions
First Nations <ul style="list-style-type: none"> Cowichan Tribes Ditidaht Halalt Lake Cowichan Lyackson Malahat Penelakut Stz'uminus 	<ul style="list-style-type: none"> Use and protect water, land and ecosystems in traditional territories Assert Aboriginal and Treaty rights 	<ul style="list-style-type: none"> <i>Indian Act</i> <i>First Nations Land Management Act</i> Douglas Treaty and associated modern-day treaties Case law 	<ul style="list-style-type: none"> Indian Reserve Asserted traditional territory Treaty territory 	<ul style="list-style-type: none"> Aboriginal Rights Treaty rights 	<ul style="list-style-type: none"> Health of fisheries, water and ecosystems Ability to carry out traditional seasonal rounds 	<ul style="list-style-type: none"> Operate community water systems on reserves Carry out responsibilities in accordance with regional strategy Carry out responsibilities in accordance with water objectives and decision-making framework in low- and medium-risk watersheds Carry out responsibilities in accordance with Water Sustainability Plans in high-risk watersheds 	<ul style="list-style-type: none"> Elected Chief and Council Accountable to band members AANDC supports services on reserve and administers the land management component of the <i>Indian Act</i>. AANDC is also responsible for negotiating and implementing self-government agreements and treaties. 	<ul style="list-style-type: none"> Transfers from the Federal government (through contribution agreements) for basic services Contributions from other levels of government (specific projects) Agreements established through senior government Authority exists to self-generate revenues

¹ Current mandate of responsibilities and contributions to the Cowichan region by provincial and federal governments is summarized in Appendix C.

Organization	Mandate	Primary Water-Related Legislation	Jurisdiction	Legislated Rights and Authority	Primary Water-related Interests	Primary Water-Related Responsibilities	Representation and Accountability	Potential Sources of Funding
<p>Regional Districts</p> <ul style="list-style-type: none"> Cowichan Valley Regional District <p>Neighbouring:</p> <ul style="list-style-type: none"> Regional District of Nanaimo Alberni-Clayoquot Regional District Capital Regional District 	<ul style="list-style-type: none"> Provide a vehicle for cooperation among local governments to provide primarily voluntary services on a variety of scales (e.g. regional, sub-regional, local) Function as local government for electoral areas 	<ul style="list-style-type: none"> Local Government Act and regulations (including the Cowichan Valley Regional District Approval Exemption Regulation) Community Charter 	<ul style="list-style-type: none"> Land and public assets within regional district boundaries, including unincorporated electoral areas 	<ul style="list-style-type: none"> Provide mandated functions (e.g. general government, solid waste management planning) May establish any voluntary service that the board considers necessary for all or part of the regional district May lead the development of a Regional Growth Strategy Regulate public and private land use in electoral areas Corporate powers to make agreements, acquire and manage land, delegate authority to other bodies 	<ul style="list-style-type: none"> Public interests Sufficient surface and ground water quality and quantity for drinking water Regional water monitoring and measurement of watershed health 	<ul style="list-style-type: none"> Land use planning and regulation Community water supply/treatment Community liquid waste management (sanitary and drainage) Waste management Floodplain mapping Public asset management Carry out responsibilities in accordance with Regional Water Strategy Carry out responsibilities in accordance with water objectives and decision-making framework in low- and medium-risk watersheds Carry out responsibilities in accordance with Water Sustainability Plans in high-risk watersheds 	<ul style="list-style-type: none"> Governed by a board of directors composed of appointees from municipalities and an elected director from each electoral area Officials are accountable to the public Provincial oversight 	<ul style="list-style-type: none"> Property tax requisitions in rural areas Municipal requisitions Grants in lieu of taxes Service fees Rentals Franchise fees Transfers from other governments Developer contributions License and permit fees Fines Earnings on reserve funds Sale of assets
<p>Municipalities</p> <ul style="list-style-type: none"> City of Duncan Municipality of North Cowichan Town of Ladysmith Town of Lake Cowichan 	<ul style="list-style-type: none"> Provide good government for the community Provide services, laws and other matters for community benefit Provide stewardship of the public assets of the community Foster the current and future economic, social and environmental well-being of the community 	<ul style="list-style-type: none"> Local Government Act and regulations Community Charter 	<ul style="list-style-type: none"> Land and public assets within municipal boundaries (incorporated areas) 	<ul style="list-style-type: none"> Establish any service that council considers necessary or desirable Generate revenues through taxation, user fees and other charges Regulate municipal services, public and private land use, etc. May establish bylaws in “spheres of concurrent authority” such as protection of the natural environment and protection of public health 	<ul style="list-style-type: none"> Public interests Sufficient surface and ground water quality and quantity for drinking water 	<ul style="list-style-type: none"> Land use planning and regulation Community water supply/treatment Community liquid waste management (sanitary and drainage) Waste management Floodplain mapping Public asset management Carry out responsibilities in accordance with Regional Water Strategy Carry out responsibilities in accordance with water objectives and decision-making framework in low- and medium-risk watersheds Carry out responsibilities in accordance with Water Sustainability Plans in high-risk watersheds 	<ul style="list-style-type: none"> Governed by a council of democratically elected officials Officials are accountable to the public Provincial oversight 	<ul style="list-style-type: none"> Local property tax Grants in lieu of taxes Service fees Rentals Franchise fees Transfers from other governments Developer contributions License and permit fees Fines Earnings on reserve funds Sale of assets
<p>Improvement Districts</p> <ul style="list-style-type: none"> Braithwaite Estates, Cowichan Bay, Diamond, Cobble Hill, Mill Bay, Sunset, Sylvania, Wace Creek, Oceanview, Meredith Road 	<ul style="list-style-type: none"> Provide and manage local public services such as water, diking, and drainage 	<ul style="list-style-type: none"> Local Government Act 	<ul style="list-style-type: none"> Defined service area 	<ul style="list-style-type: none"> As defined in Letters Patent No standard set of powers, as improvement districts exist to provide services for which they were incorporated 	<ul style="list-style-type: none"> Public interests Sufficient surface and ground water quality and quantity for drinking water and/or irrigation 	<ul style="list-style-type: none"> Community water supply and treatment 	<ul style="list-style-type: none"> Elected board of trustees Officials are accountable to the public (must hold annual general meeting) Provincial oversight – bylaws are only effective once registered with Inspector of Municipalities 	<ul style="list-style-type: none"> Property tax Service fees

Organization	Mandate	Primary Water-Related Legislation	Jurisdiction	Legislated Rights and Authority	Primary Water-related Interests	Primary Water-Related Responsibilities	Representation and Accountability	Potential Sources of Funding
Private Managed Forest Landowners and Forestry Companies <ul style="list-style-type: none"> Island Timberlands Timberwest Private Forest Landowners Association (NGO) 	<ul style="list-style-type: none"> Manage and harvest privately owned forests 	<ul style="list-style-type: none"> <i>Private Managed Forest Land Act</i> 	<ul style="list-style-type: none"> Privately owned forests 	<ul style="list-style-type: none"> Harvest of private forests (and where applicable, Crown forests) 	<ul style="list-style-type: none"> Health of watersheds 	<ul style="list-style-type: none"> Conduct forest management practices responsibly and in accordance with the law Ensure downstream water users are not impacted by forest management practices Protect water quality, fish habitat, soil productivity and critical wildlife habitat Carry out responsibilities in accordance with Regional Water Strategy Carry out responsibilities in accordance with water objectives and decision-making framework in low- and medium-risk watersheds Carry out responsibilities in accordance with Water Sustainability Plans in high-risk watersheds 	<ul style="list-style-type: none"> Various forms of oversight provided by the province (FLNRO), the Managed Forest Council, and the Forest Practices Board 	<ul style="list-style-type: none"> Product sales
Other Industry <ul style="list-style-type: none"> Catalyst Paper Corporation 	<ul style="list-style-type: none"> Manufacture specialty printing papers, newsprint and pulp for retailers, publishers and commercial printers 	<ul style="list-style-type: none"> <i>Water Act</i> <i>Water Sustainability Act</i> 	<ul style="list-style-type: none"> Cowichan Lake weir Paper mill 	<ul style="list-style-type: none"> Store water in Cowichan Lake and diversion of water at intake 	<ul style="list-style-type: none"> Sufficient river flow to divert water for mill operations 	<ul style="list-style-type: none"> Holder of two water licenses for storage of water in Cowichan Lake Operation of the Cowichan Lake weir Carry out responsibilities in accordance with Regional Water Strategy Carry out responsibilities in accordance with water objectives and decision-making framework in low- and medium-risk watersheds Carry out responsibilities in accordance with Water Sustainability Plans in high-risk watersheds 	<ul style="list-style-type: none"> Oversight provided by the province (FLNRO) Advisory input from local technical specialists and politicians 	<ul style="list-style-type: none"> Product sales
Local Watershed Boards and Authorities <ul style="list-style-type: none"> Cowichan Watershed Board Shawnigan Basin Authority 	<ul style="list-style-type: none"> Educate the public Monitor watershed health Inform policy / advise government Protect and improve watershed health Implement Water Sustainability Plan in high-risk watersheds 	<ul style="list-style-type: none"> Applicable Water Sustainability Plan 	<ul style="list-style-type: none"> Water Sustainability Plan area 	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Public and private interests 	<ul style="list-style-type: none"> Implement Water Sustainability Plan in high-risk watersheds Stewardship, monitoring, and communication in accordance with direction from the Regional Water Authority Advising Regional Water Authority on local issues 	<ul style="list-style-type: none"> Public and private representation Appointed board of directors Accountable to the board No external oversight 	<ul style="list-style-type: none"> Public and private grants

5.4.1 Evolutionary Transition

Transitioning to the Authority requires leadership from existing organizations. In particular, the CVRD is in a strong position to initiate the steps required to establish the new entity through its existing legislated mandate and funding mechanisms. Specifically, a regional select committee may lead the transition process. The steering committee should include members who represent the functions of the future Regional Water Authority by including First Nations and industry members, among others.

Table 5.2 below outlines the tasks required to establish the Regional Water Authority. It outlines the necessary task; the outcomes (purpose) of that task; and participants involved in carrying out the task (generally under CVRD-led steering committee leadership).

Table 5.2 Preliminary steps towards establishing a Regional Water Authority

Task	Outcomes	Participants
Continue dialogue between CVRD Directors, mayors, and First Nations chiefs, as well as NGOs, industry and others over time	Established regional alliance, founded on principles of co-governance	CVRD (lead) Municipalities First Nations NGOs (future) Industry (future) Others (future)
Initiate inventory of existing environmental data	Foundation for the regional watershed library and database Baseline knowledge to inform the Regional Water Strategy	CVRD (lead) Municipalities NGOs Industry Health Authority, MoE, MFLNRO
Initiate inventory of traditional ecological knowledge (TEK)	Foundation for the regional watershed library and database Baseline knowledge to inform the Strategy	CVRD (lead) First Nations
Prepare terms of reference (TOR) for the Strategy and establish MOUs between members of the regional alliance	Agreed-upon process for collectively developing the Strategy Agreed-upon financial and in-kind support from CVRD and other partners to develop the Strategy	CVRD (lead) Municipalities First Nations NGOs Industry Health Authority, MoE, MFLNRO
Develop a framework and carry out a region-wide watershed risk assessment	Identification of priority watersheds based on low, medium or high risk	CVRD (lead) Municipalities First Nations Industry NGOs Health Authority, MoE, MFLNRO

Task	Outcomes	Participants
Develop the Regional Water Strategy	Regional Water Strategy, including a shared vision, goals, targets, measures, and action plan; emphasis placed on both low-risk and high-risk watersheds	CVRD (lead) Municipalities First Nations Industry NGOs Health Authority
Develop TOR for the first Water Sustainability Plan for highest priority watershed	TOR for Water Sustainability Plan	Regional Water Authority (lead) CVRD Municipalities First Nations Industry NGOs Health Authority, MoE, MFLNRO
Develop TOR for the Regional Water Authority to implement the Strategy and Water Sustainability Plan (concurrently with the previous task)	TOR for Regional Water Authority, including membership, funding, and confirmed roles and responsibilities	Regional Water Authority (lead) CVRD Municipalities First Nations Industry NGOs Health Authority, MoE, MFLNRO
Transition regional alliance into Regional Water Authority	Regional Water Authority	Regional Water Authority (lead) CVRD Municipalities First Nations Industry NGOs Health Authority, MoE, MFLNRO
Develop first Water Sustainability Plan for highest priority watershed	Water Sustainability Plan for highest priority watershed	Regional Water Authority

These steps should be carried out of the course of the next five years, and some should be carried out concurrently. A preliminary sequence of steps is illustrated on Figure 5.3.

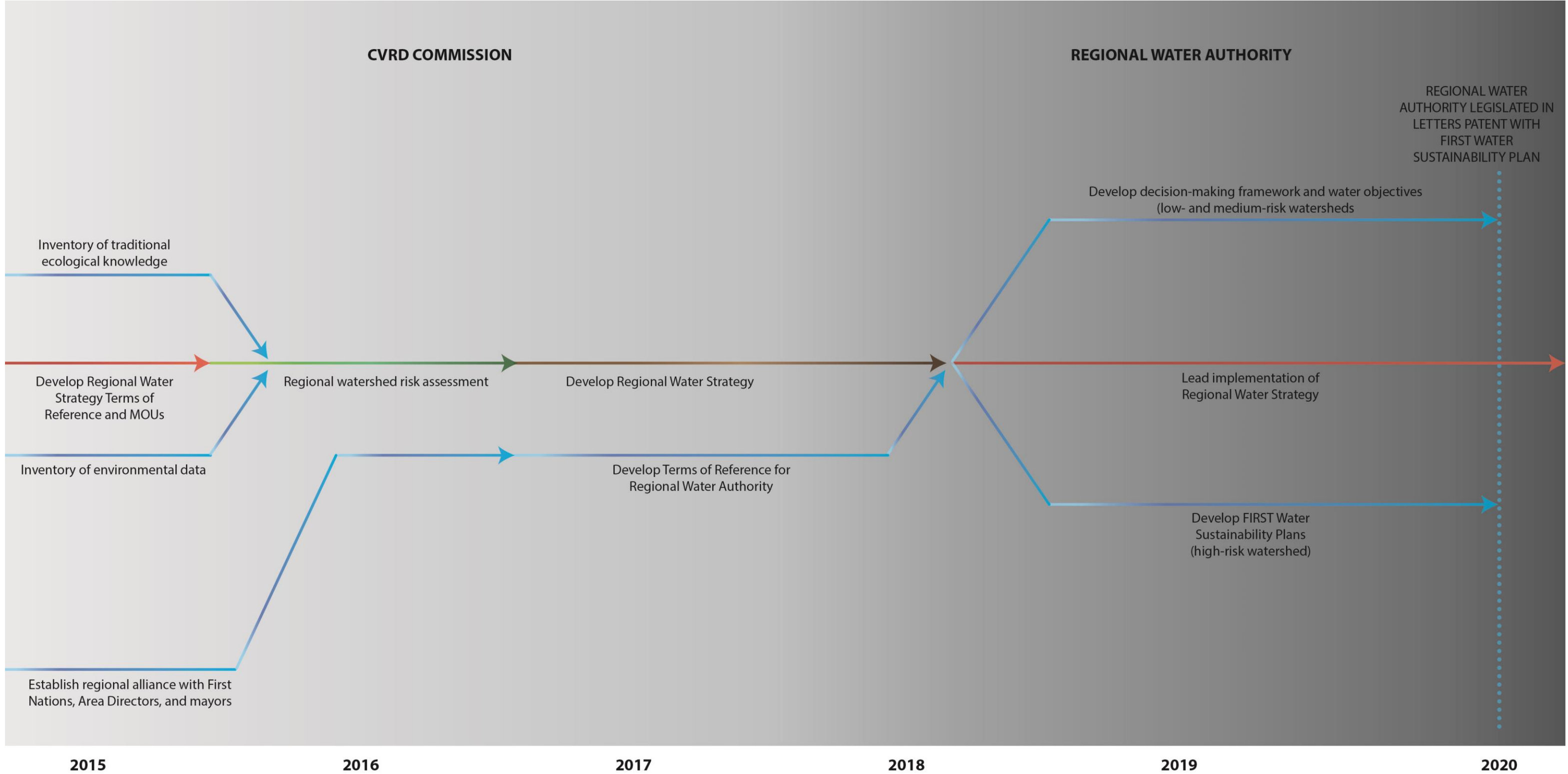


Figure 5.3 Transition to Regional Water Authority

It will be important for the successful transition to the Regional Water Authority to engage senior government ministries early and often. Relevant ministries include the following:

- Ministry of Aboriginal Rights and Reconciliation (MARR)
- Ministry of Environment (MOE)
- Ministry of Forests, Lands and Natural Resource Operations (FLNRO)
- Ministry of Community, Sport and Cultural Development (CSCD)

This engagement will be important for funding purposes (as discussed in the following section) and to ensure that the Province is fully engaged in the outcomes of Water Sustainability Plans.

5.4.2 Funding

Long-term funding requires contributions from those in the region that benefit from the services of the Regional Water Authority. Costs and funding sources for both the governance transition period and the fully established Authority are outlined in general terms in Table 5.3, Table 5.4 and the accompanying narrative. Transition costs are presented as the level of effort in terms of staff contributions (i.e., full-time equivalents, or FTE) and the cost associated with various professional services.

Table 5.3 Estimated costs to transition to the Regional Water Authority

Task	Costs	
Build relations among CVRD Directors, mayors, and First Nations chiefs, as well as NGOs and industry	<ul style="list-style-type: none"> ▪ Primarily in-kind costs ▪ Some costs may be borne by the hosting organization 	n/a
Initiate inventory of existing environmental data	<ul style="list-style-type: none"> ▪ Staff time from CVRD (0.25 FTE) ▪ Consulting support ▪ In-kind coordination costs from local and provincial authorities 	\$85,000
Initiate inventory of traditional ecological knowledge (TEK)	<ul style="list-style-type: none"> ▪ Staff time from CVRD and First Nations(0.25 FTE) ▪ Consulting support 	\$125,000
Prepare terms of reference (TOR) for the Strategy and establish MOUs between members of the regional alliance	<ul style="list-style-type: none"> ▪ Staff time from CVRD 	n/a
Develop a framework and carry out a region-wide watershed risk assessment	<ul style="list-style-type: none"> ▪ Staff time from CVRD (0.5 FTE) ▪ Consultant support ▪ Staff support from municipalities, First Nations, senior government, NGOs and industry 	\$150,000

Task	Costs	
Develop the Regional Water Strategy and water decision making management framework	<ul style="list-style-type: none"> ▪ Staff time from CVRD (1.0 FTE for 2 years) ▪ Consultant Support 	\$250,000
Transition regional alliance into Regional Water Authority	<ul style="list-style-type: none"> ▪ In-kind costs from members of the Alliance ▪ Legal and accounting support 	\$50,000
Develop TOR for the first Water Sustainability Plan for highest priority watershed	<ul style="list-style-type: none"> ▪ Staff time from CVRD ▪ In-kind costs from senior government 	n/a
Develop first Water Sustainability Plan for highest priority watershed	<ul style="list-style-type: none"> ▪ Staff time from CVRD (0.5 FTE) ▪ Consultant support 	\$150,000
Develop TOR for the Regional Water Authority (e.g. incorporation documents) to implement the Strategy and Water Sustainability Plan (concurrently with the previous task)	<ul style="list-style-type: none"> ▪ Staff time from CVRD (0.25 FTE) ▪ Consultant Support ▪ In-kind costs from senior government 	\$50,000
Total: Approx. 1.0 FTE (CVRD) ongoing for 3 years		\$860,000 or Approx. \$215,000/year for 4 years

The total funds estimated to develop the Authority is \$860,000 over approximately four years. The current requisition to fund the functions under Bylaw No. 3359 “Environmental Initiatives” is, at present, insufficient to cover the costs of the transition period. Further, expanding the scope of Bylaw No. 3359 to cover the operating costs of the Authority does not appear to be in line with its original purpose. Therefore, the CVRD should establish a wholly new ‘watershed protection’ function through a new service area that encompasses the entire regional district. This new proposed service would require elector assent, which could be achieved an Alternative Approval Process (AAP) or referendum, potentially concurrent with the 2015 budget process. Funding should be linked to the objectives of preparing the Regional Water Strategy, establishing water objectives as part of a decision-making framework for low- and medium-risk watersheds, developing and implementing Water Sustainability Plans for high-risk watersheds. If additional funding is needed to support the level of service provided under the Water

Sustainability Plans, then an additional requisition could be considered under a “sub-regional’ service within the overall watershed protection function.

Funds collected for the watershed protection service should amount to approximately \$250,000 per year for the first four years, which covers the projected costs of developing the strategy including contingency funds. Following completion of the Regional Water Strategy and establishment of the Authority, the total annual requisition should increase to approximately \$650,000 per year, which is the sum of the funds generated by both parcel classes. Additional funds will be required to cover the operating costs of the Authority once it is fully established, as outlined in Table 5.4.

Once the Authority is established, the CVRD should review and refine the service and scope of the Environmental Commission to make a clear distinction between its mandate and practices and those of the Authority.

Funding for the New Regional Water Authority

Once the terms for the Authority are complete and agreed upon by the members of the regional alliance, the ongoing operations and functions of the entity will require ongoing funding. Preliminary estimated staffing requirements for the Authority are outlined in Table 5.4. These estimates are suitable for developing an order of magnitude cost for operating the Authority; however, the total FTEs will be suited to the agreed-upon mandate of the entity.

Table 5.4 Ongoing funding for the established Regional Water Authority

Function	Costs
1. Implement a Regional Water Strategy including oversight of low, medium and high risk watersheds and secure long-term funding	General overhead + senior management (1.0 FTE)
2. Enforce guiding policies for local and regional land use and resource planning (high risk watersheds) including implementation of Water Sustainability Plan(s)	Regional Water Authority Staff (0.75 FTE)
3. Encourage guiding decision-making framework for low- and medium-risk watersheds	Regional Water Authority Staff (0.5 FTE)
4. Various committee and advisory task force engagement on specific regional issues and services	Regional Water Authority Staff (0.5 FTE)
5. Project management for various studies, plans and projects undertaken throughout the region	Regional Water Authority Staff (0.5 FTE)
6. Maintain the regional watershed library and database	Regional Water Authority Staff (0.25 FTE)
7. Report trends in cumulative effects, water supply demand model and overall collective impact to the public	Regional Water Authority Staff (0.25 FTE)

Function	Costs
8. Advise the Province on water allocation decisions through referral process	Regional Water Authority Staff (0.1 FTE)
9. Encourage local authority compliance with regional guiding policies and decision-making framework in low- and medium-risk watersheds	Regional Water Authority Staff (0.25 FTE)
10. Report to and engage with the public on local authority compliance with regional policies and decision-making framework in low- and medium-risk watersheds	Regional Water Authority Staff (1.0 FTE)
11. Oversee decisions made by local watershed authorities in high-risk watersheds	Regional Water Authority Staff (0.1 FTE)
12. Data collection and instrument management	Regional Water Authority Staff (0.5 FTE)
Total	Approx. 5.70 FTE

Including general administration, overhead, and salaries, the projected annual operating costs of the Authority is \$775,000, based on:

- Two Senior Professionals occupying 2.0 FTEs including salary and benefits e.g. Executive Director;
- Three to four administration and technical staff occupying 3.70 FTE including salary and benefits; and
- General overhead and administration (e.g., office space, mileage, Board remuneration, document production) at 35% of employee costs.

Operating costs will fluctuate based on the number of high-risk watersheds that emerge from the risk assessment as part of the Regional Water Strategy.

Additional funds will also be required for maintaining instruments to collect environmental data, securing licenses for specialized software to assess cumulative effects, funding specialized events for regional collaboration and for various professional services such as legal, accounting and water consulting. To account for these costs and to develop a small operating reserve, an additional \$100,000 per year is included in the operating cost projections. This brings the total approximate annual operating costs for the Regional Water Authority to \$875,000.

Funding the overall operations and functions of the Authority will come from multiple sources to diversify revenues and to capitalize on the contributions from other, willing organizations. For approximately \$875,000 in annual operating costs, the recommended funding system includes:

- Requisition through CVRD for regional water functions carried out by the Authority through the new watershed protection service: \$650,000 (projected annually) generated from two rate classes (low-medium, and high)

- Public and private contributions (e.g., grants): \$150,000 for staffing costs for implementation of Water Sustainability Plans and the Regional Water Strategy
 - 50% of the \$150,000 target should come through partnerships with grantmakers and through private donors to cover critical ongoing services; e.g., cumulative effects reporting for improved decision-making and ongoing engagement with Local Watershed Board(s) and advisory groups
 - 50% of the \$150,000 target should come through public grants (e.g., Gas Tax Fund) for regional water sustainability e.g. cumulative effects analysis, water supply and demand, and for analysis to provide overall support to water centric decisions in the region
- Academic partnerships for maintaining the regional watershed library and integrating new data with the cumulative effects program: \$50,000 and up (projected annually)
 - Recommended to develop multi-year partnerships with specific terms of engagement and required outcomes to suit the region's objectives for information collection and decision making
- Climate Action Revenue Incentive Program (CARIP) contributions from local governments for water conservation as well as data collection and interpretation regarding water quality and quantity monitoring: \$75,000 (projected annually) in an effort to support climate change mitigation and adaptation
- Ongoing in-kind contributions from First Nations for knowledge exchange and for support in implementation aspects of a legal and traditional rights framework for inclusion into the implementation of the Regional Water Strategy
- In-kind contributions from senior government such as Water Survey of Canada, Department of Fisheries and Oceans, the Ministry of Environment, and the Ministry of Forests, Lands and Natural Resource Operations

A funding system that is founded upon a primary source such as the regional requisition, but that also includes contributions from organizations that benefit from the services, provides a greater likelihood of long-term success of the Authority.

Occasionally, the Authority may be involved in capital projects that restore watershed health, such as wetland restoration. Given that the Authority would not be collecting funds for capital works, nor staffed with experts in design or construction, its role would be to convene the beneficiaries of the project by clarifying the outcomes of the project and how it will help to achieve the region's water vision and objectives. Partnerships and agreements among the organizations would be created to fund and implement the project(s).

Recommendations



To address the surface and ground water governance and management issues in the region, and the six priority areas of the study, primary recommendations include:

- 1. Establish a legislated Regional Water Authority to provide regional coordination for stewardship of surface and ground water resources and regulation of environmental standards in high-risk watersheds**
- 2. Transition to the Regional Water Authority under CVRD leadership from 2015-2020**
- 3. Fund the transition to the Regional Water Authority through the establishment of a CVRD watershed protection service (\$860,000 over four years)**
- 4. Under Regional Water Authority leadership, apply whole watershed-thinking and follow a risk-based approach to decision-making and management across the region.**

These recommendations are detailed below.

Recommendation #1: Establish a legislated Regional Water Authority

The mandate of the Regional Water Authority will be to provide regional coordination for stewardship of surface and groundwater resources, and regulation of environmental standards in high-risk watersheds. The following points summarize the Regional Water Authority's governance structure; authoritative, coordinating, overseeing, and reporting responsibilities; and funding sources.

Governance Structure:

- General decision-making by the Regional Water Authority will be carried out by a Board of Directors, representing First Nations and interested sectors across the region
- Financial decision-making by the Regional Water Authority will be carried out by an Executive Director appointed by the Board of Directors
- General management (supporting decisions and acting on them) will be carried out by staff, supported by ad-hoc advisors and technical specialists as needed
- Decisions will be based on cumulative impacts and following a risk-based approach (see Recommendation #2)

Authority:

The authorities of this entity will be outlined in Letters Patent by the Province of BC. These responsibilities should include:

- Authority to set water objectives (as defined in the *Water Sustainability Act*)
- Authority to implement Water Sustainability Plans
- Authority to enforce compliance with standards and requirements of Water Sustainability Plans

Coordination:

The Regional Water Authority should fulfill the following coordinating responsibilities:

- Implement a shared Regional Water Strategy to inform decisions and management activities across jurisdictions

- Implement a risk-based approach to water governance and management at the regional and local levels
- Develop and implement a decision-making framework (based on water objectives as defined in the *Water Sustainability Act*) to inform local land use planning and resource decisions in low- and medium-risk watersheds
- Maintain a regional watershed library and database of scientific data and traditional ecological knowledge to inform decision-making based on cumulative effects
- Advise the Province on water allocation decisions through a referral process

Oversight:

The Regional Water Authority should fulfill the following oversight responsibilities:

- Monitor and encourage local compliance with regional decision-making framework in low- and medium-risk watersheds (agreed-upon through MOUs with other decision-makers)
- Ensure regulatory compliance with the objectives and standards in the Water Sustainability Plan in high-risk watersheds
- Oversee implementation of Water Sustainability Plans by local watershed boards in high-risk watersheds

Reporting:

The Regional Water Authority should fulfill the following reporting responsibilities:

- Report to the public trends in cumulative effects and water supply and demand
- Report to the public progress on collective impact towards achieving the goals and objectives of the Regional Water Strategy
- Report to the public on local and regional compliance with decision-making framework in low- and medium-risk watersheds, and compliance with Water Sustainability Plans in high-risk watersheds

Funding:

Funding for the Regional Water Authority will be outlined in the Letters Patent. It is anticipated that funding sources will range from local government contributions to private industry contributions, resource rents and potentially user fees. The projected annual operating costs of the Regional Water Authority are \$775,000.

Recommendation #2: Transition to the Regional Water Authority under CVRD leadership

The CVRD is in a strong position to lead the formation of the Regional Water Authority through a regional steering committee. To do so, it is recommended that CVRD lead the following steps:

1. Establish a regional steering committee and transition to a Regional Water Authority (2015-2019)

- In partnership with mayors and First Nations, lead the establishment of a regional steering committee (to form the foundation of the Regional Water Authority membership), with engagement of others over time

- Initiate inventory of existing environmental data and traditional ecological knowledge
- Prepare the terms of reference for a Regional Water Strategy and MOUs between members of the regional alliance
- Develop a framework and carry out a region-wide watershed risk assessment to identify low-, medium-, and high-risk (priority) watersheds
- Develop the Regional Water Strategy
- Develop terms of reference for the first Water Sustainability Plan for the highest-priority watershed
- Develop terms of reference for the Regional Water Authority to implement the Water Sustainability Plan and other responsibilities
- Establish Regional Water Authority from regional alliance membership

2. Formally establish the Regional Water Authority in legislation (2019-2020)

- Develop first Water Sustainability Plan under Regional Water Authority leadership
- Legislate first Water Sustainability Plan through Provincial approval
- Formally legislate Regional Water Authority mandate and authorities in Letters Patent

Recommendation #3: Provide funding for the transition to the Regional Water Authority through a CVRD watershed protection service

- CVRD should establish a wholly new ‘watershed protection’ function under Bylaw 3356 “Environmental Initiatives” to cover the costs of the transition to a Regional Water Authority
- Electoral assent for the new service should be obtained with through an alternative approval process (AAP) or referendum, potentially concurrent with the 2015 budget process

Recommendation #4: Under Regional Water Authority leadership, apply whole watershed-thinking and follow a risk-based approach to decision-making and management across the region

- Establish water objectives (as defined in the *Water Sustainability Act*) to inform governance and management activities in low- and medium-risk watersheds
- Develop and implement Water Sustainability Plans to regulate governance and management activities in high-risk watersheds
- Encourage statutory decision-makers to carry out their responsibilities in accordance with legislated water objectives in low- and medium-risk watersheds through memorandums of understanding (MOUs) and agreements



Appendix A

Dialogue
Summaries

Workshop 1 Dialogue Summary May 2014



Regional Surface & Ground Water Management & Governance Study





BACKGROUND

A diversity of local residents, businesses, and industries currently live and work in the Cowichan region, across four municipalities, nine electoral areas, and nine First Nations. Basic daily activities and operations, combined with population growth and the impacts of climate change, place significant pressure on the region's water resources, both through their demand for water and their impacts on it.

In light of these pressures, water has emerged as a key issue in the Region. Currently, over 50 distinct organizations – different levels of government, First Nations, improvement districts, non-governmental organizations, and industry – play a role in the governance, management, and stewardship of water resources in the Cowichan. It is a complex network that is highly integrated and yet decisions and practices that affect our water resources are often fragmented resulting in the need to examine how water is governed and managed in the Cowichan Region.

WHAT'S BEING DONE?

To address this need, the CVRD established a Regional Water Management Committee (RWMC) to oversee a Regional Water Management and Governance Study, with the goal of developing a water governance model for the Cowichan region that meets key objectives for governance, delegated authority, oversight, coordination, reporting, and funding. Informing the development of this model is a Task Force with invited representatives from the 50+ organizations involved in water governance, management and stewardship in the region.

Acknowledging that significant progress has been made across the region to address water issues, this study aims to harness our collective progress to date and – working together as one – establish a more effective and efficient governance model that can be proposed to the Provincial government.

The first big step was to bring together representatives of the Task Force to discuss water issues and actions, vision themes for watershed health, and process principles for completing the study. The conversation was facilitated by Urban Systems in a workshop setting on May 9, 2014, at the Quw'utsun' Cultural and Conference Centre on traditional Cowichan Tribes territory in Duncan, B.C. Workshop participants represented over 20 groups within the Task Force and RWMC.

The purpose of this dialogue summary is to capture and communicate the conversation that took place.

WORKSHOP NO. 1 | DESIRED OUTCOMES

- 1 Complete the inventory of watershed issues & necessary actions
- 2 Confirm our vision themes for watershed health
- 3 Select our process principles for completing this study

WATER GOVERNANCE ISSUES & ACTIONS

ACTIVITY 1 | OUTCOMES

The Task Force was asked to identify watershed issues and develop possible actions around the themes quality, quantity, and ecosystem health. The following is a summary of some of the key issues and actions identified by the Task Force.

ISSUES

LACK OF RESOURCES TO MANAGE GROUNDWATER AND SURFACE WATER USE EFFECTIVELY.

Uncertain future for our water in a changing climate.

Lack of definition for "watershed health"

Lack of understanding and authority to protect ecosystem values.

NEW ALLOCATIONS ARE OFTEN MADE WITHOUT KNOWING SAFE EXTRACTION RATES.

Create a unified voice for stewardship including definitions of key terms.

Transfer water authority and enforcement to local organizations where lawful, where there are resources, and where it is beneficial.

Coordinate information on water availability and use for existing policy and future ACTIONS

CLEARLY DEFINE OUR ROLES, RESPONSIBILITIES, AND JURISDICTIONS

Create a tool for accountability of water allocations (more/less) based on watershed health.

ACTIONS

NATURAL AND ENGINEERED ASSETS ARE NOT FULLY CATALOGUED OR MAINTAINED.

Storage & supply decisions lack accountability to regional watershed health.

Land use & resource development decisions are fragmented & often made without full knowledge of impacts to ecosystem health.

We need to incorporate First Nations water rights and title within management and governance.

Conservation & restoration is scattered and largely without clear objectives.

EXISTING ALLOCATIONS AND LICENSES ARE NOT MONITORED OR ENFORCED.

Local water use controls in times of scarcity/ flood lack authority and clear methods to act.

ENABLE & ENGAGE RESIDENTS & BUSINESSES TO BE WATER STEWARDS & FOSTER A RESPECTFUL WATER CULTURE

Create a shared "watershed library" of monitoring data, reports, & management efforts across the region

Create consistent funding means to support regional & local governance needs.

Clarify reporting responsibilities for local authorities & land-water managers.

DEVELOP A PRIORITY FRAMEWORK FOR BEST WAYS TO ACHIEVE WATERSHED HEALTH.

Inadequate water quality protection & asset restoration for water features within our developed lands.

INADEQUATE UNDERSTANDING OF HOW ENGINEERED WORKS AFFECT NATURAL SYSTEMS AND WATER QUALITY.

Lack of authority And resources to monitor, regulate & enforce activities in the watershed, especially on private land (e.g. forest lands)

Inconsistent and inadequate connection between water pricing (funds) & its value.

ENACT SUSTAINABILITY PLANS TO PROTECT WATERSHED RESOURCES.

COORDINATE OUR MONITORING, REPORTING, AND CONSERVATION EFFORTS ACROSS THE REGION

Develop water leadership in support of water governance.

ROOT PROBLEMS

The list of issues points to a set of common root problems, including lack of authority, limited enforcement, insufficient resources, inadequate information, unclear jurisdiction, fragmented and unclear decision-making, and a need for leadership.

Ultimately, the root problems can be addressed by clearly defining our various roles, responsibilities, and jurisdiction; having local authority to make water decisions and enforce laws; coordinating activities and decisions; collecting and sharing information; having adequate and sustainable funding; and promoting a stewardship ethic among water users.

Activity 1 served to reinforce the vision for this study and this Task Force to address regional and collective governance needs. It is the starting point for enacting local, concrete actions for all stewards across the Cowichan region.

WORKING TOGETHER PROCESS PRINCIPLES

ACTIVITY 2 | OUTCOMES

As important to **why** we are developing a new water governance model and **what** we hope to achieve by it is **how** we will work together to do so. Process principles guide our actions and the way we collaborate to develop a new water governance model. They also inform us of the behaviours required to effectively open and close the water management and governance study.

The second desired outcome of the workshop was to select our process principles. These were proposed to the Task Force through an anonymous polling exercise in which workshop participants provided feedback on their level of agreement with the stated principle. There was general agreement on all of the proposed principles, and recommendations were given by the Task Force to refine a select few. Provided below is a summary of the agreed-upon principles, which reflect the feedback from the workshop participants:

AGREEMENT TO PROCEED

- ✓ All views are considered but no one voice makes a decision for or against any element of the model.*
- ✓ Agreement to proceed does not give up the chance to debate the element again in the future; it says "Let's try it and improve it as we go".

* Clear feedback (e.g. polling) from the Task Force on their collective level of support for elements of the governance model will be collected and provided to the Regional Water Management Committee.

OPENNESS

- ✓ Through a select list of project contacts, all information for the study is easily accessible.*
- ✓ Each activity or conversation is enhanced because we listen patiently and appreciate the concerns of others.*

* Preference toward multiple points of contact to reinforce existing lines of communication and provide redundancy in accessibility to key materials.

BUILDING PARTNERSHIPS

- ✓ Our actions and words gradually build trust and create an environment of cooperation, not competition.
- ✓ Creating partnerships with others who complement us will help the whole group move beyond the study into implementation.

* Feedback from the Task Force also reinforced their readiness to tackle concrete governance needs in the next workshop.

WORKING TOGETHER PROCESS PRINCIPLES

PARTICIPATION & IMPLEMENTATION

- ✓ Each study milestone includes multiple ways for us to contribute, from open to close of the study.
- ✓ Completing the study process will help inform us all of our potential roles in water stewardship – as a collective and as individuals.*

* Feedback from the Task Force suggests that they are keen to complete the governance model so that the role of their organization in regional stewardship can be better defined.

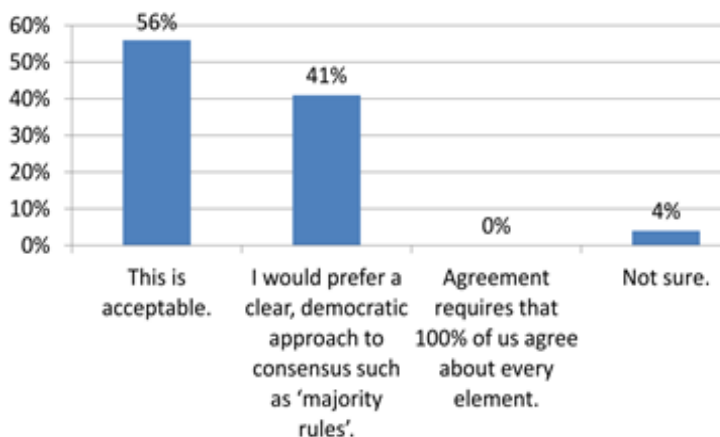
GOVERNANCE MODEL DEVELOPMENT

- ✓ Keeping our 6 result areas connected to our water issues will build an effective governance framework.*
- ✓ Feedback from the Task Force guides the final evaluation of the model by the Regional Water Management Committee.

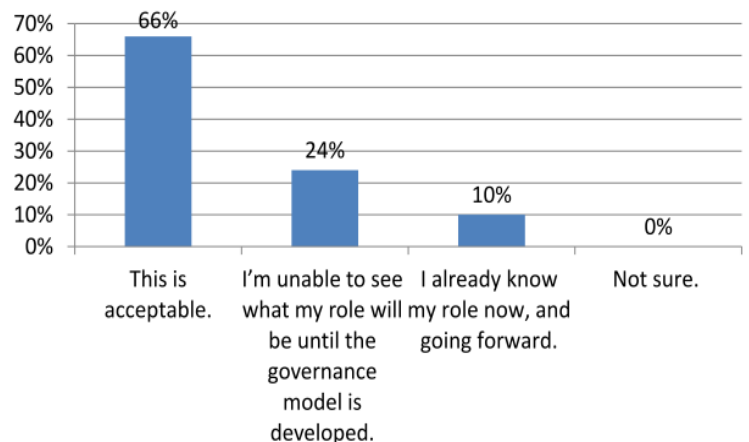
* There is strong support for considering the lessons and advice from other governance models (e.g. subject matter experts at the second workshop) to better inform the decisions made in this study.

EXAMPLES OF WHAT WE HEARD

“All views are considered but no one voice makes a decision for or against any element of the model”



“Completing the study process will help inform us all of our potential roles in water stewardship, as a collective and as individuals.”



TOWARDS OUR WATER GOVERNANCE MODEL

The outcomes of the workshop are positive and position us for Workshop 2 where we will develop concrete ideas for an effective regional governance model. With an inventory of issues and actions, a vision for the future, and an agreed upon list of principles - we are enthusiastic to prepare us all for next steps.

Please consult the list of attendees below and a few parting questions that we welcome feedback on by replying to the sender of this email. Thank you.

- 1 Which regional governance issues or actions would you like Subject Matter Experts to discuss at Workshop 2?
- 2 Which issues would you like to see examined in more detail to prepare the Task Force for governance ideas?
- 3 Have you thought of additional actions or governance ideas following Workshop 1?

Water Management & Governance Task Force Meeting | May 9, 2014

Contact	Organization	Contact	Organization
Robert Sagmeister	Malahat Nation	Kate Miller	CVRD Staff
Gord Hunter	Diamond Improvement District	Keith Lawrence	CVRD Staff
Stacey Sowa	Island Health	Paul Chiemielewski	Mill Bay Waterworks
Mathew Louie	Cowichan Tribes	Pat Lapcevic	Ministry of Forests, Lands and Nat'l Resources
Barry Gates	Elkington Forest	Eric Marshall	Cowichan Valley Naturalists
Bill Drysdale	Town of Ladysmith	David Slade	Cowichan Watershed Board
Paul Rickard	Cowichan Stewardship Roundtable	Phil O'Connor	PMFLC - Private Managed Forest Land Council
Rob Hutchins	Cowichan Watershed Board	Dave Polster	Polster Environmental Services
Georgia Collins	Shawnigan Watershed Roundtable	Gerry Giles	CVRD Board
Dave Hutchinson	Shawnigan Basin Society	Brian Dennison	CVRD Staff
Grant Price	Shawnigan Residents Association	Ian Morrison	CVRD Board
Jon O'Riordan	POLIS	Ken Thomas	Penelakut Tribe
Grant Treloar	Shawnigan Basin Society	Ehren Lee	Urban Systems
Rogers Wiles	One Cowichan	Dan Huang	Urban Systems
Michelle Geneau	City of Duncan	Brittney Dawney	Urban Systems
John McKay	Municipality of North Cowichan Staff	Don Dobson	Urban Systems
Bruce Fraser	CVRD Board	Kiely McFarlane	RES'EAU
Loren Duncan	CVRD Board	Stina Brown	Stina Brown Consulting

Workshop 2 | Dialogue Summary

Regional Surface & Ground Water Management & Governance Study



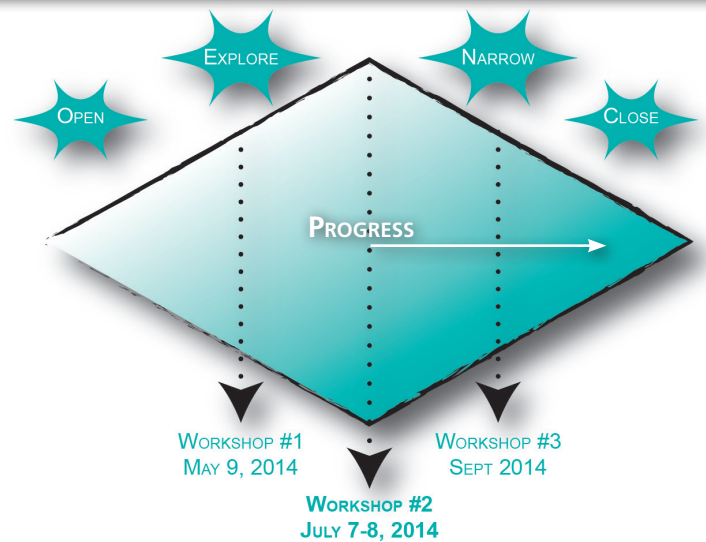
Next Meeting:
Workshop #3
September 11th, 2014
10:00 am to 3:30 pm
at the Quw'utsun' Cultural Centre in Duncan

Progressing Towards a Water Governance Model for the Region

The Cowichan Valley Regional District (CVRD) is overseeing a Regional Water Management and Governance Study with the goal of developing recommendations for governance, taking into account governance structure, delegated authority, coordination, oversight, reporting, and funding of water governance and management responsibilities.

The process of developing governance options is a collaborative one, led by the CVRD's Regional Water Management Committee (RWMC) but involving input from a Task Force with representation from over 60 different organizations, including all levels of government, First Nations, improvement districts, non-governmental organizations, and industry.

This has been a facilitated process, following the general "anatomy of a facilitated process" as shown here. The process was opened by engaging participants through a questionnaire, which then lead into Workshop #1. Here, the Task Force agreed upon principles to follow throughout the process and confirmed that there is a common understanding of the sort of vision that we are collectively striving towards. The Task Force also took stock of the various water management and governance issues in the region, and identified possible actions to address them. These were distilled into four key [problem statements](#), which guide the remainder of the process:



Decision-makers lack a coordinated set of mandates, strategies, information, and tools to make informed decisions around water, watershed health and land use.



Our collective impact on watershed health is not measured, which limits our ability to adapt and improve as a region over time.



Regulations and standards that protect water quality, water quantity, and ecosystem health are not consistently enforced or enforceable under current law.



Local governments, First Nations, and NGOs typically do not have adequate long-term funding (and often compete for it) to carry out water management and stewardship activities.

Representatives of the Task Force then gathered again over July 7 and 8, 2014, in Duncan, BC, at the Quw'utsun' Cultural and Conference Centre, generously made possible by Cowichan Tribes. Workshop participants represented over 27 groups from the Task Force and the RWMC. [In addition a group of seven special guests shared their experiences and ideas for water governance with the group.](#)

The workshop was designed to achieve four key outcomes through a combination of shared learning, anonymous polling, and open space discussions. The purpose of this document is to summarize the key messages, ideas, and discussion points from the workshop.

The workshop was designed to achieve four key outcomes...

1

Feedback on draft objectives for watershed governance.

3

Discuss & summarize concrete regional governance options to fulfill our objectives for watershed governance, centered on who, how, what, & why.

2

Learn from & consider recommended governance options for the region based on experiences from other organizations.

4

Narrow our governance options to a preferred list.

FEEDBACK ON DRAFT GOVERNANCE OBJECTIVES

The problem statements characterize the issues, and governance objectives are meant to identify how we will address them. It was important that the RWMC and the task force generally agree on these objectives in order to move towards a shared governance model together.

Draft objectives were initially developed based on guidance from the Task Force (through the “Issues and Actions” activity in Workshop #1 leading into the Problem Statements) and on governance best practices. They were presented to the RWMC and Task Force at Workshop #2 on Day 1 and agreement with each objective was assessed through anonymous polling. There was generally good agreement on the objectives, though some revisions were required. These were made with direct input from the RWMC and Task Force and agreement with each revised objective was assessed through another anonymous polling exercise.

INITIAL POLL

OBJECTIVE

FOLLOW-UP POLL



Objective 1

Decision makers are informed & held to account as a result of a clear governance structure for the region.



REVISED →



Objective 2

Our governance model includes monitoring & reporting of cumulative effects for more effective decision-making.



REVISED →



Objective 3

Regulations & environmental standards on private land that protect water quality, quantity & ecosystem health are effectively enforced.



REVISED →



Objective 4

Decisions & stewardship activities are funded through a sustainable & credible model that builds long-term public confidence.



There was generally strong agreement with the revised objectives and these were used to guide the discussion around governance and management options and ideas.

Outcome #2

What Did Our Specialists Tell Us



- 1. Consider scale & boundaries - watershed level, sub-watersheds, regions, aquifers?
- 2. Consider representation from non-government, government, elected officials, appointed officials.
- 3. Consider governance capacity & requirements including rules, standards, and tools, authority, and approaches (enforcement, voluntary uptake, or incentives).
- 4. Consider how the governance structure will shape opportunities for broad participation.

KIELY McFARLANE
UBC Program on Water Governance

- 1. Governance: who, what, how, and accountability for decision-making. Doing the right thing.
- 2. Management: doing things right
- 3. Consider influence versus power
- 4. Collaboration is a tool, it's not the end
- 5. Key winning conditions: First Nations co-governance; a functioning legal framework; and sustainable long-term funding
- 6. Form follows function – different models exist but all are context-specific.
- 7. It is important to understand and anticipate cumulative impacts from multiple land and water use activities

OLIVER BRANDES
POLIS Project on Ecological Governance

- 1. Consider nature's role as infrastructure
- 2. Consider the value of your natural capital
- 3. Reconcile your finances with the environment
- 4. Educate and develop partnerships

EMANUEL MACHADO
Town of Gibsons

- 1. Ontario Conservation Authority function as part-local government agency, part business
- 2. Sustainable funding is key: taxation and water rates are opportunities
- 3. A separate foundation can raise funds and interface with industry
- 4. A watershed plan can help identify who does what across multiple agencies

JOE FARWELL
Grand River Conservation Authority

- 1. Maximize your current authority to regulate land use and to raise funds
- 2. Consider Water Sustainability Plans - they provide the ability to limit water use and number of licenses, and can condify agreements
- 3. Rights and responsibilities are a two-way street - if you have a right to water, you also have a responsibility to it

DEBORAH CURRAN
University of Victoria Faculty of Law

Legal borders, First Nations rights, ethics, vision, leadership, house in order, strong knowledge base are key conditions for collaborative governance.

MERRELL-ANN PHARE
Centre for Indigenous Environmental Resources

We can have collective impact through, a common agenda, shared measurements, mutually reinforcing activities, continuous communication, and backbone support.

TONY MAAS
Our Living Waters, MAAS Strategies

Common Messages for the Task Force

-
- First Nations rights & co-governance must be addressed
- Shared vision, objectives, & ethics should guide governance & management activities
- Get your house in order: maximize your authority, & revitalize it if needed
- Pool your collective watershed knowledge & use it to inform decisions
- Leverage your authority to generate sustainable funds for water governance & management
- Many governance models exist, but none of them are perfect and ultimately, your model must be specific to your unique context

Significant Ideas



For Deeper Discussion in Breakout Sessions

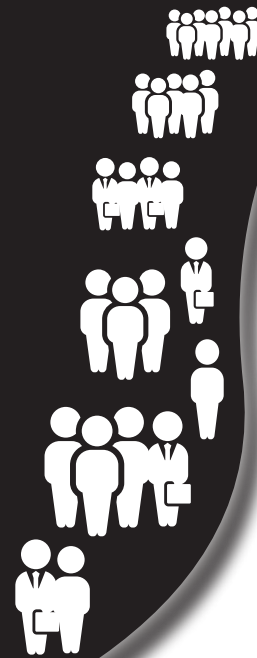
“Maximize our current authority”

“Cumulative effects monitoring & reporting to inform decision-making”

“Co-governance with First Nations”

“Watershed-centric decision making framework”

“Maximize opportunities under the Water Sustainability Act”



WHO? WHY? HOW?

Outcome #3



KEY MESSAGES FROM THE TASK FORCE BREAKOUT DISCUSSIONS



We have the authority to generate sufficient funds for our water governance and management activities – we just need to use it!

We need to understand & maximize our existing authority to achieve our vision – then consider delegated authority or other mechanisms, if needed.



We need to confirm a watershed vision and establish shared objectives and measures for watershed health.



There is no “why” for First Nations co-governance – we just do it! To start, we need greater input from First Nations on what our governance model looks like.



The CVRD is well positioned to play a coordinating role for cumulative effects / collective impact monitoring & reporting to inform decision-making.



Outcome #4

TOWARDS A REGIONAL WATER GOVERNANCE MODEL: FOCUS AREAS

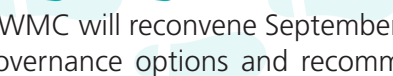
- ◆ Coordinate & maximize our existing authority
 - ◆ Pool and share our water knowledge
 - ◆ Build and demonstrate coordinated water stewardship
 - ◆ Optimize and adapt to our collective impact
 - ◆ Maximize our ability to generate revenues

The development of options and recommendations for water governance in the Cowichan region will be driven by the key takeaways from our Task Force and our Focus Areas.

In addition to the four planned outcomes for the workshop, a few important points became clear at the end of the two days:

- ◆ There is no road map: ultimately, a governance model for the Cowichan region will be one that is unique to the region's watersheds and its people
- ◆ Moving from issues to solutions is challenging: it requires leadership, humility, and being comfortable with the uncomfortable
- ◆ Participatory governance isn't always easy, but this process is an immense learning opportunity for us all and it gives us insight into what it takes to work together over the coming years

NEXT STEPS...

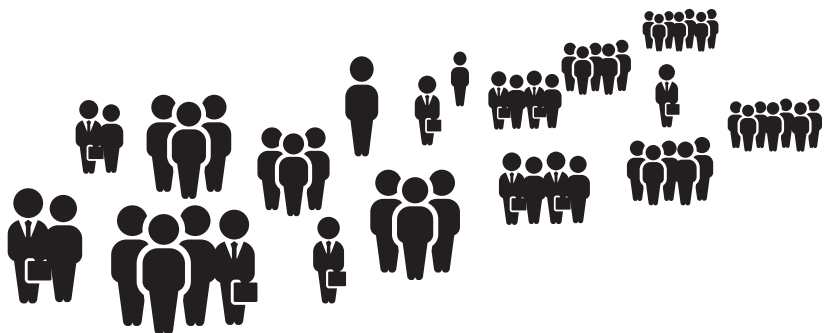


The Task Force and RWMC will reconvene September 11, 2014, with the goal of reviewing potential water management and governance options and recommendations, and narrowing them down to the most preferred.

TASK FORCE REPRESENTATIVES IN ATTENDANCE

- ◆ Hancock Finest Holdings
- ◆ Cowichan Valley Regional District
- ◆ GW Solutions
- ◆ Shawnigan Basin Authority
- ◆ One Cowichan
- ◆ Town of Ladysmith
- ◆ Mill Bay Waterworks
- ◆ Ministry of Agriculture
- ◆ Municipality of North Cowichan
- ◆ Private Managed Forest Land Council
- ◆ City of Duncan
- ◆ Town of Lake Cowichan
- ◆ Cowichan Tribes
- ◆ University of British Columbia
- ◆ Capital Regional District
- ◆ Halalt First Nation
- ◆ IFC Water Solutions
- ◆ Timberwest
- ◆ Island Timberlands
- ◆ Cowichan Lake & River Stewardship Society
- ◆ Cowichan Stewardship Roundtable
- ◆ District of North Cowichan
- ◆ Cowichan Watershed Board
- ◆ Ministry of Forests, Lands and Natural Resource Operations
- ◆ Island Health
- ◆ Drillwell
- ◆ Cowichan Estuary Restoration and Conservation Alliance

The workshop was facilitated by Urban Systems.



MEETING NOTES

Subject: CVRD Regional Surface and Ground Water Management and Governance Study –
Workshop #3 Dialogue Summary (DRAFT)
Date: September 15, 2014
Meeting Date: September 11, 2014
Location: Quw'utsun' Cultural and Conference Centre, Duncan, BC
File: 2107.0005.01
Prepared By: Brittney Dawney
Distribution: CVRD Regional Water Management Committee

Background

The Cowichan Valley Regional District (CVRD) is overseeing a Regional Water Management and Governance Study with the goal of developing recommendations for governance, taking into account governance structure, delegated authority, coordination, oversight, reporting, and funding of water governance and management responsibilities.

The process was opened by engaging participants through a questionnaire, which then lead into Workshop #1. Here, the Task Force agreed upon principles to follow throughout the process and confirmed that there is a common understanding of the sort of vision that we are collectively striving towards. The Task Force also took stock of the various water management and governance issues in the region, and identified possible actions to address them. These were distilled into four key problem statements, which guide the remainder of the process:

- Decision-makers lack a coordinated set of mandates, strategies, information, and tools to make informed decisions around water, watershed health and land use.
- Our collective impact on watershed health is not measured, which limits our ability to adapt and improve as a region over time.
- Regulations and standards that protect water quality, water quantity, and ecosystem health are not consistently enforced or enforceable under current law.
- Local governments, First Nations, and NGOs typically do not have adequate long-term funding (and often compete for it) to carry out water management and stewardship activities.

Representatives of the Task Force then gathered again over July 7 and 8, 2014, in Duncan, BC, at the Quw'utsun' Cultural and Conference Centre for Workshop #2. One of the key objectives of the workshop was to learn from and consider recommended governance options for the region based on experiences from other organizations. These recommendations were significant inputs into the development of functions to be carried out to address the issues and problem statement, as well as various governance arrangements for a regional water entity to carry out the functions. These functions and arrangements were the centre of the discussion at Workshop #3, held on September 11, 2014.

MEETING NOTES


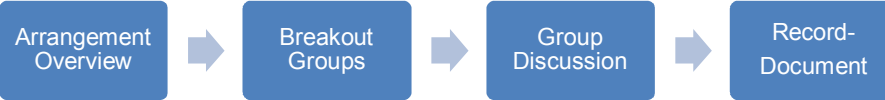
Subject: CVRD Regional Surface and Ground Water Management and Governance Study – Summary (DRAFT)
Meeting Date: September 11, 2014
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Desired Workshop #3 Outcomes

- Provide feedback on key governance functions for improved regional water governance and management
- Review and provide input on potential governance arrangements for the region

Workshop #3 Design

<p>Activity 1 Provide feedback on key governance functions for improved regional water governance and management</p>	 <pre>graph LR; A[Introduction] --> B[Functions Overview]; B --> C[Breakout Groups]; C --> D[Group Share]</pre>
<p>Activity 2 Review and provide input on potential governance arrangements #2, #3 and #4 for the region</p>	 <pre>graph LR; A[Arrangement Overview] --> B[Breakout Groups]; B --> C[Group Discussion]; C --> D[Record-Documents]</pre>

MEETING NOTES

Subject: CVRD Regional Surface and Ground Water Management and Governance Study – 1
Summary (DRAFT)

Meeting Date: September 11, 2014

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Activity 1 Summary: Feedback on Functions

The Task force was provided with a list of functions for review. It is important to note that participants in this final workshop varied slightly from previous; that is, some participants were attending one of the workshops for the first time. The background and experience of participants varied; accordingly, feedback on the functions was diverse. Consolidated feedback is summarized below:

General Feedback

- Many functions may be carried out at multiple scales (not “either-or”), such as strategies, policies, and objectives at the local, watershed, regional, and territorial
- Clarify and define what is meant by “regional” and “water objectives”
- Clarify the differences between mandate, responsibility, projects, tasks, services, and decisions
- Water management and governance with First Nations is a primary condition for successful governance; its place as a “function” should be considered solely in the establishment of an entity in which First Nations have a co-governing role
- Provincial ministries and First Nations should be added to existing responsible parties
- Transition to arrangement: let the greatest needs define the mandate/responsibilities of the new entity
- Re-order the functions based on prioritization and strategic implementation
- Need to include forestry, PMFLC and agriculture in the functions (and arrangements)
- Clarify which functions would be advisory (set expectations) and which would be regulatory (authoritative)
- Apprehension about a think-tank that is not first focused on application and procedural change
- There is a spectrum of acquiring and exercising authority: spectate, participate, influence, lead and decide. Functions, and who carries them out, should reflect this.

Feedback on Specific Functions

- Oversight and environment of standards on private land requires both existing and new authorities to be effective and to be provide assurance of watershed protection
- Climate adaptation needs leadership; the impacts of climate change should be incorporated in a decision-making framework to inform adaptive land use planning and other practices
- Engagement with all audiences and stakeholders is essential: develop services centered on integration of enforcement-education-engagement
- Set and administer permit fees or resource rents in specific areas to support financing of other functions (complement user-based water rates)

MEETING NOTES

Subject: CVRD Regional Surface and Ground Water Management and Governance Study – 1
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- Increase emphasis on supply and demand and the need to monitor and make allocation decisions
- The weir management application and flood and sediment management programs are pending; this will affect who carries out this function

Activity 2 Summary: Feedback on Arrangements

General Feedback

- Interest in the potential ability of a regional organization to become a special purpose entity in the future, once it is fully established and has demonstrated capacity and credibility

<p>Arrangement 2 Commission of the CVRD</p>	<ul style="list-style-type: none"> • Concerns with the jurisdictional limitations of housing a regional entity within the CVRD; requires full buy-in from municipalities • Concerns with representation of First Nations and stakeholders at the decision-making level • There is a need for “adaptive governance” and this may be easier within CVRD • May be a stepping stone and “quick win” option
<p>Arrangement 3 Regional Water Society</p>	<ul style="list-style-type: none"> • Weak model to start regarding authority, but could be strengthened through agreements with public and private authorities • Funding concerns: sustainable funding could come through contribution agreements with local government but this may present a conflict of interest for local government representation at the board level • Accountability concerns: board members would have to be elected or appointed by elected officials in order to be accountable to the public • Ability for broad representation is strong • May transition more easily into Arrangement #4 • Concerns raised regarding two regional entities with similar geographic boundaries (CVRD and entity)
<p>Arrangement 4 Legislated Watershed Authority</p>	<ul style="list-style-type: none"> • General acknowledgement that this is the goal but that interim actions are required • Concerns raised regarding two regional entities with similar geographic boundaries (CVRD and entity) • Accountability concerns: board members would have to be elected or appointed by elected officials in order to be accountable to the public

MEETING NOTES

Subject: CVRD Regional Surface and Ground Water Management and Governance Study – \n Summary (DRAFT)
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Next Steps

- Author draft report and present to the Regional Water Management Committee
- Submit report to the CVRD Board
 - Recommendations for six priority areas

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Appendix B

Process
Principles

PROCESS PRINCIPLES

As important to why we are developing a new water governance model and what we hope to achieve by it is *how* we will work together to do so. Process principles guide our actions and the way we collaborate to develop a new water governance model. They also inform us of the behaviours required to effectively open and close the water management and governance study.

The third desired outcome of the first workshop was to select process principles. These were proposed to the Task Force through an anonymous polling exercise in which workshop participants provided feedback on their level of agreement with the stated principle. There was general agreement on all of the proposed principles, and recommendations were given by the Task Force to refine a select few. Provided below is a summary of the agreed-upon principles, which reflect the feedback from the workshop participants:

Category	Principles
Agreement to Proceed	<ul style="list-style-type: none"> ✓ All views are considered but no one voice makes a decision for or against any element of the model.* <i>*Clear feedback (e.g. polling) from the Task Force on their collective level of support for elements of the governance model will be collected and provided to the Regional Water Management Committee.</i> ✓ Agreement to proceed does not give up the chance to debate the element again in the future; it says “Let’s try it and improve it as we go”.
Openness	<ul style="list-style-type: none"> ✓ Through a select list of project contacts, all information for the study is easily accessible. <i>*Preference toward multiple points of contact to reinforce existing lines of communication and provide redundancy in accessibility to key materials.</i> ✓ Each activity or conversation is enhanced because we listen patiently and appreciate the concerns of others. * <i>*Feedback from the Task Force also reinforced their readiness to tackle concrete governance needs in the next workshop.</i>
Participation and Implementation	<ul style="list-style-type: none"> ✓ Each study milestone includes multiple ways for us to contribute, from open to close of the study. ✓ Completing the study process will help inform us all of our potential roles in water stewardship – as a collective and as individuals. <i>*Feedback from the Task Force suggests that they are keen to complete the governance model so that the role of their organization in regional stewardship can be better defined.</i>

Category	Principles
<p>Building Partnerships</p>	<ul style="list-style-type: none"> ✓ Our actions and words gradually build trust and create an environment of cooperation, not competition. ✓ Creating partnerships with others who complement us will help the whole group move beyond the study into implementation.
<p>Governance Model Development</p>	<ul style="list-style-type: none"> ✓ Keeping our 6 result areas connected to our water issues will build an effective governance framework. <p style="text-align: center;">*There is strong support for considering the lessons and advice from other governance models (e.g. subject matter experts at the June conference) to better inform the decisions made in this study.</p> <ul style="list-style-type: none"> ✓ Feedback from the Task Force guides the final evaluation of the model by the Regional Water Management Committee.



Appendix C

Current
Framework

Table C.1 Organizations and agencies directly involved at the local level

Organization	Mandate	Primary Water-Related Legislation	Jurisdiction	Legislated Rights and Authority	Primary Water-related Interests	Primary Water-Related Responsibilities	Representation and Accountability	Potential Sources of Funding
<p>First Nations</p> <ul style="list-style-type: none"> • Cowichan Tribes • Ditidaht • Halalt • Lake Cowichan • Lyackson • Malahat • Penelakut • Stz'uminus 	<ul style="list-style-type: none"> • Use and protect water, land and ecosystems in traditional territories • Assert Aboriginal and Treaty rights 	<ul style="list-style-type: none"> • <i>Indian Act</i> • <i>First Nations Land Management Act</i> • Douglas Treaty and associated modern-day treaties • Case law 	<ul style="list-style-type: none"> • Indian Reserve • Asserted traditional territory • Treaty territory 	<ul style="list-style-type: none"> • Aboriginal Rights • Treaty rights 	<ul style="list-style-type: none"> • Health of fisheries, water and ecosystems • Ability to carry out traditional seasonal rounds 	<ul style="list-style-type: none"> • Operate community water systems on reserves 	<ul style="list-style-type: none"> • Elected Chief and Council • Accountable to band members • AANDC supports services on reserve and administers the land management component of the <i>Indian Act</i>. AANDC is also responsible for negotiating and implementing self-government agreements and treaties. 	<ul style="list-style-type: none"> • Transfers from the Federal government (through contribution agreements) for basic services • Occasionally contributions from other levels of government for specific projects • Agreements established through senior government • Authority exists to self-generate revenues (e.g., through taxation)
<p>Regional Districts</p> <ul style="list-style-type: none"> • Cowichan Valley Regional District <p><i>Neighbouring:</i></p> <ul style="list-style-type: none"> • <i>Regional District of Nanaimo</i> • <i>Alberni-Clayoquot Regional District</i> • <i>Capital Regional District</i> 	<ul style="list-style-type: none"> • Provide a vehicle for cooperation among local governments to provide primarily voluntary services on a variety of scales (e.g. regional, sub-regional, local) • Function as local government for electoral areas 	<ul style="list-style-type: none"> • <i>Local Government Act</i> and regulations (including the Cowichan Valley Regional District Approval Exemption Regulation) • <i>Community Charter</i> 	<ul style="list-style-type: none"> • Land and public assets within regional district boundaries, including unincorporated electoral areas 	<ul style="list-style-type: none"> • Provide mandated functions (e.g. general government, solid waste management planning) • May establish any voluntary service that the board considers necessary for all or part of the regional district • May lead the development of a Regional Growth Strategy • Regulate public and private land use in electoral areas • Corporate powers to make agreements, acquire and manage land, delegate authority to other bodies 	<ul style="list-style-type: none"> • Public interests • Sufficient surface and ground water quality and quantity for drinking water 	<ul style="list-style-type: none"> • Land use planning and regulation • Community water supply and treatment • Community liquid waste management (sanitary and drainage) • Floodplain mapping • Public asset management 	<ul style="list-style-type: none"> • Governed by a board of directors composed of appointees from municipalities and an elected director from each electoral area • Officials are accountable to the public • Provincial oversight 	<ul style="list-style-type: none"> • Property tax requisitions in rural areas • Municipal requisitions • Grants in lieu of taxes • Service fees • Rentals • Franchise fees • Transfers from other governments • Developer contributions • License and permit fees • Fines • Earnings on reserve funds • Sale of assets
<p>Municipalities</p> <ul style="list-style-type: none"> • City of Duncan • Municipality of North Cowichan • Town of Ladysmith • Town of Lake Cowichan 	<ul style="list-style-type: none"> • Provide good government for the community • Provide services, laws and other matters for community benefit • Provide stewardship of the public assets of the community • Foster the current and future economic, social and environmental well-being of the community 	<ul style="list-style-type: none"> • <i>Local Government Act</i> and regulations • <i>Community Charter</i> 	<ul style="list-style-type: none"> • Land and public assets within municipal boundaries (incorporated areas) 	<ul style="list-style-type: none"> • Establish any service that council considers necessary or desirable • Generate revenues through taxation, user fees and other charges • Regulate municipal services, public and private land use, etc. • May establish bylaws in "spheres of concurrent authority" such as protection of the natural environment and protection of public health 	<ul style="list-style-type: none"> • Public interests • Sufficient surface and ground water quality and quantity for drinking water 	<ul style="list-style-type: none"> • Land use planning and regulation • Community water supply and treatment • Community liquid waste management (sanitary and drainage) • Floodplain mapping • Public asset management 	<ul style="list-style-type: none"> • Governed by a council of democratically elected officials • Officials are accountable to the public • Provincial oversight 	<ul style="list-style-type: none"> • Local property tax • Grants in lieu of taxes • Service fees • Rentals • Franchise fees • Transfers from other governments • Developer contributions • License and permit fees • Fines • Earnings on reserve funds • Sale of assets •

Organization	Mandate	Primary Water-Related Legislation	Jurisdiction	Legislated Rights and Authority	Primary Water-related Interests	Primary Water-Related Responsibilities	Representation and Accountability	Potential Sources of Funding
Improvement Districts <ul style="list-style-type: none"> Braithwaite Estates Improvement District Cowichan Bay Waterworks District Diamond Improvement District Mill Bay Waterworks 	<ul style="list-style-type: none"> Provide and manage local public services such as water, diking, and drainage 	<ul style="list-style-type: none"> <i>Local Government Act</i> 	<ul style="list-style-type: none"> Defined service area 	<ul style="list-style-type: none"> As defined in Letters Patent No standard set of powers, as improvement districts exist to provide services for which they were incorporated 	<ul style="list-style-type: none"> Public interests Sufficient surface and ground water quality and quantity for drinking water and/or irrigation 	<ul style="list-style-type: none"> Community water supply and treatment 	<ul style="list-style-type: none"> Elected board of trustees Officials are accountable to the public (must hold annual general meeting) Provincial oversight – bylaws are only effective once registered with Inspector of Municipalities 	<ul style="list-style-type: none"> Property tax Service fees
Private Managed Forest Landowners and Forestry Companies <ul style="list-style-type: none"> Island Timberlands Timberwest Private Forest Landowners Association (NGO) 	<ul style="list-style-type: none"> Manage and harvest privately owned forests 	<ul style="list-style-type: none"> <i>Private Managed Forest Land Act</i> 	<ul style="list-style-type: none"> Privately owned forests 	<ul style="list-style-type: none"> Harvest of private forests (and where applicable, Crown forests) 	<ul style="list-style-type: none"> Health of watersheds 	<ul style="list-style-type: none"> Conduct forest management practices responsibly and in accordance with the law Ensure downstream water users are not impacted by forest management practices Protect water quality, fish habitat, soil productivity and critical wildlife habitat 	<ul style="list-style-type: none"> Various forms of oversight provided by the province (FLNRO), the Managed Forest Council, and the Forest Practices Board (FPB) 	<ul style="list-style-type: none"> Product sales
Other Industry <ul style="list-style-type: none"> Catalyst Paper Corporation 	<ul style="list-style-type: none"> Manufacture specialty printing papers, newsprint and pulp for retailers, publishers and commercial printers 	<ul style="list-style-type: none"> <i>Water Act (Water Sustainability Act)</i> 	<ul style="list-style-type: none"> Cowichan Lake weir Paper mill 	<ul style="list-style-type: none"> Store water in Cowichan Lake 	<ul style="list-style-type: none"> Sufficient river flow to maintain mill operations 	<ul style="list-style-type: none"> Holder of two water licenses for storage of water in Cowichan Lake Operation of the Cowichan Lake weir 	<ul style="list-style-type: none"> Oversight provided by the province (FLNRO) Advisory input from local technical specialists and politicians 	<ul style="list-style-type: none"> Product sales
Environmental Non-Governmental Organizations (ENGOS) <ul style="list-style-type: none"> Cowichan Lake and River Stewardship Society Cowichan Stewardship Roundtable Mill Bay and District Conservation Society One Cowichan Quamichan Lake Watershed Stewardship Society Shawnigan Basin Authority Somenos Marsh Wildlife Society (Others) 	<ul style="list-style-type: none"> Varies: <ul style="list-style-type: none"> Educate the public Monitor watershed health Inform policy / advise government Protect and improve watershed health 	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Varies Public and private interests 	<ul style="list-style-type: none"> Varies: <ul style="list-style-type: none"> Stewardship of water and environmental resources Public education and outreach Water and environmental health monitoring Advising government Implement environmental programs and projects 	<ul style="list-style-type: none"> Typically appointed board of directors Typically accountable to the board Typically no external oversight provided 	<ul style="list-style-type: none"> Public and private grants Private donations

Organization	Mandate	Primary Water-Related Legislation	Jurisdiction	Legislated Rights and Authority	Primary Water-related Interests	Primary Water-Related Responsibilities	Representation and Accountability	Potential Sources of Funding
Local Watershed Boards and Authorities <ul style="list-style-type: none"> Cowichan Watershed Board Cowichan Watershed Society Shawnigan Basin Authority 	<ul style="list-style-type: none"> Educate the public Monitor watershed health Inform policy / advise government Protect and improve watershed health 	<ul style="list-style-type: none"> None Opportunities for transfer of authority to local watershed boards/authorities in the <i>Water Sustainability Act</i> 	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Public and private interests 	<ul style="list-style-type: none"> Stewardship of water and environmental resources Public education and outreach Water and environmental health monitoring Advising government Implement environmental programs and projects 	<ul style="list-style-type: none"> Public and private representation Appointed board of directors Accountable to the board No external oversight 	<ul style="list-style-type: none"> Public and private grants
Private residents	<ul style="list-style-type: none"> Use and enjoy public and private spaces 	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Privately owned land and assets 	<ul style="list-style-type: none"> Occupy and use privately owned land Access clean drinking water 	<ul style="list-style-type: none"> Private interests Sufficient river flow and quality for drinking water 	<ul style="list-style-type: none"> Operate and maintain private drinking water systems Operate and maintain private liquid waste management systems (sanitary and drainage) 	<ul style="list-style-type: none"> Some local government oversight Some provincial oversight 	<ul style="list-style-type: none"> n/a

Table C.2 Organizations and agencies involved at the senior level

Organization	Mandate	Legislated Authority and Responsibilities	Representation and Accountability
Forest Practices Board	<ul style="list-style-type: none"> Hold government and forestry industry publicly accountable for forestry practices on Crown land 	<ul style="list-style-type: none"> Audit government and industry forestry practices Deal with public complaints regarding forestry practices and government enforcement May appeal enforcement decisions and penalties imposed by government Seek review of government decisions to approve forestry operations Carry out special investigations Make recommendations Conduct random, field-based audits Investigate complaints Carry out appeals of government decisions Report findings to the public 	<ul style="list-style-type: none"> Appointed board members Operates arms-length from the provincial government Issue reports to the public
Managed Forest Council	<ul style="list-style-type: none"> Regulate forest management activities on private managed forest land Administer the Managed Forest Program and protect key public environmental values on private Managed Forest land in BC 	<ul style="list-style-type: none"> Regulator for forest management activities on private managed forest land Conduct audits, inspections and special investigations Functions similar to FPB but jurisdiction is on private land 	<ul style="list-style-type: none"> Two elected representatives of private managed forest land, two officials appointed by the Minister of FLNRO and one Chair who is appointed by the four Council members. Ongoing accountability is accomplished through its yearly inspection program of managed forest owners and the application of the Compliance and Enforcement measures within Part 4 of the PMFLA.
Ministry of Forests, Lands and Natural Resource Operations	<ul style="list-style-type: none"> Deliver integrated natural resource management services across the province Develop policies, programs and legislation to promote economic prosperity and environmental sustainability Establish conditions for access to, and use of, Crown forests, land and natural resources 	<ul style="list-style-type: none"> Authority is articulated in 52 statutes and associated regulations Setting policy and standards for forest practices Setting policy and standards for water sustainability Water resource management Water use planning and authorizations Marine planning Resource management objectives and compliance Watershed restoration Crown land allocation and authorizations Forests and range authorizations Land use planning Independent power production Mines and minerals permitting and inspections (except for major mining projects) Aquaculture licensing and regulation Aboriginal consultation and coordination (natural resource operations) Fish, wildlife and habitat management Drought management Dam and dyke safety and regulation Flood plain management 	<ul style="list-style-type: none"> Appointed staff and senior Ministers Accountable to the public External oversight provided by the Forest Practices Board

Organization	Mandate	Legislated Authority and Responsibilities	Representation and Accountability
Ministry of Environment	<ul style="list-style-type: none"> Encourage and maintain the effective protection, management and conservation of BC's water, land, air and living resources 	<ul style="list-style-type: none"> Administer water licenses Monitor, assess and report on environmental conditions Setting environmental and water sustainability policy and standards Administer community watersheds and drinking water plans Monitor and enforce compliance with environmental laws and regulations Administer parks, wilderness and protected areas Pollution prevention and waste management Conservation Framework and Species-at-Risk policy Species and ecosystem protection policy Oceans protection and sustainability Conservation and resource management enforcement Flood Management Environmental Emergency Response 	<ul style="list-style-type: none"> Appointed staff and senior Ministers Accountable to the public
Ministry of Health (Vancouver Island Health Authority)	<ul style="list-style-type: none"> Support and regulation to ensure safe water in local communities 	<ul style="list-style-type: none"> Issue boil water notices Provide oversight of water inspections and water sampling results Issue permits and enforce applicable standards Approve source protection plans 	<ul style="list-style-type: none"> Appointed staff and officers Accountable to the Board of Directors of the Authority
Ministry of Agriculture	<ul style="list-style-type: none"> Support practices that promote adaptable, sustainable and competitive agrifoods production Work to balance urban/agricultural interests 	<ul style="list-style-type: none"> Set policy and standards for irrigation practices 	<ul style="list-style-type: none"> Appointed staff and senior Ministers Accountable to the public
Environment Canada	<ul style="list-style-type: none"> Preserve and enhance the quality of the natural environment including water, air, soil, flora and fauna Conserve Canada's renewable resources Conserve and protect Canada's water resources Forecast weather and environmental change Enforce rules relating to boundary waters Coordinate environmental policies and programs for the federal government. 	<ul style="list-style-type: none"> Provide scientific expertise and advice to federal, provincial, municipal and Aboriginal governments to support their environmental assessments Provide advisory support to AANDC on delivery of on-reserve drinking water programs and services 	<ul style="list-style-type: none"> Appointed staff and senior Ministers Accountable to the public
Department of Fisheries and Oceans	<ul style="list-style-type: none"> Conserve and protect fish and fish habitat 	<ul style="list-style-type: none"> Set policy and standards to protect fish and fish habitat 	<ul style="list-style-type: none"> Appointed staff and senior Ministers Accountable to the public
Aboriginal Affairs and Northern Development Canada	<ul style="list-style-type: none"> Support Aboriginal people and Northerners in their efforts to: <ul style="list-style-type: none"> Improve social well-being and economic prosperity Develop healthier, more sustainable communities Participate more fully in Canada's political, social and economic development 	<ul style="list-style-type: none"> Deliver programs and services for providing clean, safe and secure water on reserves (with First Nations band councils and Health Canada) 	<ul style="list-style-type: none"> Appointed staff and senior Ministers Accountable to the public



Appendix D

Literature
Review & Case
Studies

July 2nd 2014

Regional Surface and Ground Water Management and Governance Study: Review of North American Case Studies

Kiely McFarlane, Dr. Leila Harris, and Dr. Karen Bakker
Program on Water Governance, University of British Columbia

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1 Introduction

This review of three North American water governance case studies is intended to complement the material presented by subject matter experts at the second workshop of the Regional Surface and Ground Water Management and Governance (RSGWMG) Study. The review adds to the broad range of perspectives and experience delivered through the workshop, identifying alternative governance arrangements and additional considerations for governance reform processes.

The case studies included in this review were selected based on their reputation as 'best practice' examples of watershed governance, and the insight they provided into key problem statements identified by the taskforce. The following case studies were approved by the CVRD staff and board committee:

1. The Okanagan Basin Water Board (British Columbia)
2. The Alliance of Rouge Communities (Michigan, USA)
3. Nisqually River Watershed Planning (Washington, USA)

For each case study, a literature review was compiled based on the same problem statements and questions that the subject matter experts have been asked to address. The literature review is based on information and documents available on the organization's website, the plan or strategy of interest, and any relevant reports. In two cases, the review was supplemented with an interview with the watershed organization's Executive Director. No response was received from the third organization.

Each case study begins with an overview of the historical and institutional context of the watershed management organization and process of interest. The organization's governance structure and arrangements are described, organized according to the four problem statements identified by the RGSWMG study taskforce:

1. Local governments, First Nations, and NGOs typically do not have adequate long-term funding (and often compete for it) to carry out water management and stewardship activities.
2. Decision-makers lack a coordinated set of strategies, mandates, information, and tools to make informed decisions around water, watershed health and land use.
3. Activities on private land that impact water quality, water quantity, and ecosystem health are often not enforced or enforceable under current law.
4. Our collective impact on watershed health is not measured, which limits our ability to adapt and improve as a region over time.

The described governance arrangements also highlight the six key result areas identified by the CVRD: Governance structure; delegated authority; coordination; funding; oversight; reporting. Each review concludes by identifying key insights and considerations from the case study 'experience' that may be of interest to the taskforce as they discuss governance and management options for the Cowichan region.

Key considerations emerging from the case studies are summarized in the final section.

Additional case study reviews will be posted on the 'Cowichan Water' webpage in the Program on Water Governance blog: <http://blogs.ubc.ca/powg/> (password: CVRDgov14). These additional case studies provide insights from regional water governance in the United Kingdom, Australia, and New Zealand, where significant reforms have occurred over the last twenty years.

2 Okanagan Basin Water Board (British Columbia)

2.1 Origins and mandate of the Okanagan Basin Water Board

The Okanagan Basin Water Board (OBWB) provides an example of basin-wide *funding*, years of experience working collaboratively with local and senior government, First Nations, and communities to undertake shared water management programs.

The OBWB was formed in 1969-1970 under the BC Municipalities Validating and Enabling Act as a basin-wide partnership to define and resolve water resource issues in the Okanagan Basin. It replaced the previous Okanagan Watershed Pollution Control Council, which was formed to address growing pollution problems in the lakes, but lacked a mechanism to share funds and meaningfully collaborate. The Board was intended to provide leadership on basin-wide water issues, including the sustainability of the water supply, source water quality, and the health of lakes and streams.

The Okanagan Basin Study (1974) recommended that the OBWB act as the coordinating regional authority for water resources management in the basin. However, the provincial government was reluctant to devolve power to the OBWB, and so the OBWB was initially focused on upgrading sewage treatment facilities and controlling an aquatic weed infestation. In 2006, population growth, climate change and drought concerns resulted in the OBWB renewing its broader water management mandate.

The OBWB is a unique local government agency, formed as a collaboration between the three Okanagan regional districts, with taxation powers to support its activities. The Board does not have regulatory power, but seeks to improve the integrated management of water resources by undertaking (and funding) research, education, infrastructure, and management programs that benefit the whole basin, and by improving communication between government agencies to reduce fragmentation in policy and planning.

The overall purpose of the OBWB is “to undertake strategic projects and programs at the Basin scale that meet the collective needs of Okanagan citizens for long-term sustainable water supplies while supporting the capacity of member jurisdictions to meet their own water management goals”.

2.2 Overview of the OBWB’s governance structure

The OBWB is an inter-regional governance authority whose jurisdiction is defined by the watershed boundaries. Table 1 summarizes the governance structure of the OBWB, based on information available on the OBWB’s website (1) and in its governance manual (2).

Table 1. Structure and composition of the OBWB

Board of Directors	<ul style="list-style-type: none"> • The main decision making body. • Comprised of three directors appointed from each of the three regional districts’ boards; and one director appointed from each of the Okanagan Nation Alliance, Water Supply Association of BC, and the Okanagan Water Stewardship Council.
Okanagan Water Stewardship Council	<ul style="list-style-type: none"> • A technical advisory committee established by the Board to provide independent advice and policy recommendations on water issues.

	<ul style="list-style-type: none"> Comprised of water stakeholders, including water experts and volunteers.
Committees	<ul style="list-style-type: none"> The OBWB has formed committees to address specific matters under its responsibility. Includes standing and program committees, and task forces. Committees may include board members and other stakeholders. Committees make recommendations to the full board.
OBWB staff	<ul style="list-style-type: none"> The Board is supported by seven full time staff that manage OBWB programs. The executive director works with the Board to develop long-term strategic plans.

2.3 Governance arrangements of the OBWB

This section describes the governance of the OBWB, including its funding, authority, coordination, and oversight arrangements. The analysis is organized according to the four problem statements identified from the first task force meeting. The information presented was primarily gathered from the OBWB’s website (1), its governance manual (2), and strategic plans (3, 4), verified and supplemented by a telephone interview with the Board’s executive director.

1. Local governments, First Nations, and NGOs typically do not have adequate long-term funding (and often compete for it) to carry out water management and stewardship activities.

The OBWB was given taxation authority to support its projects under the BC Municipalities Validating and Enabling Act; every resident and business within the Okanagan Basin (excluding First Nation reserve lands) contributes at the same mill rate, on the basis that they share equitably in the benefits of basin-wide water management initiatives. The amount each landowner pays is based on a property value assessment; the 2014 mill rate is 5.8¢/\$1000 assessed value, which amounts to \$3,444,600 per year for the Board. The Board has set legal maximum annual contribution rates for each tax-funded program. New projects can be funded under this tax requisition (with the approval of the regional districts), so long as the project is consistent with the OBWB mandate and fits within the maximum contribution rate.

The Board’s funding and programs are organized around the Okanagan watershed as the integrating biophysical unit. Only those portions of regional districts that lie within the watershed boundaries contribute to and participate in the programs, while only those programs and projects that benefit the basin as a whole are funded by the OBWB. The rationale is that everyone pays, and everyone benefits. This has two key implications:

- while localized projects that have whole-of-basin benefits (e.g. source water protection) are funded through OBWB programs, initiatives with area-specific benefits (e.g. drinking water treatment) are not eligible for funding.
- because First Nations reserve lands are generally-speaking not taxed, they cannot contribute financially to the OBWB in the same way as local governments, and are not eligible for some projects on reserve lands (e.g. sewage facilities assistance grants). This has created some tensions over who can be involved in decision making over funding; at present only regional district representatives vote on financial decisions.

The tax income covers the basic costs of running the OBWB and its programs, and is identified as the key to the success of the organization. The tax provides a permanent source of income to hire permanent staff, carry out core programs and activities (e.g. monitoring), and leverage other funding opportunities (which typically require local group copayments).

The annual operating budget is approved by the OBWB, and by the boards of the regional districts through their budgeting process.

The OBWB receives senior government “partnership funding” for water management, research and planning projects. As a local government entity, the Board has also been able to apply for gas tax funding. There is a strong level of agency/government support because the OBWB is seen as a joint initiative. The OBWB maintains an ongoing relationship with senior government and funding agencies, so that agency staff can alert OBWB when relevant opportunities arise. In addition to directly entering into funding agreements, the OBWB supports the efforts of municipalities, improvement districts and First Nations to access grant funding (e.g. provincial infrastructure grants, Real Estate Foundation grants).

The combined funds are used by OBWB for program operations; subsidies for infrastructure upgrades; watershed research; and grants for water management projects with basin-wide significance. The OBWB maintains a ‘water conservation and quality improvement’ grant program, which provides funds to local governments, irrigation districts and NGOs for projects that conserve and protect water (e.g. water sensitive urban design). Grants range from \$3,000-30,000, and are prioritized based on their measurable outcomes, basin-wide significance, matching funding, and collaboration between jurisdictions.

When there are no external project funds available, the OBWB’s internal funding enables it to continue its basic functions while it focuses on relationship building and project development. The OBWB maintains a supply of project proposals that are ready to go when senior government partnership funding becomes available. Year-over-year financial carry over is also important to maintaining programs over time given the variability in external grants and funding needs. For example, gas tax funding requires communities to pay for projects up front, and be reimbursed later; having a financial reserve therefore enables the OBWB to take advantage of gas tax funding opportunities.

2. Decision-makers lack a coordinated set of strategies, mandates, information, and tools to make informed decisions around water, watershed health and land use.

The Board seeks to improve water management by providing a basin-wide perspective and improving inter-regional communication. The OBWB provides a mechanism for local governments to share resources, gather watershed information, and address basin-wide problems. The OBWB shapes local governments’ management of water resources through voluntary mechanisms such as grants, resources, information, and strategic plans; however it avoids undertaking projects that overlap with municipal jurisdiction. The 2008 Okanagan Sustainable Water Strategy identifies the 12 guiding principles for water management and policy, and specific actions to address the principles. The actions identify who will complete the action, over what timeframe. In addition, the strategy identifies previous research that was undertaken in the region, and the current state of knowledge on water issues. It therefore provides a central resource for knowledge on the basin, and is intended to promote connectivity between research projects and reduce duplication of effort. The 2008 strategy was recently updated with the 2014-2019 Strategic Plan, which sets out the goals that will guide the OBWB’s work over the next five years, and the activities it will undertake to achieve these goals. While the scheduling of activities remains dependent on funding and

changing circumstances, the strategic plan identifies the issues and areas of work of greatest strategic importance. The plan also signals the OBWB's priorities to its funders and partners.

The Stewardship Council has a particularly important role to play in coordinating the collection and communication of science based information to decision makers. The Council provides information and independent advice to the Board on proposed projects, policies, and actions. The Stewardship Council was responsible for compiling the information and recommendations contained in the Okanagan Sustainable Water Strategy. In addition, the Council develops programs that contribute to the local knowledge base and provide informational tools for the watershed community; it also acts as a communication channel to communities and stakeholders. The Council is supported by funds allocated under the OBWB's regional water management program. Additional research support is provided by the new UBC Okanagan LEEF chair in water resources, which is funded by the OBWB to support the coordination of research in the Okanagan by the OBWB, universities, and other agencies.

The water management program, which includes all OBWB activities beyond the sewage and aquatic weed control programs, has to be re-approved every few years (currently tied to the municipal election cycle). By requesting re-approval of the program on a regular basis, the OBWB ensures this program remains closely attuned to local government needs.

The Board also provides a link between the regional districts and other levels of government. Key elements of the OBWB's role are to advocate and represent local needs to senior government decision makers, and facilitate communication between levels of government. The Board communicates with the provincial and federal governments about inter-regional water issues; it coordinates and participates in provincial partnerships with local governments and stakeholders; it partners with federal agencies and the province on water management and research initiatives; and it coordinates provincial and federal partnership funding. The Board coordinates with First Nations through representation on the Board of Directors and on the Okanagan Water Stewardship Council.

Governance in the Okanagan was historically very fragmented, with fifteen local governments, over a hundred water utilities, and four First Nations. Getting all of these groups to work together is a significant challenge. The OBWB has addressed this issue through its use of the connected watershed as a rationale for coordinated effort; by investing in relationship building over decades; and through its role as a funding agency rather than an authority. The OBWB has found that it can achieve the most as a 'carrot' (rather than a 'stick') organization and through community building; local governments and community members voluntarily contribute their own resources and commitments to pursue common goals. In contrast there is noted to be substantial resistance to authorities in the region (e.g. Interior Health), who rely on enforcement of rules to achieve results.

3. Activities on private land that impact water quality, water quantity, and ecosystem health are often not enforced or enforceable under current law.

The OBWB was legislated under the Municipalities Enabling and Validating Act, and by Supplementary Letters Patent (SLP) to the Okanagan regional districts (official documents which authorize additional functions for the regional districts). Legislative approval was required for the taxation authority of the OBWB because it was creating a special service area across three regional districts. The SLPs establish the commitments and responsibilities of participating regional districts, and the mandate of the OBWB.

The OBWB is not a regulatory agency and does not enact or enforce law. It was given taxation authority to fund its programs, and is therefore at its essence a means of pooling and directing funds towards basin-wide projects. The OBWB also acts as a communication hub, and a centralized unit for the coordination and administration of projects. It promotes best practice by supplying scientific advice, information, grants, and other incentives to local government, businesses, and the public.

Decisions are made by votes of the Board of Directors. All directors have equal weighted votes, and are expected to represent the common interests of the whole basin. However only the regional district directors are allowed to vote on financial decisions.

The OBWB supports the efforts of municipalities and regional districts to regulate land and water use activities through the creation of bylaws. The OBWB has developed a number of bylaw toolkits for local governments, which set out guidelines for creating bylaws to protect water resources (e.g. groundwater). It has also helped local governments' access legal advice to develop environmental bylaws. The Board therefore enables the voluntary uptake of best practice by local authorities. In one case, they have incentivized these voluntary measures: sewage infrastructure grants are only available to local governments that do not allow small lot subdivision on septic. This practice has been effective, in part because it fits with provincial government rules for infrastructure grants.

4. Our collective impact on watershed health is not measured, which limits our ability to adapt and improve as a region over time.

The OBWB has built partnerships with provincial and federal governments, developed projects, and provided funds for monitoring, research and modeling within the Okanagan Basin. These activities have contributed significantly to understanding surface and ground water flows, and land and water use impacts on the basin as a whole. Several years ago the OBWB initiated a new tax requisition for a LEEF Innovation Chair in Water Resources at UBC Okanagan, to undertake and coordinate Okanagan Basin water studies, and bring in additional research grants that can only be accessed by universities. The OBWB also maintains an outreach and education strategy for improving communication of its research findings to the community and governments.

2.4 Key insights and implications for the CVRD from the OBWB

The OBWB case study highlights four key considerations for the CVRD as it investigates potential funding and devolved authority options. These considerations are drawn from analysis of the OBWB approach, and the recommendations of the Executive Director of the OBWB.

- There is the opportunity to establish a similar tax requisition for water management activities under current local government legislation. It is possible to create a regional district special service area with an earmarked requisition for water management under the BC Local Government Act (without requiring additional permissions from the province). The Local Government Act also sets the rules for amendments to the letters patent of a government agency. The Ministry of Community, Sport and Cultural Development would be able to provide advice on what financial and organizational arrangements are possible within the local government legislative framework.
- If the CVRD pursues a taxation approach, it will need to give careful consideration to funding arrangements with First Nations. In the Okanagan, one band contributed to infrastructure upgrades through taxes on leasehold properties. The Lower Similkameen

band, which has annual property taxes, is investigating options for a water mill rate on reserve properties. Non-property tax arrangements may also be possible.

- The geography of the CVRD, which contains multiple watersheds with varying scales of population and development, complicates the collection and distribution of tax funds. Unlike in the Okanagan, many water initiatives will have area-specific benefits, and therefore (some) funds will have to be allocated across the region. Different areas will also have different management needs, which may not be aligned with the capacity of the population to fund them. The balance of shared versus local funding will have to be carefully assessed in terms of its implications for equity and effectiveness.
- The OWBW demonstrates the importance of relationship building (within the region and with senior government agencies) for the effective coordination of and shared investment in improving water management. Such an approach takes time, and is based on the steady, incremental development of regional governance from existing arrangements and relationships to a desired future state. Wholesale changes in governance arrangements disrupt existing relationships, and are likely to require greater investment in community building to be effective in the long term.

2.5 References

- (1) Okanagan Basin Water Board 2014 Okanagan Basin Water Board. Retrieved June 16 2014, from <http://www.obwb.ca/>
- (2) Okanagan Basin Water Board 2010 *Okanagan Basin Water Board Governance Manual*. Available at http://obwb.ca/fileadmin/docs/obwb_governance_manual.pdf
- (3) Okanagan Water Stewardship Council 2008 *Okanagan Sustainable Water Strategy: Action Plan 1.0*. Okanagan Basin Water Board. Available at http://www.obwb.ca/fileadmin/docs/osws_action_plan.pdf
- (4) Okanagan Basin Water Board 2013 *Okanagan Basin Water Board Strategic Plan*. Available at http://www.obwb.ca/newsite/wp-content/uploads/obwb_strategic_plan.pdf

3 Alliance of Rouge Communities (Michigan, USA)

3.1 Origins and mandate of the Alliance of Rouge Communities (ARC)

The Alliance of Rouge Communities and their watershed management planning approach provide an example of senior and local government, and non-governmental stakeholders working together to improve watershed health. The Rouge River communities were the first in Michigan to adopt a watershed-based approach to stormwater management, and the first Michigan watershed alliance created; in both cases the Rouge approach was taken up in state legislation.

In the 1980s, the Rouge River was designated as among the most polluted areas in the Great Lakes. The Rouge flows through several large urban and industrial areas, and was being degraded by widespread wastewater and stormwater pollution. The US District Court urged local authorities to adopt a more comprehensive approach to pollution control; at the same time the US EPA was developing regulations to control stormwater discharges. A group of local agencies within the Rouge River watershed proposed a watershed-based approach to managing discharges, which was endorsed by state and federal government. The state government later adopted this watershed-based permit approach as an alternative to traditional stormwater permitting processes, and it has become a national model in the US.

While the Rouge Project was initially funded through significant federal government grants, reductions in federal funding over time resulted in the exploration of local funding options. Local government agencies within the Rouge watershed formed a partnership to address their stormwater permit requirements. The Memorandum of Agreement for this partnership became the model for the Watershed Alliance legislation, which was being developed by the state of Michigan to authorize the formation of watershed entities at the time. The bylaws forming the Alliance of Rouge Communities (ARC), a voluntary public watershed entity, were adopted by participating local government bodies in 2006.

The ARC is comprised of representatives of public agencies with water management responsibilities within the Rouge River watershed, including county and municipal governments. The purpose of the Alliance is to ‘provide an institutional mechanism to encourage watershed-wide cooperation and mutual support to meet water quality permit requirements and to restore beneficial uses of the Rouge River to the area residents’ (1). The ARC acts as a coordinating body, enabling the cooperative development of watershed plans, and supporting members to apply for stormwater permits; to implement plan actions; to identify remaining contaminant sources and solutions; and to undertake education, monitoring, and restoration projects.

3.2 Overview of the ARC’s governance structure

The ARC is voluntary public watershed entity whose jurisdiction is defined by the watershed boundaries. Table 1 summarises the membership of the ARC, while Table 2 summarises its governance structure, based on information provided on the ARC’s website (2) and in its bylaws (1).

Table 1. Membership of the ARC

Primary members	Representatives of each township, city, village and county whose jurisdiction is wholly or partially within the watershed boundaries,
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	and whose governing body voluntarily adopts the bylaws.
Associate members	Representatives of any local or regional public agency (e.g. school) that has been issued a state permit for a water discharge into the Rouge River, and whose organization accepts the bylaws.
Cooperating partners	NGOs, public agencies, businesses, and residents who volunteer their time, services or other resources towards the protection of the river, and who comply with the ARC policy for cooperating partners.

Table 2. Structure and functions of the ARC

Full ARC	<p>Includes municipal governments, counties, associate members, and cooperating partners. Only primary and associate members vote on ARC decisions.</p> <p>The Full ARC meet twice a year, and is responsible for the election of senior officers, adoption of annual budgets and cost assessments to members, delegation of responsibilities, and development of ARC policies.</p>
Executive committee	<p>Comprised of 14 voting members, including the elected chair, vice chair and treasurer; one representative of each county; one representative of each of the seven subwatershed advisory groups; and the immediate past chair or vice chair.</p> <p>The executive committee oversees the expenditure and management of the ARC, and assisting other committees to meet their responsibilities.</p>
Standing committees	<p>The ARC has established a standing committee on technical issues, financial management, and public involvement and education. Participation on standing committees is open to ARC members, cooperating partners and other interested parties (including members of the public). The technical committee is responsible for the management of the watershed monitoring program, oversight of permit requirements, and recommendations on joint projects to develop best management practices.</p>
Special committees	<p>The ARC may establish special committees to consider specific issues. For example, the Organization Committee considers changes to ARC bylaws, develops and reviews policies and procedures, considers membership requests, and makes recommendations to the Full ARC.</p>
Subwatershed advisory groups	<p>Represent seven subwatersheds within the wider Rouge River watershed. The advisory groups are made up of public agencies, community members, local water groups, and other interested stakeholders. Member agencies within each subwatershed cooperate to develop a watershed management plan, which includes commitments from each agency to carry out the activities required to achieve the objectives of the plan.</p>
Executive director and staff	<p>The ARC currently has an executive director and four support staff. The Executive Director serves as an unofficial member on all committees, providing supporting information and recommendations.</p>

3.3 Governance arrangements of the ARC

This section describes the governance of the ARC, including its funding, coordination, reporting, and oversight arrangements. The analysis is organized according to the four problem statements identified from the first task force meeting. The information presented was primarily gathered from the ARC's website (2), its bylaws (1) and watershed management plan (3), and a USEPA report (4), verified and supplemented by a telephone interview with the ARC's executive director.

1. Local governments, First Nations, and NGOs typically do not have adequate long-term funding (and often compete for it) to carry out water management and stewardship activities.

The ARC total income for 2014 is \$691,000. Of this, participating communities contribute approximately \$297,000 through their membership dues, with the remainder made up of primarily federal grants. While the federal government invested millions of dollars in initial pollution management activities, grant funding has reduced significantly over time, and does not always match the needs of the communities at the time. The Watershed Alliance legislation and ARC were created to enable capture of local funding (through member assessments) for watershed based planning and restoration activities.

Assessments to members are set annually, based on annual budgeted costs. Counties currently contribute through in-kind contributions to the ARC, and are not assessed. The financial contribution of municipal government members is prorated based upon the population and land area of the municipality within the watershed, where areas with the greatest proportion of the land area and population are allocated the largest proportion of costs. Assessment for associate members is based upon the ARC membership benefits provided (i.e. participation in grant funded programs), and any in-kind contributions made by the member.

Member assessments are used to fund compliance with permit requirements, including public education, watershed monitoring, and elimination of sewage discharges into water bodies, as well as staff support for the ARC and its committees. Government grants are primarily directed towards restoration activities, including tree planting, river and lake restoration, dam removal and monitoring. ARC member assessment and grant money is pooled and directed towards subwatersheds and activities that are identified as being of strategic importance for water quality improvement. While this prioritization approach has met with some resistance from communities that wish to see their contributions spent locally, it has been successful in ensuring that funds are invested in activities that will make the greatest contribution to watershed health overall.

2. Decision-makers lack a coordinated set of strategies, mandates, information, and tools to make informed decisions around water, watershed health and land use.

The ARC enables the coordination of municipalities' pollution management activities through water discharge permitting based on watershed plans. Under the revised state legislation, public agencies can choose to submit either a standard permit or a watershed based permit for stormwater and wastewater discharges. Agencies that choose the watershed based permit are required to cooperate in the development of a (sub)Watershed Management Plan. The plan sets out objectives and long term goals for the subwatershed, actions required to achieve the objectives, commitments from each agency to implement the actions, and methods for evaluating progress. The ARC provided funding for technical

support and facilitation to produce these plans, and appoints a chair to each subwatershed to coordinate the permittees.

Each individual permittee is required to submit an Illicit Discharge Elimination Plan, a Stormwater Pollution Prevention Initiative, and a Public Education Plan, all of which are enforceable by the Michigan Department of Environmental Quality. The Stormwater Pollution Prevention Initiative is developed based on the agency's commitments in the Watershed Management Plan, and specifies the actions to be implemented during the term of the permit, a stormwater management program, and methods for assessing progress. Therefore, the ARC is able to coordinate the water quality improvement activities and strategies of multiple public agencies through voluntary, cooperative subwatershed planning, which are then enforced by the permitting authority (i.e. the State).

The Full ARC and Executive Committee oversee all subwatershed and member activities, ensuring coherence and coordination of improvement strategies and investment across the Rouge River watershed. While the Full ARC meet twice yearly to discuss and vote on important issues, the Executive Committee plays an important role in overseeing the ARC's day to day operations, including expenditure and management.

Stakeholder participation and agency cooperation within the watershed are key to the success of this approach. Most monitoring, management, education, and restoration activities are undertaken by the public agencies and partners themselves. The ARC supports the agencies by providing a mechanism for coordination of watershed planning; resources (e.g. educational materials, templates); expertise and support for permittees (e.g. training); and access to funding (pooled local contributions and grants). In addition to providing direct funding for agency activities, the ARC have reduced the cost of compliance for stormwater permits and pollution control activities by coordinating and streamlining activities (e.g. development of permit templates, educational materials).

The ARC has also supported an ongoing watershed wide monitoring program and improved data access, enabling water quality trend analysis and strategic decision making. The ARC Technical Committee manages the comprehensive monitoring program, which is undertaken by various county, municipal, state and federal departments, together with local groups. The annual budget funds the monitoring program as well as data analyses and reports. Over time, the ARC has also invested in the development of water quality and quantity modelling tools, geographic information systems, and publicly accessible information databases. The monitoring data and analyses tools have been significant in the detection of remaining pollutant sources, prioritizing management activities and investment, and evaluating outcomes for water quality and ecosystem health.

3. Activities on private land that impact water quality, water quantity, and ecosystem health are often not enforced or enforceable under current law.

The ARC is a coordinating body, based on voluntary membership, and does not have delegated authority to enforce watershed activities. Rather, by creating a legislated watershed-based permitting approach, the ARC enables public agencies to commit to best management practices and actions that are enforced by the State through the permit conditions. The ARC supports the public agencies to identify and undertake these activities through watershed planning processes, providing resources, and funding infrastructure improvements and restoration activities.

The ARC also supports infrastructure improvements and best management practices on private land through education and funding. Significant restoration activities, such as

riparian planting and the creation of rain gardens, is being undertaken by homeowners and businesses on their own properties. The ARC has been successful in convincing landowners that these practices improve their properties (e.g. through improved drainage), are economically efficient in the long term, and improve the brand of local businesses. A number of businesses and other organizations have signed on as cooperating partners to the ARC.

The ARC is developing a range of payment options for infrastructure improvements on private land to eliminate remaining sewage discharges (e.g. from septic tanks). In some cases, an assessment district is created to pay for the infrastructure, which may capture funding from a subset of houses or a whole city. Where individual houses are required to pay for the infrastructure upgrades, the ARC/public agency can offset initial costs by requiring payment at point of sale, offering no interest loans, or negative interest loans (i.e. subsidized loans). These techniques have been effective, with most people paying for the infrastructure within the time required.

4. Our collective impact on watershed health is not measured, which limits our ability to adapt and improve as a region over time.

The ARC monitors both the effects of land and water use, and water stewardship activities on watershed health. The watershed management plan outlines a five-year monitoring plan, identifying parameters to be collected throughout the watershed to measure patterns in water quality and quantity. Regular monitoring involves the collection of precipitation, streamflow, dissolved oxygen, water temperature, E. coli and freshwater ecology data. Other monitoring is undertaken on an intermittent basis to assess the state of the river (e.g. suspended sediments), and by individual permittees to assess the effectiveness of the pollution control strategies in their permits. Coordination of the permittees' monitoring and assessment activities is addressed through the watershed management plan. The monitoring data collected between 1994 and 2013 is stored in a county database; a subset of this data is accessed through the Rouge project's online database, which allows users to query the data from 1994-2011. The ARC have sought assistance from a University to continue to provide public access to this data.

Through the watershed planning process, water quality and quantity standards were set, along with other targets for watershed health. Monitoring data are used to identify progress towards these targets, and compliance with/exceedance of water quality standards. Geographic Information Systems and modelling tools are also used to analyze trends in water quality throughout the watershed and over time. Technical reports and maps of Rouge River monitoring and assessment are produced annually. Additional reporting of quality indicators and progress against targets is undertaken by permittees and submitted to the permitting authority on an annual basis.

3.4 Key insights and implications for the CVRD from the ARC

Four key considerations for the coordination and funding of a (sub)watershed based approach to water quality improvement emerge from the ARC case study. These considerations are based on a case study report published by the USEPA (4) and a telephone conversation with ARC's Executive Director.

1. Membership in the ARC and the use of the watershed-based permit are voluntary, yet have been taken up by the majority of communities within the Rouge watershed. Several explanations are advanced for this voluntary, cooperative investment in watershed protection. Firstly, the watershed based permitting approach was offered as

a desirable (but voluntary) alternative to a traditional regulatory approach. Secondly, the voluntary watershed alliance promotes a culture of cooperation. The subwatershed planning approach has been particularly effective at gaining local buy-in and ownership of improvement strategies, and has resulted in communities taking on additional activities like stream bank stabilization and habitat restoration. Finally, the ARC enables communities to access funding and resources to support their individual activities (including ARC funds and government grants). This institutional infrastructure and coordination of watershed activities improves the effectiveness of the individual agencies efforts, so that they are more likely to achieve their objectives.

2. An effective watershed based approach, which addresses cumulative impacts, will be built upon a strong understanding of the jurisdiction for water management. It is important to know who owns and regulates water at each point as it moves through the watershed (e.g. from a property, to a road, to a drain, to a river), in order to assess the potential for water management issues and solutions, responsible parties, and integrate the management of water across space and time. The Executive Director argues that this jurisdictional knowledge must be matched with an understanding of watershed hydrology, in order to look beyond effects (e.g. flooding, soil erosion) and identify the causes of 'broken hydrology' (e.g. deforestation), and the parties with the authority to address these causes. The ARC use watershed monitoring and modelling to identify the sources of freshwater contamination (e.g. leaking septic systems).
3. Regulations will not solve everything, and need to be matched by incentives and building of public support. Regulations are typically aimed at the management of effects, rather than causes, and tend to result in 'finger pointing' and minimum compliance, rather than the adoption of best management practices. The ARC is currently investigating a range of financial incentives, including subsidized loans; funding activities that prevent soil erosion and introduction of contaminants; incentivized rating schemes for improved runoff; and water quality trading¹. The private sector is also often more receptive to voluntary improvements rather than regulatory requirements; in many cases there is a business case for improvements in practices, and such initiatives contribute to positive branding for the company. Non-financial strategies, such as education and awareness raising activities, were also important in mobilizing Rouge communities and creating political pressure for municipalities to buy into the watershed approach. The Executive Director highlighted the use of water quality maps (showing pollutant levels across the watershed) and a letter challenging mayors to declare that they had no sewage leaks as two effective awareness raising strategies.
4. Consideration should be given to the alignment of communities and (sub)watersheds when developing watershed or regional based approaches. Dividing a region into (sub)watersheds can be an effective way of gaining community buy in and ownership of water management initiatives. However, because community/political and watershed boundaries are not always aligned, municipalities may be located within more than one watershed. The requirement to contribute to more than one watershed management plan imposes significant compliance costs on that community. Elsewhere this has been addressed by communities identifying a primary watershed to contribute to, and participating in other watershed initiatives at a lower level. Consideration should also

¹ Water quality trading involves strategic investment in water quality improvements to maximize the benefit to cost ratio. Investments in small improvements in water quality are redirected towards activities that will have greater effect, or will result in the same improvement at lower cost.

be given to how costs, votes, and expenditure will be allocated across (sub)watersheds. While area and population based allocation supports democratic representation, it also reifies existing power relationships, so that small communities have less input into decisions and are limited in their capacity to implement solutions. In the ARC, most decisions are based on equal member votes, and expenditure is allocated to where it is most needed.

3.5 References

- (1) Alliance of Rouge Communities 2013 *Bylaws: Alliance of Rouge Communities*. Available at <http://www.allianceofrougecommunities.com/PDFs/general/4-12-13%20FINAL%20Bylaws%20Package.pdf>
- (2) Alliance of Rouge Communities 2014 *Alliance of Rouge Communities*. Retrieved 24 June 2014, from <http://www.allianceofrougecommunities.com/index.html>
- (3) Alliance of Rouge Communities 2012 *Rouge River watershed management plan*. Available at <http://www.allianceofrougecommunities.com/login.html>
- (4) US Environmental Protection Agency 2007 *Watershed-based permitting case study: Michigan state-wide stormwater permitting*. Washington DC, US Environmental Protection Agency. Available at http://www.epa.gov/npdes/pubs/wq_casestudy_factsht3.pdf

4 Nisqually River Watershed Planning (Washington State, USA)

4.1 Origins and mandate of the Nisqually River Watershed Management Plan

The Nisqually River case study provides an example of multiple stakeholder groups working together to create a watershed vision, and implementing a plan to achieve it. In particular, it provides an example of a collaboration between indigenous and local government; the Nisqually Tribe was the lead agency in the development of the Watershed Management Plan (WMP). The Nisqually River WMP was the first to be adopted in the state of Washington; it provides an example of integrated land use and water planning, water allocations, and plan implementation.

The WMP was adopted under the Watershed Management Act, which was passed by the Washington State legislature in 1998. The purpose of this Act was to set a framework for the development of local solutions to watershed issues; it enables the citizens of a watershed to cooperatively assess the state of water resources and determine how best to manage them on a watershed basis. Watershed management plans are required to balance competing resource demands, while protecting minimum instream flows and ensuring the provision of water for future needs. Watershed planning is funded by the state government over four phases (organization, watershed assessment, planning, and implementation) with set timeframes.

The Nisqually River WMP was developed by a watershed planning unit, comprising the Nisqually Tribe, counties, municipalities, water purveyors, citizens and river council representatives, agricultural interests, development interests, and the state Department of Ecology. The WMP was adopted in 2004, and was followed by a detailed implementation plan in 2007. The state watershed management planning process is now complete, with the last year of implementation funding in 2010. Ongoing watershed planning and management activities continue to be undertaken on a collaborative basis by the Nisqually River Council (NRC), which adopted a 15-year watershed stewardship plan in 2005. Many of the same stakeholders in the watershed planning unit are members of the NRC.

4.2 Governance arrangements in the Nisqually River Basin

This section describes the governance of the Nisqually River Watershed Management Plan process, including its funding, authority, coordination, and oversight arrangements. The analysis also describes the ongoing governance of watershed management through the Nisqually River Council. The analysis is organized according to the four problem statements identified from the first task force meeting. The information presented was primarily gathered from the Department of Ecology's website (1-3), the WMP and implementation plan (4-5), and the Nisqually River Council's website (6).

- 1. Local governments, First Nations, and NGOs typically do not have adequate long-term funding (and often compete for it) to carry out water management and stewardship activities.**

The water management planning process is funded by the state government. Targeted funds are provided for each stage in the planning process, including five years of

implementation funding. The Nisqually planning unit received a total of \$930,000 for the development and implementation of its WMP.

Towards the end of the implementation period, the water planning unit investigated options for sustainable long-term funding of watershed planning and implementation. They noted that sustainable funding is needed to pursue plan actions and projects, and to pay for the administration of plan implementation (7). Key local funding options identified were the creation of a special purpose district to levy fees for specific services, or the collection of water-related revenues from existing special purpose districts (e.g. public water utilities) through an inter-local cooperation agreement. The Unit notes that while special purpose districts are targeted at providing necessary services, and have a strong cost to benefit ratio, they are also criticized for creating too many governmental units, and being less visible and accountable to citizens. Inter-local agreements between existing jurisdictions were therefore seen as a viable option.

Grants were identified as an important external source of revenue for watershed plan implementation. However it was noted that grants usually require matching funds, so some local funding arrangement would still be required. Further, some grants are available to governments only, while others are targeted to nonprofit organizations.

Private foundations also are a source of funding for nonprofit organizations, providing a grant option that may not be available to governmental entities. The planning unit investigated options for collaborating with the existing NRC and its funding organization, the Nisqually River Foundation, in a coalition that would enable the organizations to seek and share funding in an effective manner. Such a coalition would ensure the sustainability of these organizations and their work, while improving coordination of watershed management.

The Nisqually River Foundation provides staffing, funding and project-management support for the NRC. Originally, funding and staffing for the Council came from the Department of Ecology; when the department was unable to continue its support, the Council determined that a nonprofit corporation would provide the most flexibility in seeking new funding. The Foundation manages more than \$1 million worth of grants, including state, local, federal, and private grants, and private donations. Decisions on funding are made by a board of directors, based on the priorities in the NRC's water stewardship plan.

2. Decision-makers lack a coordinated set of strategies, mandates, information, and tools to make informed decisions around water, watershed health and land use.

Watershed planning was used as a vehicle to bring levels of government and stakeholders together to coordinate water use and management activities in the Nisqually watershed. Three key mechanisms were used to define and coordinate the roles of individual governance agencies in watershed management: a memorandum of agreement, watershed management plan, and implementation plan.

The initiating governments created a memorandum of agreement to enable broader participation in the planning process than is required under the Watershed Management Act. In addition to the Nisqually Tribe and state, county, and municipal governments, the planning unit also included representatives of the NRC, three water districts, a water purveyor, and hydroelectric utility. This broad representation supported the Unit's objective to 'develop a comprehensive strategy for balancing competing demands for water, while at the same time preserving and enhancing the future integrity of the watershed.' While the Nisqually watershed remains in relatively good condition, population growth has created concerns over the sustainability of water resources in the region. The unit therefore

sought to collaboratively identify ways to manage water supply and demand through the planning process. Key informant interviews and planning unit workshops were used to identify key watershed-wide issues and potential solutions. The WMP sets out recommended actions for the five priority issues in the form of policy statements, management strategies, and projects, as well as sub-basin action plans to address issues in areas facing immediate water shortages.

Following the adoption of the WMP by the county governments, a detailed implementation plan was developed by an expanded planning unit, which now included local agriculture and environmental representatives, and landowners in the watershed. A new memorandum of agreement established the roles and responsibilities of the expanded planning unit and its government entities in ongoing plan development and implementation.

The implementation plan provided a practical schedule for implementing the actions in the WMP, identifying the entity responsible for implementing specific actions, their funding source, and timeframe. The planning unit developed a set of criteria to prioritize projects for funding and implementation; the implementation schedule was based on the perceived importance of actions, statutory obligations, the resources available to complete particular tasks, and the sequence in which actions need to be implemented. While the state, tribe and participating counties are legally required to adopt the plan actions by rule or ordinance (according to the Watershed Management Act), municipalities and other organizations are not. The planning unit noted that strategies, actions, or obligations assigned to public agencies were contingent on securing funding, resources, and legislative authorizations. Voluntary commitments and agreements (e.g. cooperative agreements between public agencies) were therefore seen as the most effective way to coordinate implementation by members of the planning unit, as opposed to regulatory enforcement.

The planning unit sought to coordinate implementation of the WMP with other water management initiatives occurring within the watershed (e.g. the NRC, local shellfish protection projects). During the development of the implementation plan, the planning unit consulted with water management NGOs/initiatives in the watershed, and sought to identify and eliminate any duplicate or inconsistent policies. The planning unit committed to supporting the development and implementation of existing programs (e.g. NRC's watershed stewardship plan) through partnership and/or coordination with other entities.

The planning unit recommended additional coordination of efforts for groundwater management. The jurisdictional boundaries of the WMP are based on surface water divides, which do not always match groundwater divides. The WMP therefore required the implementing body to facilitate agreements with the planning units of adjacent watersheds to promote the consistency of policies and projects addressing groundwater that crosses watershed boundaries. Such agreements could cover water quality monitoring, groundwater recharge area policies, processing of water rights by groundwater divide, development of new groundwater supplies, and assessment of cumulative impacts.

Coordination of watershed and cross regional planning efforts was facilitated through the governance of the water management plan. The counties agreed to support the Nisqually Tribe to apply for a watershed-planning grant as the lead agency. The Tribe already played a significant role in water governance in the region; the leadership of the Nisqually Tribe therefore brought continuity and local legitimacy to the WMP process. Similarly, the inclusion of NRC representatives in the planning unit, and later other water stakeholders (including agriculture and hydropower), enabled coordination of parallel water management activities and provided for a broader range of implementation activities.

Meaningful engagement of these authorities was promoted through consensus-based decision making in the WMP process. The inclusion of the NRC also promoted broader public engagement and representation. The NRC includes a citizens advisory committee, an active body of citizens within the watershed who facilitate local input into NRC decision making. The planning unit sought opportunities to increase public outreach through exposure at NRC public events, updates to the NRC and its advisory committees, and working with the NRC to distribute informational materials to the public.

3. Activities on private land that impact water quality, water quantity, and ecosystem health are often not enforced or enforceable under current law.

The watershed management planning process did not create any new authority for the planning unit. Rather, member organizations took on authority or responsibility for additional tasks, and made changes to their existing policies and processes. Through the WMP process, the organizations worked together to identify how changes in the way in which each agency exercised its authority (e.g. permitting processes, policies) could address gaps in enforcement and coordinate regulatory approaches. For example, the planning unit identified the following changes in policy and processes as necessary for the improvement of watershed management:

- Department of Ecology: review and amend the Reclaimed Water Act to ensure consistency between water quality and water resource statutes. Members of the planning unit provided input to legislators on these changes.
- Department of Ecology: increase their enforcement of the exempt well statute and develop an action plan to achieve compliance with the intent of the statute.
- Counties: strengthen water system plans to provide a more direct link between land use planning and water supply availability.
- Municipalities and counties: approval of amendments to land use designations and urban growth area expansion to be dependent on proof of water availability.

The WMP process was therefore effective in improving the management of water and land uses by involving authorities from multiple levels of government in joint decisions on necessary changes and ‘obligations’ to fulfill the shared objectives of the plan. In particular the plan featured a focus on aligning agencies’ decision making processes over land and water use (e.g. permits, rights, designations) to balance competing demands.

The NRC is also a non-regulatory organization, focused on coordination, advocacy and education. Through public engagement, advisory activities, and incentives, the NRC have enabled private land owners and businesses to make changes that promote watershed health. For example, through the ‘Nisqually Sustainable’ project they assist and promote local businesses who implement sustainable practices, such as rain gardens. The NRC have developed a ‘resource review list’ to assist businesses in assessing their resource use and identifying opportunities for improvement. By participating in this program, businesses can access technical advice on sustainability, marketing, and NRC support.

4. Our collective impact on watershed health is not measured, which limits our ability to adapt and improve as a region over time.

The Watershed Management Act requires planning units to undertake a technical assessment phase prior to developing their watershed plan, and provides funding for watershed assessments. The purpose of this phase is to assess the physical state of the watershed under existing land and water use practices. The Nisqually planning unit first conducted a review of existing information, in order to identify gaps in the data and further assessments required. For example, the review found inconsistencies in information

available on exempt well use, and the cumulative impacts of exempt wells on surface water and instream flows. Consequently, the planning unit recommended a study on the cumulative impacts of exempt wells, in order to set basin standards for the number of exempt wells allowable.

The watershed assessment estimated surface and groundwater stocks and flows, water rights, actual water use, future water demand, and water available for future appropriation (taking into account minimum instream flows), as well as fish habitat, water quality and aquifer mapping. The recommendations and actions in the WMP were then developed based on the information gathered through this assessment. For example, the watershed based assessment of water supplies and current and future demand enabled counties and cities to consider water supply availability when making land use decisions. The planning unit developed an extensive information database to guide science-based decision making.

The planning unit undertook a number of additional studies to address information gaps for decision making (e.g. the instream flow needs of salmonids). They prepared a water quality monitoring plan to facilitate long term water quality monitoring, and a data management plan to provide a foundation for coordinated watershed data collection and decision making. Based on the baseline monitoring program, the planning unit was able to develop a numerical model to better understand groundwater-surface water interactions, and the potential for aquifer development as a drinking water source.

4.3 Key insights and implications for the CVRD from the Nisqually River

The Nisqually River watershed planning process suggests a number of points for consideration in establishing collaborative watershed governance arrangements. The following observations highlight key points of difference in the Nisqually river case study, as well as reflections from a feature article (8) and a report by the Nisqually Tribe (9):

1. **Sustainable funding.** This case study highlights that a significant amount of financial and staff resources were required up-front to complete the watershed assessment, planning, and initial implementation phases in a timely manner. However, both the NRC and planning unit highlight the limited and uncertain nature of senior government funding, and the need to establish a sustainable local funding basis to enable the implementation of long term strategies. Flexible funding is also required in order to maintain a 'living' plan that is adapted to reflect changes in circumstances and priorities over time.
2. **Working together to address shared challenges.** Elsewhere in Washington State (e.g. the Yakima Basin) collaborative efforts have been predicated on significant senior government funding of 'win-win' solutions for stakeholders. In contrast, the Nisqually planning unit recognized resource constraints and used the planning process to balance competing demands through investigation of supply options, prioritizing uses, restricting new uses based on availability, and improving water use efficiency. Outcomes were achieved through the wide representation of authorities and interests in the planning process, and a shared commitment to future water sustainability, exercised through voluntary commitments to changes in policies and practices. However, Pitre and Wilson (8) highlight the difficulties the planning unit faces in making political water decisions, and warn against putting them off by requesting more and more data. While evidence based decision making is important, significant time and budget can be spent on the collection of this data, reducing capacity for the development of strategies to address competing uses.

3. Indigenous leadership. The Nisqually planning unit is the only watershed in the state where a tribe served as the lead agency in the planning process. Robinson and Alesko (9) note that most tribes opposed the Water Management Act because they believed that it would diminish the government-to-government relationship between tribes and senior government. However, the Nisqually Tribe, who already had a leadership role in water planning through the NRC, bought into the Watershed Management Act process. This was in part because they had already embraced the concept of the 'watershed community', and because the Act created the opportunity for the Tribe to lead the process. The new planning process therefore affirmed the Tribe's role in natural resource management, and brought additional resources into existing watershed management efforts. Robinson and Alesko (9) argue that this cooperative engagement with local government and stakeholders worked to achieve tribal natural resource protection goals.
4. Integration of land and water use. Recognition of water supply restrictions and the cumulative impacts of individual water intakes (e.g. exempt wells) led the planning unit to incorporate changes in land use policies and integrate land and water use decision making through their WMP. This approach enables improved demand side management and consideration of cumulative effects. Making changes in land use policies and decision making required actions by not only local government entities but also the state. The implementation plan identified a range of actions for the Department of Ecology and other state agencies, from localized practices (e.g. changes in the processing of water right applications in the watershed) through to amendments to an act. The development of these recommendations was based on the direct involvement of the state in the planning unit.

4.4 References

- (1) State of Washington Department of Ecology 2013 The Watershed Planning Act. Retrieved June 24 2014, from <http://www.ecy.wa.gov/watershed/misc/background.html>
- (2) State of Washington Department of Ecology 2011 Watershed Management: Nisqually – WRIA 11. Retrieved June 24 2014, from <http://www.ecy.wa.gov/programs/eap/wrias/Planning/11.html>
- (3) State of Washington Department of Ecology 2013 WRIA 11: Nisqually. Retrieved June 24 2014, from <http://www.ecy.wa.gov/apps/watersheds/wriapages/11.html>
- (4) Nisqually Indian Tribe 2003 *Nisqually Watershed Management Plan*. Available at <http://www.chilliwackwatershedstrategy.ca/docs/Nisqually%20Plan.pdf>
- (5) Nisqually Indian Tribe 2007 *Nisqually Watershed Detailed Implementation Plan*. Available at <http://www.ecy.wa.gov/programs/eap/wrias/Planning/docs/Nisqually%20Imp%20Plan%202-14-07%20Complete%20report.pdf>
- (6) Nisqually River Council 2014 Nisqually River Council. Retrieved June 24 2014, from <http://nisquallyriver.org/>
- (7) Nisqually Watershed Planning Unit 2009 *Sustainable funding for Nisqually watershed planning*. Lacey, Washington State Department of Ecology. Available at <http://nisquallyriver.org/wp-content/uploads/2010/03/Sustainable-Funding-for-NisquallyWatershed-Planning.pdf>
- (8) Pitre, C and Dally Wilson, L 2004 Watershed planning in Washington State. *Land and Water* 48(4): 56. Available at http://www.landandwater.com/features/vol48no4/vol48no4_2.html
- (9) Robinson, S and Alesko, M 2011 The return of a river: a Nisqually tribal challenge. Olympia, The Evergreen State College. Available at <http://www.evergreen.edu/tribal/docs/Robinson-Alesko%20Nisqually30611.pdf>

5 Summary of case study insights

This section summarizes key insights and points of consideration from across the case studies. These points were drawn from common themes across the cases, as well as points of difference highlighted through comparison. Many of the points are also identified as factors that influence water governance outcomes in the academic literature. These insights are intended highlight some possible considerations for the workshop discussions and assessment of governance options.

1. **Local governments, First Nations, and NGOs typically do not have adequate long-term funding (and often compete for it) to carry out water management and stewardship activities.**
- **Initial investment and sustainable funding.** A significant amount of financial and staff resources is likely to be required up-front to establish the organization, undertake public engagement activities, establish an evidence base, and develop plans and strategies. A long term, reliable funding source is important to maintain basic operations, leverage external funding, and enable the implementation of ongoing activities and programs.
 - **Grant funding.** Grants are available at both a provincial and federal government level, and enable investment in large projects. However the availability of grants varies between years, and many have set timeframes and objectives. Some grants may only be available to local government entities, while others are targeted at charities and non-governmental organizations. Many grants require a local matching contribution of 10-60%.
 - **Community based funding.** Given the limited and uncertain nature of government funding, many initiatives have found it necessary to establish a local funding base through taxation or membership funds. In British Columbia it is possible for local government entities to create a special service area with an earmarked requisition for water management. The Ministry of Community, Sport and Cultural Development should be able to provide advice on what financial arrangements are possible.
 - **First Nations funding.** Due to differences in taxation between reserve and non-reserve lands, it may be necessary to establish different contribution structures. Other bands (e.g. the Lower Similkameen) are currently investigating alternative funding structures that may be applicable in the CVRD. However it is also important to consider the specific characteristics and interests of each band when considering funding options.
 - **Flexible funding.** It is important to consider how the timing and objectives of funding arrangements influence capacity to maintain a 'living' plan that can be adapted to reflect changes in circumstances and priorities over time. The Okanagan experience highlights that roll-over funding is useful for creating such flexibility.
 - **Distribution of costs and expenditure.** Depending on the funding arrangements, costs may be distributed equally across individuals or organizations, or vary between areas based on population, land area, or land uses. Similarly, investments in water management may be attributed to whole-of-region benefits (i.e. directed to where they are most needed), distributed equally across areas, or vary based on area characteristics. It is important to consider the equity of the distribution of cost vs. expenditure vs. benefits, while also acknowledging that the need for investment is not

always aligned with the funding capacity of an area/population. It is also important to consider the relationship between funding and decision-making (e.g. vote share).

2. Decision-makers lack a coordinated set of strategies, mandates, information, and tools to make informed decisions around water, watershed health and land use.

- **Watershed based approaches.** Dividing a region into watersheds can be an effective way of gaining community buy-in and ownership of water management initiatives. However, misalignment between ground and surface water boundaries, and the spatial relationship between water takes and uses, may require different water management zones in order to effectively integrate land and water management. Designation of water management zones should consider hydrological, political, and economic (i.e. water use) boundaries.
- **Coordination across watersheds.** The CVRD contains multiple watersheds with varying populations, land uses, and water management issues. Neither the CVRD nor electoral boundaries align with watershed boundaries. This complicates the coordination of regional governance, including the collection and distribution of funds, community representation (especially for unincorporated areas), prioritization of projects, and development of region-wide initiatives. Furthermore, where community/political and watershed boundaries are not aligned, these divisions can also require communities or organizations to contribute to multiple watershed initiatives, imposing significant compliance costs. Cowichan entities may also wish to coordinate with neighbouring regions or organizations for effective watershed management.
- **Regional coordination and oversight.** Many initiatives include a regional oversight group that is responsible for liaising with senior government; facilitating cross-regional decision making; coordinating and resourcing watershed management initiatives; undertaking region-wide initiatives; and providing oversight of funding, expenditure and reporting. In many cases this group is linked to local government.
- **Relationship building.** The network governance literature highlights the importance of relationship building (within the region and with senior government agencies) for the effective coordination of and shared investment in water management. Such an approach takes time, and is based on the steady, incremental development of governance capacity from existing arrangements and relationships to a desired future state. Wholesale changes in governance arrangements may disrupt existing relationships (and capacity), and may be less stable in the long term.
- **Working together to address shared challenges.** Collaborative initiatives, based on the meaningful involvement of multiple interest groups is a widely advocated way of identifying common objectives, working through competing interests, and increasing governance capacity. Deliberative forums can help to identify trade-offs and opportunities to achieve shared goals. However, such processes do not remove differences in interests, goals, and stakes, and require careful facilitation to identify common objectives without silencing other interests.
- **Representation.** Consideration of meaningful and accountable representation in water governance may include four key elements: 1) Election versus appointment. Elected (government) officials are commonly included on water governance boards to ensure democratic accountability for board decisions. 2) Governance vs government representatives. In many cases a range of interest groups are involved in deliberations on management decisions, but only government officials vote on (investment) decisions. 3) Representation may involve inclusion of individuals to represent the range of

interests in an area, and/or it might involve individuals who act as two-way conduits to their respective communities. 4) Voting on decisions. Some groups advocate equal vote shares and consensus based decision making among representatives to support joint ownership of and responsibility for decisions. Others use population or area based vote shares and majority voting, in support of democratic representation.

- **Coordination with indigenous government.** Effective and equitable coordination will be sensitive to the effect of collaborative arrangements on the government-to-government relationship of indigenous groups, and unresolved land and water rights. While local initiatives provide opportunities and resources for indigenous leadership in water governance and the pursuit of indigenous objectives, they can also overlook self-governance and ownership concerns. Indigenous groups may also have varying capacity to contribute to collaborative initiatives because of these parallel processes.
- **Information management.** The development of shared databases of existing and new information about the region is important for evidence-based decision making, and the coordination of regional initiatives (e.g. prioritization of investments). Investing in data management helps to identify gaps in understanding, reduce the duplication of effort, and detect patterns across space and time. Other agencies have used online databases, report depositories, and GIS databases to coordinate the collection of information. However, it is also important to recognize that 'evidence' collection cannot overcome politics related to decision making.

3. Activities on private land that impact water quality, water quantity, and ecosystem health are often not enforced or enforceable under current law.

- **Regulatory authority.** Most watershed organizations in this review have minimal regulatory authority, and instead act as mechanisms to coordinate the efforts of participating government agencies who do have authority. The watershed organizations use memorandums of agreement with government agencies and other members to define member responsibilities, and the expectations for watershed decisions to be incorporated in agency policies and processes. Working effectively with existing authority requires a firm understanding of ownership and jurisdiction across the range of water management issues.
- **Voluntary approaches.** All three case studies rely on voluntary membership and participation in the watershed organization. In addition, many of the management strategies put in place are 'best practice' voluntary approaches. Organizations highlight that voluntary approaches promote a culture of cooperation, are effective at gaining local buy-in and ownership of improvement strategies, and encourage members to bring their own commitments and resources to initiatives.
- **Limits to regulatory approaches.** In contrast, enforcement based measures are often met with opposition by local actors, which reduces local buy-in to collaborative initiatives. Several organizations therefore recommend the separation of coordinating/collaborative and regulatory approaches across agencies. The US case studies also highlight that regulatory based approaches have limited effectiveness, as they tend to result in a focus on jurisdictional responsibility and compliance, rather than the adoption of best practice.
- **Incentive based approaches.** Regulatory and voluntary approaches may be supplemented with incentive mechanisms to encourage adoption of 'best practice' and buy-in to watershed planning. Incentives may include access to resources through participation in collaborative approaches (e.g. grant funding, expertise), reduced

compliance costs through coordination with other watershed agencies, access to loans or subsidies for green initiatives, and incentivized rating schemes. The private sector is noted to be particularly responsive to voluntary and incentive based initiatives, as this can create a business case for improvements in practice and contribute to positive branding.

- **Public education.** All case studies used public education campaigns and advisory services as part of their watershed strategy. Education is intended to promote the voluntary uptake of best management practices, support local stewardship initiatives, and raise awareness about key water issues. Such initiatives can help to create political pressure for various government entities and private sector organizations to adopt the watershed approach and recommendations.
- 4. Our collective impact on watershed health is not measured, which limits our ability to adapt and improve as a region over time.**
- **Knowledge of watershed hydrology and institutions.** It is widely accepted that assessment of cumulative effects requires a strong understanding of watershed hydrology, in order to identify how effects are transmitted through the watershed and between surface and ground water bodies. Tracing cumulative and diverse effects to the land and water management or governance processes responsible for generating them (e.g. policy siloes), enables identification of the root causes of 'broken hydrology' and the parties with the authority to address them. Reducing cumulative impacts therefore requires a strong understanding of the ownership of water and jurisdiction for water management at each point as it moves through the watershed.
 - **Tools for assessment of cumulative effects.** Watershed organizations have used a range of techniques to detect and manage cumulative effects, including: strategic monitoring to detect effects and trace their sources; collection and/or analysis of ecosystem health indicator data; collection of data on water allocations and other resource use; integrated data management to detect trends across space and over time; quantitative analysis of current and projected water use versus availability; calibrated watershed models to identify likely causes, as well as potential consequences of changes in resource uses; and GIS and systems analysis to analyze and communicate multi-scalar relationships.
 - **Integration of land and water management.** Increasing water security concerns (including available water quality and quantity, and ecosystem health) have resulted in increased attention the effects of current and projected land use change. Watershed organizations have consequently expanded their mandate to include future land use planning and growth policies. In water restricted areas watershed authorities have undertaken assessments of current and future water allocations and availability. Government agencies are using this information as an input into land use decision-making, including the approval of consents, and changes to growth policies or zoning.

The image features a teal graphic consisting of two overlapping, teardrop-shaped elements. The larger, lower element contains the word "Functions" in white, sans-serif font. The smaller, upper element, which overlaps the top-right corner of the larger one, contains the text "Appendix E" in the same white, sans-serif font. The background is plain white.

Appendix E

Functions

Table E.1 New functions required to address water governance and management needs in the Cowichan region

Function	Proposed Scale	Responsible Organization
To address COORDINATION of resources, information, activities, and decisions		
Integrate previous strategies, policies, studies, and reports to support the development of a regional watershed risk assessment and regional water strategy	Regional	CVRD
Inventory existing scientific data to support the development of a regional watershed risk assessment and regional water strategy	Regional	CVRD
Inventory traditional ecological knowledge (TEK) to support the development of a regional watershed risk assessment and regional water strategy	Local	First Nations
Develop terms for memorandums of understanding (MOUs) and agreements between regional and local decision-makers to commit to a regional water strategy	Regional	CVRD
Carry out a regional watershed risk assessment (across all watersheds) to identify low-, medium-, and high-risk (priority) watersheds	Regional	CVRD
Develop a regional water strategy and action plan, including a shared vision, goals, objectives, and measures for water quality, water quantity, and ecosystem health to inform planning and management activities at all levels	Regional	CVRD
Lead the implementation of a regional water strategy	Regional	Regional Water Entity
Develop terms for memorandums of understanding (MOUs) and agreements between regional and local decision-makers to commit to a regional decision-making framework in low- and medium-risk watersheds	Regional	Regional Water Entity
Develop a water and environmental decision-making framework, including water objectives (as defined in the <i>Water Sustainability Act</i>), for low- and medium-risk watersheds	Regional	Regional Water Entity
Carry out land use planning and decision-making in accordance with regional decision-making framework and water objectives in low- and medium-risk watersheds (as required by MOUs and agreements)	Local	Local governments First Nations PMFLC Health Authority
Develop a regional drought management plan, including specific protocol for responding to various drought conditions (e.g., priority allocations) that emerges from the regional water strategy	Regional	Regional Water Entity
Develop messaging for citizen outreach and external communications by local authorities and NGOs	Regional	Regional Water Entity
Establish a shared watershed database to house scientific and traditional data and resources (water sources, availability, ecosystem health, etc.)	Regional	Regional Water Entity
Inventory water sources and availability to support decision-making based on cumulative effects	Regional	Regional Water Entity
Develop a regional cumulative effects assessment framework	Regional	Regional Water Entity
Develop terms for ongoing data collection (to support cumulative effects monitoring) in low- and medium-risk watersheds	Regional	Regional Water Entity
Develop terms for ongoing data collection (to support cumulative effects monitoring) in high-risk watersheds	Local	Local Watershed Board

Function	Proposed Scale	Responsible Organization
To address AUTHORITY (executing and advising on decisions)		
Work with the Province to develop regulations under the <i>Water Sustainability Act</i> (e.g., Water Sustainability Plans and water objectives)	Regional	Regional Water Entity
Develop Water Sustainability Plans for priority (high-risk) watersheds	Regional	Regional Water Entity
Implement Water Sustainability Plans for priority (high-risk) watersheds under oversight of Regional Water Entity	Local	Local Watershed Board
Advise the Province on surface and ground water allocation decisions (licenses) through a referral process in low- and medium-risk watersheds	Regional	Regional Water Entity
Advise the Province on surface and ground water allocation decisions (licenses) through a referral process in high-risk watersheds	Local	Local Watershed Board
To address OVERSIGHT		
Provide regulatory oversight for decisions made by the Regional Water Entity (enforce compliance)	Provincial	Province of BC
Provide non-regulatory oversight of CVRD decisions and activities in regards to water objectives in low- and medium-risk watersheds (encourage compliance)	Regional	Regional Water Entity
Provide non-regulatory oversight of local decisions and activities in regards to water objectives in low- and medium-risk watersheds (encourage compliance)	Regional	Regional Water Entity
Provide regulatory oversight of local decisions and activities in accordance with Water Sustainability Plans in high-risk watersheds (enforce compliance)	Local	Local Watershed Board
Provide regulatory oversight of local watershed boards' implementation of Water Sustainability Plans (enforce compliance)	Regional	Regional Water Entity
Provide non-regulatory oversight of progress with annual action plan items at local scale (encourage compliance)	Regional	Regional Water Entity
To address REPORTING		
Report progress on overall water strategy and annual action plan to the public	Regional	Regional Water Entity
Report individual organizations' progress on annual action plan to the regional water entity	Local	
Report on cumulative effects to the public	Regional	
Report on local/regional compliance with standards and requirements in Water Sustainability Plan in high-risk watersheds to the Regional Water Entity	Local	Local Watershed Board
Report on local/regional compliance with decision-making framework and water objectives in low- and medium-risk watersheds, and Water Sustainability Plans in high-risk watersheds, to the public	Regional	Regional Water Entity
To address FUNDING for watershed governance and management		
Establish a watershed protection service and set appropriate rates to contribute to regional costs for water governance and management activities	Regional	CVRD
Administer funds from local government and public and private donations to recover regional costs for water governance and management activities	Regional	Regional Water Entity
Administer funds from local government and public and private donations to recover local costs for water governance and management activities in areas bound by Water Sustainability Plan (high-risk watersheds)	Regional	Local Watershed Board



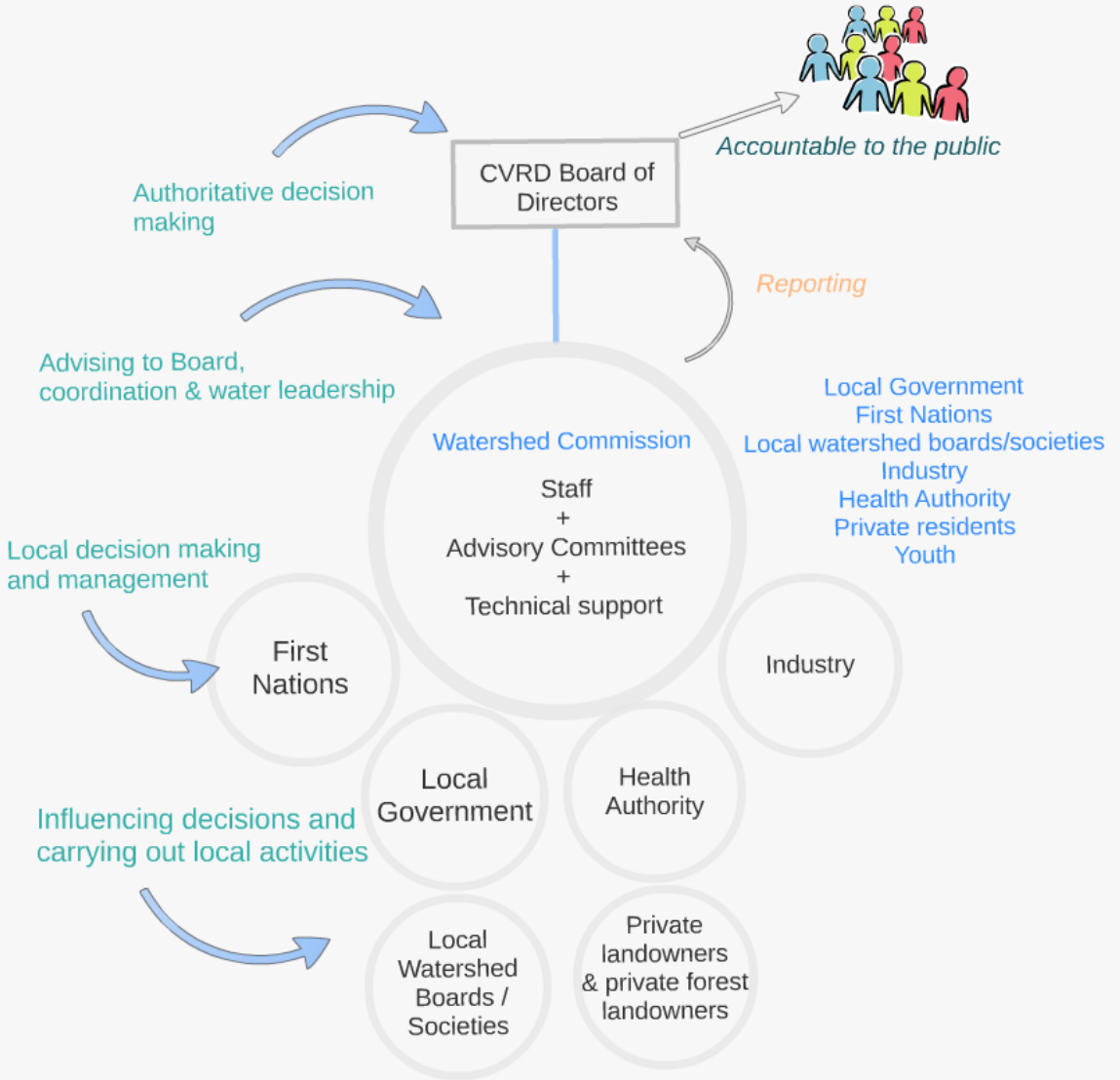
Appendix F

Governance
Alternatives &
Evaluation

1: Informal Coalition



#2: Commission of CVRD



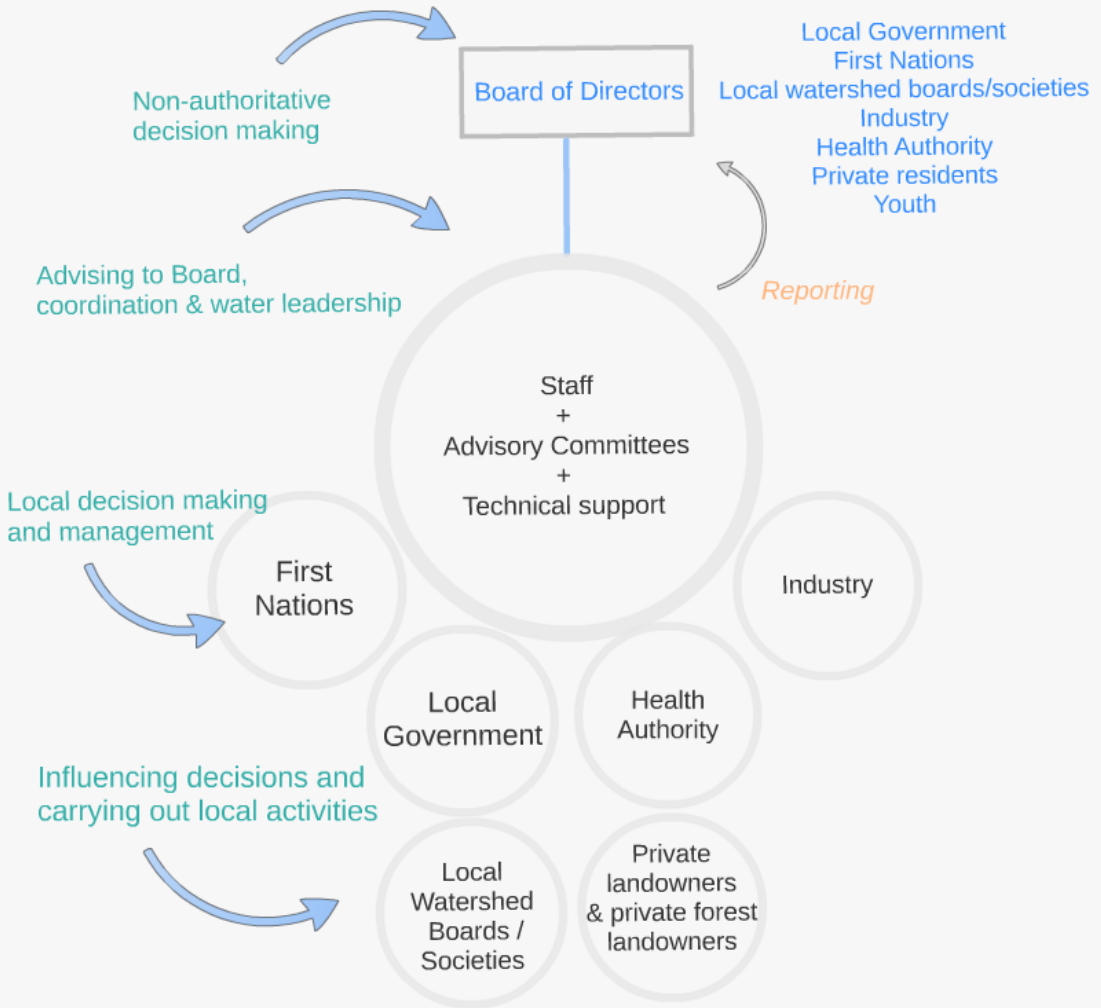
CVRD service fees, taxation, senior government grants



Strengthen arrangement by...

MOUs and agreements (particularly between CVRD and municipalities)

3: Regional Watershed Society



Grants, donations

Strengthen arrangement by...



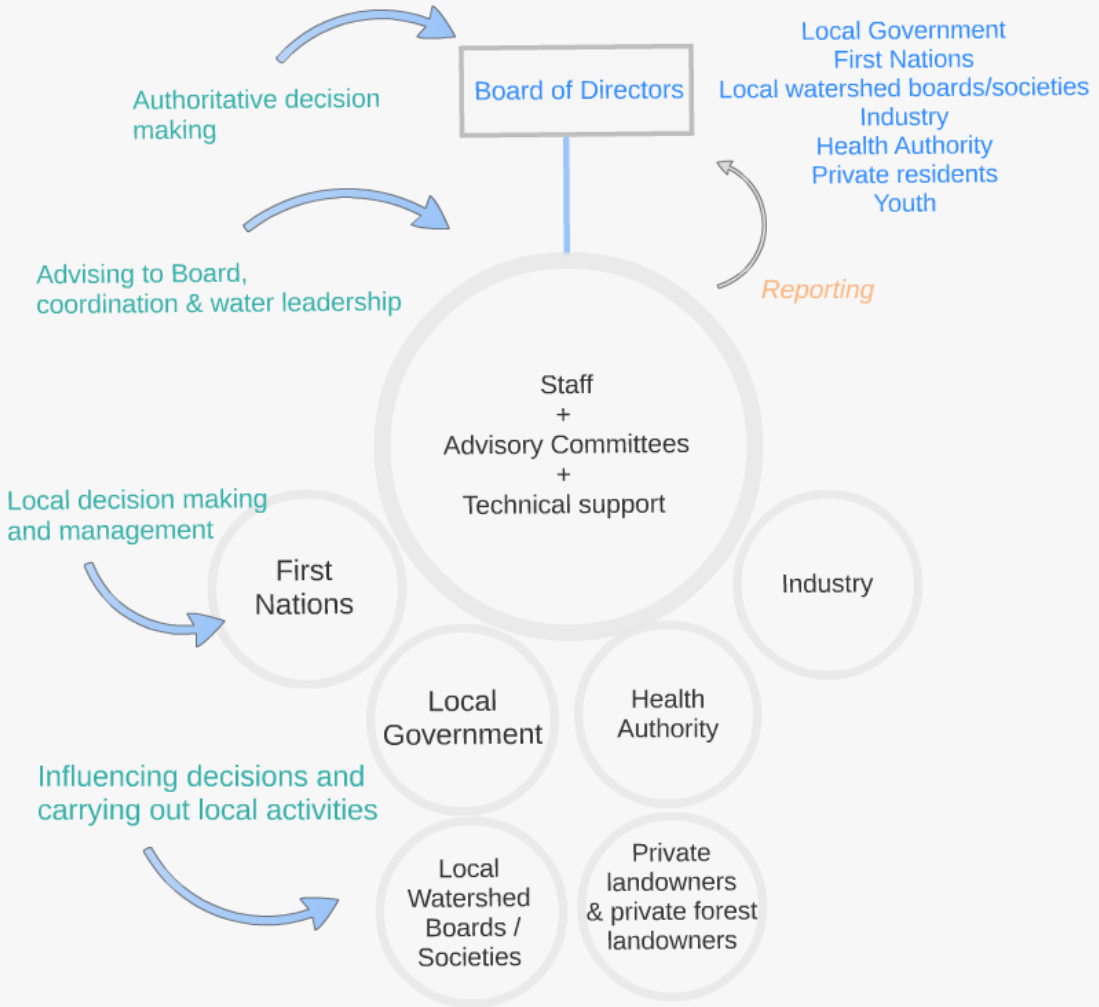
CVRD Tax / Fees Requisition

MOUs and agreements



Ensuring board members are appointed by elected officials

















4: Legislated Watershed Authority



As defined in legislation

! Authority, capacity, funding, and overall strength of arrangement depends on legislation that is not yet developed

Table F.1 Qualitative evaluation of regional water entity alternatives as part of enhanced overall framework against governance objectives

Objective	Arrangement 1	Arrangement 2	Arrangement 3	Arrangement 4
Objective 1: Decision makers are informed and held to account as a result of a clear governance structure for the region.				
Objective 2: Our governance model includes monitoring and reporting of cumulative effects for more effective decision-making.				
Objective 3: Regulations and environmental standards on private land that protect water quality, water quantity and ecosystem health are effectively enforced.				
Objective 4: Decisions and stewardship activities are funded through a sustainable and credible model that builds long-term public confidence.				

|

Table F.2 Qualitative evaluation of regional water entity alternatives as part of enhanced overall framework against governance criteria

Governance Criteria	Arrangement 1	Arrangement 2	Arrangement 3	Arrangement 4
Enabling Powers in Legislation				
Co-governance with First Nations				
Support from and partnership with Local Government				
Sustainable funding				
Legal framework for water(shed) management				
Availability of data and information				
Independent oversight and public reporting				
Continuous learning and capacity building				
Assess cumulative impact				
Appropriate scale and boundaries				
Appropriate membership and representation at decision-making level				
Capacity and capability to carry out activities				



Appendix G

Summary of
Report
Feedback

Appendix G - Study Feedback

Prepared by CVRD Staff

Urban Systems presented the Draft Regional Surface & Ground Water Management and Governance Study Report to the Regional Water Management Committee of the CVRD on October 7th, 2014. During the meeting, the Committee received the Report and directed that a consultation process with First Nations, appropriate government agencies, and other key organizations be initiated.

Further to the Committee meeting, CVRD staff requested meetings with 10 First Nations that have offices or reserve land in the Cowichan Region. The purpose of the meetings was to present the Draft Study report and understand concerns and opportunities for Regional Water Management and Governance. Since October, meetings have been held with 7 of the First Nations:

- Halalt First Nation – Chief and Council,
- Lake Cowichan First Nations – Chief and Council,
- Stz'uminus First Nation – Chief and Council,
- Cowichan Tribes – Environment Committee and Chief and Council
- Lyackson First Nation - Staff
- Malahat Nation – Staff
- Penelakut Tribe - Staff

Meetings were also held with government agencies and other key organizations to gather feedback on the Draft Report:

- Improvement Districts
- The agricultural community
- TimberWest Forest Corp. – Staff
- Island Timberlands LP – Staff
- Catalyst Paper Corporation - Staff
- The Town of Ladysmith - Council
- The Town of Lake Cowichan – Council
- The City of Duncan – Council
- The District of North Cowichan
- BC Ministry of Environment Staff
- Managed Forest Council
- Island Health

Additionally, we requested feedback from all Task Force participants on the Draft Study Report. In response, we received written comments from several participants.

This Appendix is a synthesis of the information gathered from:

1. the meetings with First Nations in our Region,
2. the meetings with government agencies, and other key organizations and
3. feedback received in writing from Task Force participants on the Draft Study Report

General Feedback on the Draft Study Report

- The Report broadly captures what was heard and experienced across the three Study workshops
- The Report addresses local government / First Nations co-governance
- The transition steps are well thought out
- There are a few places where the language around co-governance needs to be clearer
- Option 4, the Regional Water Authority, with powers devolved via the Water Sustainability Act, is clearly set out in the Report as the only recommended option, and this fits with what was heard from workshop attendees.
- Overall the Report is a great step forward towards sustainability in our watershed.

Feedback from First Nations

During our meetings with First Nations, we noted some common interests among the First Nations for water including cultural and spiritual values, healthy watersheds, safe water for generations to come and economic development. We also heard comments that help to establish expectations for Regional Water Management and Governance.

What we heard

- There was general support for the Regional Surface & Ground Water Management and Governance Study
- It will be important to have First Nations in the leadership of the Board of the Regional Water Authority recommended in the Draft Study Report
- There is a recognition that it is important to work together for the good of all watersheds in the Region. There is a need to improve the current situation.
- Water quality, water availability and timing of flow are priority concerns that need to be addressed in the Region.
- The long term impacts need to be considered. Our watersheds are important for many generations to come. Our watersheds need to be able to support:
 - employment
 - hunting and fishing
 - biodiversity
 - safe drinking water
- Hul'qumi'num words should be included in the Vision (e.g. Naut'sa mawt ...?)

How we can move forward

- There is interest for First Nations in the Region to come together and have a discussion themselves about water governance.

- There is interest for First Nations to continue having meaningful discussions with local government and other key participants in the Region about Water Management and Governance.

Updates to the Draft Study Report

Some of the comments received included suggested updates to the Draft Report. Updates that have been incorporated into the Report include:

- Emphasizing the importance of First Nations co-governance as a primary condition for the structure of the recommended regional water authority.
- Reflecting the application of “whole watershed” thinking within the Regional Governance Framework
- Reflecting that although a watershed risk assessment process would take place to identify higher risk watersheds, watershed monitoring and management processes would still be in place to support lower risk watersheds.
- Clarifying the Executive Director’s roles and responsibilities in a Regional Water Authority.
- Clarifying and providing additional information on the interests, roles and responsibilities of the organizations listed as part of the framework for enhanced water governance and management for the Cowichan Region
- Including the provincial government as participants in some of the tasks toward establishing a Regional Water Authority
- Clarification of the cost and staffing estimates for development and operations of the structure

Feedback regarding the establishment of a Regional Water Authority

1. Governance

Function

Overall there is general support from Task Force participants for the Region to take the lead on managing its water resources. As this could be the first Regional Water Governance initiative developed under the Water Sustainability Act, some participants indicated that there should be consideration to limiting the initial scope of the governance by implementation in phases as experience with the legislation catches up. Monitoring is one example of a logical function for the water authority to step into and for it to keep its scope more focussed initially/

Structure

Task Force participants acknowledge that the RWA Board should represent the various interests and actors in the region as is noted in the Draft Report. Some Task Force participants have specifically indicated that the RWA Board needs to be primarily made up of elected CVRD/municipal representatives and elected First Nations representatives in roughly equal numbers. These elected representatives would then be accountable for governing in the public interest. This structure would meet the objectives of co-governance and direct accountability. If

there are any non-elected members on the RWA, these should be few in number and their public interest role should be clear within RWA terms of reference. Feedback from task force participants also indicated that additional interests and actors should be represented including improvement districts and the agricultural community.

Task Force participants indicated that organizations participating in the governance framework have to be comfortable with the objectives and results of the Regional Water Authority. The cost and the time of participating should be proportional to the benefits.

Task Force participants indicated that special interests should be fairly and proportionately represented. The proposed governance structure needs to balance the needs and voice of these users with the legitimacy of their claims.

Advisory Body

Task Force participants indicated that there should be consideration to having a technical advisory body or a group of non-voting members provide recommendations to the Regional Water Authority. Such options may be effective for enabling other groups to support the work of the RWA including improvement districts, health, fishery, groundwater and other technical experts, as well as representation from conservation groups and those industries that rely on the watershed and river flows and whose operations and land management practices have the potential to significantly impact the health of the watershed, such as industry and agriculture.

BC Government's Role in the Regional Water Management and Governance

Task Force participants generally support a locally developed Regional Water Authority. At the same time, there are task Force participants indicating that the Provincial government should continue to have some role for water management and governance in the Region. The roles that Task Force participants expect from the BC government vary from:

- responsibility for all decisions made under the WSA; to
- provision of resources for monitoring and compliance activities; to
- technical support in the form of information sharing and collaboration on water management activities

2. Coordination

Task Force participants indicated concerns for coordination of water management activities in the Region under the existing informal framework including:

- Duplication of water management efforts in the Region. One example of this duplication included multiple hydrogeological studies conducted in the same area.
- Lack of information sharing across the watersheds

Task Force participants indicated that there are efficiencies to having one regional water entity to deal with water issues rather than dealing with numerous, federal, provincial and local government agencies individually. At the same time, there are some concerns around data

sharing and how agreements could accommodate the varying confidentiality requirements of participants in a governance structure.

Task Force participants recognize that there have been numerous water management successes in the Region through relationship building. It is important to build on what we already have. Existing collaborative relationships in the Region should be supported, and potential conflicts of interest need to be avoided.

Task Force participants indicated that there is also a need for collaboration with the other Regions of Vancouver Island as they may be dealing with similar issues.

3. Authority

Powers drawn down from the Provincial government and Maximizing existing powers

Task Force participants indicated that there are insufficient standards and regulations and a lack of enforcement. In response, Task Force participants generally support delegated authority from the Province to enforce compliance with standards and requirements. Feedback also supports the notions that the Region needs to maximize its existing powers.

Water Surety for Existing Water Licenses

There is an expectation by some Task Force participants that water allocation under existing license scenarios covered by the new WSA would not be amended under a regional approach.

Water Surety during Scarcity as contemplated by the WSA

There is an expectation by some Task Force participants that if the Regional Water Authority takes on a role of advising the Province on water allocations, the approach to drought management and water allocations during drought needs to be considered. There is an expectation by some Task Force members that the FITFIR allocations would continue to be considered during this decision process for water allocations during drought.

4. Oversight and Accountability

Land use decisions

Task Force participants are supportive that the authority should have a role in enforcing land use decisions. Feedback indicated that the water authority should work with other government agencies such as municipalities and the Regional District to make and enforce land use decisions.

Regulatory compliance with objective s and standards

Task Force participants recognize the need for source protection. By the time a water purveyor sees a problem with a water sample, it is too late.

Minimum Standards for Area Based Solutions and Management

There is an expectation by some task force participants that the regional approach would maintain minimum standards of practise which are established by the BC government.

5. Funding

The governance framework must be structured to deliver value for the Region. The total costs of the Regional Water Authority should be proportional to the benefits. The Draft Report describes general funding sources to cover the costs. Feedback indicated that there needs to be specific articulation of the funding approach for the development and operations of the Regional Water Authority. Consideration should be given to a combination of public and private funding approaches to develop an affordable governance structure. As the process continues, there will need to be a focus on educating the public about why a Legislated Water Authority is important so that funding is broadly supported.